Public Comment Opportunity

A Sediment Remedial Action Plan, the Office of Long Island Sound General Permit Application, and draft NPDES Permit for remedial activities were available for public review and comment between December 2012 and February 2013. The public comment period is now closed. Thank you for your comments.

Given the complex and technical nature of the issues raised during the public comment period, the Department has initiated a series of working sessions involving representatives from the Town of Fairfield, Exide, and the Department to discuss the public comments. The results of these working sessions will be used to form a basis for the responses to public comments and modifications to the Plan and Permits to ensure that the Mill River is remediated in a manner that is protective of human health and the natural resources of the Mill River. We hope that, through this process, we will be able to reach a consensus on an approach that will result in a prompt and effective clean up of the Mill River.

After public comments are reviewed and considered, the associated documents will be revised, as necessary, prior to issuance of final authorizations to conduct the required remedial work.

Mill River Sediment Remedial Action Plan, Draft NPDES Permit and Application for OLISP General Permit

Comment #	Comment Received From:
1	Thomas Steinke, Fairfield Conservation Commission 12/28/12
2	Committee on Exide (Representatives of the Fairfield Harbor Management, Conservation, and Shellfish Commissions 1/9/13
3	Mary Van Conta, Fairfield Harbor Management Commission 1/10/13
4	Jocelyn Shaw, Fairfield Resident 1/10/13
5	Sanford Wakeman, Fairfield Shellfish Commission 1/10/13
6	Tom Corell, Fairfield Resident
7	Mary von Conta, Fairfield Harbor Management Commission 1/25/13
8	Thomas Steinke, Fairfield Conservation Commission 1/18/13
9	Suzanne D. Simmonds, Fairfield Resident
10	David Sturges, Fairfield Resident
11	Bob Campbell, Fairfield Resident
12	Alan Pakiela, Trout Unlimited
13	Hilary Michaels, Fairfield Resident
14	Thomas Steinke, Fairfield Conservation Commission 2/14/13
15	Mary von Conta Fairfield Harbor Management Commission 2/14/13
16	Michael Herley, Fairfield RTM's Public Health & Safety Committee
17	Thomas Steinke, Fairfield Shellfish Commission 2/19/13
18	Jocelyn Shaw, Fairfield Resident 2/19/13
19	Robert Bilek, NPDES, Fairfield Resident
20	James Salce, Fairfield Resident
21	Peter Penczer, Fairfield Department of Community and Economic Development
22	Barbara Stetson, Fairfield Resident
23	Mary von Conta, Fairfield Harbor Management Commission 2/22/13
24	Iken, Fairfield Resident
25	Judi Klein, Fairfield Resident
26	Dawn Llewellyn, NPDES, Fairfield Resident
27	Dawn Llewellyn, RAP, Fairfield Resident
28	Glenn Ratcliffe, Fairfield Resident
29	Jessica Doerner, Fairfield Resident
30	Helen Watkins, Fairfield Resident
31	Tom & Rhiannon Kelty, Fairfield Resident
32	Scott & Debbie Farquhar, Fairfield Resident
33	Joan Gartin, Fairfield Resident
34	Deanna & David Edginton, Fairfield Resident
35	Carol Pontrelli, NPDES, Fairfield Resident
36	Carol Pontrelli, RAP, Fairfield Resident
37	Robert Bilek, RAP, Fairfield Resident
38	Thomas Steinke, Fairfield Conservation Commission 2/27/13
39	Ellen Jacob, Fairfield RTM D-9
40	Pam Ritter, Fairfield Resident
41	Charlene Brauns-Schindler, Mill River Wetland Committee
42	Tom Naughton, Fairfield Resident
43	Gaylord Meyer, District t RTM
44	Gian Morresi, Trout Unlimited
45	Kathyrn Braun and others, Fairfield Residents

EXIDE COMMITTEE
DISCUSSION D R A F T
12/28/12

To: Conservation (and Inland Wetland Agency), Shellfish, and Harbor Management Commissions' Exide Review Committee
From T.J. Steinke, CD
Subject: Conservation staff review of Exide's proposed remedial action plan for lead-contaminated sediments in Mill River and Southport Harbor (SedRAP, April 2012)
Date: December 28, 2012

To assist the committee in relating this review to the Exide report text, this staff outline approximates the format of Exide's proposed SedRAP Plan and Drawings for remediating the lead-contaminated sediments in Mill River. The committee will note sections that may seem redundant, but this is due to the format of the remedial action plan where similar subjects may be described in terms of different activities, functions, or impacts on a common element of the plan.

Background
Exide has submitted for review and approval by the CTDEEP its proposed "Remedial Action Plan for Lead Impacted River Sediments Mill River Study Areas I – V pertaining to CTDEEP Consent Order No. SRD-193 Dated October 2011, Revised April 2012" (SedRAP), in which Exide proposes to dredge 21,440 cubic yards of lead-contaminated sediment out of five areas comprising approximately 30 acres of the Mill River above and below the Tidemill Dam at Harbor Road.

As noted in its report, Exide has been complying over several decades with multiple orders by the CTDEEP to investigate the nature and extent of lead contamination in and adjacent to its upland factory site and in the sediments of Mill River; to locate and secure the sources of contamination; and to remediate the contaminated upland soils, groundwater, and Mill River sediments affected by Exide's factory operations. The lead contamination exists due to discharges of lead from battery manufacturing following Exide's acquisition of the aluminum factory property from ALCOA in 1948. Following its cessation of battery manufacturing in 1981, Exide complied with a CTDEP order in 1983 to remediate 4,100 cu. yds. of contaminated sediment in a portion of Mill River located between the Post Rd. and the railroad adjacent to Exide's property. The target level for residual lead was 500 mg/kg and lead remediation was conducted with a hydraulic cutterhead dredge working within a floating silt curtain enclosing the dredge site or cell. After chasing resuspended sediments with lead exceedances, Exide removed a total of 4,383 cu. yds., of sediment. After successful remediation of the site in 1983, the river was recontaminated to the extent we find it in today. Exide has nearly completed its upland remediation activities as it addresses the factory leaching field and easterly bank of the mill pond, and now proposes to again address the Mill River in its proposed April 2012 (revision of the October 2011 version) sediment remedial action plan known as the SedRAP.

Exide's proposed Mill River sediment remediation plan or SedRAP is the product of years of investigation, sampling, and analysis of river sediments to define the extent and degree of lead contamination in the river and to determine the acceptable residual lead concentrations that may be considered safe for human and ecological receptors predicated on a search of the literature and bioassays for chronic toxicity. Based on a compromise following their respective interpretations of the data and conclusions for an acceptable residual lead concentration, Exide at 400 mg/kg and the CTDEEP at 220 mg/kg, the state and Exide have agreed upon a dual target for residual lead concentrations in the river sediments based on their location. In the four remediation areas located below or downstream of I-95 (Areas I, II, III and IV), where the highest levels of lead contamination are found, Exide will remove the contaminated sediments down to 220 mg of lead per kilogram of sediment (often referred to as 220 parts per million). In the remedial area above or upstream of I-95, Exide

will remove lead-contaminated sediment down to a residual concentration of 400 mg/kg; the reasoning for the two targets being that the extensive disturbance required to remediate the lower areas to either target level will necessarily also eliminate the natural habitat in the river, while the less contaminated upper area with its valuable habitat would be protected by less dredge disturbance seeking a 400 mg/kg residual lead concentration.

In a parallel matter, the CTDEEP and Superior Plating Company have been addressing chromium contamination of soil, groundwater, and river sediments along the shore of Mill River opposite the Exide factory. Similar to Exide's Lead-SedRAP subject matter, the chromium review suggests that the Superior Plating Company will also need to address the remediation of chromium exceedances in the soils, groundwater, and Mill River sediments in the future. The three drawings accompanying the CTDEEP October 12, 2012 compliance letter to Superior Plating Company depict the chromium sample exceedances in the river sediments that are to be addressed in a related remedial action plan.

Existing Conditions:
The present water quality status of the Mill River is clearly described in the CTDEEP's April 11, 2011 State of Connecticut Integrated Water Quality Report to the EPA, the CTDEEP has listed the Mill River and Southport Harbor as impaired waters relative to Sections 305(b) and 303(d) of the federal Clean Water Act. The impaired uses are Fish Consumption – due to Lead; Habitat for Marine Fish and Other Aquatic Life and Wildlife – due to Chromium (total), Chromium (hexavalent) and Lead; Recreation – due to Chromium (total), Chromium (hexavalent) and Lead; Shellfish Harvesting for Direct Consumption Where Authorized – due to Fecal Coliform bacteria. The Potential Sources of the heavy metals are listed as Industrial Point Source Discharge and Contaminated Sediments. There is a health advisory posted around the river against consuming blue-clawed crabs by pregnant women and children; and no swimming, fishing, or boating activities. The 2012 Exide SedRAP will address the lead-contaminated sediments and may also include chromium-contaminated sediments that are co-located with the lead. Chromium that is not co-located with lead-contaminated sediment is expected to remain an impairment to the river until remediated in the future.

Much of the SedRAP concerns and activities, and staff review comments, are related to Exide's efforts to minimize the duration of its in-water remediation project by working during the normally protective seasons for spawning fish and shellfish. As noted below, Exide proposed this year-round waiver of spawning restrictions during a meeting several years ago when it stated that it believed that it could conduct its dredging activities and demonstrate no adverse effects on the protected spawning species. Exide has not yet demonstrated its ability to meet that performance standard.

2010 CTDEP meeting agenda for reviewing Exide's proposal to be permitted to dredge in the Mill River estuary during normally protected spawning seasons for fish and shellfish

AGENDA
Exide/Inco 2190 Boston Post Road, Fairfield, CT
Allowable Dredging Periods
Potential Moratorium Waivers

Date : November 10, 2010
Place: DEP Headquarters
79 Elm Street, Hartford CT
Conference Room 4D 2:00 p.m.

Items:
1. Introduction of Attendees (EGI/DEP)
2. Meeting Objectives/Goal (EGI)

3. Mill River Sediment RAP Concept Development (EGI presentation)
4. Discussion of RAP Concept and Application of DEP Policies (group discussion)
5. Status of Response to Mill River Environmental Risk Assessment (DEP)
6. Discussion of next steps and schedule (group discussion)

With this background, Exide and the CTDEEP convened a meeting on November 10, 2010 with local, state and federal interests in the Mill River remediation project for the purpose of reviewing the need for protective seasons during spawning periods. At that meeting, Exide noted many technological advances in dredging methods in the twenty-seven years since its 1983 remediation dredging work in the Mill River and proposed in-water river dredging activities during the normal dredge exclusion periods intended to protect spawning fish and shellfish species. Exide prefaced its proposal with the condition that it would protect those species by precluding the discharge of harmful resuspended sediment during those protective seasons. In other words, if Exide could show that its dredging activities would have no adverse impact on the spawning fish and shellfish then it would be acceptable to allow dredging during the spawning seasons.

(1) If approved by regulatory agencies, this spawning season dredging window could shorten the remediation project thereby reducing risk of secondary environmental impacts and project expenses associated with an otherwise extended project duration. When questioned about the release of resuspended sediment and related problems encountered in its 1983 dredging experiences, Exide offered examples of new dredge technologies in the form of such designs as the Tornado-Motion Technology hydraulic dredge method and the use of silt curtains with horizontal bottom panels that actually confined resuspended sediment and protected the open water from active dredge cell sediment discharges. The consensus of meeting participants was favorable to Exide's proposal if Exide could demonstrate its success in isolating contaminated resuspended sediments from the open river water during spawning seasons.

The question of allowing in-water dredge remediation activities during spawning seasons has particular significance to Fairfield and to the river herring and shellfish that are dependent upon clean water in Mill River. River herring, alewives and Blueback herring, are anadromous fish species that live as adults in the Atlantic Ocean and in the spring of the year, responding to unknown cues and methods of orientation, return to their natal rivers and streams to spawn. There is a relict population of perhaps several hundred adults of both species in Fairfield that are greatly hindered in their spawning runs by the obstruction of the tidemill dam (they can only pass it at high tide where, while waiting, they are fed upon by herons, striped bass, bluefish and other predators) and which are totally prevented from reaching their upper spawning areas in the watershed by the Samp Mortar Dam. The adults now go no further than the spawning pool beneath the dam's spillway. Along the east coast, these species have experienced plummeting populations due to dams and loss of spawning habit, water pollution, predation, and over-harvesting. As a result, these species have been nominated in 2011 for consideration under the Endangered Species Act and the National Oceanic and Atmospheric Administration has made a preliminary determination that supports the concern resulting in a 90-day finding of their being Candidate Species with a final determination expected within three months (March 2013). The Mill River herring populations would be well-served by protecting the water quality and the river passage that they are so dependent upon.

(2) Similarly, the Mill River estuary is one of the most productive shellfish areas in Fairfield with its Natural Beds and water quality supporting hard clam and oyster populations that form a base for seed transplants and relays for the commercial and recreational shellfish programs. These populations, and the shellfish programs that they support, are entirely dependent upon good water quality that protects the spawning adults, the larvae in the water column, and the young spat-fall coming to rest on the bottom. Like river herring, these shellfish species'

life forms may be adversely affected by "clean" sediment plumes and smothering sediment or mud waves on the bottom, and if the sediments also contain contaminated materials, they could have a direct and acute toxic affect on the species. If dredging continues through several spawning seasons, the species populations could lose several year classes of recruitment cycles in the affected area.

Following the CTDEEP meeting, Exide proceeded to compile the proposed 2011-2012 SedRAP revisions under review today. To save time, Exide has submitted this SedRAP proposal in a federal application to dredge approximately 27,600 cu. yds. of lead-contaminated sediment over 36-acres of river and harbor bottom and it has received an Army Corps permit for the project based on the proposed SedRAP (Corps Permit No. 2011-2074 dated 9/18/12).

(3) The reader will note the nearly thirty percent increase in dredge volume from the SedRAP (21,440 CY) to the Corps permit and the Appendix III CTDEEP Natural Diversity Database Review Request Form (27,600 CY). This new increase in dredged sediment volume and the reason for it is not addressed in the current April 2012 Exide SedRAP and will need to be reviewed in further detail. While there is undoubtedly a good reason for the increase in sediment volume to be removed, it may affect nearly every aspect of the remediation project from a new multi-year time schedule and increased treatment and mitigation requirements to how it may affect the chromium problem in the river. Given such significant changes in the SedRAP it may necessitate a new revision of the proposed remedial action plan.

If the proposed SedRAP is revised, Exide may have to revise its existing permit or apply for new permits.

Staff Review

Staff comments concerning the proposed Mill River lead-contaminated sediment remediation plan (SedRAP April 2012) are as follow:

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Section 1 Introduction

1.2 Background – Project History Leading to Preparation of Remedial Action Plan

1.2.1 Summary of 1983 Remediation of Mill Pond

The report notes the 1983 dredge remediation of 4,100 cubic yards (CY) of in-situ lead-contaminated sediment plus the recovery of 283 CY of additional contaminated sediment from chasing deeper lead deposits for a total volume of 4,383 CY.

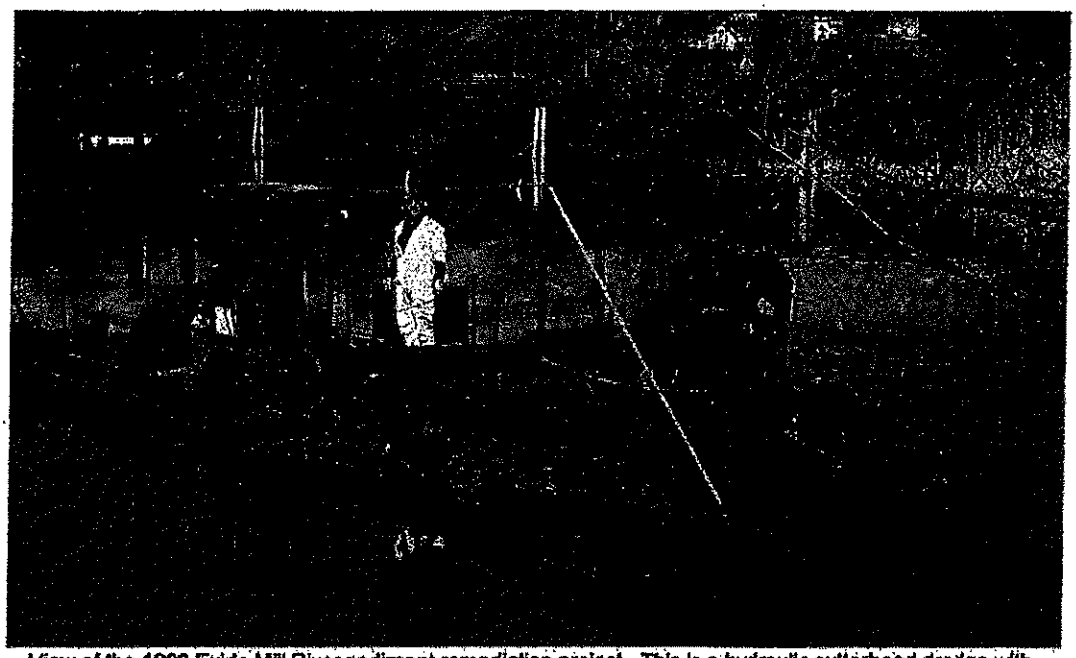
The report does not reflect that the 283 CY (6.9 % of the 4,100 CY target contaminated dredge material) of additional volume included secondary contamination requiring extended dredge recovery efforts of the unconsolidated semi-liquid mud wave and flocculated materials of the resuspended contaminated residual sediment layer about 4 to 10 inches thick covering the bottom of the dredged area. The report also provides no estimate for the volumes of resuspended sediment that was discharged from the dredge cell out into the open river water by flowing over the silt curtain; and after tightening the curtain head-rope the resuspended sediment flowed out around the ends of the silt curtain; and after securing the ends of the silt curtain and tightening the foot rope and anchoring it in the bottom, the water pressure from the tide, river, upland runoff, and variable dredge pumping rates apparently caused the resuspended sediment to blow out the fine bottom silt beneath the curtain and then flow out into the river water. The attached photos depict these conditions arising from Exide's hydraulic cutterhead dredging in 1983 with incomplete control of resuspended sediment. The resuspended sediment problems arising from the 1983 hydraulic cutterhead dredge project were some of the reasons why Exide conducted its dredge technology search and had prepared responses to the questions it anticipated from the CT DEEP 2010 meeting participants.

These are some of the issues that prompted Exide to investigate new dredging technologies, such as Tornado Motion dredging and sophisticated silt curtain designs protective of spawning species, before proposing to be exempt from the protected spawning window prohibitions. In this SedRAP, Exide does not propose Tornado Motion or any other new dredging technology or sophisticated silt curtain designs – it states that it will rely on the use of a hydraulic cutterhead dredge and a silt curtain suspended at least 6-inches off the bottom around the active dredge cell.

Exide offers no information on the potential contamination of the resuspended sediment; it offers no results from any Elutriate test of the dredge slurry to characterize heavy metals or other pollutants in the dredged material; it offers no information on a bioassay of the potential acute toxicity of the resuspended sediments to the life forms of the species to be protected during their spawning periods. Exide should be able to demonstrate what the potential effects could be on the protected fish and shellfish resources before it proposes actions that could have significant environmental impacts on those resources.

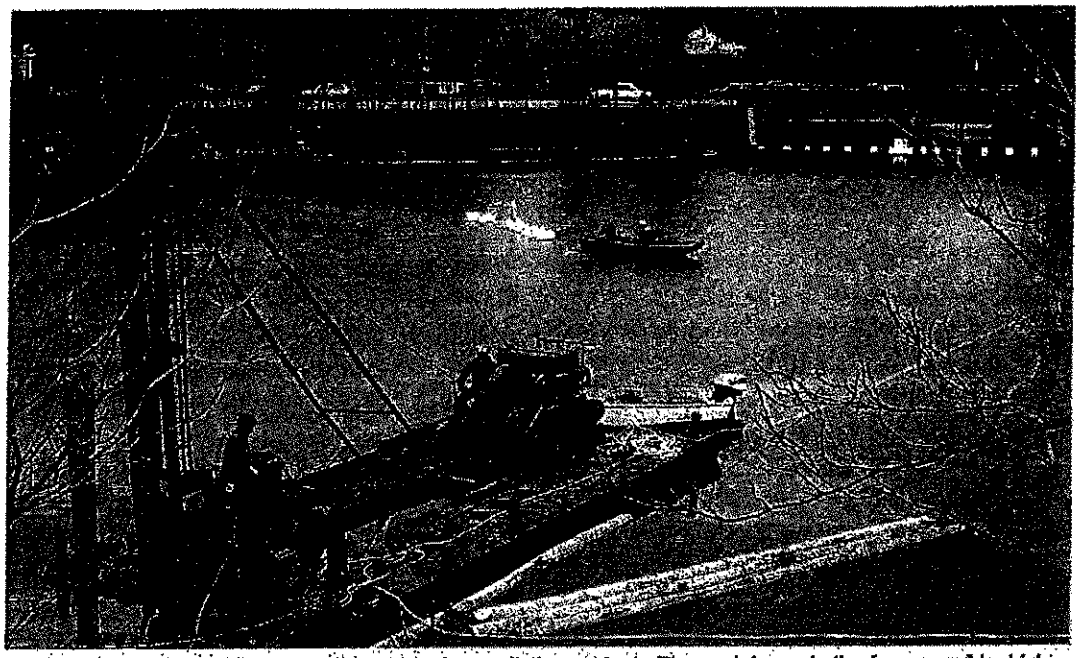
The point being, that if Exide does not know the risk to protected spawning species and cannot control the discharge of contaminated resuspended sediment out of the dredge cell in order to protect the spawning species' life forms present during the protected spawning seasons when Exide proposes to dredge, than Exide should not be conducting any in-water dredging activities during the spawning periods.

The attached photos depict elements of the 1983 dredging project wherein a hydraulic cutterhead dredge with shroud and variable speed pump and cutterhead rotation was used to remove sediments and pump them to the upland treatment and transfer-disposal location at the factory site.



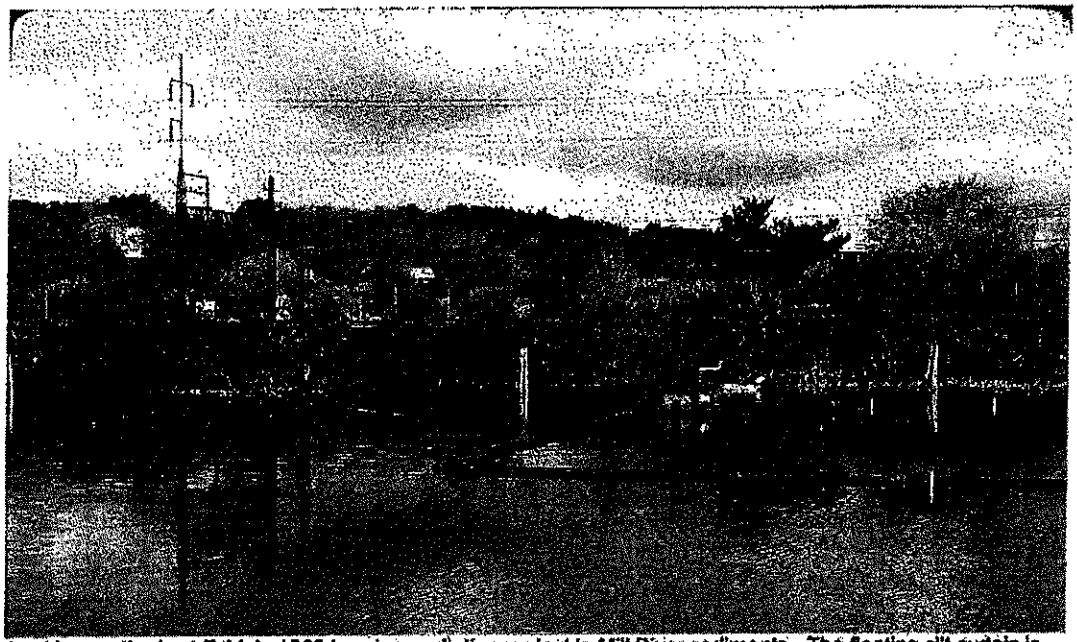
View of the 1983 Exide Mill River sediment remediation project. This is a hydraulic cutterhead dredge with shroud, variable-speed pump and cutterhead. The dredge shifts its position by moving along a cable suspended between timber pilings located around the shoreline. April 1983 tjs

Photo #1



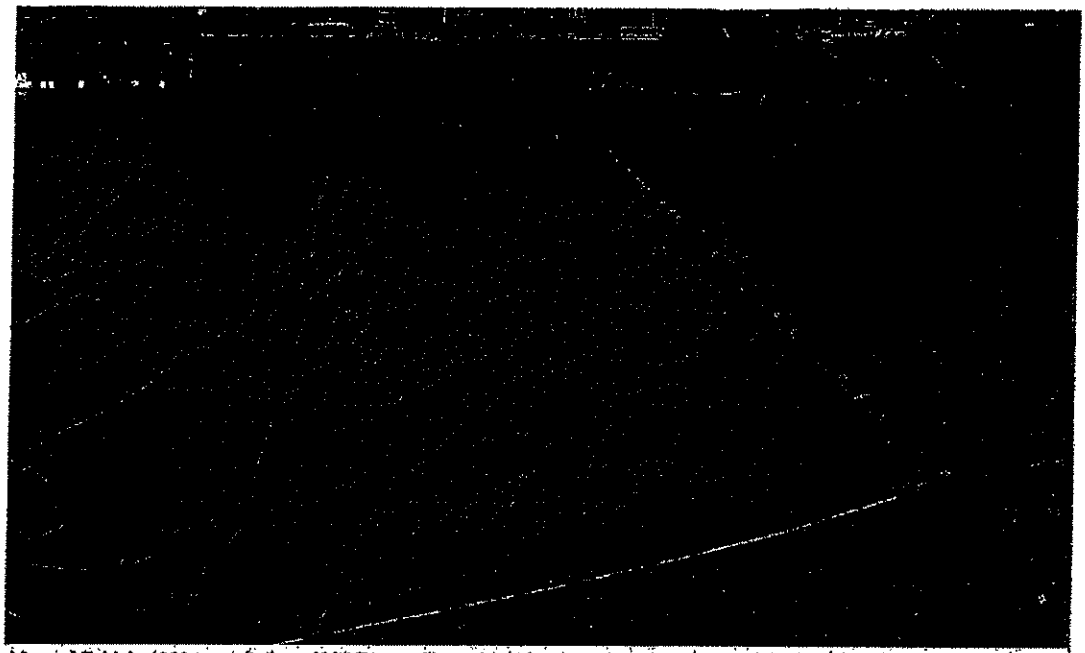
View of Exide's 1983 Mill River sediment Lead remediation project. The work barge in the foreground is driving timber piling along the shoreline to support the cable for shifting the dredge as it cuts into the river bottom.'83 tjs

Photo #2



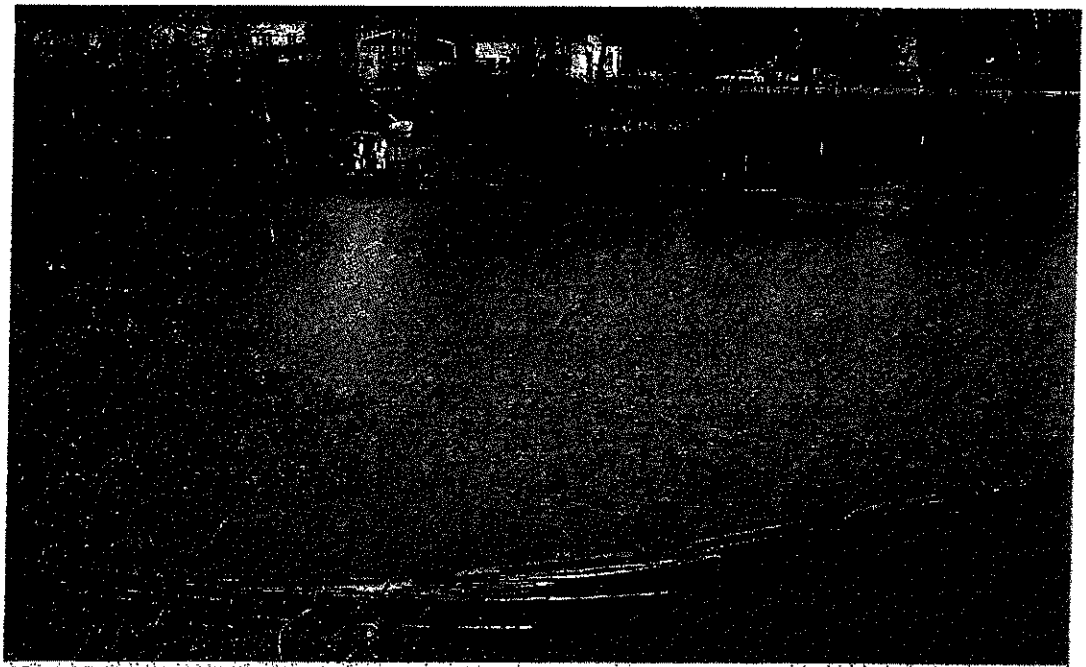
Looking northerly at Exide's 1983 Lead remediation project in Mill River sediments. The floating silt curtain is deployed around the dredge cell on the left side to protect the open water in the river; the pile-driver is installing timber support piles for shifting the dredge on cables; the hydraulic cutterhead drege is dredging the bottom sediment and pumping it through a floating pipeline to the treatment and disposal area. April 1983 tjs

Photo # 3



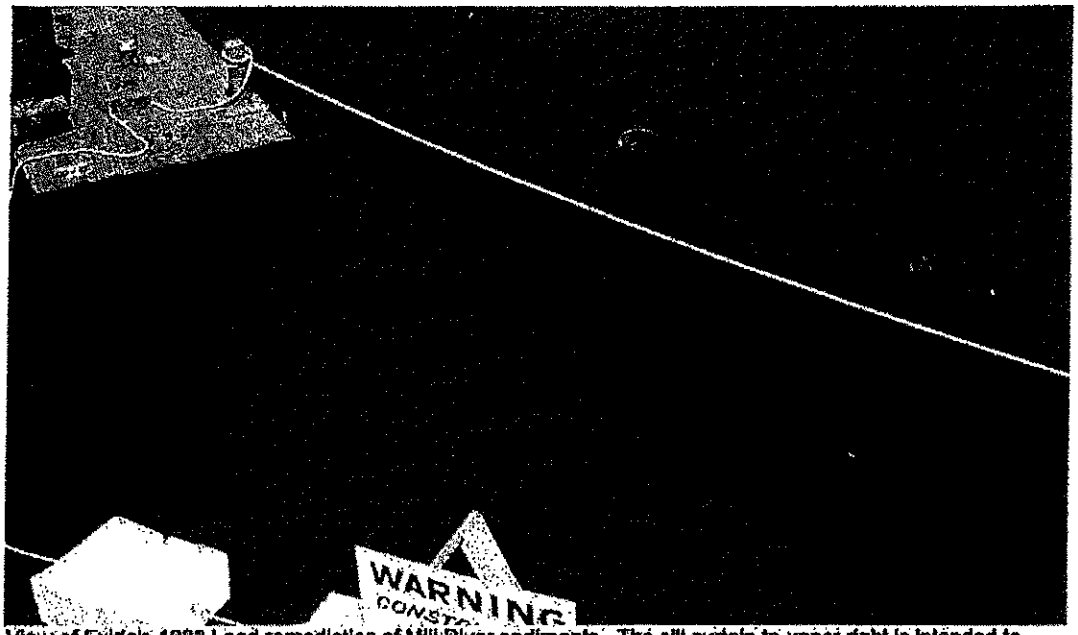
View of Exide's 1983 remediation of Mill River mill pond looking from the railroad toward the Post Rd. The dredge cell silt curtain to the right is suspended from the floating boom and is intended to protect the open water in the Mill River. Note the oil slick in the foreground contained within the boom. April 1983 tjs

Photo # 4



View of Exide's 1983 Mill River Lead remediation project. Note silt curtain suspended from floating boom with resuspended sediment discharging from under the curtain in the foreground. Depending on the tide, river flow, rainfall, and dredge pumping, the resuspended sediment discharged over, around, and under the silt curtain into the open river. April 1983 tjs

Photo #5



View of Exide's 1983 Lead remediation of Mill River sediments. The silt curtain to upper right is intended to separate the resuspended sediment within the active dredge cell from the protected open water in the river located to the left. Note the boiling clouds of resuspended sediment blowing out from beneath the curtain into the open river water between the rope and the warning sign. April 1983 tjs

Photo # 6

View in September 1985 of the Mill River mill pond two years following Exide's Lead remediation of the Mill River in 1983. The river bottom is marked by shallow furrows from the dredge, deeper holes in the open water areas from chasing deep Lead deposits, but notably a smooth homogenized featureless substrate of little habitat value to plants or animals. 9/1985 tjs

Photo #7

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Section 2 Remedial Action Plan (RAP) Overview
2.1 Overview/Purpose.
The SedRAP is offered for two reasons: to comply with CTDEEP Consent Order No. SRD 193; and to reduce the concentration and bioavailability of lead in the Mill River study areas to levels that are protective of human health and the environment.
2.2 Desired Effects
Exide notes that "in spite of the elevated sediment lead contamination in some areas, Mill River currently exhibits a vibrant array of dependent flora and fauna. It is desirable that whatever remedial alternative is selected, consideration be given to minimizing the negative short term disturbance to these organisms and maximizing the long term benefits of reducing lead in the environment in which they live."

2.2.1 Short Term
Comment:
The Overview and Desired Effects statements above capture the conceptual essence of the Exide proposal now under consideration.

(5) Unfortunately, Exide has not provided any quantitative biological baseline data or description of the plants and animals that will be affected by the dredging project. The absence of such information negates any effort to monitor species and numbers to be able to objectively detect whether or not environmental restoration is achieved or approximated following the lead remediation project.

Based on our experience and observations with Exide's 1983 dredging project, Exide has yet to address the short term impacts of resuspended sediment associated with its proposed hydraulic dredge project.

Hydraulic dredging is analogous to the action of a kitchen blender where its spinning cutterhead cuts into and breaks up the bottom sediment deposits into small pieces, allowing water to mix with the resuspended sediment to make a fluid-like slurry of about 80 to 90% water and 10 to 20% solids which is then sucked up by a pump and pushed through a floating pipe to the sediment treatment and disposal area. The resuspended sediment typically occurs with dredge-induced changes from a reducing environment to one in which the contaminants are subjected to significant changes in dissolved oxygen, temperature, light, ph, salinity, and water content that may increase their bioavailability and acute toxicity to protected species and their life forms.

In addition to the turbulence generated by the turning motions of the cutterhead, ladder-boom, relocation of dredge barge and service vessels over the bottom, the presence of submerged trash, stones, logs and related debris impede and foul the dredge creating more turbulence until they can be cleared and removed. Further turbulence and transport of resuspended sediment occurs with the reversing tidal and river currents, upland runoff, wind and rainfall.

The resuspended sediment has several forms or phases of development depending on the specific project operation, sediment types, and proximity to the dredge head, but typically include a plume of resuspended solids in the water column transitioning to an unconsolidated semi-fluid mass of flocculated organic matter and fine-grained sediment particles in a mud wave moving along the bottom away from the dredge head.

In general-navigation projects where dredging is used to maintain channels with environmentally "clean" sediments, a simple floating silt curtain is often used to mitigate adverse effects by containing resuspended sediments and impeding their discharge from the active dredge cell or area so that non-target areas and life forms will not be adversely affected by the project. Contaminated sediments are another matter entirely,

requiring significantly different mitigation measures in the form of specially-designed silt curtains, redundancy, or the use of cofferdams to protect non-target areas and organisms. If Exide's proposed silt curtain functions as did the 1983 unit, we can anticipate significant impacts beyond the dredge cell in non-target areas.

As noted in the SedRAP and depicted in the photos of the 1983 dredge project, the resuspended sediment spreads out in the water column and along the bottom throughout the dredge cell This resuspended material of unconsolidated sediment and fine-grained organic matter is typically measured as total suspended solids within the plume or cloud of discoloration in the water column. If contaminated, this resuspended material settles on both contaminated and uncontaminated bottom surfaces within the dredge cell, necessitating the expansion of the dredging project to chase down and recover errant exceedances. This secondary recovery action results in increased volume and handling/treatment expenses, more time, and increased destruction of vegetation and habitat that would have otherwise remained protected and intact.

(1) Exide proposes to monitor the water column silt plume and near-bottom mud waves for their optical properties or signature to determine if contaminated resuspended sediment is discharging from the dredge cell curtain and thereby impacting protected spawning species. Exide must then be able to equate these optical turbidity units to total suspended solids and the concentrations of potentially toxic constituents in the resuspended sediment so that dredging may be stopped immediately if contaminants discharge from the dredge cell.

Exide has not provided any test data to describe the physical or chemical status of contaminated resuspended sediments relative to its proposed use of optical data units to monitor plumes and mud waves.

(1) No bench test or field trial data have been submitted as to the volume of resuspended sediment to be expected with this dredging project; no data are provided for any contaminants associated with the resuspended sediment; no data are provided for any potential acute toxicity of the resuspended sediment on the species and their life forms (e.g., adult spawning river herring, shellfish, shellfish larvae in the water column, and spatfall) that Exide proposed to protect during their critical spawning periods.

(20) Exide has not provided a debris survey or any data on the nature and extent of submerged obstructions that may interfere with and foul the dredge causing increased exposure to resuspended sediments. (19)

(24) Exide has not provided any test data on the proposed silt curtain (to be suspended at least six inches off the bottom) or its effectiveness in containing potentially contaminated resuspended sediment within the dredge cell. (20)

(22) Exide did not include any list of references for its literature citations, but a search of the literature found many publications addressing dredging methods, environmental impacts, and practices for mitigating impacts on aquatic resources and eco receptors – the Army Corps of Engineers has a remarkably effective dredge research program whose knowledge-base is readily available for projects such as these. (21)

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2.2.2 Long Term
Exide notes the long-term advantages of reduced lead contamination in the river sediments, but does not address long-term adverse effects.
The dredging project will do several things as observed in the enclosed 1983 and 1985 photos:

1. To provide a clean dredging bottom surface, the project will cause the removal of all significant physical structural elements of the river bottom in terms of logs, stones, and related materials thereby destroying habitat conditions for both plants and animals.

2. The removal of submerged debris and the dredge's mechanical agitation of the bottom sediments will leave a smooth, relatively level, homogenized mud substrate having little diversity and value to plants and animals.
3. The dredging of deep contaminated sediments will involve creating or aggravating significant areas of deep lifeless sumps or pits on the bottom of the river. These dredged holes or craters, some up to three feet or more in depth, will typically fill with fine-grained organic matter characterized by acidic conditions, low or no dissolved oxygen, a rotten-eggs odor, and incapable of supporting plant and animal species associated with the natural river bottom. Exide characterizes these sediments as black pudding and black mayonnaise.
4. These changes may approximate a veritable biological desert as the river has been dammed since 1700 during which time it has acquired a great variety of habitats and conditions that support the plants and animals found there today.

(4) These conditions may be mitigated by Exide by providing for the future refilling of its dredged sumps with clean soil material and by restoring the submerged structural habitat elements, logs, stones, etc., on the bottom following the dredging project.

(15) Exide should continue to monitor lead concentrations in eco-receptors following its remediation activities to ensure that the health advisory on blue-clawed crabs will eventually be removed.

Further, Exide should conduct a quantitative pre-dredge base-line survey of plants and animals in the affected areas and provide a long-term monitoring program so that it may document when the remediation project may be successfully concluded by Exide's success in achieving the reestablishment of plant and animal communities equivalent to the pre-dredged condition in Mill River or to the Reference Sites.

(23) Exide should be held accountable for continued long-term mitigation until the river is restored and the lead impairments and health advisories are no longer needed. (22)

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2.3 Cleanup Criteria
Exide notes the need for a statistical analysis to determine the probability of a successful sediment remediation effort based on sampling of the residual lead concentrations in the sediment to determine if they are within the 95% confidence interval for the clean-up criteria; and if any individual sample location has a lead concentration greater than twice the clean-up target level it will need to be addressed in a post-remediation environmental net benefit analysis of the merits of any supplemental efforts to clean it up.

Comment:
Exide proposes to sample for residual lead according to a pre-determined pattern and range in the 0" to 6" bottom sediment. That sampling schedule should be expanded to require sampling of the near-bottom layer of unconsolidated sediment in the mud wave along the water-soil interface, as well as the deep sumps that Exide created or enlarged during its dredge remediation activities. Otherwise, the potentially contaminated semi-fluid sediment layer lying above the bottom and in the deep holes where contaminated sediment will collect may not be encountered during grid sampling and could subsequently recontaminate other areas when river currents redistribute materials in the channel. (24) (23)

(25) Exide's undefined post-remediation net benefits analysis and supplemental remediation alternatives need to be described in more detail. For example, is Exide contemplating alternatives of doing nothing to mitigate residual exceedances, or a capping operation of clean soil material over the bottom residual lead exceedances (which (22)

may be compromised by future chromium remediation efforts), or of establishing a dedicated fund for future support of mitigation activities in Mill River?

Page 9
3.0 Mill River Current Conditions
Exide describes the various remediation areas (Areas I-V), depicted in Figures 1 & 2, Drawings 1 and 2, with respect to their physical features including bathymetry, topography, tidal regime, road crossings, pipe outfalls, structures, and history of the tidal dam and earlier gravel mining operations above I-95 for construction of the Connecticut Thruway.

Comment:
The Exide report notes the 300 year old tidemill dam and one may expect that the impounded mill pond may cover both Colonial and Native American materials, but does not reflect any pre-dredging survey or provision for artifacts of historical or archeological significance that may be encountered in the course of the project. Exide should provide for such eventuality.

The tidal dam structure (tidemill) is over 300 years old and has suffered damage in that time period. The concrete spillway on the east side of the tidemill island was constructed by the town when it replaced the old wooden tidegates at different times in the 1950s and '60s when it believed that the town owned the dam. In 1985-87 the concrete spillway was seriously undermined to the point where the river drained out beneath the spillway and exposed the lead-contaminated river bottom sediments upstream. Dr. Kueffner, tidemill dam owner, requested that the town assist him in repairing the breach in order to protect the contaminated river sediments from scour and redistribution downstream until they could be remediated by Exide. The Conservation Commission approved the project and the Conservation Department crew repaired the leak by placing sand bags in the bottom breach where the colonial foundation stones were washed out of position beneath the dam. Our SCUBA repairs were temporary in that they were merely sand-filled bags placed on the up- and down-stream faces of the dam breach and had to be replaced in 1987. They have apparently remained in position since that time, but no assessment of their condition has been made since installation. The entire multi-year Exide remediation proposal is uniquely dependent upon the structural integrity of the tidemill dam, but Exide has not provided any information as to the condition of the structure, or what Exide is prepared to do if the structure is compromised during or after the dredging activities. Exide should be required to provide such information and a response plan before receiving approval for the proposed SedRAP.

Exide proposes to conduct its remediation activities in the river (mill pond) above the head of navigation at tidemill dam. The dam is apparently the property of the Tidemill owner, while the bottom of the river and Mill Pond is owned by various entities, including Tidemill and Exide. Exide depicts its ownership of the bottom of Mill River (see Figure 9) where the property extends into the river on the easterly side of the main channel between the Post Road and the railroad. This property configuration is derived through Exide's acquisition of the aluminum factory which received it from the prior owners Lacey and Sturges. The remainder of the mill pond property not conveyed to Exide appears to rest with the successors of Sturges. The river bottom property above I-95 appears to be owned by the riparian owners along the shoreline who provided their permission to the turnpike construction contractor to dredge their property for sand and gravel. Ownership of the affected property in the proposed remediation plan is important to what the owner may allow in terms of dredge or cofferdam placement and excavation, existing and possible contamination or recontamination, deployment and location of silt curtains, diversion of upland tributary stream flows away from dredge cells, possible impacts to and integrity of the tidemill dam and other shoreline structural conditions, and condition of the property following the conclusion of the remediation effort. In addition to its own property holdings in the river, Exide

(9) should revise the proposed SedRAP and provide a delineation of all property ownership for the properties located within the remediation areas above the head of navigation at the tidemill dam (I-V).

On the Drawing Set submitted with the proposed SedRAP, Exide has superimposed the elevation 5 contour over the base topographic map detail thereby obscuring the elevations which determine the boundaries between the state's tidal and the town's inland wetlands and watercourse jurisdictions. Exide should submit revised (10) drawings that clearly depict all contour lines and relevant elevations along the shore as well as all soils and the upland setback review areas as depicted on the Fairfield IWWC maps; and the newly defined tidal areas State Jurisdiction Line; so that the Fairfield Inland Wetlands Agency may make a determination of any regulated areas and regulated activities associated with the proposed SedRAP.
(More about this matter in the IWWC section at page 73.)

(23) Exide depicts the town's west-trunk sanitary sewer siphon with its twin pipes approximately two to four feet deep in remediation Area V .beneath the river at Henderson Road. Exide should provide plan, section, and (24) profile views of this important structure to minimize risk of disturbance to the sewer siphon.

Exide has not depicted any sampling within the large culverts of the I-95 river crossing between remediation (11) Areas I and V and it is unclear if Exide has already sampled this area or if it intends to sample this area following dredging in case the area is contaminated. Exide should clarify the status of any sediment samples from the I-95 culverts and indicate if it intends to include them in its pre-and post-remediation sampling program for Areas I and V.

(12) The SedRAP is silent on the status of the railroad drain as a potential source of lead to the Mill River.

Page 17
In the proposed SedRAP Exide describes the broad concepts and general methods of the proposed remediation project, but provides no details. Exide states that the details of the remediation project are not known at this time, but will be developed by Exide and the contractor after the SedRAP is approved through its bid (26) documents, the contract documents, and by the successful bid contractor when it provides plans for actually conducting the work. In light of this approach to the project it makes it is impossible to determine at this time whether or not there are any IWWC regulated activities in regulated areas. It may be necessary to wait until the successful bidder submits its statement of work and the related plans and details for each Remediation Area and then the Wetland Agency may use that information to determine if an IWWC permit application is required. (25)

Page 17
3.2 Sediment Lead Distribution
Page 19, 3.3 Physical Characteristics of Study Area Sediments
Page 20, 3.4 Hazardous Waste Characteristics of Study Area Sediments

Based on over 2,000 sediment samples, Exide reports that the highest average sediment lead concentrations are present in Area II (mill pond) with the next highest in Areas I and III. These areas also have some of the deepest sediment lead deposits beneath the water column. On page 20, Exide reports that it encountered sulfide-reactive sediment materials and hazardous waste conditions including TCLP lead (toxicity characteristic leaching procedure) requiring special treatment and disposal at a hazardous waste facility. Exide anticipates the need to add chemical stabilizers to the dredge slurry in the on-shore treatment facility, but expresses no concern and offers no treatment suggestions for such hazardous materials that may be mobilized in the water column by dredging and transported as dissolved or particulate matter with resuspended sediment flowing out of the dredge cell into non-target areas and adversely affecting protected spawning species. Further, with respect to Overall

Benefits Analysis and Socio-Economic Issues, in section 4.4 (page 27) Exide finds "That risk to humans through consumption of fish/shellfish or ingestion of lead-contaminated sediment is substantially elevated in Area II, and elevated in Area I, with no substantial risk in Areas III, IV, & V." The risk of incidental ingestion of lead-contaminated sediments through such activities as swimming "is deemed to be substantially elevated in Area II and elevated in Areas I & III, with no substantial risk in Areas IV & V" and thereby concluding that only a net benefit would be gained by dredging the river.

Instead of a One-Size-Fits-All remediation method to treat both high- and low-risk areas through dredging alone, the above information supports a far more effective approach wherein Exide should be selective and use the open-water dredge system to remediate the relatively low risk Areas while using a closed system cofferdam method to excavate the high risk Areas. The use of a cofferdam in Areas I, II, and III would allow Exide to isolate the worst sediments from the river and dewater and observe the areas to be dredged; clear all debris that would normally foul the dredge; allow Exide to directly obtain confirmation samples of residual lead and be able to chase any lead exceedances without resuspending the highest-risk sediments; it would allow Exide to easily replace the excavated sediment with clean material, refill and eliminate its anaerobic sumps; and replace submerged structural habitat elements. If the cofferdams were installed prior to the protected spawning periods, Exide would avoid in-water disturbance to spawning species and could continue to conduct these cofferdam activities within the protected spawning periods. Exide already owns the easterly shoreline and a large portion of the bottom of Mill River in Area II, with State ownership in Area I and Tidemill in Area III. Concerns for flooding due to cofferdam encroachment on the river are acknowledged and may be ameliorated by avoiding encroachment within the cross-sectional areas of the existing river control sections of the Railroad and Post Road bridges. With this dual approach Exide could work within the cofferdams during the spawning season, and dredge with appropriate silt curtains outside of the spawning periods, thereby protecting ecological receptors, achieving the most successful residual lead targets in the sediments, and saving a great deal of time and expense in the project.

(13)

Page 22
3.6 Federal Wetlands Delineation
And Drawing Set Dwg.. #11 and #12
Exide notes the need for state and federal wetlands delineation by survey and map, but does not depict on drawings 11 and 12 the soil flag numbers, the soil types, or identify any municipal IWWC watercourses. Exide omits the Federal Wetland Delineation Transect for Area I, and Drawing #11 also apparently omits soil delineations along the southeast section of the I-95 shoreline for Area I. Exide should explain/clarify/complete the missing information. (This discussion continues on Page 73-74)

(27) (26)

Page 22
3.7 Natural Diversity Database (NDDB) Research
As noted above, the relict populations of river herring are stressed in Mill River as well as in the ocean, and Exide's proposed SedRAP of April 2012 should be revised to reflect the on-going review of the 2011 NOAA evaluation of river herring (alewife and bluebacked herring) for consideration under the Endangered Species Act.

(19) (18)

Page 25+
4.0 Human Health and Ecological Risk Assessment and Appendix II, Exponent Sediment Toxicity Study
Exide describes the human and ecological receptors that are affected in the project area and the derivation of the target residual sediment lead concentrations that are protective of those receptors on a chronic basis. Exide goes on to note (page 28, 4.4.2 Short Term/Long Term Impact) that "A proactive sediment remediation alternative (e.g., dredging) is expected to increase short-term risk factors due to physical disturbance of organisms and

potential sediment resuspension thus possibly increasing (in the short term) bioavailability to river flora and fauna." Exide does not indicate how the increased bioavailability of potentially acutely toxic materials is to be controlled in its remediation activities, or how it supports or negates Exide's intentions to allow resuspended sediment to be discharged from its dredge cells and affect spawning fish and shellfish species. This increased short-term risk of bioavailability to ecological receptors, such as spawning fish and shellfish, motivated Exide to conduct its remediation technology search and to propose to the CTDEEP in 2010 that it be allowed to conduct its remediation activities in the Mill River during spawning periods if it could demonstrate protection of protected spawning species. Unfortunately, Exide does not include any information on the short-term risk that it acknowledges, no information on what receptors may be affected, such as shellfish larvae, or when, where, or for how long; no data on the contaminants and concentrations that may be associated with the dredge slurry, or with the resuspended sediment in the water column silt plume or the unconsolidated semi-liquid mud wave migrating near the bottom; no information on the volumes of resuspended sediment involved or potentially discharging from an active dredge cell; no information for any modified elutriate test or bioassay to determine acute toxicity of the resuspended sediment against the spawning species and life forms that Exide proposes to protect so that it may justify in-water remediation activities during their spawning periods. Exide should provide this information before receiving approval of its proposed SedRAP, or restrict its in-water remediation activities to non-spawning seasons.

Page 27
4.4.1 Socio-Economic Issues
Exide notes that its consultant, Exponent, Inc., expects recovery of the remediated benthic community within one to three years, but Exide has not provided any quantitative data on the pre-dredge, i.e., existing, flora and fauna found in the remediation project area in terms of information that can be used following remediation for an objective assessment of its progress in restoring the plant and animal communities in species and numbers to pre-disturbance or Reference Site conditions. Exide, and Exponent, are silent on the environmental impacts of the post-dredging homogenized and leveled river substrates with all dredge-fouling submerged structural elements removed, with new, deeper or enlarged anaerobic sumps or holes excavated in the bottom of the river.

Exide does not describe how or for what time period it will monitor the post-dredging remediation river to ensure its restoration and the eventual removal of the blueclaw crab health advisory and use restrictions for the river.

Page 29+
Remediation Methodology; Figure 6 Remedial Options; Figure 7 Dredging Options
Exide states that "The ultimate over-arching goal is to select the solution, which maximizes the overall benefit to the environment." Exide summarizes five remedial options: Taking No Further Action; Monitored Natural Recovery; Capping-In-Place; Excavation In-The-Dry (Cofferdams) with off-site disposal; and Dredging with off-site disposal; noting associated risks, the advantages and disadvantages, time and relative costs. Exide compares six different dredging methods settling on Hydraulic Cutterhead Dredging as the method of choice for remediation of the lead-contaminated sediments. This one-size-fits-all approach is not conducive to an effective or efficient remediation project. Exide needs to fit the method to the site conditions where there are five different Areas, I-V, with different conditions of topography and bathymetry, contamination, hazardous waste materials, total and TCLP exceedances, vegetation, substrate depths, submerged debris, property ownerships, all of which require adaptive management and flexibility in remediation methods in order to achieve success in the project.

Page 32
5.5.1.1 Hydraulic Cutterhead Dredge

Exide acknowledges the need to control the generation of contaminated resuspended sediment as it is far more difficult and costly to chase, recover, and treat it after its dispersion. Exide notes the ability to minimize resuspended sediment through adjustments to cutterhead speeds, pumping rates, and the use of floating silt screens (suspended off the bottom allowing mud waves to by-pass the curtain perimeter). Although Exide recounts how its in-situ contaminated sediment poses a threat to ecological receptors due to its chronic toxicity and must be removed down to established residual sediment-lead targets, Exide does not explain "why" it is necessary to control its resuspended sediments during the removal process. Exide provides no description of its resuspended sediment with respect to its physical and chemical properties and characteristics or its contaminants, bioavailability or degree of toxicity to protected spawning species in the river. Exide provides no lab or field test information as to the volumes of resuspended sediment that it will generate, how this material may travel through the water column or along the bottom, or what distances it may travel up-stream or down- depending on river and tidal water current conditions. Exide should provide an evaluation of its resuspended sediment with respect to its contaminants and biotoxicity to protected spawning species' life forms with the variables noted above, and describe how it proposes to mitigate any adverse effects consistent with the performance standards noted below.

Exide's SedRAP project is not yet defined with respect to the performance standards within which it must operate. At this time, Exide expresses no knowledge of the volume of resuspended sediment that may be discharged from a dredge cell, or of the degree of contamination of its resuspended dredge sediments, or of their bioavailability or potential acute toxicity to eco-receptors, no idea of how the physical, chemical or biotoxic properties of the resuspended sediment silt plume and mud wave will affect non-target organisms, or be relevant to the optical monitoring instruments proposed to be deployed in a mixing-zone from 100 to 200 feet downstream of the dredge cell in order to signal potential failure of mitigation measures designed to protect non-target conditions in the open river.

Performance standards should include:

1. No discharge of potentially harmful materials outside the perimeter of the dredge cell if these materials could harm the life forms or spawning behavior of the fish and shellfish species intended to be protected during their spawning seasons. Consider the interior of the remediation cell (whether defined by dredge silt curtain or cofferdam) as the mixing zone and the cell perimeter as a point source discharge for these resuspended industrial wastes. If this performance standard cannot be achieved and demonstrated, then Exide should not conduct in-water remediation activities during protective spawning periods.
2. Inventory, if removed, and restore all naturally-occurring materials, such as submerged stones, boulders, submerged logs and other woody debris, to their source locations.
3. Replace all sediment volumes dredged from the river with suitable clean material to restore the pre-disturbance bottom profile and physical habitat conditions.
4. Restore with suitable clean materials, all sediment removed during the creation or enlargement of deep holes and anaerobic sumps.
5. Monitor recovery of post-disturbance flora and fauna and actively restore the site if natural recovery does not approximate pre-disturbance or Reference Site conditions after three years following disturbance.
6. Provide an independent post-disturbance mitigation proposal to accommodate activities and structures needed to achieve river restoration and its flora and fauna if Exide's SedRAP program does not do so.

Page 35,
5.5.3 Summary Comparison of Hydraulic and Mechanical Dredging.

(1) Cites Hayes and Wu (2001) [no list of references cited in the report] finding of a percent solids loss as low as 0.013% with hydraulic dredging – the lowest value. What is the range of values and the average value for hydraulic cutterhead dredging?

Page 36,
5.6 Excavation (in-the-dry) Exide notes the use of cofferdams and their water-tight enclosures with dewatering to expose the bottom sediments presenting the advantage over the alternative of dredging of being able to view the bottom and thereby result in lower residual lead contamination.

Comment: In addition to being able to view the bottom materials and chase lead exceedances in-the-dry to be certain of compliance with residual lead targets, Exide's other advantages include being able to remediate the river sediments during the protected spawning periods without adverse effects from discharges of resuspended sediments to protected species and life forms and thereby effecting a significant savings in time and expense; the ability to remove the most highly-contaminated sediments and hazardous waste conditions in the areas having the highest risk associated with human and ecological receptors without mobilizing these materials in the water column to contaminate non-target areas; the ability to remove all debris and trash that would otherwise foul a dredge with consequent downtime and resuspended sediment; the ability to back-fill all excavated pits and holes in the bottom and avoid or minimize anaerobic sumps; the ability to restore the bottom material and profile with suitable clean material to match the contaminated sediment removed from the cell; the ability to restore all natural submerged bottom materials and structures (boulders, stones, woody debris) to their original condition and locations for restored habitat; avoidance of secondary contamination of uncontaminated and non-target areas and disturbance and loss of valuable vegetation, habitat, time and money that would otherwise be required if dredging were involved.

Exide's list of disadvantages include:

1. Inconvenient access in the residential areas of some of the river remediation sites;
   Comment: This cautionary note applies to Areas III, IV and V , but Areas I and II are substantially industrial in land use, located between I-95 and the railroad with the State of Connecticut as the apparent major property owner with access to the river; and between the railroad and the Post Road where Tidemill and Exide own the river bottom property with Exide's riverbank access from its factory site. These are the most contaminated Areas with hazardous wastes and with the greatest risk to human and ecological receptors and are the ideal candidates for consideration of remediation within cofferdams.

(13) 2. Uncertain bottom conditions to support cofferdam structures;
   Comment: Cofferdams may take many forms – such as Exide's sheet piling that requires sufficient depth penetration in the substrate to resist water pressure. Sheet piling cofferdams may also need supplementary support-piling in some bottom types; and cofferdams may also take the form of earthen berms, sand-filled Geotubes, Porta-Dams, or other designs, depending on the project site conditions. Exide is uncertain of site conditions because it has not yet investigated the river bottom remediation Areas in terms of their ability to support the use of cofferdams. Exide should investigate these bottom conditions and determine their ability to support various cofferdam designs as a viable alternative remediation method.

3. Disturbance to river sediments from driving and removing sheet piling;
   Driving and removing sheet piling may disturb river sediments, but typically to a lesser degree than the sediment disturbance associated with hydraulic dredging; and any cofferdam's sediment disturbance may be mitigated with a suitable temporary silt curtain until the cell wall is intact or subsequently

removed. If the in-water construction of the cofferdam wall is completed before the dates of the protected spawning seasons, then the enclosed contaminated sediments in the cell may be excavated during the spawning seasons.

4. Localized diversion of river flow around the cofferdams with possible scour and redistribution of potentially-contaminated sediments.
   Comment: This concern bears further investigation to determine if Exide's assumption holds in specific areas (see Drawing #8).
   I. Exide's Area I lead-contaminated sediments are primarily located in the quiescent area to the west of the main channel which focuses water currents flowing from the I-95 culverts into the railroad bridge thereby providing an apparent opportunity to isolate the most highly contaminated sediments within a cofferdam cell without significantly affecting scour of other sediments.
   II. Exide's Area II lead-contaminated sediments are primarily located in the mill pond area located to the easterly side of the relatively uncontaminated channel on the west side of the river which flows directly from the railroad bridge to the Post Road bridge. This configuration appears to allow the construction of a cofferdam wall on the easterly side of the channel between the Post Road and the railroad without significant scour or disturbance to potentially contaminated sediments.

Page 38
6.0 Sediment Processing Options

Page 45
7.0 Material Handling and Disposal
Page 49
7.5 De-Watering Wastewater Handling, Treatment & discharge
Exide notes that its dredge pipe slurry water must be treated and discharged back to the river because its volume will exceed the capacity of the town sanitary sewer system. This discharge of treated dredge slurry waste water into the Mill River constitutes an industrial waste treatment point-source and will require an NPDES permit application under the Clean Water Act.

It appears that the proposed hydraulic cutterhead dredge cell (where typically reduced contaminated sediments will be mechanically agitated and diluted with water of different acidity, dissolved oxygen, etc.) will also be a point source of potential industrial waste discharges in the form of contaminated resuspended sediment from the dredge, contained within the mixing zone of the dredge cell, and, if it escapes, will be subsequently discharged from the dredge cell into the receiving waters of Mill River where it may contaminate non-target areas and, through potentially toxic effects on protected species and their life forms, significantly impact these ecological receptors. In light of the experience in Exide's 1983 remediation effort of the mill pond with its discharge of resuspended sediment out of the dredge cell (see photos), Exide should investigate all aspects of its dredged resuspended sediment with respect to the nature and extent of its constituents, its contamination, any acute biotoxicity, its volume, its characteristics in the mixing zone of the dredge cell, its forms and modes of transport, and the distances it may travel to impact downstream receptors.

Page 50
8.0 Controls
8.1 Fugitive Sediment Mitigation
Exide notes that the redistribution of some sediment is unavoidable during the implementation of any dredging project, and asserts that the mitigation objectives are to localize sediment redistribution as much as possible through the use of best management practices, engineered controls and monitoring of turbidity.

Exide does not indicate the nature of its resuspended sediment nor does it identify its degree of contamination; potential bioavailability, any acute toxicity, or what risk it might pose to ecological receptors and therefore Exide cannot defend its proposal to conduct in-water dredging activities during protective spawning seasons. Exide's proposed silt plume monitoring program and procedures using optical instruments and visual observations have not been connected in any way to the physical, chemical, or biological properties of the resuspended sediments in order to be able to determine if the proposed mitigation and monitoring systems, distances, depths, or any other variable or sampling results are protective of the environment and ecological receptors.

8.1.2 Turbidity Mitigation

Exide's consultant, CCA, recommends that the successful bid contractor use the American Boom & Barrier Corporation's Model PC-2 silt curtain as it performed satisfactorily with the tidal currents in the Thames River. Exide states that the silt curtain will not come in contact with the river bottom (it proposes to deploy the silt curtain six inches off the bottom). Exide does not indicate the nature of the project at the reference site (for navigation or remediation?) or how it deployed the curtain with respect to the bottom, or what performance standards were evaluated with respect to satisfactory performance of the silt curtain in terms of mitigating the discharge of resuspended sediment from the dredge cell, e.g., what was the configuration of the silt curtain; what was the physical nature and volume of the dredged sediment, the contaminated status of the resuspended sediments, what volume or percentage of the total was discharged from the dredge cell as resuspended sediment? These concerns are important to the applicability of the silt curtain product to the Exide remediation site in light of the release of contaminated resuspended sediments in the 1983 mill pond hydraulic cutterhead dredge remediation project where the additional dredge volume, 283 cu. yds., removed from the cell represented 6.9% of the design volume and did not include the suspended sediment in the plume and mud wave that discharged from the cell silt curtain.

In Drawings #13 and #14, Potential Dredge Cell Layout, Exide depicts 16 potential silt curtain layouts in the four remediation Areas, I, II, III, and V, that, while their final layout will be decided by the successful bid contractor, will have an effect on spawning species, especially river herring on their spawning runs. These silt curtain configurations must encroach on the width of the river to some extent and they will reduce the apparent control points along the river and at the tidal dam and bridge locations to approximately one-third to one half of the original width of the openings. With Exide's consultant, CCA, only recommending the use of the PC-2 silt curtain suspended one-half foot off the bottom and the bid contractor who may decide on a different silt curtain and a greater distance off the bottom, we may expect that there will be significant adverse effects on the river herring spawning run for several reasons:

1. The Mill River blueback and alewife river herring on their spawning runs represent relict populations of species whose spawning habitat has been truncated by upstream dams and whose numbers have diminished in their range, due to dams, poor water quality, overharvest, etc., to such an extent that NOAA found them worthy of evaluation under the Endangered Species Act.
2. The Tidemill Dam represents a significant physical barrier to the fish such that they can only swim over the spillway at the highest high tides and must scoot or may not get over at all on normal and neap tides unless there is sufficient outflow of the river; and while waiting for the tide to rise they are diminished in numbers by every finned, furred, and feathered predator waiting for them along the artificial obstructions of dams and silt curtains in their passage.
3. The cross-sections of the river channel and bridge openings are not uniform and the silt curtain layouts may not physically allow sufficient area or depth for the fish to pass by the silt curtain structures and bottlenecks without adverse effects.

4. If the 1983 Exide mill pond lead-contaminated sediment remediation experience with its cutterhead hydraulic dredge serves as an example, then we may expect that the spawning herring will encounter silt plumes and mud waves of contaminated resuspended sediment being discharged from the active dredge cells into the water column of the bottlenecks – both during the dredge operation as well as during the dredge down-time and overnight – as the river, tidal, and upland runoff water and currents redistribute the lead-contaminated resuspended sediments.

To mitigate these impacts:

1. Exide should not conduct any in-water remediation activities that generate resuspended sediments discharging outside of the dredge cell within any protective fish or shellfish spawning season.
2. Exide should define the geometry and substrate conditions of the minimum cross-section of river channel required to pass spawning herring without any adverse effects on their behavior and meet that configuration as a performance standard for all remediation efforts and activities.
3. Instead of suspended off-bottom silt curtains, Exide should use the "engineered" silt curtain designs, e.g., Gunderboom, that its representatives researched and described during the November 10, 2010 CTDEEP meeting in which Exide requested an exemption from dredging prohibitions during protective spawning seasons if it could demonstrate no adverse impacts on the protected species.

Page 52

In describing its deployment of silt curtains and the need to protect them during storm events, Exide states that its silt curtains will be retracted, pulled up from the water column and secured to the float line, in advance of storm events. Such action to remove the protective silt curtain from an active dredge cell and allow storm-driven river or tidal currents to flush the disturbed sediment materials out of the cell will facilitate the mobilization of contaminated resuspended sediment throughout non-target areas and protected spawning species. Exide should provide revised plans that will mitigate these adverse effects.

From its 1983 experience with the cutterhead hydraulic dredge working within the dredge cell defined by the Post Road and railroad embankments and a floating silt curtain along the westerly side of the mill pond, Exide may expect to find during its SedRAP implementation that the dredge-disturbed resuspended sediments will create contaminated silt plumes and mud waves of unconsolidated semi-liquid flocculants and fine-grained organic matter and sediment that will recontaminate areas that have been successfully remediated and contaminate initially clean areas having no exceedances – both within the active dredge cell and outside of the active dredge cell.

Exide's Drawing #13 and #14 depict three project categories of river bottom within the five remediation Areas I – V, the shaded gray areas of lead-contaminated sediment exceedances comprise 37% of the total area within all silt curtains located above the Tidemill Dam (in areas I, II, III, and V); the clear unshaded areas within these silt curtains amount to 55% of the total; the areas labeled "No Dredging Required" amount to 8%. If Exide's 1983 hydraulic cutterhead dredging experience is used, and it is the only test or trial noted by Exide and described in the SedRAP, Exide may expect that 37% of the river bottom will drive secondary remediation efforts over the remaining 63% of the total area with commensurate commitment of time and expense. The necessary redredging of 283 CY after the targeted 4,100 CY had been remediated in 1983, suggests that there may be a 6.9% resuspended sediment variable as an overdredge requirement that is not accounted for in Exide's proposed remediation – recovery projections; which would be even greater if it included the unknown volumes of silt plumes and mud waves discharged from the silt curtain. This behooves Exide to design its dredge cells as small as needed to remediate the target areas, and construct the dredge perimeter wall as tightly as possible, e.g., with cofferdams whenever feasible.

Page 52
8.2 Turbidity Monitoring
Exide proposes to deploy sensors to monitor the optical properties of resuspended sediment in the water column "to ensure that any resuspended sediment is kept to a minimum and limited to the area immediately adjacent to the dredge intake and, in particular, does not migrate outside of the turbidity curtain constructed around the remediation area being dredged.", but Exide does not propose to meet this performance standard nor does it explain why it is desirable to minimize resuspended sediment, or if the monitored visual and optical cues will be adequate to protect ecological receptors.

If this were a conventional navigation project involving maintenance dredging of "clean" sediments, its primary concern would be to minimize resuspended sediment that could stress spawning species in many ways such as by physically interfering with or altering their behavior, or by silt-smothering of adult and juvenile life forms of shellfish, etc. With contaminated materials, in addition to their physical properties, resuspended sediments present a completely different and more complex condition whose potential impacts have far more significance to non-target and protected species (and their life forms and life stages found during the protected spawning seasons) in the affected area. Exide has not yet described its dredge slurry or the resuspended sediment plume or mud waves and their "action levels" in terms of their constituents and potential contaminants; it provides no information on potential contaminant bioavailability or acute toxicity to protected spawning species; it offers no information as to how it will translate the physical, chemical, and potentially biotoxic properties of the resuspended sediment to the optical properties it proposes to measure in the water column in order to protect non-target areas and animals.

Page 53
8.2.1 Equipment
(14) Exide proposes that a wireless local area network be used to relay optical monitoring instrument signals (nephelometric turbidity units or NTUs) to representatives of the remediation contractor and Exide's representative, CCA and to their cell phones whenever an exceedance is detected whereupon remediation operations will be immediately halted. To enhance public understanding and provide for public education and information, Exide should provide a public website for registering such monitoring exceedances and a forum for comment and explanation of its activities and progress in achieving remediation of the river sediments.

Page 53
8.2.2 Monitoring Locations
(1) Exide proposes to locate its monitoring instruments approximately 100 and 200 feet from the outside of the turbidity curtain without knowing if the 100 – 200 foot intervening discharge mixing zone is adequate to protect non-target areas and species from the adverse properties of the resuspended sediment. Exide should define the mixing zone to be within its dredge cell perimeter, and the "action level" to be any discharge of resuspended sediment from its remediation cell.

Page 54
8.2.2 Monitoring Locations
Exide proposes to use a mid-depth monitoring location for its NTU measurements, and in deep water (greater than ten feet) allow the Engineer to use its observations to decide if two depth measurements are warranted – at one-third and at two-thirds of the depth at such location. These depth locations are not unreasonable, but should be supplemented with a third sample array by depths and locations at every active dredge cell so that Exide will monitor the resuspended sediments being discharged from the silt curtain – especially those associated with any silt curtain suspended off-bottom.

Page 54
8.2.4 Parameters
Exide proposes to use action levels based on background turbidity levels without knowing the relationship between these levels and the degree of threat posed by the proposed 5 NTUs of contaminated resuspended sediment above background level (between 0 – 20 NTUs) and a 35% increase over background levels above 20 NTUs. Exide should define the properties of the resuspended sediments, their potential adverse effects on protected spawning species, and how these properties relate to the optical and visual properties that Exide proposes to use in determining action levels.

Page 55
Figure 10, Turbidity Monitoring Station Placement
Exide proposes to use in-river turbidity monitoring stations above and below the active dredge cell to determine the net difference for its action-levels when monitoring upstream background or ambient levels of turbidity, but Exide does not acknowledge the potentially significant probability of "upward creep" of the background NTU readings due to river- and tide-mobilized resuspended sediment travelling up- and down-stream outside the dredge cell to artificially bias the readings of background sediment and thereby artificially increase the acceptable levels of resuspended sediment before action-levels are noted. Exide should reexamine its proposal to eliminate this potential bias in its monitoring program.

Page 56
8.2.5 Action Levels, Record Keeping & Reporting
If its NTU action levels are exceeded, Exide proposes to use a time-driven sequence of inquiries, inspections and samples to seek to determine the possible cause of such exceedances thereby rendering uncertain its section 8.2.2 Monitoring Locations (page 54 statement that dredging operations will halt if one of two readings exceeds a turbidity limit. Exide's proposed sequence no longer includes a directive to cease dredging activities as it did in Exide's first edition of the SedRAP of October 2011 (page 55 "Dredging operations will be halted if the background turbidity value is significantly exceeded...."). Exide should reinstate its directive to halt dredging operations if exceedances are encountered. Exide should define objective parameters of what constitutes "significance" for evaluating any exceedances of action levels.

Page 8.3 Confirmation Sampling of River Sediments
Exide proposes post-dredging residual lead-sediment confirmation samples from the remediation areas according to a predetermined grid pattern and collected from the top six inches of dredged river bottom and references shaded areas in attached drawings for further detail.

Exide should state specifically which set of shaded drawings it is referring to, e.g., 5 & 6; 7, 8 & 9; or 13 & 14.

Exide should expand its sampling program to capture the potential layer of contaminated and unconsolidated semi-liquid flocculated materials of resuspended sediments in the interface between the water and the bottom substrate of dredged and undredged sediments within the dredge cell as well as those nearby bottom areas outside of the active dredge cell.

Exide should expand its sampling program to include all created or enlarged bottom sumps or holes due to dredging where potentially contaminated fine-grained material will tend to collect.

Exide should expand its sampling program to monitor SedRAP remediation parameters in comparison with implementation results, in terms of residual sediment depths achieved; volumes of sediment disturbed, and removed; mass balance of contaminants; residual lead concentrations achieved.

Exide should expand its sampling program to include RCRA metals, especially chromium, and fecal coliform bacteria as these constituents may also be found in close association with the lead-contaminated sediments; all three constituents are causes of the impaired waters of the Mill River and Southport Harbor; and may significantly affect the success of the remediation effort.

Chromium is of importance in order to know if this pollutant has been mobilized during lead remediation activities; if the removal of lead-sediment deposits has exposed residual chromium sediment exceedances that were known, but not exposed, earlier; or if lead remediation activities have resulted in contaminating new areas with chromium where there was no chromium detected in pre-dredging sampling efforts. In such cases, the questions arise as to who "owns" such contaminated material and who is accountable for its remediation?

The highly organic sediments and shallows of the remediation Areas (I -- V) in Mill River are potential sources not only of heavy metals, but also of fecal coliform bacteria received from animals, failing septic systems, and other non-point source pollutants in the watershed. The shellfish water quality in Southport Harbor is determined by such bacteria as is the success of Fairfield's commercial and recreational shellfishing activities depending on relay access to these waters. Exide's dredging activities may mobilize such concentrations of heavy metals and bacteria that shellfish water quality may be compromised and the shellfishing waters closed during Exide's in-water remediation activities. Exide should provide data and information on the potential bacterial contamination of shellfish waters and describe its proposed mitigation to counteract such impacts.

Exide should post its post-dredging remediation residual lead-sediment results to its public I & E website for each remediation Area (I-V) as it progresses through the project.

Page 64
9.0 Concurrent Out-of-River Remediation
Exide limits this discussion to the remediation of the upland riverbank area along the easterly side of the mill pond adjacent to the factory property.

Exide should add a new section to include Concurrent In-River Remediation for the restoration of the structural elements of submerged habitat (natural debris such as stones and boulders, sunken logs and woody debris) restored to their locations as mapped during Exide's remediation activities in Areas I-V, as well as replacing clean sediment material where Exide excavates the bottom of the river.

Page 72
10.0 Post-Remediation Monitoring
10.1 Sediment
Exide proposes a single post-project study area-wide sampling effort to confirm the effectiveness of the remediation project using the top six inches of substrate on a pre-established grid system.
As noted in the earlier discussion of Chapter 8 for the "real time" confirmation sampling of the river bottom before relocating the dredge and silt curtain, Exide should expand its sampling to include the potential layer of contaminated and unconsolidated semi-liquid flocculated materials of resuspended sediments in the interface between the water and the bottom substrate of dredged and undredged sediment areas, as well as all sumps and holes in the bottom of the river; for RCRA metals, especially chromium.

Exide's monitoring proposal appears to be limited to the one-time post-remediation mapping effort for residual lead. Exide needs to revise its proposed SedRAP to include a new section 10.2 Long-Term Environmental Conditions and Ecological Receptors.

Exide should expand its long-term annual monitoring program with an objective sampling program to quantify flora and fauna in the river until such time as these disturbed riverine communities approximate the pre-disturbance baseline condition or that of the Reference Site locations.

Exide should expand its annual monitoring program of blue-clawed crabs to determine when the associated health advisory for lead may be safely removed.

Exide should expand its long-term monitoring program to include the sumps and holes that it created or expanded and refilled with clean material until they approximate adjacent non-sump areas for plant and animal species.

Page 73
11.0 Project Permitting and Figure 13 (page 74)
Exide acknowledges the need for state and federal permits some of which have already been approved. In its first edition of the SedRap of October 2011 page 71, Exide noted that site conditions may require that Exide revise or modify its existing IWWC permit or apply for a new IWWC permit. In this April 2012 draft, Project Permitting and Exide's Figure 13 Permitting Summary, Exide does not acknowledge any municipal regulations with which it must comply, although it notes that it is relying on the assistance of soil scientists and local permitting experts to evaluate the applicability of any town regulations.

Response:
In a project such as this proposed Exide SedRAP where the company will be conducting activities in the river, where limited tidal action exists placing it under state and federal jurisdiction, and on and above the riverbank in soils and watercourses where federal and municipal IWWC jurisdiction may exist, the only entity in Connecticut that may determine an inland wetland regulated area through its interpretation of relevant information and definitions is the municipal inland wetland agency, i.e., the Fairfield Conservation Commission; which agency also uniquely determines what activities may be considered regulated activities in the context of the IWWC regulations.

When an activity is first proposed in Fairfield, the IW Agency initially relies on its official 100-foot scale IWWC Regulated Areas Maps to acknowledge regulated areas which consist of wetland soils, watercourses, and setbacks or upland review areas, often supplementing that mapped information with site inspections and the potential applicant's and IW Agency's soil scientists' delineations of the area in question. In areas influenced by tidal action the state has regulatory jurisdiction within which municipal regulation is excluded, and any municipal IWWC regulated areas will be determined to exist above the state's jurisdiction line which was previously defined as the elevation of property located one foot above local extreme high water, but is now defined by the Connecticut statutes to be a State Jurisdiction Line which has been recently established by the CTDEEP in each municipality along the Connecticut coast. Exide has not yet depicted the State Jurisdiction Line on any of its drawings, but it will need to do so on all maps so that the IW Agency may determine where its lower IWWC boundary may exist.

On its maps, Exide has apparently not yet depicted all wetland soil areas of the remediation project, nor identified the soil types that it has depicted, nor depicted the soil flagging by their unique numbers typically associated with a soil mapping effort. The Fairfield official IWWC maps depict wetland soils, watercourses and 144-foot setback upland review areas in and around the remediation project and neither set of maps, Exide's or the town's, depict the State Jurisdiction Line.

By essentially leaving the remediation project details up to the successful bidding contractors, Exide has not proposed any specific actions, structures, or locations to enable anyone to determine that a regulated activity is proposed in a regulated area and so may require an IWWC permit application. In light of these facts, Exide should provide the following to the IW Agency:

Provide preliminary IWWC compliance topographic maps/plans depicting all standard contours within the project area; depict the Connecticut State Jurisdiction Line (SJL); depict the regulated areas as indicated on the official IWWC maps of the Town of Fairfield; provide a composite map of Exide's soil map, and the surveyed numbered soil flags between the SJL and the 144-ft. buffer upland review area boundary as placed by a soil scientist retained by the IW Agency [the Agency to be reimbursed at Exide's expense]; depict the watercourses that exist within the 144-ft. buffer upland review area; depict all contractors' temporary and permanent activities and structures in their intended locations that Exide proposes to implement in this remediation project; depict any 10-ft. setback around all such activities and structures as required in the regulations of the Office of Long Island Sound Programs [CTDEEP General Permit for Coastal Remedial Activities Required By Order Sec. 3.(b)(2)(F). After reviewing these data and the site, the IW agency may then make a determination as to whether there are any inland wetland regulated activities in regulated areas and the need for any final plans and property owners' consent.

Page 76
Figure 14 Revised Implementation Timeline
Exide's timeline specifies remediation of river sediments in a generally downstream direction, Areas I, II, III, IV, and then upstream to Area V. Remediation activities in rivers typically proceed downstream in order to capture contaminants that may have been mobilized during the project. Exide should explain its objectives in the reversed sequence for Area V and describe its intentions with respect to capturing potential contaminated resuspended sediments downstream of Area V.

Although not addressed in its SedRAP, in its regulatory permit applications Exide proposes a nearly thirty percent increase in sediment volume to be dredged from the Mill River. Exide should explain its reasoning and sample data behind this significant increase in volume, and indicate its anticipated over-dredge volumes, and the resuspended sediment volumes discharged from the dredge cells.

Exide should revise this SedRAP to reflect the new thirty percent increase in sediment volume and the consequent significant changes to its remediation areas such as, depths, access points, silt curtain layouts, schedules, multi-year timelines, sediment treatment programs, base-line surveys of flora and fauna if new remediation areas are affected, replacement volumes of clean fill material for increased depths, and related project activities.

APPENDICES

Appendix I
Executive Summary of the Sediment Sample Collection and QAPP Report, June 2009

Appendix II
The Exponent, Inc. "Sediment Toxicity Study: Mill River, Fairfield, Connecticut", June 2009
While the chronic toxicity issues were addressed in the study report, there is no discussion concerning potential contamination of the dredge slurry or resuspended sediment in the mud wave and silt plume and related bioavailability or acute toxicity of these materials to protected spawning species and their related life forms

during the remediation project. Exide should provide this information for all remediation Areas and protected species.

Appendix III

Request for Natural Diversity Data Base (NDDB) State Listed Species Review in which Exide describes its proposed dredge project of ± 27,600 cu. yds.
Exide provides a copy of the CTDEEP August 18, 2011 response letter for a finding of no impact which was included in its October 2011 edition of the SedRAP. Exide should update the NDDB review and reflect the fact of NOAA's review of the river herring species for potential inclusion under the Endangered Species Act.

Appendix IV

CCA, Inc. Health and Safety Plan
Exide proposes to use organic cationic coagulants (Solve 416) and anionic flocculants (Solve 9330) that may be harmful to aquatic organisms in the concentrations proposed for treatment of the dredge slurry. Exide should provide information on these constituents in the sediment treatment process and document their neutralization prior to discharge.

Appendix V

Federal Wetlands Delineation Report by Environmental Planning Services March 2009
Exide conducted federal wetland delineation transects for remediation Areas II, III, IV, and V, but did not do so for Area I; nor did it complete the soils mapping and delineation for Area I. Exide should explain this omission or revisit the site and provide these data for an accurate and complete delineation.

Appendix VI

Dewatering Trial Performance December 2009
Exide provides useful information on its dewatering treatment alternatives and their total suspended solids and residual filtrate lead concentrations for all chemical conditioners in the sample trials. Exide does not indicate if its consultants conducted any analyses of the raw (untreated) sample sediment as a composite of sample containers after homogenizing/blending to approximate dredging resuspension of sediment and what that resuspended solid material contained in terms of lead concentrations. If such data are available to Exide, the data should be included in the SedRAP.

Drawing Set

(N.B. All drawings should be revised as needed to reflect the thirty percent increase in sediment volumes to be removed in the remediation project.)

Dwg. #1 & 2: Inventory of Physical Features

The Figure 2 color aerial photograph, Mill River Sediment Study Area (11 X 17), depicts two more pipe outfalls than are indicated on Dwg. # 2 in the area northwest of I-95 north of the siphon sewer and south of Outfall #26. Exide should explain this discrepancy as it may be relevant to its remediation activities.

Dwg. #3 & 4: Mill River Water Column Thickness

Depicts the depth of the river in the remediation Areas

Dwg. #5& 6: Final Intended Dredging Depths (in feet below river bottom) based on the clean-up criteria of 220 and 400 mg/kg of residual lead in sediment.

Exide depicts the areas where new anaerobic sumps or holes in the river bottom will be created or enlarged by the remediation activities. Exide should provide related drawings depicting the restoration of the river bottom profile wherever it is altered by the remediation activities.

Dwg. #7, 8 &9: Dredge Prisms illustrating lead concentration at depth.

#8 – Explain why there are no dredge prisms and no pre- or post-dredging sampling data for the large bottom area (approx. 80' X 150') in the I-95-culvert river crossing. Exide should provide pre-disturbance sampling data for this area as well as include it in its post-dredging confirmation sampling activities.

#9 – Exide should explain why Area V sample location F-17 with a third level lead concentration of 440 mg/kg (in excess of the target of 400) has no dredge prism associated with it.

Dwg. #10: Dredging Depth Cross Sections

In addition to the representative sample locations depicting existing and proposed grades with material to be removed, Exide should provide revised drawings depicting the bottom profile and X-section views of all created or enlarged anaerobic sumps or holes in the river bottom as well as the suitable clean material required to restore the river bottom to predisturbance conditions wherever altered by Exide.

Dwg. #11 & 12: Edge of Mill River Survey Showing Federal Wetlands

Exide should revisit Area I and provide the missing transect and soils data for the Area. Exide should revise the drawings for local, state and federal regulatory agencies and depict the topographic contours for the project area and uplands at a uniform contour interval and in their entirety within the project areas; the State Jurisdiction Line; the IWWC regulated areas as depicted on the official IWWC maps of Fairfield; the IWWC soils as mapped by Exide's and the Wetland Agency's soil scientists; the CTDEEP GP Required by Order Section 3(b)(2)(F) 10-ft. setbacks; upland property lines and in-water property lines where located above the head-of-navigation; and all regulated activities within any regulated area.

Dwg. #13 & 14: Potential Dredge Cell Layout Non-Restrictive of Anadromous Fish Runs

As a performance standard to be applied to the in-water activities and structures of this remediation project, Exide should consult with anadromous fisheries experts and define the parameters, such as width and depth, as needed to satisfactorily allow spawning fish passage through artificial structures (silt curtains, bridges, etc.) without adversely affecting their behavior and ensure that it is provided. With respect to the Tidemill Dam and its spillways being available for fish migration during the remediation project and deployment of obstructing silt curtains, it should be noted that the river herring congregate and pass the dam from the easterly spillway far more frequently than from the westerly spillway.

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tjs

cc: K. Money, J. Fallon, Esq. Exide; C. Fusaro, T. Selmeski, CTDEEP; M. Tetreau, First Selectman; D. DA-BA; Marine Fisheries; COE; TU

G:\CONSERVATION\Conservation\Exide New Folder\Mill River RAP\Exide SedRAP Staff review 12-28-12.doc

Fusaro, Carolyn

From: Baranyai, Cortney [CBARANYAI@town.fairfield.ct.us]
Sent: Friday, December 28, 2012 2:07 PM
To: Fusaro, Carolyn
Subject: Exide RAP Staff Review
Attachments: Exide SedRAP Staff review 12-28-12.doc

Good Afternoon:

Please find attached the Exide RAP Staff Review from Thomas J. Steinke. If you have any questions please feel free to contact the office.

Thank you,

Cortney Baranyai
Town of Fairfield
Conservation Department
725 Old Post Road
Fairfield, CT 06824
(p) 203-256-3071
(f) 203-256-3123

Rec'd 1/10/13 @ Public Info Meeting

January 9, 2013

Issues and Comments Concerning a Proposal by Exide Group, Inc. to Dredge Lead-Contaminated Sediment from the Mill River and Southport Harbor

As Discussed by Representatives of the Fairfield Harbor Management, Conservation, and Shellfish Commissions

Prepared by Geoffrey Steadman, Mary von Conta, and James Harman[1]

On January 7, 2013, a committee consisting of representatives of the Fairfield Harbor Management, Conservation, and Shellfish Commissions met in John J. Sullivan Independence Hall to discuss the pending proposal by Exide Group, Inc. (the Applicant) to dredge lead-contaminated sediment from the Mill River and Southport Harbor. That sediment would be pumped via a pipeline to a temporary processing facility on the site of the former Exide Battery plant adjoining the Mill River. The sediment would then be de-watered and trucked to out-of-state landfills for disposal. The drained water would be treated and discharged back to the River. The Applicant's proposal requires receipt of several approvals from the Connecticut Department of Energy and Environmental Protection (DEEP) and will be the subject of a public informational meeting to be convened by the DEEP on January 10, 2013.

Each of the commissions represented on the committee have specific municipal authorities and interests relevant to review of the Applicant's proposal. During its January 7, 2013 meeting the committee discussed a number of issues concerning the Applicant's proposal. It was the sense of the committee that a summary should be prepared of the issues discussed and the committee's comments, and that the summary should be provided to the Applicant and DEEP. The Harbor Management Commission's representatives agreed to prepare the summary which is presented below.

SUMMARY OF ISSUES AND COMMENTS

1. The Applicant's proposal is described in three separate documents submitted for DEEP approval. These are: 1) a "Remedial Action Plan (RAP) for Lead Impacted River Sediments"; 2) an "Office of Long Island Sound General Permit Registration Form"; and 3) a "Permit Application for Wastewater Discharges." The Public Notice issued by the DEEP for the January 10, 2013 public information meeting concerning the Applicant's proposal states that the meeting is to be held regarding the RAP. In addition, the Notice mentions that the General Permit and Application for Wastewater Discharges will also be discussed. It is not entirely clear how the DEEP's regulatory process for reviewing and hearing public comments on the three separate documents will proceed following the informational meeting, although the committee understands that the DEEP intends to provide a 30-day public comment period following the meeting. It is unclear if there will be an opportunity for public review of any amendments to the

[1] Geoffrey Steadman is the Fairfield Harbor Management Commission's planning consultant and serves as staff to the Commission; Mary von Conta is Chair of the Commission; and James Harman is a Commissioner.

Applicant's proposal that may be made in response to comments received during and following the public meeting.

2. According to the proposed RAP, some details of the project methodology will be left up to the selected contractor. According to the wastewater discharge permit application, specific methodologies, equipment, and operating procedures described in the application are subject to change by the selected contractor. This raises the issue of whether or not sufficient detail is now included in the Applicant's proposal, and if perhaps too much of the project design would occur after any project approvals are issued by the DEEP. Since detailed implementation plans are not included in the Applicant's proposal, it is unclear what, if any, additional approvals, including inland wetlands approvals, may be required for project implementation. It is also unclear if there will be an opportunity for Town review of the Applicant's detailed implementation plans.

3. The Applicant is aware that re-suspension of sediment during the proposed dredging operations may cause adverse impacts on environmental conditions in the River and Harbor. As a result, the Applicant proposes best management practices, including placement of turbidity curtains, to minimize sediment re-suspension. The Applicant believes that those curtains, which to minimize bottom disturbance will not come in contact with the River and Harbor bottom, will allow the dredging of all but one project area to be conducted during periods of anadromous fish migration and shellfish spawning. Dredging is normally prohibited by the DEEP during these periods. It is the sense of the committee that dredging during the migration and spawning periods may cause significant adverse impacts on shellfish and anadromous fish, especially if dredging occurs over more than one migration or spawning season. It is also the sense of the committee that additional consideration should be given to the use of cofferdam cells and alternative dredging methods in one or more of the project areas to minimize the adverse impacts caused by re-suspension of sediment.

4. An optical monitoring approach is proposed in the RAP to identify issues concerning the re-suspension of sediment in the water column during dredging operations. It is the sense of the committee that additional discussion of the effectiveness and appropriateness of this approach is needed, including consideration of the position of the monitor relative to the dredging cell, and the specific actions to be taken if the monitor detects any problems related to the re-suspension of sediment.

5. The RAP does not adequately describe plans by the Applicant to monitor water quality downstream of the remediation area in Southport Harbor prior to, during, and after the proposed project. It is the sense of the committee that such monitoring, of a range of water quality parameters, may be appropriate for the purpose of helping to ensure that the project does not result in any significant pollution entering the Harbor as a result of work in the upstream remediation areas.

6. The RAP describes a proposed project that would dredge 21,400 cubic yards of lead-impacted sediment. However, the General Permit Registration Form and Permit Application for Wastewater Discharges call for the dredging of 27,600 cubic yards, a 29% increase in the anticipated volume. There is no explanation for the increased volume and how this may affect the RAP.

7. The RAP describes the Applicant's project to remove lead-contaminated sediments from the River in 1983 and states that the River was subsequently re-contaminated with lead. It is the understanding of the committee that the re-contamination was caused by additional discharges from subsurface drainage pipes on and near the Applicant's property. It is unclear if all sources of potential re-contamination, including subsurface drainage pipes, have been properly investigated by the Applicant to ensure that no future re-contamination will occur. In addition, it is unclear who will be responsible for any future contamination that may be detected following completion of the Applicant's proposed remediation project.

8. As currently described in the RAP, the proposed remediation project would begin in April 2012 and be completed by December 2013. A revised schedule has not been provided.

9. Built in the early 1700s, the Tide Mill Dam at Harbor Road marks the upstream boundary of Southport Harbor. The structure of the dam and its concrete spillway have been damaged and repaired several times. The RAP includes no assessment of the existing structural integrity of the dam; of how any diminishment of that integrity may affect the RAP; and of how implementation of the RAP may affect the integrity of the dam.

10. The Applicant states that the benthic resources of the River and Harbor will be unavoidably affected by the proposed remediation project but will recover within one to three years. The RAP, however, does not include any detailed information concerning the existing living aquatic resources and habitat. It is unclear how the recovery of affected resources can be determined without baseline data concerning existing conditions in the areas to be affected. In addition, the applicant apparently does not intend to conduct any restoration of the benthic habitat affected by the proposed dredging operations. The committee recognizes that chromium contamination in Mill River sediments may be subject to future remediation actions by other parties, although the timing of such actions is currently not known. As a result, it may not be effective or appropriate to require the Applicant to immediately restore the benthic habitat affected by the proposed dredging project. It is the sense of the committee that in lieu of such restoration, consideration should be given to other types of mitigation, including but not limited to, establishment of a mitigation fund for future restoration projects. In addition, it is the sense of the committee that the effectiveness and appropriateness of immediate restoration and mitigation projects should continue to be evaluated.

11. Details of the dredging operation, including how dredging equipment would access the project areas bounded by the Tide Mill Dam, Post Road, railroad, and I-95, and how the hydraulic pipeline would be employed to pump dredged material to the processing site are not included in

the RAP. As a result, it is not possible at this time to completely assess the potential impacts of the proposed project on the nearby neighborhoods, including nuisance impacts and property impacts.

12. It is understood that the Mill River is identified by the State of Connecticut as an impaired water body, but it is unclear to what extent the proposed project will contribute to removal of the River from the State's list of impaired water bodies. Also, the River is currently deemed unsafe for fishing and swimming and it is unclear how it will be determined when the area will be safe for those activities.

13. It is reported in the RAP that the applicant owns underwater lands in the Mill River adjoining the proposed processing site. This raises the question of whether or not there are other private owners of underwater lands that would be affected by the proposed project, and if permission or special notification of those owners is required or appropriate in order to conduct the proposed remediation work.

14. The proposed sequence of work in the RAP shows that the most upstream project area, identified as Area V, will be the last area to be dredged. It is not clear why this area, upstream of I-95, would not be dredged earlier in the process, to avoid any potential downstream impacts to project areas where remediation has already been completed.

15. It is the sense of the committee that a period of time greater than 30 days may be needed in order for each of the interested Town commissions to: a) review information presented during the public meeting concerning the Applicant's proposal; b) review any necessary amendments to the Applicant's proposal following the meeting; and c) formulate each commission's findings and recommendations concerning the proposal. As a result, it is the sense of the committee that a comment period of 90 days following the public meeting is an appropriate period of time prior to any final decision by the DEEP regarding the Applicant's proposal.

End of Summary
01-09-13

Recd 1/10/13
@ Public Info
Meeting

PUBLIC INFORMATIONAL MEETING CONCERNING A PROPOSAL BY EXIDE GROUP, INC. TO DREDGE LEAD-CONTAMINATED SEDIMENT FROM THE MILL RIVER AND SOUTHPORT HARBOR

January 10, 2013

REMARKS BY MARY VON CONTA
CHAIRMAN, FAIRFIELD HARBOR MANAGEMENT COMMISSION

My name is Mary von Conta. I'm Chairman of the Fairfield Harbor Management Commission which has jurisdiction over Southport Harbor at the mouth of the Mill River. Members of the Commission are here tonight.

I'd like to make a statement concerning the responsibility of the Harbor Management Commission to review the Exide proposal and then I'd like to submit some comments specific to the proposal.

According to the Town Code and Connecticut General Statutes, it is the responsibility of the Commission to review all proposals affecting Southport Harbor so that we may determine the consistency of those proposals with the Town's Harbor Management Plan. The Plan has been adopted by the Representative Town Meeting and approved by the State of Connecticut.

It's our job to transmit our findings and recommendations on any proposal to the appropriate regulatory agencies. According to the General Statutes, a recommendation that we make pursuant to the Harbor Management Plan shall be binding on any state official making a regulatory decision affecting the Harbor, unless that official shows cause why a different course of action should be taken.

The Exide proposal, because some of it would occur in the Harbor and the rest of it may affect the Harbor, is subject to our project review authority. We will continue our review of the proposal following tonight's meeting, with the benefit of the knowledge we gain tonight.

I might mention that in completing our review we will give particular attention to the provisions of the Harbor Management Plan that call for the protection and enhancement of water quality, the conservation of aquatic resources such as shellfish and finfish, and the preservation of the quality of life in the residential neighborhoods near the Harbor.

I think I can speak for other members of the Harbor Management Commission when I say that we support the removal of lead-contaminated sediment from the Mill River and Southport Harbor, provided removal is accomplished in the most effective and environmentally sound manner. Our principal concerns are: 1) that work upstream in the River does not cause pollution downstream in the Harbor; 2) that fish and shellfish are not significantly harmed; and 3) that the work does not unduly disturb the neighborhoods that surround the Harbor.

In the course of our review, a committee of representatives of the Harbor Management Commission, Shellfish Commission, and Conservation Commission met to consider the Exide proposal and prepare a summary of issues and comments that we believe should be addressed by Exide and the DEEP. We've already provided a copy of our summary to Exide and the DEEP and I will submit a copy for the public record of tonight's meeting. The summary is posted on the Town website and we have some extra copies with us if anyone is interested.

Some of our main issues are:

1. We are concerned that too much of the details of the project's implementation method seem to be left up to the selected contractor, so that we're not able to evaluate all of the potential impacts at this time.

2. We are also concerned about the potential for re-suspension of sediment during the dredging operations, especially since the applicant proposes to work during fish spawning and migration periods when dredging is usually prohibited by the DEEP.

3. We are not aware of any plans to continually monitor water quality downstream of the project areas for the duration of the project in order to help ensure that the Harbor is not being adversely affected.

4. The Remedial Action Plan calls for dredging about 21,000 cubic yards of sediment. The other project documents call for over 27,000 cubic yards. We can't find the explanation for this increase.

6. It is unclear if all sources of potential re-contamination, including all subsurface pipes, have been thoroughly examined to ensure that no re-contamination occurs as it apparently did after the Applicant's 1983 remediation work.

7. The Applicant states that the ecology of the River bottom will naturally restore itself in one to three years but no baseline of existing ecological conditions has been presented against which to judge future restoration.

8. We recognize there is chromium contamination in the River that may be subject to future remediation, but the timing of that is unknown. As a result, we don't know if it makes sense to require the Applicant to restore the bottom ecology of the dredged areas now, or provide for some sort of future mitigation of adverse impacts.

9. No assessment of the structural integrity of the Tide Mill Dam is included, and we don't know how the project will affect that integrity or vice versa.

10. The proposed schedule of work in the documents we reviewed is outdated and requires revision.

11. We'd like the DEP to address how this project will help remove the Mill River from the State's list of impaired water bodies.

12. Are there any private owners of underwater lands in the River that must be notified before the project proceeds?

13. We are concerned that the proposed sequence of work shows that the most upstream project area will be the last area dredged, which seems to leave open the possibility of downstream impacts in areas already remediated.

14. And finally, we are concerned that the DEEP's proposed 30-day comment period may not be sufficient to allow the Applicant to respond to our questions and for the Harbor Management Commission and other Town agencies to review the response and prepare their final recommendations. As a result, a reasonable extension of the comment period may be appropriate.

Thank you for the opportunity to provide these comments.

Rec'd 1/10/13
@Public Info
Meeting

To CT DEEP
Re: Exide (former Battery Company) proposed SedRAP for Mill River & South Harbor. (April 2012)
Dt: January 10, 2013
Fr: Joy Shaw (Jocelyn T.) Shaw, 476 Old Mill Road, Fairfield, CT 06924

WATER PROTECTION AND LAND REUSE
JAN 10 2013
REMEDIATION DIVISION

Major concerns (Public Hearing, Roger Ludlowe H.S. Jan. 10, 2013)

1. We find unacceptable the decision to allow this proposal to be exempted from the need to obtain an Inland Wetland Permit. How such a ruling can be made in a proposal concerning dredging of the main river of a coastal town has us totally puzzled and deeply concerned.

2. Why has Exide chosen to start from the downstream end of this project when such a project would normally proceed from the upstream end in order to deal with any matter sent downstream as the project proceeded?
(Could it be that Exide anticipates the possibility of angered riverside owners and stop orders that would immediately delay and raise costs of the project?)

3. Permission to continue dredging in the spawning seasons of local species of fish and crabs should be granted only if Exide agrees to use closed system cofferdams in the most seriously contaminated Areas (I, II, and III).

4. Permission for this project should also be granted only if Exide commits to refill each excavated hole with clean fill, so that the river has the capacity to recover. Leaving such deep holes to become anaerobic sumps will prevent the natural biological community of organisms from repopulating the river bottom. The bottom cannot be left unable to support life until such time as Superior Plating may be able to do further excavating to remove chromium.

5. Permission for this project should also be conditional on Exide's taking the necessary steps of photo inspection and removal of any residual lead in and around piping still in place along the railroad tracks on the east side of Area I.

6. As mitigation for the damage it has done and will be unavoidably doing further in this remedial activity, Exide should be required to provide fish ladders for both the tidemill and the Samp Mortar dams

The above listed recommendations represent only the highest priority concerns on the part of this local student of the river, in light of time limitations for this hearing. A full presentation of concerns will follow during the 30-day period allowed for public comment.

Respectfully submitted,
Joan P. T. Shaw
Jocelyn T. Shaw

Town of Fairfield

Independence Hall
725 Old Post Road

Fairfield, Connecticut 06430
Shellfish Commission

(203) 256-3071
FAX (203) 256-3080

January 10, 2013

Daniel C. Esty, Commissioner
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Re: Request for an extension of time for public comment on the Exide battery NPDES permit application.

Dear Commissioner Esty:

The Fairfield Shellfish Commission has been engaged for decades with the CTDEEP and the Exide Group in the proceedings related to the remediation of lead-contaminated sediments in the Mill River and Southport Harbor.

The Shellfish Commission received the public notice of your Tentative Determination to Approve Exide's NPDES discharge permit and the actual draft permit on January 8, 2013, discussed the matter at its January 9 monthly meeting, will attend the January 10 CTDEEP meeting on the Exide SedRAP for Mill River, and will not meet again to review and formulate recommendations on the matter until February 13, 2013 – a full week after the existing 30-day comment period expires.

34

In light of these facts, the Fairfield Shellfish Commission requests that the public comment period on the Exide NPDES discharge permit application be extended to at least Wednesday February 20, 2013.

33

Thank you for your cooperation in this matter.

Sincerely yours,

Stanford J. Wakeman Jr.

S. Wakeman, Chairman

tjs
cc: K. Money, J. Fallon, Esq. Exide; M. Tetreau, First Selectman; S. Lesser, T. Atty.

Fusaro, Carolyn

From: Tom Corell [thomascorell@gmail.com]
Sent: Friday, January 18, 2013 6:02 PM
To: Fusaro, Carolyn
Subject: Mill River Cleanup Exide

Remediation Division
CT DEEP

Re Exide Cleanup of the Mill River

Greetings Carolyn
Thanks for the effort you and your group have invested in this project and the presentations and responses on January 10 at the meeting.
Your work is appreciated. After the meeting I went through parts of the Remediation Plan to review my concerns and refresh myself. A lot of what upset folks at the meeting seems to be covered, but I am sure not read.

I still have a few questions and also wish to express concern for the the gates at the dam which certainly could be a weak link in the plan.

My questions involve the chromium which has been stated is comingled with the lead in some areas. I would like to know which areas? I have not seen a map or an overlay of the maps indicating where the two pollutants are or are not present. Is there such a map? Are the levels quantified in the areas where they are found? Have 'safe' levels been determined for humans, for other life forms?

7 Is there Cr in zone V where the dredging will be less intrusive? Is it beyond the areas in pink on the map? Or below the depths anticipated to be dredged?

When the dredging is done we assume from comments at the meeting that the comingled chromium will settle out with the lead into the sludge. If so, will the effluent be tested for chromium concentration before being returned to the river? I assume this as the 'drinking water standard' was mentioned frequently in the session.

15 Will the areas with Cr and Pb that are dredged be clean enough to meet an acceptable environmental standard to not have to be cleaned a second time?
I know this is not Excide's problem, but am interested. As another neighbor mentioned the bird and fish life in the river has improved greatly in the past few years and is a real special treat appreciated by many. It would be a shame to disrupt it again.

15 When this is done will the river be considered 'clean' , cleaned up and good enough, or the best we could do but still needs to be posted as unsafe for shellfish, fish, or people. My focus on zone V is selfish as an abutter, but it is also the area with the most access, users, and the most shoreline and on the water activity.

I hope these questions can be addressed and are covered in your plans.
Respectfully,
Tom Corell

Thomas Corell
106 Somerset Avenue
Fairfield, CT 06824-4935
203.254.0178
thomascorell@gmail.com

Town of Fairfield
HARBOR MANAGEMENT COMMISSION
Sullivan Independence Hall
725 Old Post Road
Fairfield, Connecticut 06824

VIA EMAIL TRANSMISSION AND REGULAR MAIL

January 25, 2013

Ms. Carolyn Fusaro
Connecticut Department of Environmental Protection
Remediation Division
79 Elm Street
Hartford, CT 06106-5127

Mr. Donald Gonyea
Connecticut Department of Energy and Environmental Protection
Bureau of Materials Management and Compliance Assurance
79 Elm Street
Hartford, CT 06106-5127

Ms. Tonia Selmeski
Connecticut Department of Energy and Environmental Protection
Office of Long Island Sound Programs
79 Elm Street
Hartford, CT 06106-5127

Subject: Proposal by Exide Group, Inc. to dredge lead-contaminated sediment from the Mill River and Southport Harbor.

Dear Ms. Fusaro, Mr. Gonyea, and Ms. Selmeski:

The Harbor Management Commission (HMC) is reviewing a proposal by Exide Group, Inc. (the Applicant) to dredge lead-contaminated sediment from the Mill River and Southport Harbor. That sediment would be pumped via a pipeline to a temporary processing facility on the site of the former Exide Battery plant adjoining the Mill River. It would there be dewatered; the dewatered sediment would be trucked to out-of-state landfills for disposal; and the filtrate water discharged back into the River. The Applicant's proposal is described in three separate documents submitted to the Connecticut Department of Energy and Environmental Protection (DEEP) for approval. These are: 1) a "Re-

medial Action Plan (RAP) for Lead Impacted River Sediments," October 2011, revised April 2012; 2) an "Office of Long Island Sound General Permit Registration Form," signed by the applicant on June 22, 2012; and 3) a "Permit Application for Wastewater Discharges," signed by the applicant on June 22, 2012.

On January 19, 2012, the HMC attended a public informational meeting concerning the Applicant's proposal, and then provided comments on the proposal in a letter of January 30, 2012 to Patrick Bowe and Brian Thompson, directors of the DEEP's Remediation Division and Office of Long Island Sound Programs, respectively. In that letter, the HMC informed the DEEP that the Applicant's proposal is subject to the municipal authority of the HMC to review the proposal for consistency with the Harbor Management Plan.

Pursuant to the Fairfield Code and Connecticut General Statutes, it is the authority and responsibility of the HMC to review all proposals affecting the real property on, in, or contiguous to Southport Harbor. Review by the HMC of any proposal is for the purpose of determining the proposal's consistency with *The Management Plan for Southport Harbor* (Harbor Management Plan) which has been duly approved by the State of Connecticut and adopted by the Fairfield Representative Town Meeting. Although much of the Applicant's proposed project would take place in the Mill River upstream of the Tide Mill Dam (which marks the northern limit of Southport Harbor), the entire proposal could affect the Harbor and therefore is being reviewed by the HMC.

The HMC considered the Applicant's proposal, including the General Permit Registration Form, during the HMC's meeting on July 17, 2012. In a letter of July 27, 2012 to Ms. Selmeski, the HMC expressed its opinion that it may be premature for the DEEP to approve the Applicant's General Permit Registration Form prior to public review and DEEP approval of the RAP. The HMC also reserved its right to: a) continue to review the Applicant's proposed remediation plans, including the RAP and permit application for wastewater discharge; and b) transmit findings and recommendations concerning those plans to the DEEP at a later date, during a public comment period established by the DEEP or any public hearing that may be held on the Applicant's proposal.

More recently, representatives of the HMC participated in a meeting on January 7, 2013 with representatives of the Fairfield Conservation and Shellfish commissions to discuss the Applicant's proposal, and then prepared the January 9, 2013 summary document "Issues and Comments Concerning a Proposal by Exide Group, Inc. to Dredge Lead-Contaminated Sediment from the Mill River and Southport Harbor." That document was provided to the DEEP and Applicant prior to a public informational meeting convened by the DEEP concerning the Applicant's proposal on January 10, 2013. Members of the HMC attended that meeting.

Following the public informational meeting, the HMC considered the Applicant's proposal during the HMC's meeting on January 15, 2013 and approved a motion to:

a) Endorse, and submit to the DEEP, the January 9, 2013 summary document "Issues and Comments Concerning a Proposal by Exide Group, Inc. to Dredge Lead-Contaminated Sediment from the Mill River and Southport Harbor" (a copy is enclosed);

b) Submit to the DEEP additional issues and questions (see below) as discussed by the HMC during its January 15, 2013 meeting;

c) Request that the DEEP and/or Applicant respond in writing by January 28, 2013 to address the issues and comments described in the summary document and the additional issues and questions discussed by the HMC during its January 15, 2013 meeting; and

d) Request that the period for submitting comments concerning the Applicant's proposal be extended by the DEEP to February 22, 2013 in order that the HMC may continue to review this matter during the HMC's next regularly scheduled meeting which will take place on February 19, 2013.

The following additional issues and questions concerning the Applicant's proposal were discussed by the HMC during its January 15, 2013 meeting.

1. Modifications to the Applicant's proposal: The HMC is concerned that some aspects of the Applicant's proposal as described in the documents and applications reviewed by the HMC have been modified. For example, the RAP describes the use of turbidity curtains to minimize sediment re-suspension but says those curtains will not come in contact with the River and Harbor bottom. During the January 10 public informational meeting, the Applicant said the curtains will touch the bottom. Also, the RAP describes the proposed project being conducted during periods of anadromous fish migration and shellfish spawning. During the January 10 informational meeting, a DEEP representative indicated that work restrictions will be imposed during those periods. The HMC recommends that all stakeholders should be informed of any significant modifications to the Applicant's proposed project since release of the documents and applications reviewed by the HMC.

2. Effects of chromium disturbance: During the public informational meeting there was discussion of the extent to which chromium is co-mingled with lead in the Mill River and Southport Harbor. The HMC is concerned about the potential adverse impacts that may be caused by the re-suspension of chromium-contaminated sediments during the course of the Applicant's proposed project, and recommends that additional information concerning those potential impacts should be provided.

3. Condition of Tide Mill tide gates: Also during the public informational meeting, there was discussion concerning the current condition of the tide gates at the Tide Mill Dam and the effect that their failure or diminished function may have on the proposed project, including the ability to float dredging equipment as currently planned by the Applicant. The HMC recommends that this matter should be addressed by the Applicant.

4. Water quality monitoring in Southport Harbor: The summary document expresses the HMC's concerns about the potential adverse impacts that the Applicant's proposed project may have on water quality in the Harbor. As a result of those concerns, the HMC recommends that priority attention be given to monitoring a range of water quality parameters downstream of the proposed project, prior to, during, and after the project.

On January 15, 2013, the DEEP provided notice that the public comment period concerning the RAP has been extended until February 28. On January 20, 2013, a web site established by the DEEP concerning the Applicant's proposal reported that the public comment period concerning the Applicant's General Permit Registration Form also has been extended to February 28, and the comment period for the wastewater discharge application has been extended to February 20.

As a result of these extensions, the HMC recognizes that it will not be necessary for the DEEP and/or Applicant to respond in writing to the identified issues, comments, and questions by January 28, 2013, as requested by the HMC, and that the HMC's requested extension of the comment period to February 22 is no longer necessary. Instead, I wish to request on behalf of the HMC that a written response be provided by February 15, 2013 in order that the HMC may continue to review the Applicant's proposal during the HMC's February 19, 2012 meeting. At that time, the HMC intends to prepare final recommendations for transmittal to the DEEP.

If you have any questions, I can be reached at (203) 259-9588 or mvonconta@optonline.net.

Sincerely,

Mary von Conta

Mary von Conta, Chairman
MVC/gs

Enclosure

cc:
Mr. John Fallon, Attorney for applicant
Mr. Kevin Gumpper, Chairman, Fairfield Conservation Commission
Ms. Diane Ray, U.S. Army Corps of Engineers
Mr. Thomas Steinke, Town of Fairfield Conservation Director
Mr. Sandy Wakeman, Chairman, Fairfield Shellfish Commission
Mr. James Wendt, Town Plan and Zoning Department

Town of Fairfield

Thomas J. Steinke
Director

Fairfield, Connecticut 06824
Conservation Commission
The Wetlands Agency

Sullivan Independence Hall
725 Old Post Road
(203) 256-3071
FAX (203) 256-3123

January 18, 2013

Commissioner Daniel C. Esty
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Re: CTDEEP NPDES Permit (application) ID No. CT0030651 Exide Group, Inc. Mill River water discharge

Dear Commissioner Esty:

At its January 17, 2013 meeting, the Fairfield Conservation Commission voted to submit the enclosed comments on the pending Exide NPDES permit application.

Project Summary:
Exide's pending NPDES permit application is based on Exide's April 2012 proposed Mill River sediment remediation plan (SedRAP) required by CTDEEP Order in which Exide proposes to remove 21,440 CY of contaminated sediment from the Mill River estuary.

As noted in the NPDES application, Attachment B: Detailed Site Map and Attachment I: Part A: General Description, the applicant proposes to remove approximately 27,600 cubic yards (CY) of contaminated sediment from a 36-acre area of the Mill River estuary beginning 250 feet south of Harbor Road to 2,100 feet north of the I-95 thruway (approximately 4,000 feet involving over sixty property owners of the river bottom, including Exide.). While dredging in the river during both spawning and non-spawning periods of shellfish and anadromous river herring, the dredge slurry, consisting of about 15% of contaminated dredged solids and 85% water, will be pumped to the 6.25 acre 2190 Post Rd. Exide property for treatment and disposal. The sediments will be dewatered, either by mechanical dewatering or by consolidation by gravity and chemical additives, and subsequently transported to approved disposal sites. The contaminated dredge slurry water will be treated if necessary and then discharged back to the Mill River at an average flow rate of 435,000 gallons per day (gpd), up to a maximum of 475,000 gpd during a continuous discharge averaging 15 hours per day and up to 24 hours per day. As noted in the CTDEEP application file, Exide's discharge of 475,000

gpd represents approximately 44% of the Mill River discharge during the design low-flow period (7Q10). When reviewing the SedRAP (of 21,440 CY), the state fisheries biologist stated that Exide's activities should stop after 12 hours in order to allow the anadromous fish to continue their spawning run undisturbed during the subsequent 12-hr period.

As noted in Attachment G: Coastal Consistency Review Form, Exide acknowledges that its dredging activities will ..."include the destruction of benthic habitat and the possibility of resuspension of contaminated sediments". Further, Exide will conduct its dredging and water discharge activities in close proximity to shellfish concentration areas and shellfish habitats during the shellfish spawning periods.

In its Attachment H: Connecticut Natural Diversity Data Base response of May 9, 2012, Exide acknowledges the status of river herring as a Connecticut "State Special Concern" species (these species are currently under evaluation by the federal government for listing under the Endangered Species Act).

Commission comments and recommendations are as follow:

1. Exide apparently proposes to dredge through the normally protected spawning periods in order to minimize the duration of environmental disturbance and to minimize expenses for the project. Exide provides acute toxicity data for the discharge water on species of minnows and shrimp which may be protective of most receptors during the non-spawning seasons, but which do not represent the species and life forms of the fish and shellfish which are in the water column during the normally protective spawning periods. Exide should not discharge its treatment effluent to the Mill River during the protective fish and shellfish spawning seasons until it submits satisfactory acute toxicity test results against the fish and shellfish species and larval forms that will be present in the water column during Exide's discharge activities. If Exide insists on discharging during the spawning seasons without first demonstrating no significant impacts on fish and shellfish species and life forms, then Exide should provide compensatory mitigation for its impacts through suitable provisions for enhancing the anadromous fish and shellfish resources in the Mill River estuary. Such compensatory mitigation could include restocking shellfish beds, providing fish passage and improved habitat conditions for fish and shellfish.

2. Exide's Conceptual Facility Plan depicts the treatment effluent discharge assembly as a floating 60 ft. X 20 ft. manifold raft anchored in the downstream throat of the railroad bridge channel.
   A. This discharge raft location will obstruct public access when boating on the river. The discharge assembly should be relocated out of the main river channel at all times.
   B. Exide's proposed raft location will subject this discharge float assembly to potential damage and loss from river and tidal currents and floating debris, and thereby may pose a danger to other structures and property along the river. Exide should relocate the discharge assembly raft to a location more distant from the river currents associated with the main channel and confined bridge openings.

C. Exide's NPDES Attachment F: Site Plan: Conceptual Facility Plan depicts Exide's property ownership of the bottom of the Mill River extending in a long curved line approximately 50 to 100 feet waterward of its easterly shoreline. Exide proposes to anchor its large effluent discharge float assembly straddling the property of abutting owners to the west, i.e., within the Railroad right-of way at the RR bridge and the adjacent property owner to the south (downstream). Exide should relocate the floating effluent discharge structure within its own property unless other property owner permission is provided.

3. Under low-flow conditions during spawning seasons, where Exide's NPDES discharge may represent 44% of the river's flow, Exide's discharge structure will have an effluent discharge potentially posing a barrier or impediment to spawning species due to adverse conditions of thermal, salinity, or dissolved oxygen stress if significantly different from those parameters in the water column. Exide should continuously sample and test the treated effluent to ensure that, at the time and point location of discharge, it is coincident with ambient river water conditions with respect to temperature, pH, salinity, and dissolved oxygen.

4. In Exide's SedRAP, Appendix VI, Exide indicates a 12 hour dredging work day. The state fisheries biologist reviewing the proposed SedRAP states that Exide's dredging and related activities should be limited to 12 hours per day so that the anadromous fish species may continue their spawning runs in an undisturbed condition during the following 12-hour period of inactivity. Exide's NPDES application cites a 15 to 24 hour per day period for discharge of its treated effluent from the manifold raft assembly in the river – which operation will have normal inspection, sampling, maintenance and repair activities associated with it. Exide's increase from 12 to 15 hours per day may be a result of its increasing the dredged sediment volume estimate from 21,440 CY to 27,600 CY (29%) and treating the additional volume by increasing the length of the work day to 15 hours. Exide should limit its discharge to no more that 12 hours per day during the anadromous fish spawning periods and may increase its effluent discharge duration during non-spawning periods.

5. Under the federal NPDES Program, all facilities which discharge pollutants from any point source into waters of the United States are required to obtain an NPDES permit. As defined in Section 502 (14) of the Clean Water Act, the term "point source" means
any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This information and definition leads us to conclude that Exide must file an NPDES permit application for its dredge-discharge of significantly contaminated resuspended sediments from its confined dredge cells into the waters of the Mill River estuary.

In both its proposed SedRAP and its NPDES permit application, Exide acknowledges that its discharge of contaminated resuspended sediments is likely to contain hazardous waste in Remediation Area II. In Section 3.2 of the SedRAP, Sediment Lead Distribution, Exide reports that the highest average sediment lead concentrations are present in Area II (mill

pond) with the next highest in Areas I and III. These areas also have some of the deepest sediment lead deposits beneath the water column. On page 20, Exide reports that it encountered sulfide-reactive sediment materials and hazardous waste conditions including TCLP lead (toxicity characteristic leaching procedure) requiring special treatment and disposal at a hazardous waste facility. Exide anticipates the need to add chemical stabilizers to the dredge slurry in the on-shore treatment facility, but expresses no concern and offers no treatment suggestions for such hazardous materials that may be mobilized in the water column when dredging and transported as dissolved or particulate matter with resuspended sediment flowing out of the dredge cell into non-target areas and adversely affecting protected spawning species. Further, with respect to Overall Benefits Analysis and Socio-Economic Issues, in section 4.4 (page 27) Exide finds "That risk to humans through consumption of fish/shellfish or ingestion of lead-contaminated sediment is substantially elevated in Area II, and elevated in Area I, with no substantial risk in Areas III, IV, & V." The risk of incidental ingestion of lead-contaminated sediments through such activities as swimming "is deemed to be substantially elevated in Area II and elevated in Areas I & III, with no substantial risk in Areas IV & V".

In its NPDES application Attachment O, Table 1, p. 2 of 7, Exide documents a composite sample of Remediation Area II sediment with a total lead concentration averaging 3,900 ppm which exceeds Exide's target clean-up residual lead concentration in this area (at 220 ppm total lead) by a factor of 17, with 470 ppm in Remediation Area III (residual lead target of 400 ppm), and 220 ppm in Area V (residual lead target of 220 ppm). In light of this information, Exide has determined that open water removal is an unacceptable alternative for remediating the lead-contaminated sediment in Mill River.

To avoid the discharge of contaminated sediments to the Mill River, Exide has proposed confined sediment removal through either dry excavation within cofferdam cells, or by hydraulic dredging within float-suspended silt curtain structures defining the perimeter of the remediation dredge cell.

These Mill River lead deposits are essentially a result of Exide's industrial waste discharges that it has stored for decades sequestered in the river sediments. In Exide's SedRAP, the contaminated sediment will now be dredge-disturbed, resuspended, mobilized into the water column, and pumped to an upland treatment facility with a significant portion of the lead-contaminated resuspended sediment discharged from the confined dredge cell as a point source discharge to the open river. Exide anticipates this discharge of lead-contaminated resuspended sediments and it proposes to deploy monitoring sensors and expedient corrective measures when the discharge occurs.

This effluent, with hazardous wastes as a discharge of Exide's industrial waste remediation activities from its confined dredge cells in Remediation Area II, represents a point source discharge of pollutants into waters of the United States and Exide should be required to apply for an NPDES permit to allow it. If Exide declines to apply for an NPDES permit for its

dredging activities in such highly contaminated areas, then it should be restricted to excavating such areas in-the-dry within cofferdam cells. If Exide is permitted to dredge without an NPDES permit for its dredge cell discharge of lead-contaminated resuspended sediments, then Exide should only be allowed to dredge such areas during the non-spawning season. If Exide is permitted to dredge-discharge without an NPDES permit during the protective spawning seasons, then it should be required to establish a robust compensatory mitigation program that will benefit the populations of spawning species potentially impacted by Exide's activities. Such compensatory mitigation may include significant enhancement of the anadromous fishery run, fish passage facilities, rehabilitation of the shellfish beds and related improvements.

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

Sincerely yours,

Thomas J. Steinke

TJS/jm

cc: M. Tetreau, First Selectman; J. Fallon, Esq., K. Money, Exide; D. Gonyea, 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 Shellfish Commission; Harbor Management Commission

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Fusaro, Carolyn

From: Suzanne D Simmonds [sdsimmonds@optimum.net]
Sent: Saturday, February 02, 2013 8:32 AM
To: Fusaro, Carolyn
Subject: Mill River Dredging and Exide

Dear Ms. Fusaro,

2

I am deeply concerned about the dredging process to remove lead in the Mill River created by run off from the Exide Battery Plant during earlier decades. I am concerned about disturbing the Alewife and Blueback Herring during their spawning period. I do not understand why Exide cannot be held to a high environmental standard to not only perform the necessary dredging, but to conduct it in such a way that maintains the stability and long term health of the Mill River and Long Island Sound. To simply allow them to dredge without consideration of the various environmental effects is negligent and short-sighted. I'm sure you do not wish any action Exide may take to reflect badly on the DEEP.

Please consider the long-term effects of any dredging activity and take all measures possible to ensure the health of the Mill River and all the vital aquatic life downstream that will be affected permanently by their actions.

Sincerely,

Suzanne D. Simmonds
Fairfield

Fusaro, Carolyn

From: David Sturges [davidsturges@sbcglobal.net]
Sent: Sunday, February 03, 2013 12:24 PM
To: 'Doody, James'
Cc: Fusaro, Carolyn; Gonyea, Donald
Subject: Exide Remediation
Attachments: DEEP Letter on Remediation Plan.doc

Attached submitted as comment. David Sturges

To the Editor for Letters

An Open Letter to the CT Dept. of Environmental Protection

It appears that the Department's Mill River Lead Cleanup plan is still following the old quip of "There will always be enough time to do it over again but not enough time to do it thoroughly and right the first time." Again with the official permitting proposal just made, more questions have been raised than answered. And the Town of Fairfield, which has to live with the results, should have its reservations heard and responded to with resulting accountability before permitting is allowed to proceed. Even though this plan is one of many the Department is handling, lip service is no substitute.

Although the expensive engineering involved is well thought out in terms of its operational complexity, it should accommodate the remaining pollution from Superior Plating and other sources, not completely investigated for neutralizing and removal. Furthermore, down stream environmental monitoring is not completely detailed to preclude sediment stir-up in the removal from doing more damage with the original contamination settled in the river bed.

The Department's presentation on January 10, led by Officers Carolyn Fusaro and Don Gonyea, did not help community confidence by artfully truncating opportunity for public comment by filling up almost all the time with a convoluted dog and pony show concerned more with who's turf was who's within the Department's permit authority.

Two moves are now necessary, First, with no less than three Town Commissions having weighed in their review with serious objections and concern input, the First Selectman, in direct contact with Governor Malloy, should demand in their behalf and order a tune-up, that the Department should not hide behind statute application for the expedience of their clients and take note of these concerns and come back for final hearing on how they will be addressed and settled before permitting and work follows.

Secondly, our Town's response, along with applied pressure from our Legislature delegation, should at least pave the way for definite deadline extension for public comment. Fairfield residents are not fooled and they should not be led along by the nose by Department administrative convenience. Finishing the Exide remediation the right way and to permanently remove all the decades old contamination requires no less. To do that, Inco and Superior Plating should remain on the liability hook.

David K. Sturges, 375 Warner Hill Road, Southport, 203/255-6553

Fusaro, Carolyn

From: Gonyea, Donald
Sent: Monday, February 04, 2013 2:04 PM
To: Fusaro, Carolyn
Subject: FW: Concern about Exide's inadequate plan to clean up the Mill River

Importance: Low

For inclusion in the Exide file

From: Creighton, James
Sent: Monday, February 04, 2013 1:42 PM
To: Eason, Joyce
Cc: Inglese, Oswald; Gonyea, Donald
Subject: RE: Concern about Exide's inadequate plan to clean up the Mill River
Importance: Low

Don Gonyea is handling any Exide hearing correspondence and will respond to Mr. Campbell.

From: Eason, Joyce
Sent: Monday, February 04, 2013 1:27 PM
To: Creighton, James
Cc: Inglese, Oswald
Subject: FW: Concern about Exide's inadequate plan to clean up the Mill River

Hi,
Please cc on response.
Thanks

From: DEEP Webmaster
Sent: Monday, February 04, 2013 1:12 PM
To: Eason, Joyce
Subject: FW: Concern about Exide's inadequate plan to clean up the Mill River

Original message attached.

From: Bob Campbell [mailto:bobcampbell2010@gmail.com]
Sent: Monday, February 04, 2013 8:44 AM
To: DEEP Webmaster
Subject: Concern about Exide's inadequate plan to clean up the Mill River

Dear Commissioner Esty,
I am writing to ask your consideration, in your position as DEEP Commissioner, of my concerns about the proposed Exide Mill River Remediation Action Plan and its significant deficiencies as an adequate restoration program for the damage this river has suffered. As a member of Trout Unlimited's local Nutmeg Chapter in whose geographic area the Mill River flows, please allow me to express my views by reiterating below our Chapter's position, representing our almost four hundred members residing in Fairfield and surrounding towns, which succinctly reflects the serious shortfalls of the Plan, and therefore my strong concerns about it.

Trout Unlimited's mission is to conserve, protect and restore coldwater fisheries and their watersheds. As such, we have been following Exide's reme diati on effort with great interest for many years. We are encouraged to see a Remedial Action Plan come together, but we do have some substantial concerns that echo those expressed by the Town of Fairfield's Conservation Department among others.

7 1,2 14 4 First, we question the wisdom of any Remedial Action Plan for lead impacted river sediment that does not include a comparable action plan for chromium impacted river sediment. Second, we do not believe Exide has done enough to evaluate and explain the environmental risks potentially associated with in-water dredging activity during the spawning season. Third, this plan does not address the need for a fish passage as an essential component of remediation. Fourth, no provision of public access is addressed. Lastly, we have yet to see any plan to restore the river to its natural state once the dredging is complete. A true remediation effort would include re-filling the dredged holes with clean soil, restoring the river bottom with structural habitat including rocks and logs and finally, re-planting the river banks with native plant species.

2 Related to these concerns and warranting specific attention is the issue of the river herring run (alewives and blueback.) NOAA is considering these species for endangered species status. Exide is saying that their dredging process poses no issue to the spawning of these fish because the slurry will be contained and therefore they should be allowed to dredge during the spring spawning season. However, based on the technique used in 1983 — cutterhead dredge and floating silt curtain — which seems to be much the same as the one proposed now, there was plenty of spillover which moved lead all over the river. Certainly this will seriously jeopardize successful river herring spawning.

Commissioner Esty, the Mill River is one of Fairfield County's natural treasures. It is one of only a handful of specially designated Class One Wild Trout Streams in Connecticut. It's estuarial confluence with Long Island Sound could, with an adequate restoration plan, once again be a healthy environment for our unique natural treasures (and economic resources) such as sea-run brown trout, and for safe use and enjoyment by residents of Fairfield and adjacent towns. This is finally the moment for a prudent plan to correct the damage to the Mill and restore its health and value to all of us.

Thank you for considering my views on this very important issue.

Very sincerely,
Bob Campbell
Trumbull

Fusaro, Carolyn

From: Hinsch, Elaine
Sent: Wednesday, February 06, 2013 3:45 PM
To: Foreman, William
Subject: FW: Mill River Resto

From: DEEP Webmaster
Sent: Wednesday, February 06, 2013 11:36 AM
To: Hinsch, Elaine
Subject: FW: Mill River Resto

Original message attached.

From: Alan Pakiela [mailto:apakiela@nhcg.com]
Sent: Wednesday, February 06, 2013 8:29 AM
To: DEEP Webmaster
Subject: Mill River Resto

Dear DEEP Commissioner Daniel C. Esty,

I am writing to ask your consideration, in your position as Commissioner, one of my concerns about the proposed Exide Mill River Remediation Action Plan and its significant deficiencies as an adequate restoration program for the damage this river has suffered. As a member of Trout Unlimited's local Nutmeg Chapter in whose geographic area the Mill River flows, please allow me to express my views by reiterating below our Chapter's position, representing our almost four hundred members residing in Fairfield and surrounding towns, which succinctly reflects the serious shortfalls of the Plan, and therefore my strong concerns about it.

Trout Unlimited's mission is to conserve, protect and restore coldwater fisheries and their watersheds. As such, we have been following Exide's reme diati on effort with great interest for many years. We are encouraged to see a Remedial Action Plan come together, but we do have some substantial concerns that echo those expressed by the Town of Fairfield's Conservation Department among others.

7, 1, 2, 14, 4

First, we question the wisdom of any Remedial Action Plan for lead impacted river sediment that does not include a comparable action plan for chromium impacted river sediment. Second, we do not believe Exide has done enough to evaluate and explain the environmental risks potentially associated with in-water dredging activity during the spawning season. Third, this plan does not address the need for a fish passage as an essential component of remediation. Fourth, no provision of public access is addressed. Lastly, we have yet to see any plan to restore the river to its natural state once the dredging is complete. A true remediation effort would include re-filling the dredged holes with

clean soil, restoring the river bottom with structural habitat including rocks and logs and finally, re-planting the river banks with native plant species.

(2) Related to these concerns and warranting specific attention is the issue of the river herring run (alewives and blueback.) NOAA is considering these species for endangered species status. Exide is saying that their dredging process poses no issue to the spawning of these fish because the slurry will be contained and therefore they should be allowed to dredge during the spring spawning season. However, based on the technique used in 1983 — cutterhead dredge and floating silt curtain — which seems to be much the same as the one proposed now, there was plenty of spillover which moved lead all over the river. Certainly this will seriously jeopardize successful river herring spawning.

Mr. Esty, The Mill River is one of my favorite rivers to fish in Connecticut. Often I fish there in the moring on the way into work and often in the evening on the way home. I do not want to see it ruined in any way.

The Mill River is one of Fairfield County's natural treasures. It is one of only a handful of specially designated Class One Wild Trout Streams in Connecticut. It's estuarial confluence with Long Island Sound could, with an adequate restoration plan, once again be a healthy environment for our unique natural treasures (and economic resources) such as sea-run brown trout, and for safe use and enjoyment by residents of Fairfield and adjacent towns. This is finally the moment for a prudent plan to correct the damage to the Mill and restore its health and value to all of us.

Thank you for considering my views on this very important issue.

Sincerely,

Alan Pakiela

All the best,

Alan Pakiela
Director, Program Development
New Haven Consulting Group, inc.
1077 Bridgeport Ave.
Shelton, CT 06484

Ph: 203 926 1526
Fx: 203 929 0176

New Haven Consulting Group, Inc. Website

HILARY H. MICHAELS
24 EATON COURT
FAIRFIELD, CT 06824

February 9, 2013

Carolyn Ann Fusaro
Remediation Section
CT DEEP
79 Elm St.
Hartford, CT 06106

Dear Ms. Fusaro:

(4) As a Fairfield resident, I am writing with my concerns about the Exide excavation of Mill River. They are not planning to replace the contaminated silt with clean fill so that the bottom will not be repaired afterwards and the holes will fill up with dead vegetation and organic debris creating a non-productive environment. In addition, they are requesting (2) a permit to dredge during the spawning season of fish and crabs.

(1) From what I understand, the dredging project will be handled by whomever Exide engages without any plans to monitor the water quality downstream of the remediation area in Southport Harbor during and after the project. It is unclear how the recovery of (5) the affected resources can be determined without baseline data concerning existing conditions in the areas to be affected.

I believe that I am not alone in these concerns and would hope that before any permits are granted that these important areas of concern are taken into account.

Thank you for your consideration.

Hilary Michaels

Hilary Michaels

Town of Fairfield

Thomas J. Steinke
Director

Fairfield, Connecticut 06824
Conservation Commission
The Wetlands Agency

Independence Hall
725 Old Post Road
(203) 256-3071
FAX (203) 256-3123

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

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.

(1) 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.

(36) 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.

See NPDES

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.

(36) 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.

See NPDES

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

Sincerely yours,

Thomas Steinke/asj

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

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Gonyea, Donald

From: Mary von Conta [mvonconta@optonline.net]
Sent: Thursday, February 14, 2013 2:23 PM
To: Gonyea, Donald
Cc: Steadman Geoff (1); Steadman Geoff (2)
Subject: Request for extension of NPDES comment period

Dear Mr. Gonyea,
Thank you for traveling to Fairfield last night to address questions and concerns of the Shellfish Commission and others concerning the proposal by Exide Group, Inc. to dredge lead-contaminated sediments from the Mill River and Southport Harbor, and specifically for your thoughtful and straightforward responses to the issues that were raised concerning Exide's NPDES permit application now being reviewed by your agency. As we discussed last night, I am writing on behalf of the Fairfield Harbor Management Commission to request that the public comment period regarding the NPDES application be extended from February 20th to February 28th. The next regularly scheduled meeting of the Harbor Management Commission will be on February 19. At that time the commission intends to render a decision with recommendations concerning the complex Exide proposal, including the NPDES application, proposed Remedial Action Plan, and requested General Permit. We will then provide our findings and recommendations to all of the involved agencies. The requested extension of the comment period will be consistent with the public comment period regarding the proposed Remedial Action Plan and should give the Harbor Management Commission sufficient time to finalize our comments after our meeting on the 19th. Thank you for your consideration of this request.

Sincerely,
Mary von Conta, Chairman
Fairfield Harbor Management Cpommission

Rep. Michael D. Herley
Representative Town Meeting (RTM)
Town of Fairfield
Chairman, Public Health & Safety Committee
94 Gray Rock Road
Southport, CT 06890

February 19, 2013

Commissioner Daniel C. Esty
CT Department of Energy & Environmental Protection (DEEP)
79 Elm Street
Hartford, CT 06106

Dear Commissioner Esty:

As the Chairman of the Fairfield RTM's Public Health & Safety Committee—and an RTM Representative who lives in and represents Southport, CT—I am deeply concerned by certain aspects of the process surrounding the proposed environmental cleanup of the Mill River. As you know, for decades the Mill River was polluted by toxic waste from the industrial business (Exide Group Incorporated) formerly located near the river. The Mill River, the largest river in the Town of Fairfield, flows into Southport Harbor and ultimately into Long Island Sound. It is an important element of our local ecosystem.

Thankfully, the necessary environmental remediation technologies now exist to restore the Mill River nearly to its natural state. To achieve this goal, however, the cleanup process needs to be properly defined and the rules set forth by the CT DEEP and other State/Local Agencies must be followed through to the project's completion. This includes listening to the recommendations of our local commissions and providing our community with ample time and opportunity to provide input. Our community wants to see this project succeed, *but the cleanup must not be rushed. It is an essential environmental initiative that must be done right and done once.*

The CT DEEP's Consent Order dated Oct. 20, 2008 establishes the sequencing of the permitting process for those responsible for the cleanup of the Mill River:

> *"On or before ninety (90) days after the Commission has approved, as applicable, a remedial action plan [("SEDRAP")], pursuant to paragraph B.2.d of this Consent Order, the Respondent shall apply for all permits that are necessary to carry out the remedial action approved by the Commissioner."*

The Consent Order was duly recorded in the Land Records of the Town of Fairfield, and has been relied upon by public and local officials as the foundational document on the proposed cleanup process for the Mill River since 2008.

Regrettably, it now appears that Exide Group Incorporated has filed applications for coastal permitting ("OLISP") and discharge permitting ("NPDES") simultaneously with the SEDRAP, which seems to be inconsistent with the process outlined in the aforementioned Consent Order provided by the CT DEEP.

Moreover, by apparently not following the Consent Order and proceeding in what appears to be an expedited fashion, the Exide Group Inc.'s actions could result in the Town of Fairfield, its residents and other local officials/bodies, including the Shellfish Commission, Conservation Commission and Harbor Management Commission, among others, not having sufficient time to give full review to the proposed remediation project for the Mill River.

Accordingly, and on behalf of my constituents as an RTM Representative, I respectfully request that the CT DEEP intervene to ensure that the previously defined permit application process be followed as per the guidelines established by the CT DEEP's October 2008 Consent Order. By doing so, interested members of the public and local officials will have more time to fully digest the proposal and to provide the necessary public input. Anything less would limit the rights of our Townspeople to express their concerns and to be part of the process.

Thank you in advance for your prompt attention to this important matter. Please do not hesitate to reach out to me directly if I can be of assistance to you or your office in gaining a better understanding of the local perspective.

Very truly yours,

Michael D. Herley

Michael D. Herley

Copy: Carolyn Fusaro
Environmental Analyst, CT DEEP

Donald Gonyea
Environmental Analyst, CT DEEP

Honorable Michael Tetreau
First Selectman, Town of Fairfield

Honorable John McKinney
CT State Senate Minority Leader, 28th District

Honorable Brenda Kupchick
CT Assembly Representative, 132nd District

Honorable Kathryn Braun
RTM Representative, Town of Fairfield

Thomas Steinke
Director of Conservation, Town of Fairfield

Carolyn

Town of Fairfield

Independence Hall
725 Old Post Road

Fairfield, Connecticut 06430
Shellfish Commission

(203) 256-3071
FAX (203) 256-3080

WATER PROTECTION AND LAND REUSE
REMEDIATION DIVISION

FEB 26 2013

SITE NAME: _____
ADDRESS: _____
TOWN: _____
FILE TYPE: REM

February 19, 2013

D. Gonyea
Bureau of Materials Management and Compliance Assurance
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Re: NPDES Application No. 201205444 Exide Group, Inc. at 2190 Post Road Fairfield, Connecticut

Dear Mr. Gonyea:

At its February 13, 2013 meeting, the Fairfield Shellfish Commission reviewed this Exide application in the context of Fairfield's Shellfish Management Plan. The Fairfield's commercial and recreational shellfish programs are directly affected by the Exide matter and the Shellfish Commission has coordinated its efforts over the past decades with other town and state agencies to assist Exide in remediating the lead contamination resulting from years of battery manufacturing activities along the Mill River estuary. This letter brings to bear the Commission's knowledge, experience, and recommendations on the Exide matter and its NPDES application in the following comments.

In summary, upon its review of the Exide NPDES permit application, its referenced Proposed Mill River Sediment Remediation Plan of April 2012 (SedRAP) by Exide, and the CTDEEP Consent Order #SRD-193 of October 20, 2008, the Fairfield Shellfish Commission believes that the Exide application has been filed prematurely, and in doing so is inconsistent with, and contrary to, the intent and the specific terms and conditions of the enabling enforcement action, Consent Order #SRD-193 sections B.2.d.(6) and B.2.f.(1) and (2), and should therefore be withdrawn by Exide or be rejected by the CTDEEP.

35

The SRD-193 consent order sections are predicated on a logical, technically sound progression of mandatory actions that are intended to achieve the successful remediation of the lead-contaminated sediments in Mill River. They require Exide to submit a "detailed" sediment remediation plan and await the Commissioner's approval of the proposed plan prior to Exide's

applying for relevant permit applications. This sequence was required ostensibly because the CTDEEP and Exide wished to inform the public and elicit local knowledge and expertise concerning the project, and to ensure that the approved remediation plan is scientifically and technically sound, complete, and incorporates all the elements needed for a regulatory agency to appreciate the significance of the project and impose appropriate permit conditions. Exide has skipped this step, i.e., waiting for the Commissioner's approval of the proposed remediation plan, and jumped ahead to the permit application stage asking regulatory agencies to approve a permit without first knowing what the Commissioner will approve in the remediation plan.

Further, our records show that while presented to selected limited audiences (town administration, public officials, and private property owners) in 2011 and 2012, the referenced Exide Proposed SedRAP has not been presented at a meeting for the general public as Exide and the CTDEEP assured that it would be. Further, the CTDEEP published its December 20, 2012 notice of the public meeting on the proposed SedRAP and then published a two-day advance public notice of the Commissioner's Tentative Determination to Approve the Exide NPDES permit on January 8, 2013 for the CTDEEP's January 10, 2013 public meeting for a combined review of the Exide SedRAP, the Exide Office of Long Island Sound Programs application, and the Exide NPDES application, all within a two hour SRO session within which the CTDEEP and Exide allowed forty-five minutes for public comment on all three subjects. Of three versions of the Exide SedRAP, only two versions have been disclosed to the public. During this public meeting, seven members of the public were permitted to speak, and when one of them requested information on why the scope of Exide's contaminated sediment removal project had expanded nearly thirty percent in volume with no explanation in the application or the two previous versions of the SedRAP, the CTDEEP moderator responded by stating that the Exide representative had just stepped out of the room and would soon return to answer the question – neither of which occurred. The public has not yet had an opportunity to be fully informed or to comment effectively on this Exide matter.

By acting on its Tentative Determination to Approve this NPDES application prior to approval of the Proposed Mill River SedRAP, the CTDEEP will further confuse and compound Exide's error introduced when Exide prematurely submitted its application contrary to the terms of its consent order.

Further, Exide cites its Proposed Mill River Sediment Remediation Plan of April 2012 as the basis for Exide's NPDES permit application, which the Shellfish Commission finds incomplete. A review of Exide's NPDES application and the Proposed SedRAP discloses the fact that Exide has deferred submittal of the project details and work plan until this information is developed and provided by the successful bid contractor on the remediation project (see below and SedRAP comments).

Further, the Shellfish Commission reviewed the cited Consent Order, #SRD-193, and notes that Section A.25 requires Exide to provide plans and implement a supplemental investigation and remediation of the CTDOT highway stormsewer in the Post Road, which work is now in progress. This section is derived from earlier investigations when Exide was ordered to clean and video-inspect the Post Road stormsewer in front of its factory and the Railroad stormsewer along the rear of its factory as these two pipe systems were known to have discharged factory wastes in the past. In 2000, without first cleaning the pipes, Exide was unsuccessful in its efforts

to video-inspect either of these drain systems, and, inexplicably, CTDEEP ordered Exide to only return to address the CTDOT Post Road drain pipe in SRD-193 section A.25. This requirement is a logical extension of CTDEEP's efforts to ensure that potential sources of lead are found and remediated so that they may not contribute to future contamination after the river sediments are cleaned. The railroad drain is still an open order that must be resolved.

(12) To this end, CTDEEP should implement a revised consent order under the provisions of SRD-193 Section 13, and require Exide to provide and implement a supplemental upland plan for investigation, including cleaning and video-inspection, of the contents and structural integrity of the railroad drain system.

In light of these facts, the Shellfish Commission believes that the Exide Group, Inc.'s NPDES permit application, and all other applications, should be withdrawn by Exide or be rejected by the CTDEEP until such time as Exide complies with Consent Order #SRD-193.

Comments on the specific sections of the Exide NPDES permit application:

Part I: Application Type
Category of discharge source:
Exide states "Other: Filtrate from dewatered sediment" as a new application for discharge to surface water.

(39) [Exide does not indicate the industrial nature of its Mill River SedRAP lead-recovery project due to its former factory waste discharges. Exide's response is incomplete in that it does not address the industrial nature, project scope, multiple discharge locations, or potential environmental impacts of Exide's SedRap multiple discharges into the Mill River. Exide's response here is somewhat misleading in that it implies that the hydraulic dredging activity is required by CTDEEP Consent Order #SRD-193, when in fact, Exide is proposing hydraulic dredging from a list of several alternative excavation methods that may be used to extract lead-contaminated sediment from the Mill River; excavation methods that would follow Exide's preparatory construction of barriers that are intended to isolate the dredging activity, and its contaminated resuspended sediment discharges, from the open waters of the Mill River. Such isolation of the sediment extraction activities and discharge of contaminated resuspended sediment from the open river could be achieved by first containing the active dredge cell within a watertight perimeter wall or cofferdam, but instead Exide has proposed use of a suspended off-bottom silt curtain similar to Exide's hydraulic dredging and silt curtain activities in the spring and summer of 1983 that resulted in gross contamination of the Mill River due to the discharge of lead-contaminated resuspended sediment from the active dredge cell silt curtain into the unprotected river.

See NPDES

(13)

Exide has demonstrated the effectiveness of lead remediation with watertight cofferdams in confining contaminated soils and sediment in its use of steel sheet-piling along the east bank of the mill pond where Exide is currently remediating the contaminated soils of the septic leaching field. After isolation of the soils/sediments within its cofferdam, Exide uses a back-hoe to extract the contaminated materials. Exide could as easily use a hydraulic dredge, clam-shell,

drag-line, back-hoe or other excavator to remove the contaminated sediments from within a confined cell without discharging lead-contaminated resuspended sediment into the unprotected waters of Mill River; especially, when these sediments are so highly contaminated as in Areas I, II, and III, and during the spawning season of fish and shellfish whose larvae will be exposed to the adverse impacts of the discharge. The issue at hand is not whether Exide should use hydraulic dredging or any other method of extracting contaminated sediment from the Mill River, but only that whatever method it elects to use, Exide shall first demonstrably secure and isolate the active excavation cell and any subsequent discharge of contaminated resuspended sediment from the open waters of the river.]

(1) The actual process of hydraulic dredging as a point-source discharge of lead-contaminated resuspended sediment from the dredge cell silt curtain into the unprotected waters of the Mill River, especially during the protected spawning periods, is not acknowledged as an NPDES regulated activity; and this activity should be included in any NPDES application submitted to the CTDEEP.

Part II: Fee Information

Part III: Applicant Information (response)
Exide Group, Inc.
Location Address: 2190 Post Road, Fairfield, CT 06824
Exide states "Site Owner" with CCA, LLC Brookfield CT as primary contact.

Part IV: Site Information

1. Facility Name and Location (response): The former Exide battery facility; 2190 Post Road; within the Coastal Boundary; yes to species of concern; no aquifer protection area; no conservation or preservation restrictions; no public water supply watershed.
   [The application is incomplete in that Exide states that the project is located at 2190 Post Rd., but in fact, 1) the proposed project includes the construction of 400 feet of discharge pipeline on the property of the Metro-North Railroad and the construction and anchoring of the discharge raft assembly on the property of the Metro-North Railroad (at its bridge and right-of-way) and that of an adjacent private property owner (see Attachment F: Site Plan "Conceptual Facility Plan", and Tax Assessor's map) without recognition or submitted consent of their respective owners; 2) the proposed dredging project entails the removal of lead-contaminated sediment by installing anchors/piling, dredge cells, constructing flow diversions, and related structures over 4,000 feet of river channel covering 36 acres and in excess of fifty owners of underlying public and private property which Exide has not identified, or provided any acknowledgement from the affected property owners; and 3) the project entails over a dozen proposed dredge cells that will discharge untreated contaminated resuspended sediment from their perimeter silt curtains into the unprotected waters of the Mill River.]

(9) Exide should submit a revised application addressing:

1. current property ownerships affected by the proposed project in its entirety and the owners' acknowledgements of Exide's use thereof;

(1)

2. the individual point source discharges of untreated lead-contaminated resuspended sediment from all dredge cells' perimeter silt curtains.

3. Coastal Boundary (response): Yes; (See Attachment G: Coastal Consistencies Review Form Part IV: Identification of Applicable Coastal Resources and Coastal Resource Policies) [Exide fails to acknowledge the fact that its 2190 Post Road property and the greater river area include inland wetlands and watercourses (IWWC) lying in and adjacent to the project area. Exide presently holds a valid Fairfield IWWC permit for its on-going supplemental upland remedial activities at the former battery factory location and Exide may be expected to apply for a new permit if the proposed remediation project contains any regulated activities in regulated areas as determined by the Inland Wetland Agency.]

(10)

-Exide should submit a revised application which reflects the presence of IWWC coastal resources in the project area.

Part V: Facility or Activity Information

1. For the facility or activity generating the discharge, provide a list of materials utilized, products produced or services provided, if applicable.
   Principle Raw Materials (response):
   Exide states "In response to CTDEEP Consent Order SRD-193, the remediation of lead-impacted river sediments will produce sediment dewatering filtrate (river water) processed by polymer flocculant.".
   Products Produced:
   Exide states "Dewatered sediment filtrate (river water); sediment cake for upland disposal."
   Services Provided:
   Exide states " Dredging & dewatering of lead-impacted sediment."
2. SIC Codes:
   Exide states "N/A"
3. Identify wastes or wastewaters not included in this application or previously licensed by another permit or general permit.
   Exide makes no comment or response in this subsection.
   [Exide's NPDES application is significantly flawed due to being incomplete by its failure to address the discharge of untreated lead-contaminated resuspended sediment from its active dredge cells' perimeter silt curtains into the waters of Mill River during the protected spawning periods for anadromous fish and shellfish species..

(1)

[As noted in this application's supporting documents, Exide cites the CTDEEP's 2008 Consent Order #SRD-193 as the reason for generating Exide's April 2012 Proposed Mill River Sediment Remediation Plan which, following eventual approval of the proposed plan by the CTDEEP Commissioner, will provide the basis for all derivative local, state, and federal permit applications, including this NPDES permit application document for dredging 27,600 cubic yards of lead-contaminated sediment in Mill River which Exide proposes to conduct during active spawning periods of shellfish and state anadromous fish species of conservation concern.

It should be noted that Exide's NPDES permit application is not related to navigational dredging, or to channel or mooring field maintenance, or to land reclamation, utility installation, or any related excavation or deposition of sediment other than to remediate over five decades of lead battery manufacturing wastes deposited in the Mill River. Exide's application does not reflect the fact that during and after the decades of its battery manufacturing, Exide has, in effect, temporarily stored its industrial wastes in the sediments of Mill River until such time as it is prepared to remediate them. Exide is now proposing an industrial lead-remediation project that is an extension of its battery manufacturing and waste disposal activities, which project will essentially mine the lead in the contaminated sediments within Exide's many active remediation dredge cells in the Mill River.

Exide is under enforcement orders to remediate the lead-contaminated sediments in the Mill River in a manner that will achieve the state's goals without secondary or collateral contamination of the river. Exide is not required to dredge anything, and should not do so if it cannot ensure protection of the non-target areas and protected spawning season life forms in the Mill River. If Exide wishes to proceed with dredging activities without a protective wall or dam and without demonstrating discharge protection of protected spawning season species and their respective age classes, e.g., shellfish larva, Exide should be prohibited from dredging during those protective spawning periods.

A note about hydraulic cutterhead dredging within silt curtains as proposed by Exide and why the method is not a viable alternative for blanket application in the waters of Mill River. A review of the literature (Collins 1995) shows that "Perfectly designed and operated cutters [hydraulic cutterhead dredges] will introduce a sediment slurry that will be completely entrained by the flow to the dredge pump. However, spatially varying sediment properties and cutter operations inevitably lead to a sediment slurry that the pump cannot handle, resulting in sediment resuspension or release."

How much sediment resuspension or release? In its April 2013 SedRAP (p. 35), Exide suggests that it could be as little as 0.013% or less than three cubic yards of material from the proposed 21,440 cubic yard (CY) SedRAP remediation project. In its literature review, Anchor (2003) cites studies of resuspended sediment from hydraulic dredges varying from less than one percent to over eight percent of the project material (dry weight) which could mean over 1,715 CY of contaminated material resuspended into the supposedly-isolated dredge cell water column from this 21,440 CY project. This is not unreasonable when we consider that in 1983, Exide remediated the mill pond by dredging over 4,100 CY of lead-contaminated sediment and then had to recover approximately 283 cubic yards of additional material (6.9% of project) that included mud wave and resuspended sediment within the silt curtain. The additional resuspended sediment in the water column and the bottom mud wave that were discharged from the silt curtain dredge cell into the Mill River were unaccounted for.

What happens to the resuspended sediment within the dredge cell silt curtain? Francingues and Palermo (2005) report useful information that is worth repeating here: "What Processes Affect Silt Curtains? In many cases where silt curtains are used, the concentration of fine-grained suspended solids inside the curtain enclosure may be relatively

high (i.e., in excess of 1 g/L). The suspended material may be composed of relatively large, rapidly settling particles or flocs. In the case of a typical pipeline disposal operation surrounded by a silt curtain where suspended solid concentrations are high and material usually flocculated, the vast majority (95 percent) of the fine-grained material descends rapidly to the bottom where it forms a fluid mud layer that slopes away from the source at an approximate gradient of 1:200. The other 5 percent of the material remains suspended in the water column above the fluid mud layer and is responsible for the turbid appearance of the water inside the curtain. While the curtain provides an enclosure where some of the fine-grained material may flocculate and/or settle, most of this fine-grained suspended material in the water column escapes with the flow of water and fluid mud under the curtain. The silt curtain does not indefinitely contain turbid water but instead controls the dispersion of turbid water by diverting the flow under the curtain, thereby minimizing the turbidity in the water column outside the silt curtain. Whereas properly deployed and maintained silt curtains can effectively control the distribution of turbid water, they are not designed to contain or control fluid mud. In fact, when the accumulation of fluid mud reaches the depth of the ballast chain along the lower edge of the skirt, the curtain must be moved away from the discharge; otherwise sediment accumulation on the lower edge of the skirt can pull the curtain underwater and eventually bury it. Consequently, the rate of fluid mud accumulation relative to changes in water depth due to tides must be considered during a silt curtain operation". This report suggests that Exide's proposed remediation project may discharge over 85 cubic yards of lead-contaminated resuspended sediment into the water column as well as a potentially much greater, but unknown volume of contaminated fluid mud in bottom waves to the open waters of the Mill River. If Exide's new sediment estimate of 27,600 CY is correct, the amount of contaminated resuspended sediment could be well into the hundreds, if not thousands, of cubic yards.

Exide has not provided any test data on the matter of resuspended sediment volumes resulting from its proposed dredging activities.

In keeping with the Francingues and Palermo recommendation, Exide does not propose to secure the bottom of the supposedly-isolated dredge cell silt curtain, but instead to suspend the curtain approximately six inches off the bottom and to lift the curtain up to avoid damage during storm events. According to the Francingues and Palermo findings, we may expect that Exide's management of the dredge cell silt curtain when deployed as designed will initially discharge the bottom mud waves to spread approximately one hundred feet beneath and beyond the silt curtain and then be redistributed by river and tidal currents into uncontaminated or previously-remediated areas, as well as into the water column where it will impact the life forms and varied age classes of normally-protected fish (river herring are designated as species of state conservation concern) and shellfish species during their spawning seasons. When Exide lifts the silt curtain to protect it from damage due to storm events or operational needs, the contaminated resuspended sediment will be distributed throughout the unprotected waters of the Mill River in what will essentially be an unconfined dredging operation – inconsistent with the Clean Water Act and contrary to the CTDEEP's consent order.

In summary, Exide's lead recovery activity will entail the isolation of successive dredge "cells" by sequentially deploying a suspended perimeter panel or silt curtain around the active in-river dredging area or "cell"; then, within the supposedly-isolated dredge cell, mechanically agitating and resuspending the contaminated river sediments into the water column with a hydraulic cutterhead dredge while the dredge pump sucks up the resuspended sediment and water at about 1,000 gallons per minute and pumps most of the sediment and water as a dredge slurry to a dewatering facility. It is during this period of dynamic mechanical agitation and cutterhead motion where the contaminated resuspended sediment is not completely captured by the dredge pump, but is allowed to be distributed within the "mixing zone" of the dredge cell which is defined by the perimeter silt curtain.

Exide claims in its NPDES Attachment G: Coastal Consistency Review Form (p. 2 of 5, Part III: consistency with applicable coastal use and activity goals and policies), that "Floating turbidity curtains will be in place forming dredge "cells", within which any released suspended sediments would be contained, and outside which fish migration would be allowed at all times during the project." Exide continues in stating that turbidity instruments will be in place to notify its Operators if turbidity levels are exceeded due to a discharge of resuspended sediment from the dredge cell. Exide's statements create the impression that the resuspended sediment will be "contained" securely within the dredge cell to protect spawning species and that Exide will cause the dredging to stop if a discharge of resuspended sediment occurs, but Exide doesn't say that. Exide states in its SedRAP that resuspended sediment will in all likelihood occur and it is expected to be discharged from the dredge cell – that's the reason why Exide proposes to deploy monitoring instruments and notify the Operator of a discharge problem.

It is when the dredge cell perimeter silt curtain is compromised by river, wind or tidal currents, or by slippage of the bottom substrate, or silt curtain and equipment failure (and in Exide's application by having the silt curtain intentionally suspended off the river bottom approximately six inches and periodically removed to prevent silt curtain damage during storm and work events) that the contaminated resuspended sediment will be discharged as a point source from the dredge cell silt curtain wall into the open waters of Mill River.

At the dewatering facility where it will receive the dredge slurry at approximately 1,000 gallons per minute, the sediment-water slurry will be dewatered mechanically or by gravity in textile bags for production of a contaminated sediment cake product that will be shipped for disposal or reuse off the site. Following dewatering, the filtrate water will be treated and discharged back to the Mill River at up to approximately 330 gallons per minute.]

Exide:
-Exide should provide a water budget and explanation in a revised NPDES application for the apparent discrepancy between dredge production slurry input rates and volumes and treated filtrate water output discharged to the river and how they will be reconciled during the project.

(40)

See NPDES

Exide proposes to monitor the discharge of contaminated resuspended sediment from the active dredge cell by deploying instruments approximately one hundred feet upstream and

downstream from the mixing zone of the dredge cell perimeter silt curtain, which will provide no protection to the open waters of Mill River and the anadromous fish and shellfish species in the river during their spawning seasons.

Exide:
- Exide should deploy instruments to monitor the discharge of contaminated resuspended sediment from the dredge cell silt curtain perimeter at locations along the cell perimeter at the bottom, top and mid-point of water depths, and with instruments and in a manner that relate the parameters monitored in the water column to the parameters of importance identified in the elutriate and toxicity tests related to the species and age classes of the fish and shellfish species expected to be present in the Mill River estuary while Exide is actively dredging during their spawning seasons.

(1)

Exide proposed to the CTDEEP (see the CTDEEP – Exide 2010 meeting minutes with town, state and federal agency representatives) that if Exide could demonstrate that it could protect all spawning fish and shellfish species from exposure to the adverse effects of the lead-contaminated sediment remediation project, that Exide should be allowed to conduct its remediation activities in the Mill River through all normally protective spawning seasons – received as a not unreasonable proposal by interested meeting participants. As noted in this application, Exide proposes to dredge during the normally protective spawning seasons, but it has not demonstrated its ability to protect the fish and shellfish species of concern from such discharges; nor has Exide provided any information concerning elutriate tests of the dredge slurry or resuspended sediment, or any toxicity testing of the resuspended sediment against the life forms and age classes of the fish and shellfish species present in the water column if discharges occur. Exide has offered toxicity test results for shrimp and minnows reflective of conditions that apply to the treated filtrate water discharge, but nothing pertaining to the discharge of resuspended contaminated sediments in the water column or in the fluid mud waves discharging from the bottom of the silt curtain dredge cell perimeter.

Until such time as Exide demonstrates no adverse impacts to spawning species and their range of age classes from discharges of lead-contaminated resuspended sediment within dredge silt-curtain "cells", Exide should be prohibited from in-water activities during protective fish and shellfish spawning seasons. Exide may propose to conduct its sediment remediation activities within walls or cofferdams during protective spawning seasons.

Exide:
-If Exide proposes to dredge within normally protective spawning periods, Exide should be required to conduct tests of the contaminated resuspended sediment for its physical, chemical and biological properties and for its acute toxicity against the age classes (including larval forms) of the fish and shellfish species known to be within the water column during the normally protective spawning periods when Exide will be dredging.
-If Exide proposes to remediate contaminated sediments within active spawning periods for fish and shellfish, Exide should be required to immediately stop the remediation activities upon discharge of contaminated resuspended sediment from the excavation cell perimeter until the source of the discharge problem is identified and corrected.

(1, 2 + 16)

The current draft of the Proposed Mill River SedRAP proposes that Exide will only dredge 21,440 CY of contaminated sediment. In this NPDES application Exide states, without elaboration, that it will dredge 27,600 CY of lead-impacted sediment in implementing its Proposed Mill River Sediment Remediation Plan. Exide cannot know what volumes of sediment it will be required to dredge in this NPDES application because the CTDEEP Commissioner has not yet approved Exide's Proposed Mill River SedRAP.]

Exide:
- Exide should revise its Mill River SedRAP and provide an explanation for the discrepancy between dredge volumes (21,440 CY vs. 27,600 CY), plus a discussion of why the thirty percent increase is necessary and its implications for affecting all aspects of the project; including but not limited to, how the increase in the volume of the project will affect the project's expanded duration and seasonal timing, extension of daily activities, increased production, treatment, and transportation areas and facilities required, increased discharge requirements, increased residual depths of channel substrate and creation and expansion of anaerobic sumps in the channel, disturbance to and increased impacts on aquatic plants and animals, and increased need for compensatory mitigation for adverse environmental impacts.

(Part V (cont'd.)

4. Inventory of toxic and hazardous substances and oil or petroleum liquids (response):
Exide lists "Solve 124: Organic cationic emulsion; Solve 416: Cationic Coagulant; Solve 9330: Organic Anionic."
5. For outstanding requirements or compliance schedules which are related to the discharges that are the subject of this application (response):
Exide states "ID of Requirement -- State: SRD-193; Brief Description of Project -- Environmental Dredging: project in permitting stage; Final Compliance Date -- November 2013 (projected)".
[Contrary to its assertion, Exide's project is not in the "permitting stage" – Exide's proposed Mill River sediment remediation plan is still under review and not approved by the CTDEEP Commissioner. As specified in Consent Order #SRD-193 B.2.f (1), p. 7, Exide must file any necessary permit applications, such as this NPDES application, subsequent to the Commissioner's approval of a sediment remediation plan. CTDEEP representatives have stated that the DEEP will not issue any of its permits until public comments are received and the SedRAP is approved. No information was offered about modifying the federal Corps general permit which was approved and issued to Exide in September 2012 without opportunity for public review and comment and without Exide's SedRAP being in compliance with its Consent Order SRD-193.]

Part VI: Supporting Documents

Part VII: Application Certification
Attachments A—V
Attachment F: Site Plan: Conceptual Facility Plan (6/27/12)
Exide depicts a dredge slurry dewatering complex incorporating nearly one-half the site area devoted to thirty-three Geotubes draining to a filtrate treatment area which flows through a 600-foot long pipeline over Exide and Metro-North property to a discharge float assembly anchored

in the mouth of the Metro-North railroad bridge in the Mill River channel.

[Exide's placement of the discharge float at the bridge places it in a location where it may be damaged by storm events and floating debris or jammed in the bridge opening where it may damage other properties; this float location will obstruct boating access on the river; as well as potentially interfere with the behavior of spawning fish in the narrow and shoaling channel at this location. The lack of detail and conceptual nature of Exide's NPDES application and SedRAP is underscored by the conflicting plan descriptions of the discharge float located in the Mill River – the text note on the Conceptual Facility Plan indicates that the structure is 40'L X 5'W while the inset detail specifies a 60'L X 20'W structure.]

Exide:
-Exide should relocate the discharge float assembly in an off-channel area where it will not interfere with channel flow or debris, boating access in the channel, and migratory fish runs.
-Exide should provide detailed plans that correctly depict the structures proposed for the remediation project.

Shellfish Commission concerns related to Exide's NPDES application related to bacteria, nitrogen, phosphorous, heat, and oil.

1. Bacteria.
   The Mill River estuary, including Southport Harbor, is the subject of an active TMDL program that addresses water quality impairments due to lead, chromium and bacteria (fecal coliform).
   Fecal coliform is of great concern because the shellfish beds (including Natural Shellfish Beds, recreational and commercial shellfish beds) associated with the Mill River estuary (in the Mill River, Southport Harbor, and out in Long Island Sound) are managed under an MOU with Fairfield by the State Department of Agriculture – Bureau of Aquaculture under water quality regulations that are predicated on the concentrations of coliform bacteria in the water column. Exceedances of permissible bacteria concentrations, even from dredging operations, will result in closure of the shellfish beds – as has happened in the past.
   During Fairfield's Pine Creek marsh restoration and mosquito control activities several years ago, amphibious ditchers and excavators were used to remove accumulated sediment from the salt marsh channels. Some of the accumulated organic matter and sediment were apparently mobilized with the tides and transported down Pine Creek and out into Long Island Sound where subsequent water quality testing by Aquaculture resulted in closures of the recreational and commercial shellfish beds off Pine Creek Point, Kensie Point and Sasco Hill Beach. All parties affected by the event were understandably concerned and Exide should anticipate the need to monitor for, and prepare to mitigate, such an eventuality when it remediates the sediments in Mill River.

Exide:
-Exide should include coliform bacteria in its hourly sampling regimen at any and all discharge points from the active dredge cells as well as the discharge of treated filtrate return water to the Mill River.
-Exide should prepare and submit a contingency plan for compensatory mitigation of all adverse impacts on the Natural Beds, recreational and commercial shellfish beds and related

shellfishing activities resulting from Exide's sediment remediation project.

2. Nitrogen and Phosphorous are of concern due to the impounded condition of the Mill River above the tidemill dam where nutrients and organic matter accumulate in large quantities. The dredging activities will mobilize these suspended and dissolved materials that will support the growth of aquatic plants, especially algae, that will flourish and subsequently die and decompose; stripping the dissolved oxygen from the water; especially during the summer when elevated temperatures in the river and discharge water have reduced capacities for holding dissolved oxygen, when aquatic organisms require increased dissolved oxygen to avoid undue stress.

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See NPDES

Exide should include nitrogen and phosphorus in its daily sampling regimen at any and all discharge points from the active dredge cells as well as the discharge of treated return water to the Mill River.

3. Heat

While Exide has not yet determined if its successful bid contractor will use mechanical or gravity dewatering techniques, Exide depicts the use of thirty-three Geotubes, or black permeable geotextile bags, 120' L X 40' W, in its Conceptual Facility Plan. This gravity dewatering technique will involve over 1.5 acres of black energy-absorbing textile bags that, especially during the summer, may be expected to produce filtrate discharge water with elevated temperatures and reduced DO that could adversely affect the receiving waters and ecological receptors in the river.

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See NPDES

Exide should monitor and adjust its treated filtrate discharge water so that, during fish and shellfish spawning seasons, it is coincident with the receiving water upon discharge to the river.

5. Oil

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Exide's 1983 dredging activities in the mill pond produced a distinct surface oil slick that discharged through the dredge cell perimeter silt curtain into the Mill River. Additional oil slicks may be expected as a consequence of Exide's proposed SedRAP in this remediation project.

Exide should monitor and treat any oil slicks associated with the remediation project cells and the dewatering filtrate prior to discharge to the Mill River.

Literature Cited

1. Collins, M.A. 1995. Dredging Induced Near-field Resuspended Sediment Concentrations and Source Strengths. Dredging Operations Technical Support Program misc. paper D-95-2, Prepared for US Army Corps of Engineers, US Army Engineer Waterways Experiment Station, Vicksburg, [page 10.]

2. Anchor Environmental C.A. L.P. 2003, Literature review of effects of suspended sediment due to dredging operations. Prepared for Los Angeles Contaminated Sediments Task Force Los Angeles, California.. One Park Plaza, Suite 600 Irvine, California 92614. June 2003. 140pp.
3. Francingues, N. R., and Palermo, M. R. (2005). Silt curtains as a dredging project management practice, DOER Technical Notes Collection (ERDC TN-DOER-E21). U.S. Army Engineer Research and Development Center, Vicksburg, MS. 18p.

Please do not hesitate to contact me if I may be of further assistance in this matter.

Sincerely yours,

Thomas J. Steinke

TJS/jm

cc: M. Tetreau, First Selectman, C. McCarthy-Vahey, K. Kiley, Bd. of Selectmen; S. Lesser, T. Atty.; SC; CC; HMC; P. Bowe, C. Fusaro, T. Iott, T. Selmeski, M. Johnson, S.. Gephard, CTDEEP; D. Carey, K. Derosia-Banick, DA-BA; Ray, COE; J. Shaw; K. Braun, Esq.; A.S. Jacobson, E. H. Jones; K. Money, J. Fallon, Esq. Exide; Sen. J. McKinney; Reps. B. Kupchick; K. Fawcett; A. Hwang

Gonyea, Donald

From: Joy Shaw [jtsffld@gmail.com]
Sent: Tuesday, February 19, 2013 6:33 PM
To: Gonyea, Donald
Cc: Fusaro, Carolyn
Subject: Qualification of Exide lead removal proposal for NPDES & SedRAP permits

We find it completely unacceptable that the DEEP is proceeding with this project with total disregard for the schedule clearly spelled out in its own prior agreement with Inco/Exide, the 2008 Consent Order. This order stated that Exide would apply for all necessary permits for this project AFTER the DEP has approved a remedial action plan. However, to our dismay,Exide has somehow been allowed to apply for OLISP and NPDES permits at the same time as it is applying for a permit for its remediation (SedRAP) "plan," in total disregard for the 2008 Consent Order. Likewise, completely out order with this mutual agreement, the SedRAP public comment period is Scheduled to end AFTER the NPDES comment period! The terms of the 2008 Consent Order clarified that the SedRAP had to be approved, with ALL DETAILS of the project presented for public consideration, BEFORE the NPDES and OLISP permits could even be applied for.

We are dismayed and find unconscionable that the DEEP is apparently accepting issuance of an OLISP permit, to be issued as a "general permit," (for the proposed Exide "clean-up" of Fairfield, CT's upper Mill River estuary) without allowing any chance for a public hearing. An "individual permit" is what would seem appropriate for this project, supposedly designed to remedy 60 years of Exide's lead pollution in this river.

This deplorable, inexcusably improper way of proceeding against the stipulations of your own department's order has left the concerned public and local commissions responsible for all important activities on this abused section of this Mill River with minimal opportunity for input that is their right to have regarding this most seriously life-destroying operation on this river. Presented below are some of the most alarming inadequacies and major concerns regarding this so-called "plan."

Inedequacy of so-called "plan" (SedRAP)

The SedRAP is only a rough outline of how Exide proposes to handle this sensitive project. It does not qualify as a plan because it lacks the most significant details. Abence of such detail has made it impossible for the Fairfield Conservation Commission to even determine whether an Inland Wetland permit should be required! (If it develops that one is needed after DEEP issues its permit, the situation would be extremely upsetting and difficult to deal with!)

Cooperative clean-up needed

We are still concerned that this project is being rushed through with no indication of any progress on getting Superior Plating's chromium pollution removed in conjunction with the lead removal. Lead removal should wait until lead and chromium can be removed simultaneously, so that the living river system would not have to be deeply disrupted all over again.

Selection of least damaging process for river & most efficient and effective for clean-up

The public has has no opportunity to speak for the living river system in regard to the way the lead (and other toxic materials) will be removed. A major swath of this community feels that coffer-dams would be far more effective in preventing the spread of resuspended contaminated sediments (as will result from the proposed hydraulic dredging with silt curtain

"containment"). It seems totally unconscionable that our supposed protective state agency is not assuring the local public and commissions the fullest possible opportunity for discussion of this concern with a public hearing. The DEEP will bear the shame of whatever impairment of the living river system results.

Restoration of river bottom and micro and macro habitats

(4) The local community is equally concerned that there is no provision in the so-called "plan" for refilling of the excavated holes, which will pose an ecological hazard for the river ecosystem's recovery (anaerobic sumps/reduction of oxygen/prevention of stream-bottom repopulation). Nor does this "plan" include other habitat restoration intent regarding valuable stream-bottom habitat features such as stumps and boulders that will be moved or removed in the process of excavation. (13) A back-hoe in a waterless coffer-dam cell would make tending to both of these vitally important habitat needs more feasible. The coffer-dam system would also allow spawning species to run upstream with the least toxic exposure.

This selection is just the highlights of our concern with a processing that reeks of dereliction of duty for your agency in regard to this supposed remedial action.

Sincerely yours,

Joy Shaw. 476 Old Mill Road, Fairfield, CT. 2/19/13

Sent from my iPad

Gonyea, Donald

From: Robert Bilek [rwbilek@sbcglobal.net]
Sent: Wednesday, February 20, 2013 4:00 PM
To: Gonyea, Donald
Cc: Thomas Steinke; Sanford Wakeman
Subject: Exide NPDES Permit Application and DEEP Tentative Determination of Approval
Attachments: EXIDE NPDES PERMIT COMMENTS 2-19-13.DOCX

Dear Mr. Gonyea:

I understand that Mr. Steinke has sent you a formal document representing the Fairfield Shellfish Commission's collective position on this NPDES Permit.

Attached is a Word document in "docx" format that reiterates issues I feel should be addressed. Some of these were presented to you at the February 13, 2013 Fairfield Shellfish Commission meeting, and some are new.

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Again, I believe all parties involved want Exide to remediate Mill River as expediciously as possible. However, after 30 years we would like it done correctly, and with minimal damage to our fish and shellfish. We are very disturbed that Superior Plating is not at the table and that we will have to go through this process again sometime in the future.

Thanks you for the courtesy of attending our meeting, and for your consideration of these and other concerns, questions and recommendations that are brought to your attention. We wish DEEP had sent representatives to discuss the SEDRAP as requested by Mr. Steinke.

Respectfully submitted,

Robert W. Bilek

EXIDE NPDES PERMIT FOR WASTEWATER DISCHARGE

DEP Consent Order SRD-193 dated 10/20/08

Sect. B.2.d.(6)
This states in part that the Respondent (Exide and Vale Inco) shall "propose a detailed remedial action plan ... for lead in sediments in the Mill River Study Area ... and schedule to perform the preferred remedial actions. The schedule required by this paragraph shall also include a schedule for applying for and obtaining all permits and approvals required ..."

There is no schedule for applying for and obtaining all permits and approvals, including the NPDES Permit.

Sect. B.2.f.(1)
"On or before 90 days after the Commissioner has approved, as applicable, a remedial action plan, pursuant to paragraph B.2.d. of this Consent Order, the Respondent shall apply for all permits that are necessary to carry out the remedial action approved by the Commissioner."

Any affected town relies on this process.

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In the case of Fairfield's Mill River remediation , the Commissioner has not approved the SedRAP dated October 2011, Rev. April 2012. Yet Exide's NPDES Permit Application is dated 6/22/12. And, on 1/7/13, DEEP issued a Notice of Tentative Determination of Intent to Issue a NPDES Permit to Exide Group Inc. identified as Application NO. 201205444 and Permit ID NO. CT0030651.

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This notice allowed 30 days to comment. This was extended to 2/20/13 after a request for more time. This forces us to comment on a permit application before we even have questions answered regarding the SedRAP, and there are many. This seems backwards. Is this process being followed in compliance with the Consent Order?

Since DEEP is using a General Permit, Fairfield's various commissions have been excluded from having public hearings on various permits normally associated with this type of SedRAP, and therefore have been denied status to intervene.

EXIDE NPDES Permit Application dated 6/22/12

ATT. A
Executive Summary
"The discharge is the result of dewatering activities involved with the dredging of approx. 27,600 cu. yds. of lead-impacted Mill River sediment."

3

How can DEEP approve a permit for removing 27,600 cu. yds. of sediment when the SedRAP shows 21,440 cu. yds.? This is like applying to build a 3 lane highway and then submitting a permit application for a 4 lane highway and getting it approved without any explanation at all. Does the permit application not have to factually match the SedRAP? Does DEEP look at the SedRAP when approving the NPDES Permit? How was this new amount calculated? Why is it so different (+28%) from the 21,440 cu. yds. specifically calculated in the SedRAP by Area?

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Also, the NPDES permit tentative determination indicates "The discharge ... will have no adverse impact on water quality." Yet, neither the SedRAP nor the permit application address the very real potential for high fecal coliform bacteria counts. With the dredging, resuspended sediment can flow downstream and cause high coliform bacteria counts, especially in the hot summer months. The water piped to the Geotubes and then discharged back into the river may contain ever higher fecal bacteria counts after sitting in the hot sun . The Bureau of Aquaculture can

See NPDES

close our Recreational Shellfish Area and/or the Commercial Shellfish areas outside Southport Harbor if these counts exceed certain limits.

Has anyone contacted the Bureau of Aquaculture regarding this type of impact for their input? If we are closed for extended periods there should be compensatory mitigation agreed to in advance. It is recommended that the upland treatment site be required to check for fecal coliform count, and be required to treat the water before discharge to the river to eliminate this issue.

ATT. F
Site Plan

The site plan shows a 40'X5' discharge manifold in the main channel, right in front of the railroad bridge. Then, in the Discharge Manifold Detail section, is shows it to be 60'X20'. That's a big difference, so which is it? This could affect access up the river for 1 ½ - 2 years if positioned there. It will surely affect the ability of river herring to pass for spawning, especially if it's running 15-24 hours per day as proposed. It should be moved to the side, and perhaps onto Exide's portion of the river.

This site plan shows 24 Geotubes in place, yet it indicates 33 will be used. Is this plan to scale, and will they fit?

ATT. G
Coastal Consistency Review Form
Part III

"The dredging technique implemented will utilize the latest technology, including a GPS unit... and a modern hydraulic dredge 'head' which produces minimal suspension of sediments..." Is this really the "latest technology" as stated in this permit application? Exide cited using the "latest technology" as a reason to allow dredging during the spawning seasons for the fish and shellfish populations in Mill River. However, Exide's own charts show the Tornado Motion Technology to be rated much better. And cofferdams in Areas I, II and III, where there is the most lead contamination, are even better and would, in effect, eliminate the issue of resuspended sediments experienced in Exide's 1983 dredging of Mill River.

ATT. H
CT NDDB INFORMATION
5/9/12 letter from Dawn McKay, DEEP
Regarding the Blueback Herring in Mill River, DEEP was to review the state permit application to determine if Exide's project could adversely affect Blueback Herring. Has this been done in light of the current review of this fish's status? Did anyone in Fisheries consider the impact of discharging treated water 15-24 hours per day in the river's main channel versus the recommended maximum 12 hours per day on the ability of the river herring to get upriver to spawn? If so, what was their recommendation?

ATT. I
Part A: General Description
1.3 Sequence of Operations
"The filtrate will then be processed through a bag filter and then a clay filter before being ultimately discharged to the river through a discharge manifold ..."

However, in the NOTICE OF TENTATIVE DETERMINATION TO ISSUE A NPDES PERMIT dated 1/7/13 on page 2, under REGULATORY CONDITIONS, it states "... filtrate will be ... pumped through fractionation tanks. Wastewaters will then be stored in an equalization tank and additional filtration will be conducted if necessary in order to comply with permit limits prior to discharge..."

Is all of the filtrate going through a bag filter and then a clay filter as described in ATT. I, or just some of it? The wording in the 1/7/13 NOTICE implies it is not.

3.3 Wastewater Treatment
"A valve sample tap near the end of the pipe will be utilized to monitor discharge water for those parameters specified in the NPDES permit..."

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Will fecal coliform bacteria be added to the parameters to stop elevated counts from entering the river? Is the "tap near the end of the pipe" on the upland treatment site or is it out on the manifold in the river? What happens if any parameters are being exceeded in terms of stopping the discharge? How does that happen, and how long would it take to do it?

See NPDES

ATT. O
DISCHARGE INFORMATION
DEWATERING TRIAL PERFORMANCE AND AQUATIC TOXICITY TESTING REPORT Rev. May 20,2012

3.4 Aquatic Toxicity Testing
Tests were performed on mysid shrimp and inland silverside fish. Why were toxicity tests not performed on blueback herring, hard clams, oysters or blue crabs? These are the fish and shellfish about which we are most concerned. How can Exide and DEEP be so confident these fish and shellfish will not be harmed, especially during spawning season? Has the Department of Agriculture/Bureau of Aquaculture reviewed these findings. Do they agree with the findings as they pertain to the fish and shellfish of concern to us listed above?

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See NPDES

NOT COVERED BY THE SEDRAP, NPDES PERMIT APPLICATION OR TENTATIVE DETERMINATION TO ISSUE A PERMIT

4

The above documents do not cover any significant remediation of the Mill River or of it's banks after this dredging project is completed. I see no mention of filling in holes created by the dredging with clean fill so they do not fill with leaves and decomposing organic matter, or of replacing logs or rocks to provide the habitat a river bottom needs. Nor did I see any mention of remediating the shoreline with trees and shrubs, provision for public access, etc. as compensation for the amount of damage done to our Mill River and the loss of public use of the river for recreational swimming, clamming, and crabbing for 30 years. This should be part of the remediation requirements.

35

34

RWB
Rev. 2/20/13

Gonyea, Donald

From: James Salce [james.salce@sbcglobal.net]
Sent: Wednesday, February 20, 2013 5:20 PM
To: Gonyea, Donald
Subject: Re: MILL RIVER Ffld.

James Salce wrote:
> James Salce wrote:
>> Mr. Donald Gonyea; Hello, my name is Jim Salce I'm 68 years old,& I
>> was on the Fairfield Shellfish Comm. for a total of 14 yrs. I worked
>> as a Seed Oystermen for 20 yrs. & as a hard shell clammer for another
>> 20 yrs. I was a member of the CT. Natural Growth Oystermens Assn .
>> for 20 yrs. In my experience stirring the bottom for just three,
>> eight hour days causes oysters to begin retaining silt and it would
>> be similar for the clams. The clams & Oysters will first stop feeding
>> to avoid the silt, but they must eventually filter feed & that when
>> the problem starts. The Shellfish over time will acquire to much silt
>> and die. Depending on the extent of the plume as to how far down
>> river it travels is of Great Concern to Me & Six other Company's that
>> I know of that Clam & Oyster at the Mouth of South Port Harbor. This
>> is a Very Productive Area for Shellfish a Multi-Million Dollar
>> Industry is in the Outer Harbor and adjoining it. Monitoring of not
>> only the water but of the Shellfish should be done. < Silt is a
>> killer of Shellfish > I don't wish to see another disaster like the
>> first time. Poor Management Supervision !!! They dredged the river
>> then they cleaned the plant < EXIDE > & washed the inside of the
>> Plant and the drains put Lead Back In The MILL RIVER !!!! ?????.
>> Proper Supervision Is A MUST !!!.. The best time of year for this
>> project might very well be the winter when Shellfish are most
>> dormant. If Necessary in ____< Two or MORE WINTERS > Mining the
>> Impact On The Environment !! If Shellfishermen's lively hood's are
>> impacted they should be compensated by EXIDE and let EXIDE agree to
>> this as part of this Project <So It Will Be Done Right This Time>
>> !!! Sincerely, Jim Salce
>>
> cc: Carolyn Fusaro @ CT. Gov
>

Town of Fairfield

Department of Community and Economic Development
Old Town Hall
611 Old Post Road
Fairfield, Connecticut 06824

February 20, 2013

Carolyn Fusaro
CT Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106

Re: Exide Group Incorporated Sediment Remedial Action Plan

Dear Ms. Fusaro,

I am writing on behalf of the Fairfield Economic Development Commission (EDC) relative to the Sediment Remedial Action Plan for the Mill River as prepared and submitted on behalf of the Exide Group Incorporated.

I and several other Commissioners had occasion to attend the public informational meeting held on January 10th of this year, as well as the joint informational meeting hosted by our own Conservation Commission approximately one year prior. I and others of us present were struck by the similarities in the information being presented, as well as the questions and comments posed. In short, it didn't appear like a lot of new information from one year to the next.

It was also sobering to hear one of the consultants admit that he has spent virtually his entire professional career—spanning thirty plus years—on remedial investigations involving this site. The Economic Development Commission, like many Fairfield residents, would like to see those involved move beyond remedial investigations and reports. While we don't profess to be remedial specialists, and will defer to the good judgment of the technical experts including those at CTDEEP, the EDC supports the clean-up of the Mill River in as expeditious a manner as is possible.

While no plan is perfect, and things seldom go according to plan, the EDC supports the Department's expeditious review and approval of a Remedial Action Plan for the Mill River so that clean up can proceed forthwith. It is our understanding that this is an outcome based plan, and that it is incumbent upon the applicant to demonstrate compliance and to ensure that all clean-up objectives have been satisfied. We trust that the Department will require appropriate oversight and monitoring to achieve that end, and to make any necessary adjustments during

the performance of the work. We would specifically like to request placement and enforcement of appropriate noise and odor controls during work to minimize impacts to adjoining property owners. (43) (38)

The Economic Development Commission looks forward to returning this strategic site to productive use in the very near future. Thank you again for this opportunity to comment.

Sincerely,

Peter Penczer,
Chairman

cc: M. Tetreau, First Selectman

Gonyea, Donald

From: Mrs Charles P Stetson [bebestetson@sbcglobal.net]
Sent: Thursday, February 21, 2013 9:54 AM
To: Fusaro, Carolyn; Gonyea, Donald
Cc: john.mckinney@cga.gov; kim.fawcett@ct.gov; firstselectmanffld@town.fairfield.ct.us
Subject: Proposed remediation Mill River and Exide battery site

(1) I urge rejection of the proposed hydraulic dredging system because of the spreading of lead and other toxic particles that will occur through and over the proposed silt curtain that is planned.

(2) The inappropriateness of the proposed system is of even greater concern since Exide proposes to dredge throughout the spawning season of the native anadromous fish of this river. The populations of both the alewives and blueback herring have declined close to being declared endangered spaces.

(7) I urge DEEP to use a coffer dam system to keep river water out of the excavation cell and Exide must use clean fill which isn't included in the plan. A coffer dam system will allow the project to proceed continuously with minimal impact on the spawning species.

Please ensure these procedures be followed to the river can be restored from the serious pollution it has suffered so long.

Sincerely,
Barbara S. Stetson

Town of Fairfield
HARBOR MANAGEMENT COMMISSION
Sullivan Independence Hall
725 Old Post Road
Fairfield, Connecticut 06824

VIA EMAIL TRANSMISSION AND REGULAR MAIL

February 22, 2013

Ms. Carolyn Fusaro
Connecticut Department of Energy and Environmental Protection
Remediation Division
79 Elm Street
Hartford, CT 06106-5127

Mr. Donald Gonyea
Connecticut Department of Energy and Environmental Protection
Bureau of Materials Management and Compliance Assurance
79 Elm Street
Hartford, CT 06106-5127

Ms. Tonia Selmeski
Connecticut Department of Energy and Environmental Protection
Office of Long Island Sound Programs
79 Elm Street
Hartford, CT 06106-5127

Subject: Proposal by Exide Group, Inc. to dredge lead-contaminated sediment from the Mill River and Southport Harbor.

Dear Ms. Fusaro, Mr. Gonyea, and Ms. Selmeski:

The Harbor Management Commission (HMC) has continued to review the proposal by Exide Group, Inc. (the Applicant) to dredge lead-contaminated sediment from the Mill River and Southport Harbor. That proposal is described in three separate documents submitted by the Applicant to the Connecticut Department of Energy and Environmental Protection (DEEP) for approval. These are: 1) a "Remedial Action Plan (RAP) for Lead Impacted River Sediments," October 2011, revised April 2012; 2) an "Office of Long Island Sound General Permit Registration Form," signed by the Applicant on June 22, 2012; and 3) a "Permit Application for Wastewater Discharges," signed by the Applicant on June 22, 2012.

My previous letter to you, dated January 25, 2013, provided a summary of the HMC's ongoing review of the Applicant's proposal, including references to the HMC's prior correspondence to the DEEP. The letter also requested that the DEEP respond in writing to a number of specific issues identified by the HMC concerning the proposal. A written response to the identified issues was deemed necessary by the HMC in order that we may properly complete our review of the proposal and determine its consistency with *The Management Plan for Southport Harbor* (Harbor Management Plan).

In the absence of any response to my letter, the HMC considered the Applicant's proposal during a Special Meeting on February 21, 2013 and approved a motion to transmit the following comments and recommendation to the DEEP and Applicant.

1. *The HMC hereby asserts its authority and responsibility, pursuant to the Connecticut General Statutes and Fairfield Town Code, to review all proposals affecting Southport Harbor to determine the consistency of those proposals with the Harbor Management Plan which is duly approved by the State of Connecticut and adopted by the Fairfield Representative Town Meeting.*

2. *The proposed remediation project, which affects real property on, in, or contiguous to Southport Harbor and therefore is subject to the municipal jurisdiction of the HMC, requires careful review with full consideration of the needs and interests of the Town of Fairfield.*

3. *Pursuant to Section 22a-113n of the Connecticut General Statutes, a recommendation of the HMC pursuant to the Harbor Management Plan shall be binding on any official of the State of Connecticut when making a regulatory decision affecting Southport Harbor.*

4. *There is currently insufficient information to enable the HMC to make a final determination regarding the consistency of the Applicant's proposal with the Harbor Management Plan. As a result, the HMC recommends that the DEEP should make no decision regarding the proposal until such time as: a) the specific issues identified by the HMC in the enclosed Statement of Harbor Management Issues are addressed in writing by the DEEP; and b) a reasonable and sufficient period of time is provided to enable the HMC to review the DEEP's written response and make a final determination with appropriate recommendations.*

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I look forward to discussing this matter with you in more detail during the February 28 meeting with other representatives of the Town of Fairfield in the Legislative Office Building. If you have any questions or require additional information prior to that meeting, I can be reached at (203) 259-9588 or mvonconta@optonline.net.

Sincerely,

Mary von Conta

Mary von Conta, Chairman
MVC/gs
Enclosure

cc:
Mr. Michael Tetreau, First Selectman
Representative Kim Fawcett, 133rd District
Representative Tony Hwang, 134th District
Representative Brenda Kupchick, 132nd District
Senator John McKinney, 28th District
Mr. Daniel Esty, Commissioner of Energy and Environmental Protection
Mr. John Fallon, Attorney for applicant
Mr. Kevin Gumpper, Chairman, Fairfield Conservation Commission
Ms. Diane Ray, U.S. Army Corps of Engineers
Mr. Thomas Steinke, Town of Fairfield Conservation Director
Mr. Sandy Wakeman, Chairman, Fairfield Shellfish Commission
Mr. James Wendt, Town Plan and Zoning Department

February 22, 2013

Statement of Harbor Management Issues Regarding a Proposal by the Exide Group, Inc. to Dredge Lead-Contaminated Sediment from the Mill River and Southport Harbor[1]

The Harbor Management Commission (HMC) is reviewing a proposal by Exide Group, Inc. (the Applicant) to dredge lead-contaminated sediment from the Mill River and Southport Harbor. As proposed, that sediment would be pumped via a pipeline to a temporary processing facility on the site of the former Exide Battery plant adjoining the Mill River. It would there be dewatered; the dewatered sediment would be trucked to out-of-state landfills for disposal; and the filtrate water discharged back into the River. The Applicant's proposal is described in three separate documents submitted to the Connecticut Department of Energy and Environmental Protection (DEEP) for approval. These are: 1) a "Remedial Action Plan (RAP) for Lead Impacted River Sediments," October 2011, revised April 2012; 2) an "Office of Long Island Sound General Permit Registration Form," signed by the applicant on June 22, 2012; and 3) a "Permit Application for Wastewater Discharges," signed by the applicant on June 22, 2012.

It is the authority and responsibility of the HMC, set forth in the Connecticut General Statutes and Chapter 24 of the Fairfield Town Code, to review all proposals affecting Southport Harbor to determine the consistency of those proposals with *The Management Plan for Southport Harbor* (Harbor Management Plan) which is duly approved by the State of Connecticut and adopted by the Fairfield Representative Town Meeting.
The Applicant's proposed remediation project, which affects real property on, in, or contiguous to Southport Harbor and therefore is subject to the municipal jurisdiction of the HMC, requires careful review with full consideration of the needs and interests of the Town of Fairfield.

During a Special Meeting on February 21, 2013, the HMC determined there is currently insufficient information to enable the HMC to make a final determination regarding the consistency of the Applicant's proposal with the Harbor Management Plan. As a result, the HMC has recommended that the DEEP should make no decision regarding the proposal until such time as: a) the specific issues identified by the HMC as items 1 through 15 in this Statement of Harbor Management Issues are addressed in writing by the DEEP; and b) a reasonable and sufficient period of time is provided to enable the HMC to review the DEEP's written response and make a final determination with appropriate recommendations.

---

1 This statement prepared by the Fairfield Harbor Management Commission includes comments and concerns from the January 9, 2013 document endorsed by the HMC and titled "Issues and Comments Concerning a Proposal by Exide Group, Inc. to Dredge Lead-Contaminated Sediment from the Mill River and Southport Harbor as Discussed by Representatives of the Fairfield Harbor Management, Conservation, and Shellfish Commissions." Also included in this statement are additional issues and concerns raised during the January 10, 2013 public informational meeting concerning the proposal and during meetings of the HMC on January 15 and February 21, 2013.

Harbor Management Issues

1. Implementation Details: According to the proposed RAP prepared by the Applicant, some details of the remediation project's implementation methods will be left up to the selected contractor. In addition, the Applicant's Permit Application for Wastewater Discharges states that specific methodologies, equipment, and operating procedures described in the application are subject to change by the selected contractor. The HMC is concerned that the Applicant's proposal may not contain sufficient detail concerning project implementation, and that a significant part of the project design may occur after project approvals are issued by the DEEP.

Since detailed implementation plans are not included in the Applicant's proposal, it is unclear to the HMC what, if any, additional approvals, including local approvals, may be required for project implementation. It is also unclear if there will be an opportunity for the HMC and other agencies to review the Applicant's detailed implementation plans at such time as those plans may be prepared. In the absence of detailed implementation plans, the HMC is concerned that project implementation, including placement and operation of dredging and hydraulic pipeline equipment, could adversely affect Southport Harbor and shoreline areas along the Harbor and the Mill River. (See no. 9 below.)

2. Re-suspension of Sediment: In the RAP, the Applicant expresses awareness that re-suspension of sediment during the proposed dredging operations may cause adverse impacts on environmental conditions in the River and Harbor. As a result, the Applicant proposes best management practices, including placement of turbidity curtains, to minimize sediment re-suspension. The Applicant believes that those curtains will allow the dredging of all but one project area to be conducted during periods of anadromous fish migration and shellfish spawning. Dredging is normally prohibited by the DEEP during these periods. The HMC is concerned that dredging during the migration and spawning periods may cause significant adverse impacts on anadromous fish and shellfish, especially if dredging occurs over more than one migration or spawning season.

Described in the RAP, the proposed turbidity curtains would be installed so as not to come in contact with the River and Harbor bottom and thereby minimize bottom disturbance. However, during the January 10, 2013 public informational meeting concerning the Applicant's proposal, the Applicant indicated that the curtains would come in contact with the bottom. The HMC is concerned about the extent of the modifications to the Applicant's remediation plans that may have been made since the plans were submitted to and reviewed by the HMC. (See no. 13 below.)

3. Project Monitoring: The HMC is concerned about the effectiveness and appropriateness of the Applicant's proposed approach for monitoring the project's impacts in the River and Harbor, including the optical monitoring approach that is proposed to identify issues concerning re-suspension of sediment during dredging operations. The HMC has asked for additional information to help judge the effectiveness and appropriateness of this approach, with

more consideration given to the position of the monitor relative to the dredging cell, and the specific actions to be taken if the monitor detects any problems related to the re-suspension of sediment.

In addition, the HMC is concerned that the Applicant has not proposed a plan to monitor water quality downstream of the remediation area in Southport Harbor prior to, during, and after the proposed project. It is the sense of the HMC that such monitoring, of a range of water quality parameters, including chemical, bacterial, and turbidity parameters, may be appropriate for the purpose of helping to ensure that the project does not result in any significant pollution entering the Harbor as a result of work in the upstream remediation areas.

4. Sediment Volume: The RAP describes a proposed remediation project that would dredge 21,400 cubic yards of lead-impacted sediment. However, the General Permit Registration Form and Permit Application for Wastewater Discharges call for the dredging of 27,600 cubic yards, a 29% increase in the RAP volume. In the project documents reviewed by the HMC, there is no explanation for the increased volume and how this may affect the RAP. Based on verbal comments provided by representatives of the DEEP, the HMC understands that the added volume represents an "over-dredge" amount considered necessary to ensure that all of the contaminated sediment, which is measured at 21,400 cubic yards, is removed. The HMC is concerned that this explanation is not included in the documents reviewed by the HMC.

5. Potential Sources of Re-contamination: The RAP describes the Applicant's project to remove lead-contaminated sediment from the River in 1983 and states that the River was subsequently re-contaminated with lead. It is the understanding of the HMC that the re-contamination was caused by additional discharges from subsurface stormwater drainage pipes and from stormwater running off the roofs of buildings on the site of the former battery manufacturing facility. The HMC is aware that an October 10, 2008 Consent Order agreed to by the Applicant and DEEP includes an agreement that "a small area in the uplands portion of the site involving a drainage system in the Connecticut Department of Transportation's Right of Way may contain lead and must be investigated and, if necessary, remediated prior to initiating remediation of lead in sediments in the Mill River Study Area." Based on verbal comments provided by representatives of the DEEP, the HMC understands that the DEEP believes this required investigation has been completed. The HMC is concerned that completion of this investigation is not addressed in the documents reviewed by the HMC, and as a result it is unclear if all sources of potential re-contamination have been properly investigated by the Applicant. In addition, it is unclear who will be responsible for any future contamination that may be detected in the River and Harbor following completion of the Applicant's proposed remediation project.

6. Work Schedule: As currently described in the RAP, the proposed remediation project would begin in April 2012 and be completed by December 2013. The HMC is concerned that a revised schedule, based on currently anticipated dates of project approval, has not been provided for review.

7. Tide Mill Dam: Built in the early 1700s, the Tide Mill Dam at Harbor Road marks the upstream boundary of Southport Harbor. It is recognized by the HMC that the structure of the dam and its concrete spillway has been damaged and repaired several times. The RAP includes no assessment of the existing structural integrity of the dam; of how any diminishment of that integrity may affect the RAP; and of how implementation of the RAP may affect the integrity of the dam. In addition, during the public informational meeting there was discussion concerning the current condition of the tide gates at the Tide Mill Dam and the effect that their failure or diminished function may have on the proposed project, including the ability to float dredging equipment as currently planned by the Applicant. The HMC is concerned that this matter is not addressed in the application documents.

8. Benthic Assessment: In the RAP, the Applicant states that the benthic resources of the River and Harbor will be unavoidably affected by the proposed remediation project but will recover within one to three years. The RAP, however, does not include any detailed information concerning the existing habitat and living aquatic resources in the River and Harbor. It is unclear how the recovery of affected resources can be determined without baseline data concerning existing conditions in the areas to be affected. In addition, the Applicant does not intend to conduct any restoration of the benthic habitat affected by the proposed dredging operations. The HMC recognizes that chromium contamination in Mill River sediments may be subject to future remediation actions by other parties, although the timing of such actions is currently not known. As a result, the HMC understands that it may not be effective or appropriate to require the Applicant to immediately restore the benthic habitat affected by the proposed dredging project. The HMC is concerned that it does not appear that consideration is being given to other types of mitigation, including but not limited to, establishment of a mitigation fund for future restoration projects. In addition, the HMC has requested that additional consideration be given to evaluating the effectiveness and appropriateness of immediate restoration and mitigation projects.

9. Neighborhood Impacts: Details of the dredging operation, including how dredging equipment would access the project areas bounded by the Tide Mill Dam, Post Road, railroad, and I-95, and how the hydraulic pipeline would be employed to pump dredged material to the processing site are not included in the RAP. (See no. 1 above.) As a result, the HMC is concerned that it is not possible at this time to completely assess the potential impacts of the proposed project on the nearby neighborhoods, including nuisance, property, and public safety impacts. Also, the HMC is aware of public concerns that the deployed dredging and water discharge equipment may pose a safety hazard for small recreational vessels in the River and Harbor. The HMC is concerned that this matter is not addressed in the application documents.

10. Impairment Classification: It is understood by the HMC that the Mill River is identified by the State of Connecticut as an impaired water body, but it is unclear to what extent the Applicant's proposed project will contribute to removal of the River from the State's list of impaired water bodies. Also, the River is currently deemed unsafe for fishing and swimming and it is unclear how it will be determined when the area will be safe for those activities.

11. Underwater Land Ownership: It is reported in the RAP that the applicant owns underwater lands in the Mill River adjoining the proposed processing site. This raises the question of whether there are other private owners of underwater lands who would be affected by the proposed project, and if permission of, or special notification to, those owners is required or appropriate in order to conduct the proposed remediation work. This matter is not addressed in the application documents reviewed by the HMC.

12. Sequence of Dredging: The proposed sequence of work in the RAP shows that the most upstream project area, identified as Area V, will be the last area to be dredged. It is not clear why this area, upstream of I-95, would not be dredged earlier in the process, to avoid any potential downstream impacts to project areas where remediation has already been completed.

13. Modifications to the Applicant's Proposal: The HMC is concerned that some aspects of the Applicant's proposal as described in the application documents reviewed by the HMC have been modified. For example, the RAP describes the use of turbidity curtains to minimize sediment re-suspension but says those curtains will not come in contact with the River and Harbor bottom. (See no. 2 above.) During the January 10 public informational meeting, the Applicant said the curtains will touch the bottom. Also, the RAP describes the proposed project being conducted during periods of anadromous fish migration and shellfish spawning. During the January 10 informational meeting, a DEEP representative indicated that the DEEP will impose work restrictions during those periods. The HMC is concerned that stakeholders have not been informed of all modifications to the Applicant's proposed project that have been put forth since release of the application documents reviewed by the HMC.

14. Effects of Chromium Disturbance: During the public informational meeting there was discussion of the extent to which chromium contamination is located in proximity to lead contamination in the Mill River and Southport Harbor. The HMC is concerned that the Applicant's RAP, Permit Application for Wastewater Discharges, and General Permit Registration do not address the potential adverse impacts that may be caused by the disturbance of chromium contamination during the course of the Applicant's proposed project.

15. Project Approvals: The HMC is aware that an October 10, 2008 Consent Order agreed to by the Applicant and DEEP includes a requirement for the Applicant to list all permits and approvals required for the proposed remediation project. In addition, the HMC is aware that the Applicant has stated that no local permits and approvals, including Town inland wetlands and planning and zoning approvals are required to implement the proposed remediation project. The HMC is concerned that the authority and responsibility of the HMC to review all proposals affecting Southport Harbor to determine the consistency of those proposals with the Harbor Management Plan is not listed in the RAP.

End

Fusaro, Carolyn

From: lken06880@aol.com
Sent: Sunday, February 24, 2013 7:05 PM
To: Fusaro, Carolyn; Gonyea, Donald
Subject: fairfields mill river

Please proceed with the clean up of the former Exide Battery site, the town deserves nothing short of a complete clean up.

41

46

Fusaro, Carolyn

From: Judi Klein [judi.klein@yahoo.com]
Sent: Sunday, February 24, 2013 7:53 PM
To: Fusaro, Carolyn
Subject: Mill River Cleanup

Dear Ms. Fusaro: This is to respectfully request that the DEEP mandate an expeditious cleanup of the Mill River at the Exide Battery and and Superior Plating sites in Fairfield. This contamination has subjected this town and Long Island Sound to an environmental hazard for far too long. Any further delay is unacceptable. I sincerely hope that you will help in the expedition and pushing forward of this cleanup. Sincerely, Judi Klein

41

46

Gonyea, Donald

From: Dawn Llewellyn [dawn.llewellyn@sbcglobal.net]
Sent: Sunday, February 24, 2013 8:24 PM
To: Gonyea, Donald
Subject: Fw: Mill River

Mr. Gonyea,

I am a Fairfield citizen writing to express my concerns about the removal of lead-contaminated sediments in the Mill River and Southport Harbor. This is a repeat of the 1983 dredging when the river was re-contaminated by drainage from the former battery site through pipes.

First, the operation in the Fairfield main river should not proceed under the "General Permit", but should require an Inland Wetland Permit. The Fairfield Conservation Department questioned how Exide could have expected such an allowance before their plans were in place.

Second, Exide has proposed to use a dredging system that allows silt to escape under through and over the soil curtain hung around the dredge. It did not work in 1983, so it will not work now. Instead a closed system cofferdams should be utilized in this contaminated area (I, II, II).

Third, Exide needs to refill excavated holes with clean fill; otherwise the deep holes will become anaerobic dumps, preventing the natural biological community of organisms from repopulating at the bottom of the river. The bottom of the river must be able to support life.

Fourth, Exide needs to proceed with the project from the upstream end, so as to deal with any matter that would make its way downstream. In addition, Exide needs to remove any residue lead in and around pipes, with extra steps of photo inspection.

Fifth, Exide needs to provide fish ladders for the tidemill, as well as the Swamp Mortar dams to mitigate damage.

I hope your department will impose these requirements on Exide's proposed action plan for removal of lead – contaminated sediments in the Mill River and Southport Harbor. The River population and estuary are dependent on good water quality to sustain life, so you need to provide proper oversight on the Exide project. We need to ensure quality conditions to protect life in the River.

Thank you for your support.

Dawn Llewellyn

524 Sturges Road

Fairfield,CT 06824

Fusaro, Carolyn

From: Dawn Llewellyn [dawn.llewellyn@sbcglobal.net]
Sent: Sunday, February 24, 2013 8:24 PM
To: Fusaro, Carolyn
Subject: Mill River

Ms. Fusaro,

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Thank you for your support.

Dawn Llewellyn

524 Sturges Road

Fairfield,CT 06824

Gonyea, Donald

From: glenn.ratcliffe@wellsfargoadvisors.com
Sent: Monday, February 25, 2013 9:45 AM
To: Gonyea, Donald
Cc: Fusaro, Carolyn

We find it completely unacceptable that the DEEP is proceeding with this project with total disregard for the schedule clearly spelled out in its own prior agreement with Inco/Exide, the 2008 Consent Order. This order stated that Exide would apply for all necessary permits for this project AFTER the DEP has approved a remedial action plan. However, to our dismay, Exide has somehow been allowed to apply for OLISP and NPDES permits at the same time as it is applying for a permit for its remediation (SedRAP) "plan," in total disregard for the 2008 Consent Order. Likewise, completely out order with this mutual agreement, the SedRAP public comment period is
Scheduled to end AFTER the NPDES comment period! The terms of the 2008 Consent Order clarified that the SedRAP had to be approved, with ALL DETAILS of the project presented for public consideration, BEFORE the NPDES and OLISP permits could even be applied for.

We are dismayed and find unconscionable that the DEEP is apparently accepting issuance of an OLISP permit, to be issued as a "general permit," (for the proposed Exide "clean-up" of Fairfield, CT's upper Mill River estuary) without allowing any chance for a public hearing. An "individual permit" is what would seem appropriate for this project, supposedly designed to remedy 60 years of Exide's lead pollution in this river.

This deplorable, inexcusably improper way of proceeding against the stipulations of your own department's order has left the concerned public and local commissions responsible for all important activities on this abused section of this Mill River with minimal opportunity for input that is their right to have regarding this most seriously life-destroying operation on this river. Presented below are some of the most alarming inadequacies and major concerns regarding this so-called "plan."

Inadequacy of so-called "plan" (SedRAP)

The SedRAP is only a rough outline of how Exide proposes to handle this sensitive project. It does not qualify as a plan because it lacks the most significant details. Absence of such detail has made it impossible for the Fairfield Conservation Commission to even determine whether an Inland Wetland permit should be required! (If it develops that one is needed after DEEP issues its permit, the situation would be extremely upsetting and difficult to deal with!)

Cooperative clean-up needed

We are still concerned that this project is being rushed through with no indication of any progress on getting Superior Plating's chromium pollution removed in conjunction with the lead removal. Lead removal should wait until lead and chromium can be removed simultaneously, so that the living river system would not have to be deeply disrupted all over again.

Selection of least damaging process for river & most efficient and effective for clean-up

The public has no opportunity to speak for the living river system in regard to the way the lead (and other toxic materials) will be removed. A major swath of this community feels that coffer-dams would be far more effective in preventing the spread of resuspended contaminated sediments (as will result from the proposed hydraulic dredging with silt curtain "containment"). It seems totally unconscionable that our supposed

protective state agency is not assuring the local public and commissions the fullest possible opportunity for discussion of this concern with a public hearing. The DEEP will bear the shame of whatever impairment of the living river system results.

Restoration of river bottom and micro and macro habitats

(4) The local community is equally concerned that there is no provision in the so-called "plan" for refilling of the excavated holes, which will pose an ecological hazard for the river ecosystem's recovery (anaerobic sumps/reduction of oxygen/prevention of stream-bottom repopulation). Nor does this "plan" include other habitat restoration intent regarding valuable stream-bottom habitat features such as stumps and boulders that will be moved or removed in the process of excavation. A back-hoe in a waterless coffer-dam cell would make tending to both of these vitally important habitat needs more feasible. The coffer-dam system would also allow spawning species to run upstream with the least toxic exposure. (13)

This selection is just the highlights of our concern with a processing that reeks of dereliction of duty for your agency in regard to this supposed remedial action.

Sincerely yours,

Residing at: 92 Fields Rock Rd

Southport, CT 06890

Glenn H. Ratcliffe
First Vice President - Investments
Assistant Branch Manager
Wells Fargo Advisors 450 Post Road East Westport, CT 06880
Tel 203-221-5572 |Toll-Free 800-327-8557 |Fax203-221-1625

Fusaro, Carolyn

From: Doerner, Jessica [Jessica.Doerner@ivi-intl.com]
Sent: Monday, February 25, 2013 2:59 PM
To: Fusaro, Carolyn; Gonyea, Donald
Subject: Remedial Action Plan for the Mill River

Dear Ms. Fusaro and Mr. Gonyea,

I am writing with regards to the Sediment Remedial Action Plan for the Mill River in Fairfield, CT.
http://www.ct.gov/deep/cwp/view.asp?a=2719&q=517076&deepNav_GID=1654

As a Fairfield resident, I would like to see those involved move beyond remedial investigations and reports. I am in full support of the clean-up of the Mill River in as expeditious a manner as is possible. I do not feel the Department should consider delaying remediation of the Mill River until such time as Superior Plating is prepared to address chromium contamination emanating from its manufacturing facility. I do not believe that such delay is warranted.

Understanding that few things ever go according to plan, I believe the Department's expeditious review and approval of a Remedial Action Plan for the Mill River is imperative so that clean up can proceed forthwith. It is my understanding that this is an outcome based plan, and that it is incumbent upon the applicant to demonstrate compliance and to ensure that all clean-up objectives have been satisfied. I would specifically like to request placement and enforcement of appropriate noise and odor controls during work to minimize impacts to adjoining property owners.

I look forward to returning this strategic site to productive use in the very near future and thank you for this opportunity to comment.

Kind Regards,
Jess Doerner
Fairfield Resident

Fusaro, Carolyn

From: Helen Watkins [hwwatkins@optonline.net]
Sent: Monday, February 25, 2013 5:05 PM
To: Fusaro, Carolyn
Cc: donaldgonyea@ct.gov
Subject: Remediation of the lower Mill River - contaminated by Exide Battery and Superior Plating

(12) The people of Fairfield have waited many years for this area of the river to be cleaned up. Hopefully it will be done properly . I would hope that the pipe running along the railroad tracks will be thoroughly examined for contaminants, especially lead. If not clean, the water pouring through will continue to contaminate.

(13) I believe the current plan to dredge will stir up the water and make the river worse. Actually, at least in the harbor, the water appears somewhat better than 40 years ago. Please insist they use a coffer dam system to contain the sludge and then move it to a hazardous waster disposal plant.

Thank you for listening. Helen F. Watkins, Southport, CT

Gonyea, Donald

From: Tom Kelty [tkelty@gmail.com]
Sent: Monday, February 25, 2013 7:01 PM
To: Fusaro, Carolyn; Gonyea, Donald
Subject: Exide Battery site on the Post Road in Fairfield

Please move the clean up forward. Stop them from stalling!

Tom Kelty
Rhiannon Kelty

41

46

Fusaro, Carolyn

From: Scott Farquhar [dsfarq@gmail.com]
Sent: Monday, February 25, 2013 9:17 PM
To: Fusaro, Carolyn
Subject: Exide pollution site in Fairfield

Hi Carolyn, We understand Exide is ready to clean up a pollution site and the Millriver in Fairfield. It would be great if they could move forward on that as soon as possible. Thanks in advance for your support.
Best regards, Scott and Debbie Farquhar.

Sent from my iPhone

46

41

Gonyea, Donald

From: joan gartin [jrgartin@gmail.com]
Sent: Tuesday, February 26, 2013 11:48 AM
To: Fusaro, Carolyn; Gonyea, Donald
Subject: Excide Cleanup

As a concerned resident of Southport, I am writing to you about the proposed cleanup of the Upper Mill River Estuary. I do not understand the technical details of the lead removal process but I feel that the details of the 2008 Consent Order should be followed.

Sincerely,

Joan Gartin
575 Hulls Hwy
Southport, Ct 06890

Fusaro, Carolyn

From: Deanna Polizzo [DPolizzo@Northmarq.com]
Sent: Tuesday, February 26, 2013 12:21 PM
To: Fusaro, Carolyn; Gonyea, Donald
Subject: Mill River Clean Up - Fairfield CT

46

Ms. Fusaro,

I am writing in support of moving the clean-up of the Exide and Superior Plating sites forward at this time. The residents of Fairfield have been waiting a very long time for this clean-up. We have an able and willing company that wants to clean-up their mess. Let's let them do it for the betterment of Fairfield. Hasn't this been put off long enough?

41

Thank you for your support.
Best regards,
Deanna Polizzo Edginton & David Edginton

Fusaro, Carolyn

From: Gonyea, Donald
Sent: Friday, March 01, 2013 1:23 PM
To: Fusaro, Carolyn
Subject: FW: Mill river Exide clean up

-----Original Message-----
From: Carol [mailto:carol.ponti@aol.com]
Sent: Wednesday, February 27, 2013 9:29 PM
To: Gonyea, Donald
Subject: Mill river Exide clean up

I live in Fairfield.

48

I need assurance that DEEP will protect the Mill River and condition any approval of the "SEDRAP" on the detailed memo's submitted by our 3 Town Commissions- Harbor Management, Shellfish and Conservation.

43

We rely on you to protect the natural resources of this state. Please ensure that the river clean up will be a careful and thorough project. I hope you consider it your obligation to require Exide to deliver a fully restored Mill River.

Thank you,
Carol Pontrelli

Fusaro, Carolyn

From: Carol [carol.ponti@aol.com]
Sent: Wednesday, February 27, 2013 9:28 PM
To: Fusaro, Carolyn
Subject: Mill River Exide clean up

I live in Fairfield.

(48) I need assurance that DEEP will protect the Mill River and condition any approval of the "SEDRAP" on the detailed memo's submitted by our 3 Town Commissions- Harbor Management, Shellfish and Conservation. (43)

We rely on you to protect the natural resources of this state. Please ensure that the river clean up will be a careful and thorough project. I hope you consider it your obligation to require Exide to deliver a fully restored Mill River.

Thank you,
Carol Pontrelli

Fusaro, Carolyn

From: Robert Bilek [rwbilek@sbcglobal.net]
Sent: Wednesday, February 27, 2013 9:04 AM
To: Fusaro, Carolyn
Cc: Gonyea, Donald; Selmeski, Tonia; Thomas Steinke; Sanford Wakeman
Subject: EXIDE SEDRAP REVISED APRIL 2012
Attachments: EXIDE SEDRAP ISSUES 2-27-13.docx

Dear Ms. Fusaro:

I understand that Mr. Steinke is sending you a formal document representing the Fairfield Shellfish Commission's collective position regarding this SEDRAP.

Attached is a Word Document in "docx" format that represents issues I feel should be addressed. Most of these were discussed at Shellfish Commission Meetings on January 23, January 30, and February 13, but a few were not.

I believe that all parties involved want Exide to remediate Mill River as expediciously as possible. However, after decades we would like it done correctly, and with minimal damage to our fish and shellfish populations. It is disturbing that Superior Plating is not part of this remediation process as of today.

We are disappointed that your staff was unable to attend any of our meetings to discuss these issues, but hope you will seriously consider these and the many other concerns, questions and recommendations that are being brought to your attention.

Respectfully submitted,

Robert W. Bilek

EXIDE SEDRAP FOR MILL RIVER
ISSUES/RECOMMENDATIONS/QUESTIONS
FEBRUARY 27, 2013

DEP CONSENT ORDER SRD-193 Dated 10/20/08

Sect. B.2.d.(6)
This states in part that the Respondent (Exide and Vale Inco) shall "propose a detailed remedial action plan ... for lead in sediments in the Mill River Study Area ... and schedule to perform remedial actions. The schedule required by this paragraph shall also include a schedule for and obtaining all permits and approvals required..."

There is no schedule for applying for and obtaining all permits and approvals, including the NPDES Permit.

Is this really a "detailed" remedial action plan or more of a conceptual roadmap, since much of what will take place will be left up to the discretion of the contractor? How can DEEP issue permits when the details are undecided/unknown?

Sect. B.2.f.(1)
"On or before 90 days after the Commissioner has approved, as applicable, a remedial action plan, pursuant to paragraph B.2.d. of this Consent Order, the Respondent shall apply for all permits that are necessary to carry out the remedial action approved by the Commissioner."

Any affected town relies on this process.

In the case of Fairfield's Mill River remediation, the Commissioner has not approved the last SEDRAP dated October, 2011, Rev. April 2012. Yet Exide's NPDES Permit Application is dated 6/22/12. And, on 1/7/13, DEEP issued a Notice of Tentative Determination of Intent to Issue a NPDES Permit to Exide Group Inc. identified as Application NO. 201205444 and Permit ID NO. CT0030651.

This notice allowed 30 days for comment. This was extended to 2/20/13 after a request by the Shellfish Commission and others for more time. Still, the comment period for the NPDES Permit ends before the comment period for the SEDRAP, which ends 2/28/13. This forces us to comment on a permit application before we even have questions answered regarding the SEDRAP, and there are many. This seems backwards. Is this process being followed in compliance with the consent order?

Also, DEEP is using a General Permit. Fairfield did not know about this until the second half of 2012. As a result, Fairfield's various commissions tasked with protecting our interests and resources have been excluded from having public hearings on various permits normally associated with this type of SEDRAP. This is a major undertaking within Fairfield, and the commissions have no opportunity to intervene in a meaningful way. Who benefits from the use of a General Permit? How does the use of a General Permit benefit Fairfield, which has lived with the lead pollution for decades?

REMEDIAL ACTION PLAN FOR LEAD IMPACTED RIVER SEDIMENTS MILL RIVER STUDY AREAS I-V (REVISED APRIL 2012)

MAJOR OVERALL CONCERNS ABOUT THIS PROJECT

- Protection of spawning fish and shellfish (hard clams, oysters, blue crabs, river herring) by using cofferdams in Areas I, II and III
- Potential closing of recreational shellfish Area A off Sasco Beach and commercial shellfish beds in Fairfield's Shellfish Management Area as a direct result of dredging operations, and compensatory mitigation if this occurs
- Opening Mill River for many recreational uses
- Getting Superior Plating to remediate Chromium concurrent with Exide to avoid many more years of shutting down Mill River for wading, swimming, shellfishing and crabbing
- Remediation of the river bottom and banks due to damage from this project

EXECUTIVE SUMMARY

Pg. iv. "The following table presents a summary of the calculated estimate of the volume of sediment determined to exhibit lead concentrations greater than the agreed upon cleanup criteria." It shows (in cu. yds) Area I – 4,441, Area II – 4,978, Area III – 5,908, Area IV – 904, Area V – 5,210, for a total of 21,440 cu. yds. This is a very specific calculation based on a lengthly study of the river bottom.

And yet, the Exide NPDES Permit Application For Wastewater Discharge Dated 6/12/12 in ATT A Executive Summary states "The discharge is the result of dewatering activities involved with the dredging of approx. 27,600 cu. yds. of lead-impacted Mill River sediment."

Why is DEEP approving a permit based on sediment from 27,600 cu. yds. when the SEDRAP shows 21,440 cu. yds.? This is like applying to build a 3 lane highway and then submitting a permit application to build a 4 lane highway and getting it approved without any explanation at all. Does the permit application not have to factually match the SEDRAP? How was the new amount calculated, and why is it so different (+28%)?

CLEANUP CRITERIA

Pg. 4 "...cleanup criteria of 220 mg/kg lead be followed for Areas I-IV... A cleanup level of 400 mg/kg lead was recommended for Area V..."
Pg. 8 "Any sample location exhibiting a concentration more than double the cleanup criteria, during post remediation confirmation sampling will need to be addressed in a supplemental effort, pending an environmental net benefit analysis of the merits of any supplemental effort..."

So, that means there can be locations with up to 440 mg/kg in Areas I-IV or 800 mg/kg lead in Area V, and Exide and DEEP agree this is OK. And, even if the sample is greater than double the criteria, it may not have to be remediated depending on the environmental net benefit analysis. Who does such an analysis, and why would it be OK? How can leaving lead at these levels in these locations meet the criteria of protecting the public's use of the river and other organisms living in the river?

With lead at those higher levels, will the river be re-opened for harvesting clams, oysters and blue crabs at these levels, and will the river be safe for pregnant moms and kids to wade and swim in this water? If not, what has been accomplished?

DREDGING

Pg. 5-6 In 1983, Exide used a "hydraulic dredge fitted with a shroud and variable speed cutter head and dredge pump." After confirmation sediment sampling, there were "still elevated lead concentrations," so more dredging was done. This meant an extra 6.9% in cu. yds. were removed. Exide plans to use the same basic technology this time, so we should assume the same results. At 21,440 cu. yds. per the SEDRAP we can expect to dredge about an extra 1,479 cu. yds. of sediment. This will impact areas of the river that are not currently contaminated. At 27,600 cu. yds. per the NPDES Permit, this equates to 1,904 cu. yds.

13

Also, are these silt curtains any better than the ones used in 1983? Why are they better? How will they prevent contaminated resuspended sediment from escaping around the sides or over the top or under the bottom of the silt curtains as mud waves along the bottom as occurred in 1983?

1

Why not use cofferdams in areas I, II and III if Exide insists on remediating during fish and shellfish spawning seasons? These heavily polluted areas, unlike Area IV and V, are primarily commercial. As stated on pg. 9, "Land use ... can be classified as mostly residential north of the CT Turnpike and industrial/commercial between the Turnpike and the tidal dam..." However, on pg. 36, it states as a major disadvantage that "a land based approach (cofferdams) ... presents a problem because the properties immediately adjacent to the river are largely residential in nature." That is simply not true, and is even contradicted on pg. 9. There is no reason from an environmental protection viewpoint that one technique must be used on all five areas. The use of cofferdams would eliminate a high percentage of the objectionable issues presented here and by others. PLEASE CONSIDER THIS.

13

OUT OF WATER AREAS

Pg. 21 "A limited out-of-water study was undertaken in 2009..." "... the report concluded that the relatively low levels of lead detected in the samples were in the range of background for Fairfield... and further study was not recommended."

50

This study was done in 2009, before Hurricane "Sandy". Due to the extremely high tides and surge up the river during "Sandy", it would be prudent to check again to see if lead and/or chromium has been moved onto land from the river bottom.

45

SPECIES OF SPECIAL CONCERN

Pg. 24 "On September 22, 2009...Nancy Murray, NDDB Program Coordinator, ... stated that 'According to our information, there are no known extant populations of Federal or State Endangered, Threatened, or

Special Concern Species that occur at the site in question."

.Is that still true for the Blueback Herring? Will it be affected by the planned dredging and waste water discharge as described in the NPDES Permit during spawning season?

SOCIO-ECONOMIC ISSUES

Pg. 27 4.4.1 This segment discusses risks in the immediate work area. "During remedial activities fishing/shellfish harvesting will not be physically possible in the immediate area of work ... and the destruction of substrates ... may temporarily decrease fish and shellfish populations."
4.4.2 "A proactive sediment remediation alternative (e.g. dredging) is expected to increase short-term risk factors due to physical disturbance of organisms and potential sediment resuspension..."

What this does not address is the possibility of shutting down the Town of Fairfield Recreation Area A for clamming, and/or the commercial shellfishermen who operate off of Southport Harbor. This will be a massive dredging project, and it could create enough contaminated resuspended sediment so that more than lead will be moved downstream. If it causes bacteria counts to be elevated, the Bureau of Aquaculture can shut down our conditionally approved areas for significant periods of time. The other possibility is that an entire new annual "class" of shellfish (clams and oysters) will be impacted severely each season that Exide is allowed to dredge during the spawning periods.

This type of shut- down would be due to Exide's actions, and so Exide should provide Compensatory Mitigation to the Fairfield Shellfish Commission if such a closing occurs. Commercial Shellfishermen could also be impacted since they are also operating in "Conditionally Approved" areas. DEEP should insure this is arranged in advance to protect the town in case we are shut down.

TURBIDITY MONITORING

Pg. 53 "Turbidity meters ... will measure in real time." "A text message will be instantaneously and automatically sent to the foreman and CCA field manager when turbidity levels exceed the prescribed limit, and remediation operations will be immediately halted." Sounds good.

Then on Pg. 56 it states "The following numerical action levels will be used..." "If the above criteria are exceeded, the following actions will be undertaken: <u>0-30 Minutes After Exceedance Registers</u> ... "the Engineer and Contractors Project Manager will communicate with the dredge operator to determine if a visible plume is observed... and if anything occurred..." So here we have a half hour gone. Then <u>≥30 Minutes After Exceedance</u> " If, after 30 minutes the downstream monitor is still reporting an exceedance of the numerical criteria, the Engineer will visit the in-water downstream monitoring station. The fixed turbidity monitor will be checked and the turbidity measurement will be confirmed using a hand held turbidimeter and a manually collected sample of river water... " etc.

How long will this take? And the real issue is, will the remediation operations be halted <u>immediately</u> as per Pg. 53, or will they continue to dredge until all these steps take place?

CONFIRMATION SAMPLING OF RIVER SEDIMENTS

Pg. 57 8.3 This discusses samples of bottom sediments inside remediation areas.

Will they also check outside the remediation area for re-deposited lead sediments given the propensity for the silt curtains to fail? If not, why not?

REMEDIAL ACTION PLAN IMPLEMENTATION SCHEDULE

Pg. 75-76 This particular plan shows Area V being done last. This make no sense to us. Excide should change the schedule so the upriver Area V is dredged first, then work downstream to Areas I, II, III, then IV in order to avoid recontamination of areas below any area that has been already remediated

OCTOBER 12,2012 DEEP LETTER TO SUPERIOR PLATING COMPANY RE: STIPULATED JUDGEMENT NO. CU-89-0355556 S

Pg. 2 "Superior Plating must complete an investigation of the extent and degree of sediment pollution at and migrating from the Site to the satisfaction of the Commissioner. Therefore, ... submit a supplemental investigation work plan ... to the Department within 45 days of the date of this letter." ...
"1. Sediment
On January 3, 2011 the Department received the report entitled Evaluation of Chromium in Mill River Sediment, Superior Plating Company ..."
"The Sediment Evaluation concludes ... remediation of chromium-impacted sediments is not required. The Department disagrees ... and finds that the Sediment Evaluation is deficient and disapproved."
Pg. 4 "The Sediment Evaluation must be revised to address the issues discussed above and ... must be submitted to the Department for review and approval within 45 days of the date of this letter."
Pg. 6 "To minimize the disturbance of the Mill River from remedial activities and expedite the clean up of the Mill River, the sediment characterization activities should be completed as soon as possible but no later than December 31, 2012 to ensure that a remedial action plan can be developed and completed in a manner which coordinates any necessary remediation with EGI's sediment remediation. If you fail to comply with the above mentioned deadlines ... Superior Plating may be in noncompliance with the Stipulated Judgement. The Department may also evaluate potential enforcement actions."

So, did Superior Plating comply with the deadlines set forth in this letter? If not, was an extension granted? If it was, what is the new deadline? What enforcement actions can be taken by the Department?

This is a critical issue. If Superior Plating does not come to the table soon, we will have to go through this process all over again in the future.

NOT COVERED BY THE SEDRAP, NPDES PERMIT APPLICATION OR TENTATIVE DETERMINATION TO ISSUE A PERMIT

The above documents do not cover any significant remediation of the Mill River or of it's banks after this

(4) dredging project is completed. I see no mention of filling in holes created by the dredging with clean material so they do not fill with leaves and composting organic matter, or of replacing logs or rocks to provide the habitat a river bottom needs. Nor did I see any mention of remediating the shoreline with trees and shrubs where damaged during dredging, provision for public access, etc. as compensation for the amount of damage done to our Mill River and the loss of public use of the river for recreational swimming, clamming and crabbing for decades. This should be part of the remediation requirements. (35) (34)

RWB
2-27-13

Town of Fairfield

Thomas J. Steinke
Director

Fairfield, Connecticut 06824
Conservation Commission
The Wetlands Agency

Sullivan Independence Hall
725 Old Post Road
(203) 256-3071
FAX (203) 256-3123

WATER PROTECTION AND LAND REUSE
REMEDIATION DIVISION

FEB 28 2013

SITE NAME _____
ADDRESS _____
TOWN _____
FILE TYPE REM

Via Certified Mail
Return Receipt Requested

February 27, 2013

Commissioner Daniel C. Esty
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Re: Comments on the Exide Group, Inc. Mill River SedRAP and OLISP General Permit Registration Form for Coastal Remedial Activities Required by Order

Dear Commissioner Esty:

The Fairfield Conservation Commission reviewed Exide's proposed Mill River sediment remediation plan (SedRAP), and its application for a state tidal wetland and structures dredging and fill general permit in the context of Fairfield's efforts to help restore the Mill River. The Commission has cooperated with the Connecticut DEP and Exide for many years in their combined efforts to bring this project about.

While the Commission supports Exide's efforts to remediate the lead-contaminated sediments in Mill River, it is concerned that Exide's approach in doing so, and its lack of detail in the proposed plan, and filing of permit applications prior to the Commissioner's approval of Exide's Proposed SedRAP, may be inconsistent with the provisions of its Consent Order, #SRD-193, and counterproductive of assuring a successful remediation of the contaminated sediments in Mill River.

The Commission offers the enclosed comments in an effort to clarify, enhance and strengthen Exide's proposed sediment remediation plan for Mill River.

Please do not hesitate to contact this office if you have any questions in this matter.

Sincerely yours,

Thomas J. Steinke

TJS/jm
enc:
cc: M. Tetreau, First Selectman, C. McCarthy-Vahey, K. Kiley, Bd. of Selectmen; S. Lesser, T. Atty.; SC; CC; HMC; P. Bowe, C. Fusaro, T. Iott, T. Selmeski, M. Johnson, S.. Gephard, CTDEEP; D. Carey, K. Derosia-Banick, DA-BA; Ray, COE; J. Shaw; K. Braun, Esq.; A.S. Jacobson, E. H. Jones; K. Money, J. Fallon, Esq. Exide; Sen. J. McKinney; Reps. B. Kupchick; K. Fawcett; A. Hwang

Comments of the Fairfield Conservation Commission
Concerning the Exide Group, Inc.
April 2012
Remedial Action Plan for Lead Impacted Sediments
February 27, 2013

TABLE OF CONTENTS

I. GENERAL COMMENTS

In summary, upon its review of the CTDEEP Consent Order #SRD-193 of October 20, 2008, the Exide Proposed Mill River Sediment Remediation Plan of April 2012 (SedRAP), the NPDES permit application, and the OLISP General Permit Registration, the Fairfield Conservation Commission believes that the Exide documents have been filed without necessary details, without identifying all required permitting agencies, and without obtaining the required approval of the Commissioner for the SedRAP before Exide may file its permit applications. In doing so, Exide actions are inconsistent with, and contrary to, the intent and the specific terms and conditions of the enabling enforcement action, Consent Order #SRD-193 sections B.2.d.(6) and B.2.f.(1) and (2), and should therefore be withdrawn by Exide or be rejected by the CTDEEP.

A. Consent Order #SRD-193

The SRD-193 consent order sections are predicated on a logical, technically sound progression of mandatory actions that are intended to achieve the successful remediation of the lead-contaminated sediments in Mill River. They require Exide to submit a "detailed" sediment remediation plan and await the Commissioner's approval of the proposed plan prior to Exide's applying for relevant permit applications. This sequence was required apparently because the CTDEEP and Exide wished to inform the public and elicit local knowledge and expertise concerning the project, and to ensure that the approved remediation plan is scientifically and technically sound, complete, and incorporates all the elements needed for a regulatory agency to appreciate the significance of the project and impose appropriate permit conditions. Exide has skipped this step, i.e., waiting for the Commissioner's approval of the proposed remediation plan, and jumped ahead to the permit application stage asking regulatory agencies to approve a permit without first knowing what the Commissioner will approve in the remediation plan.

Further, the Conservation Commission reviewed the cited Consent Order, #SRD-193, and notes that Section A.25 requires Exide to provide plans and implement a supplemental investigation and remediation of the CTDOT highway stormsewer in the Post Road, which work is now in progress. This section is derived from earlier investigations when Exide was ordered to clean and video-inspect the Post Road stormsewer in front of its factory and the Railroad stormsewer along the rear of its factory as these two pipe systems were known to have discharged factory wastes in the past. In 2000, without first cleaning the pipes, Exide was unsuccessful in its efforts to video-inspect either of these drain systems, and, inexplicably, CTDEEP ordered Exide to only return to address the CTDOT Post Road drain pipe in SRD-193 section A.25. This requirement to investigate these drainage systems is a logical extension of CTDEEP's efforts to ensure that potential sources of lead are found and remediated so that they may not contribute to future contamination after the river sediments are cleaned. The railroad drain is still an open order that must be resolved.

B. Proposed Mill River Sediment Remediation Plan (SedRAP)

Further, our records show that while presented to selected limited audiences (town administration, public officials, and private property owners) in 2011 and 2012, the referenced Exide Proposed SedRAP has not been presented at a meeting for the general public as Exide and the CTDEEP assured that it would be. Further, the CTDEEP published its December 20, 2012 notice of the public meeting on the proposed SedRAP and then published a two-day advance

public notice of the Commissioner's Tentative Determination to Approve the Exide NPDES permit on January 8, 2013 for the CTDEEP's January 10, 2013 public meeting for a combined review of the Exide SedRAP, the Exide Office of Long Island Sound Programs application, and the Exide NPDES application, all within a two hour SRO public meeting within which the CTDEEP and Exide allowed forty-five minutes for public comment on all three subjects.

Of three versions of the Exide SedRAP, only two versions have been provided to the public as may be inferred from Exide's actions. In his January 10, 2013 comments on the proposed remediation activities, Exide's representative stated that its dredge-cell silt curtain would be anchored to the river bottom, which is contrary to Exide's SedRAP that specifically states Exide's intent to suspend the silt curtain off the bottom as a design intention. During this public meeting, seven members of the public were permitted to speak, and when one of them requested information on why the scope of Exide's contaminated sediment removal project had expanded nearly thirty percent in volume with no explanation in the application or the two previous versions of the SedRAP, the CTDEEP moderator responded by stating that the Exide representative had just stepped out of the room and would soon return to answer the question – neither of which occurred. The public has not yet had an opportunity to be fully informed or to comment effectively on this Exide matter.

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C. NPDES APPLICATION AND OLISP GENERAL PERMIT REGISTRATION

Further, Exide cites its Proposed Mill River Sediment Remediation Plan of April 2012 as the basis for Exide's NPDES permit application and its OLISP General Permit Registration, which the Conservation Commission finds incomplete. A review of Exide's NPDES application and OLISP GP Registration, and the Proposed SedRAP, discloses the fact that Exide has deferred submittal of the project details and work plan until this information is developed and provided by the successful bid contractor for the remediation project (e.g., see below SedRAP sect. 3.2, p.17 [p. 16 this report]). In essence, Exide states that it must await the final remedial action plans of the successful bid contractor before it can provide the details needed for the Commissioner to approve the remediation plan which will in turn enable Exide to file its permit applications.

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By acting on the Commissioner's Tentative Determination to Approve the NPDES application prior to his approval of the enabling Proposed Mill River SedRAP, the CTDEEP will further confuse and compound Exide's error introduced when Exide prematurely submitted its applications contrary to the terms of its consent order.

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<u>CTDEEP should implement a revised consent order under the provisions of SRD-193 Section 13, and require Exide to provide and implement a supplemental upland plan for investigation, including cleaning and video-inspection, of the contents and condition of the railroad drain system.</u>

<u>In light of these facts, the Conservation Commission believes that Exide Group, Inc.'s OLISP GP, NPDES, and all other applications and registrations, should be withdrawn by Exide or be rejected by the CTDEEP until such time as Exide complies with Consent Order #SRD-193.</u>

While the Exide remediation plan may be technically eligible for consideration for an OLISP General Permit Registration Form, the importance and need for successful remediation of a large area of the Mill River estuary with multiple TMDL impairments in a technically complex plan with strong public interest and concerns, warrants review of the Exide proposals as individual permit applications.

II. SPECIFIC COMMENTS

(following pagination and numerical order of sections in the SedRAP of April 2012)

A. Background

Exide has submitted for review and approval by the CTDEEP its proposed "Remedial Action Plan for Lead Impacted River Sediments Mill River Study Areas I – V, Dated October 2011, Revised April 2012" (SedRAP), pertaining to CTDEEP Consent Order No. SRD-193, in which Exide proposes to dredge 21,440 cubic yards of lead-contaminated sediment from five remediation areas or reaches of the river totaling 35 acres and over 4,000 feet of the Mill River above and below the tidemill dam located at Harbor Road.

As noted in the SedRAP, Exide has been complying over several decades with multiple orders by the CTDEEP to investigate the nature and extent of lead contamination in and adjacent to its upland factory site and in the sediments of Mill River; to locate and secure the sources of contamination; and to remediate the contaminated upland soils, groundwater, and Mill River sediments affected by Exide's factory operations. The lead contamination exists due to discharges of lead from battery manufacturing following Exide's acquisition of the aluminum factory property from ALCOA in 1948. Following its cessation of battery manufacturing in 1981, Exide complied with a CTDEP order in 1983 to remediate 4,100 cu. yds. of contaminated sediment in the mill pond section of Mill River located between the Post Rd. and the railroad adjacent to Exide's property. The target level for residual lead was 500 mg/kg and lead remediation was conducted with a hydraulic cutterhead dredge working within a floating silt curtain enclosing the active dredge site or "dredge cell". After chasing resuspended sediments with lead exceedances, Exide eventually removed a total of 4,383 CY of sediment. After successful remediation of the site in 1983, the river was recontaminated to the extent we find it in today. Exide has nearly completed its upland remediation activities as it addresses the factory leaching field and easterly bank of the mill pond, and now proposes to again address the Mill River in its proposed April 2012 SedRAP.

In a parallel matter, the CTDEEP and Superior Plating Company of Lacey Place have been addressing chromium contamination of soil, groundwater, and river sediments along the shore of Mill River opposite the Exide factory. Similar to Exide's Lead-SedRAP subject matter, the chromium review suggests that the Superior Plating Company will also need to address the remediation of chromium exceedances in the soils, groundwater, and Mill River sediments in the future. The three drawings accompanying the CTDEEP October 12, 2012 compliance letter to Superior Plating Company depict the chromium sample locations in the river sediments that are to be addressed in a related remedial action plan.

Much of Exide's SedRAP concerns and activities are related to Exide's proposal to conduct its in-water sediment remediation project during the normally protective seasons for

spawning fish and shellfish. During a CTDEEP meeting on November 10, 2010, Exide proposed to local, state and federal agencies, a year-round waiver of their spawning season prohibitions that would normally be imposed on Exide when it stated that it believed that it could conduct its dredging activities and demonstrate no adverse effects on the protected spawning species; and therefore should be eligible for consideration of having no spawning season restrictions on its in-water remediation activities. Exide has not yet demonstrated its ability to meet that in-water performance standard.

B. Protective Spawning Seasons

The question of allowing in-water dredge remediation activities during spawning seasons has particular significance to Fairfield and to the river herring and shellfish that are dependent upon protective water quality in Mill River. River herring, alewives and Blueback herring, are anadromous fish species that live as adults in the Atlantic Ocean and in the spring of the year return to their natal rivers and streams to spawn. There is a relict population of perhaps several hundred adults of each species in Fairfield that are greatly hindered in their spawning runs by the obstruction of the tidemill dam. After passing the tidemill, the adult herring now go no further than the spawning pool beneath the Samp Mortar Dam spillway. Along the east coast, these species have experienced plummeting populations due to dams and loss of spawning habit, water pollution, predation, and over-harvesting. As a result, these species were nominated in 2011 for consideration under the Endangered Species Act and the National Oceanic and Atmospheric Administration (NOAA) has made a preliminary determination that supports the concern thereby resulting in a 90-day finding of their being Candidate Species with a final determination expected in March 2013. The Mill River herring populations would be well-served by protecting the water quality and the river passage on which they depend.

The Mill River estuary is also one of the most productive shellfish areas in Fairfield with its water quality and Natural Beds supporting hard clam and oyster populations that form a base for seed transplants and relays for Fairfield's commercial and recreational shellfish programs. These shellfish populations, and the programs that they support, are entirely dependent upon high water quality that protects the spawning adults, the larvae in the water column, and the young spat-fall coming to rest on the bottom. Like river herring, these shellfish species' age classes and life forms may be adversely affected by sediment plumes and smothering sediment or mud waves on the bottom; and if the sediments also contain contaminated materials, they could have direct and acute toxic effects on the species.

C. Water Quality

The present water quality status of the Mill River is clearly described in the CTDEEP's April 11, 2011 State of Connecticut Integrated Water Quality Report to the EPA. The CTDEEP has listed the Mill River and Southport Harbor as impaired waters relative to Sections 305(b) and 303(d) of the federal Clean Water Act. The impaired uses are Fish Consumption – due to Lead; Habitat for Marine Fish and Other Aquatic Life and Wildlife – due to Chromium (total), Chromium (hexavalent) and Lead; Recreation – due to Chromium (total), Chromium (hexavalent) and Lead; Shellfish Harvesting for Direct Consumption Where Authorized – due to Fecal Coliform bacteria. The Potential Sources of the heavy metals are listed as Industrial Point Source Discharge and Contaminated Sediments. There is a health advisory

posted around the river against consuming blue-clawed crabs by pregnant women or children; and all swimming, fishing, and boating activities are discouraged in order to minimize disturbance and exposure to contaminated sediments. The 2012 Exide SedRAP will address the lead-contaminated sediments and may also include chromium-contaminated sediments that are co-located with the lead. Chromium that is not co-located with lead-contaminated sediment is expected to remain an impairment to the river until remediated in the future.

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Section 1 Introduction
1.2 Background – Project History Leading to Preparation of Remedial Action Plan
1.2.1 Summary of 1983 Remediation of Mill Pond
The report notes Exide's 1983 dredge remediation of 4,100 cubic yards (CY) of in-situ lead-contaminated sediment plus the recovery of 283 CY of additional contaminated sediment from chasing lead exceedances for a total volume of 4,383 CY.

The report does not reflect that the 283 CY (6.9 % of the 4,100 CY target of contaminated dredge material) of additional volume included secondary contamination requiring extended dredge recovery efforts of the unconsolidated semi-liquid mud wave and flocculated materials of the resuspended contaminated residual sediment layer about 4 to 10 inches thick covering the bottom of the dredged area. The report also provides no estimate for the volumes of resuspended sediment that were discharged from the dredge cell out into the open river water by flowing over the silt curtain; and after tightening the curtain head-rope the resuspended sediment flowed out around the ends of the silt curtain; and after securing the ends of the silt curtain and tightening the foot rope and anchoring it in the bottom, the water pressure from the tide, river, upland runoff, and variable dredge pumping rates apparently caused the resuspended sediment to blow out the fine-grained bottom silt beneath the curtain and then flow out into the river water. The attached photos depict these conditions arising from Exide's hydraulic cutterhead dredging in 1983 with incomplete control of resuspended sediment. The resuspended sediment problems arising from the 1983 hydraulic cutterhead dredge project were some of the reasons why Exide conducted its recent dredge technology search and had prepared responses to the questions it anticipated from the CT DEEP 2010 meeting participants related to Exide's proposal to allow it to conduct in-water dredging activities during protected spawning seasons.

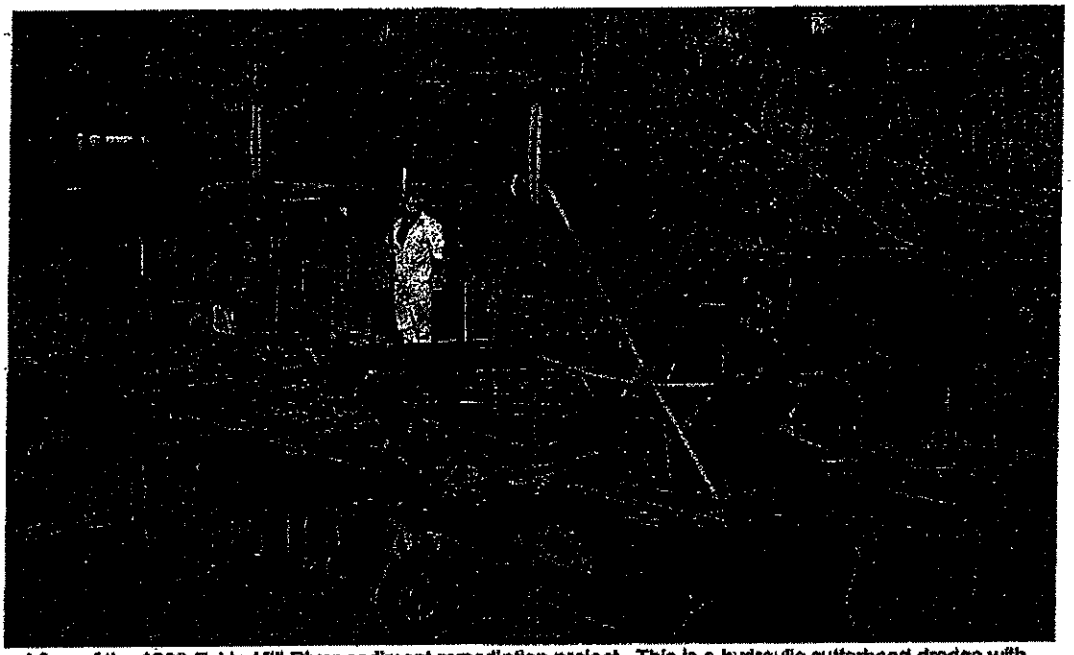
(1) Exide offers no information on the potential contamination posed by the resuspended sediment; it offers no results from any Elutriate test of the dredge slurry to characterize heavy metals or other pollutants in the dredged material that may be discharged to the river; it offers no information on a bioassay of the potential acute toxicity of the resuspended sediments to the life forms and age classes of the species to be protected during their spawning periods.

(1) CTDEEP should require Exide to demonstrate what the potential effects of its remediation activities could be on the protected spawning fish and shellfish resources before it proposes actions that could have significant environmental impacts on those resources. The point being, that if Exide does not know the risk to protected spawning species and cannot control the discharge of contaminated resuspended sediment out of the dredge cell in order to protect the spawning species present during the protected spawning seasons when Exide proposes to dredge,

(2)

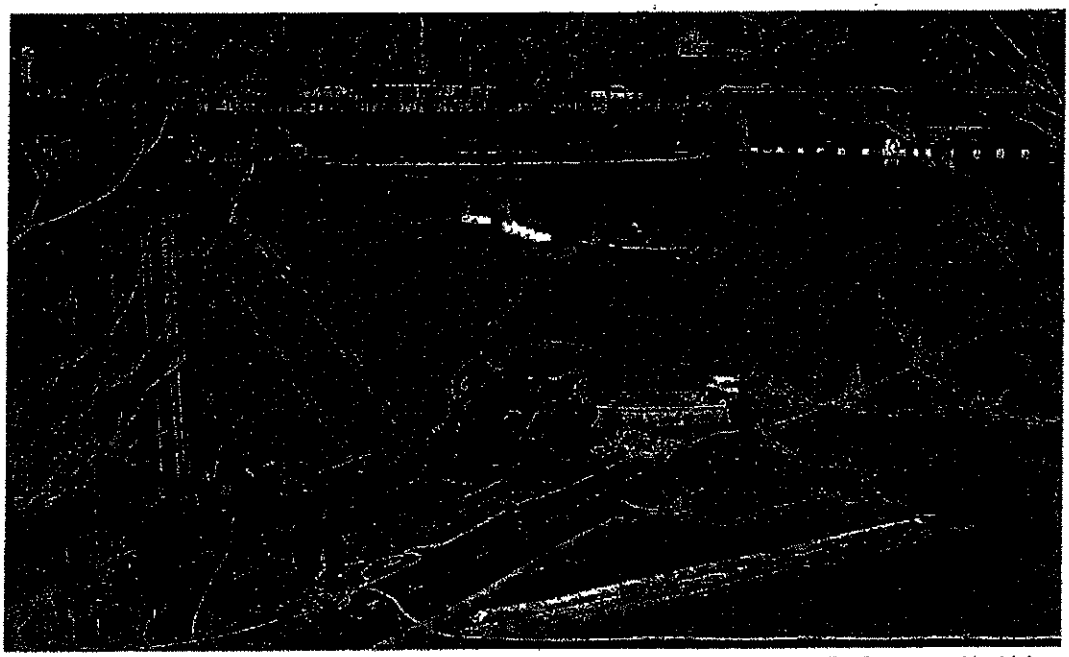
then Exide should not be conducting any in-water dredging activities during the spawning periods.

The attached photos depict elements of the 1983 dredging project wherein a hydraulic cutterhead dredge, with shroud and variable-speed pump and cutterhead rotation, was used to remove sediments and pump them to the upland treatment and transfer-disposal location at the factory site.



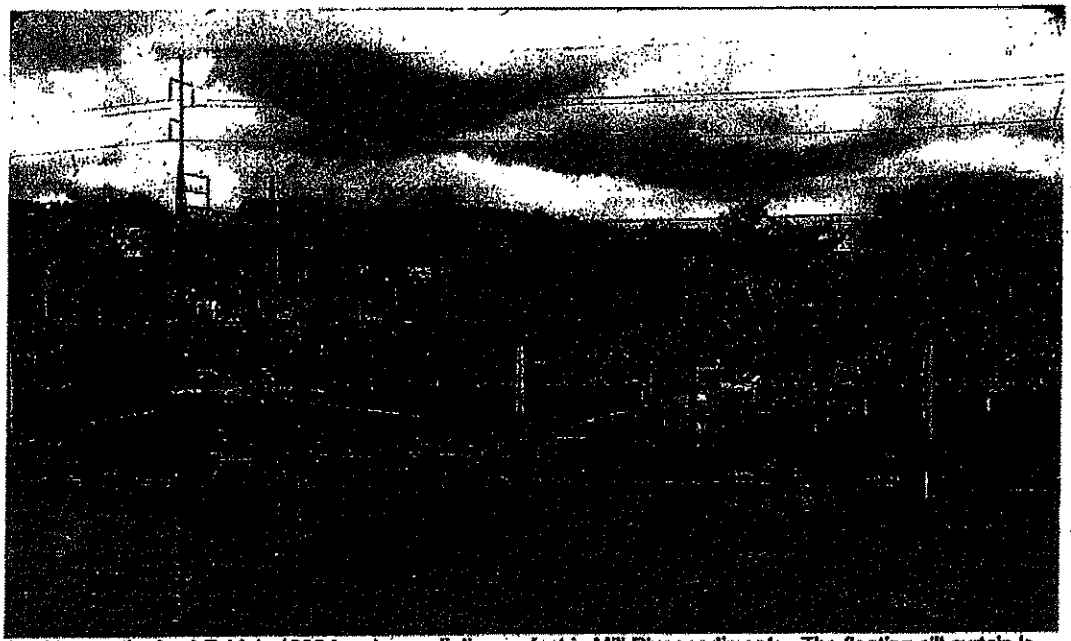
View of the 1983 Exide Mill River sediment remediation project. This is a hydraulic cutterhead dredge with shroud, variable-speed pump and cutterhead. The dredge shifts its position by moving along a cable suspended between timber pilings located around the shoreline. April 1983 tjs

Photo #1



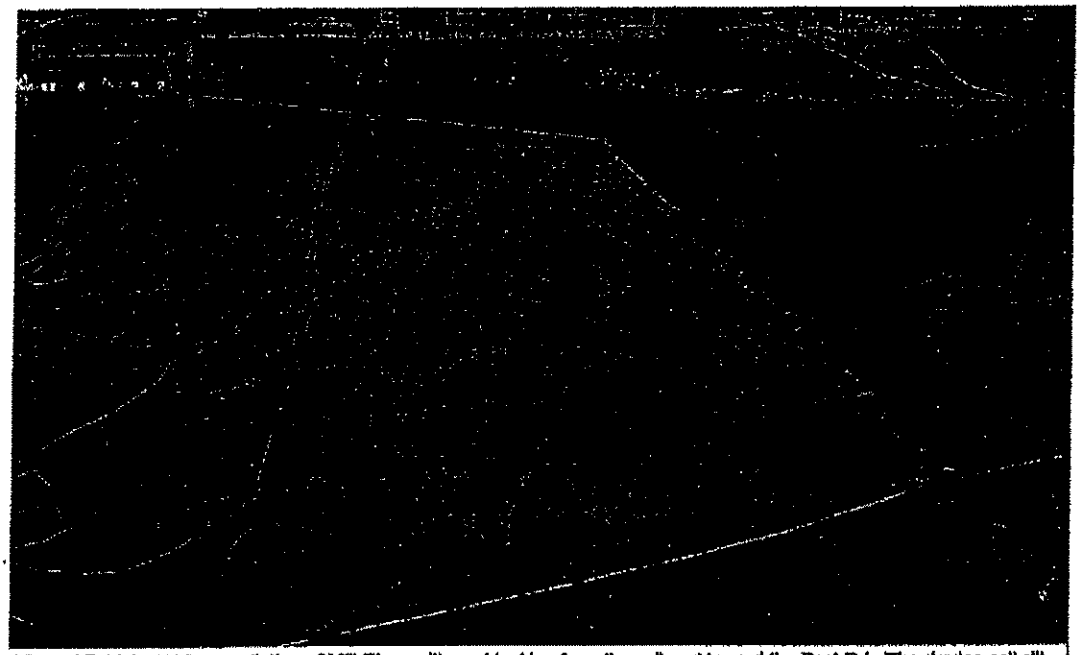
View of Exide's 1983 Mill River sediment Lead remediation project. The work barge in the foreground is driving timber piling along the shoreline to support the cable for shifting the dredge as it cuts into the river bottom.'83 tjs

Photo #2



Looking northerly at Exide's 1983 Lead remediation project in Mill River sediments. The floating silt curtain is deployed around the dredge cell on the left side to protect the open water in the river; the pile-driver is installing timber support piles for shifting the dredge on cables; the hydraulic cutterhead drege is dredging the bottom sediment and pumping it through a floating pipeline to the treatment and disposal area. April 1983 tjs

Photo # 3

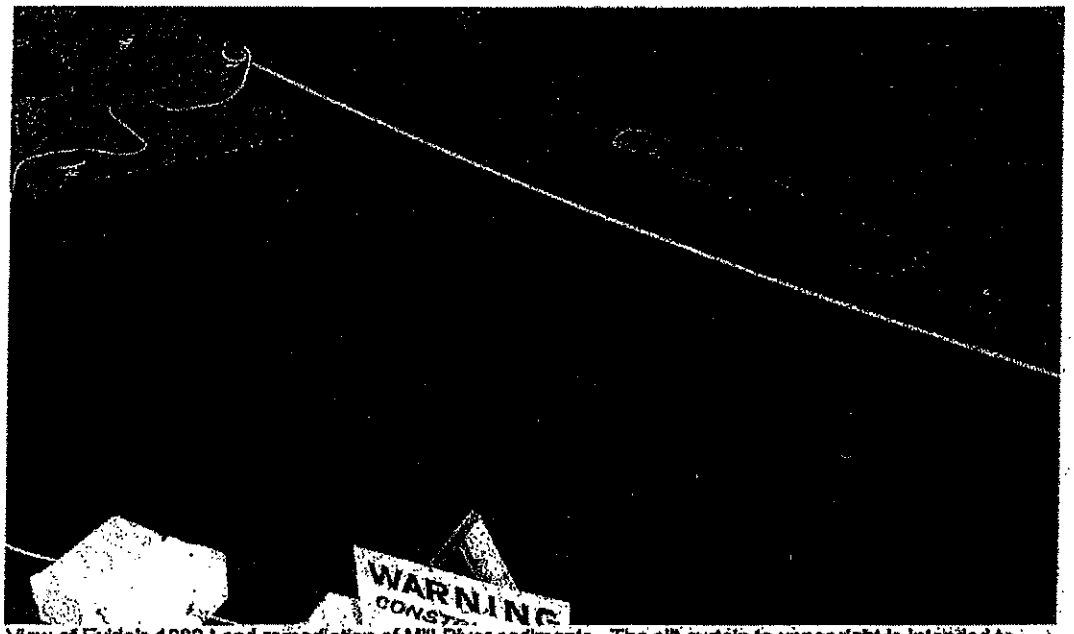


View of Exide's 1983 remediation of Mill River mill pond looking from the railroad toward the Post Rd. The dredge cell silt curtain to the right is suspended from the floating boom and is intended to protect the open water in the Mill River. Note the oil slick in the foreground contained within the boom. April 1983 tjs

Photo # 4

View of Exide's 1983 Mill River Lead remediation project. Note silt curtain suspended from floating boom with resuspended sediment discharging from under the curtain in the foreground. Depending on the tide, river flow, rainfall, and dredge pumping, the resuspended sediment discharged over, around, and under the silt curtain into the open river. April 1983 tjs

Photo #5



View of Exide's 1983 Lead remediation of Mill River sediments: The silt curtain to upper right is intended to separate the resuspended sediment within the active dredge cell from the protected open water in the river located to the left. Note the boiling clouds of resuspended sediment blowing out from beneath the curtain into the open river water between the rope and the warning sign. April 1983 tjs

Photo # 6

View in September 1985 of the Mill River mill pond two years following Exide's Lead remediation of the Mill River in 1983. The river bottom is marked by shallow furrows from the dredge, deeper holes in the open water areas from chasing deep Lead deposits, but notably a smooth homogenized featureless substrate of little habitat value to plants or animals. 9/1985 tjs

Photo #7

Page 7, Section 2 Remedial Action Plan (RAP) Overview
2.1 Overview/Purpose.
The SedRAP is offered for two reasons: to comply with CTDEEP Consent Order No. SRD 193; and to reduce the concentration and bioavailability of lead in the Mill River study areas to levels that are protective of human health and the environment.
2.2 Desired Effects
Exide notes that "in spite of the elevated sediment lead contamination in some areas, Mill River currently exhibits a vibrant array of dependent flora and fauna. It is desirable that whatever remedial alternative is selected, consideration be given to minimizing the negative short term disturbance to these organisms and maximizing the long term benefits of reducing lead in the environment in which they live."

5,15

Exide should provide quantitative biological baseline data and descriptions of the plants and animals that will be affected by the dredging project so that Exide may monitor species and numbers and be able to objectively determine whether or not environmental restoration is achieved following the lead remediation project.

2.2.1 Short Term
Comment:
The Overview and Desired Effects statements above capture the conceptual essence of the Exide proposal now under consideration.

Based on our experience and observations with Exide's 1983 dredging project, Exide has yet to address the short term impacts of resuspended sediment associated with its proposed hydraulic dredge project.

In general-navigation projects where dredging is often used to maintain channels with environmentally "clean" sediments, a simple floating silt curtain is often used to mitigate adverse effects by containing resuspended sediments and impeding their discharge from the active dredge cell or area so that non-target areas and life forms will not be adversely affected by the project. Contaminated sediments are another matter entirely, requiring significantly different mitigation measures in the form of specially-designed silt curtains, redundancy, or the use of cofferdams to protect non-target areas and organisms. If Exide's proposed silt curtain functions as did its 1983 unit, we can anticipate significant impacts beyond the dredge cell in non-target areas.

As noted in the SedRAP and depicted in the photos of the 1983 dredge project, the resuspended sediment spreads out in the water column and along the bottom throughout the dredge cell. This resuspended material of unconsolidated sediment and fine-grained organic matter is typically measured as total suspended solids (mg/L) within the plume or cloud of discoloration in the water column. If contaminated, this resuspended material settles on both contaminated and uncontaminated bottom surfaces within the dredge cell, necessitating the expansion of the dredging project to chase down and recover errant exceedances. This secondary recovery action results in increased volume and handling/treatment expenses, more time, and increased destruction of vegetation and habitat that could otherwise have remained protected and intact.

Exide proposes to monitor the water column silt plume and near-bottom mud waves for their optical properties or nephelometric signature to determine if contaminated resuspended sediment is discharging from the dredge cell curtain and thereby impacting protected spawning species.

(16) Exide should equate its optical turbidity monitoring units to the total suspended solids concentrations (mg/L) of potentially toxic constituents in the resuspended sediment so that dredging may be halted immediately if contaminants are discharged from the dredge cell.

(16) Exide should provide test data to describe the physical, biological and chemical properties of contaminated resuspended sediments relative to Exide's proposed use of nephelometric, optical, data units to monitor plumes and mud waves and quantitatively relate those optical units to the concentrations of suspended solids and contaminants in the water column.

(16) Exide should provide estimates of the volume of resuspended sediment expected to be discharged beyond the dredge cell silt curtain with this dredging project; the contaminants associated with the resuspended sediment; the potential acute toxicity of the resuspended sediment on species and their age classes (e.g., adult spawning river herring, shellfish, shellfish larvae in the water column, and shellfish spatfall) if Exide proposes to conduct in-water sediment remediation activities during critical spawning periods.

(17) Exide should provide a submerged debris survey and data on the nature and extent of significant submerged obstructions that may interfere with and foul the dredge causing increased exposure of resuspended sediments to ecological receptors. (19)

(21) Exide should provide test data on its proposed silt curtain (designed to be suspended six inches off the bottom) and its effectiveness in containing potentially contaminated resuspended sediment within the dredge cell. (20)

Page 7/8
2.2.2 Long Term
Exide notes the long-term advantages of reduced lead contamination in the river sediments, but does not address long-term adverse effects.

The dredging project will do several things as observed in the enclosed 1983 and 1985 photos: To provide a clean dredging bottom condition, the removal of submerged debris and the dredge's mechanical agitation of the bottom sediments will leave a smooth, level, homogenized mud substrate having little diversity and value to plants and animals.

The dredging of deep contaminated sediments will involve excavating, creating new or expanding existing, significant areas of deep lifeless sumps or pits on the bottom of the river. These dredged holes, some up to three to five feet or more in depth, will typically fill with fine-grained organic matter characterized by acidic conditions, low or no dissolved oxygen, saturated with hydrogen sulfide, and be incapable of supporting plant and animal species associated with the natural river bottom. Exide characterizes these sediments as black pudding and black mayonnaise. If extensive, these holes or bottom depressions may approximate a veritable biological desert as the river has been dammed since circa-1700 during which time it has

acquired a great variety of habitats and conditions that support the plants and animals found there today. These excavated holes will represent a loss of productive bottom habitat as well as a potential safety concern for those wading in the river.

(4) Exide should compensate for the increased anaerobic bottom conditions by submitting revised plans providing for the refilling of its dredged sumps with clean soil material and by restoring the significant submerged structural habitat elements, logs, stones, etc., on the bottom following the dredging project.

(15) Exide should continue to monitor lead concentrations in eco-receptors following its remediation activities until such time as the present health advisory on blue-clawed crabs may be removed.

(5) Exide should conduct a quantitative pre-dredge base-line survey of plants and animals in the affected areas and provide a long-term monitoring program so that it may document when the remediation project may be successfully concluded by Exide's success in achieving the reestablishment of plant and animal communities equivalent to the pre-dredged condition in Mill River or to the Reference Sites.

(22) Exide should submit a revised plan for long-term monitoring and mitigation of the sediments and estuarine flora and fauna until the river is restored and the TMDL lead impairments, health advisories, and boating and use restrictions are no longer needed. (22)

Page 8
2.3 Cleanup Criteria
Exide notes the need for a statistical analysis to determine the probability of a successful sediment remediation effort based on sampling of the residual lead concentrations in the sediment to determine if they are within the 95% confidence interval for the clean-up criteria; and if any individual sample location has a lead concentration greater than twice the clean-up target level it will need to be addressed in a post-remediation environmental net benefit analysis of the merits of any supplemental efforts to clean it up.

Comment:
Exide proposes to sample for residual lead according to a pre-determined pattern and depth range in the 0" to 6" bottom sediment. With this sampling protocol, the potentially contaminated resuspended semi-fluid sediment layer, lying above the bottom and in the deep holes where contaminated sediment will collect, may not be encountered during grid sampling and could subsequently recontaminate other areas when river currents redistribute materials in the channel.

(24) In addition to its grid sampling, Exide should submit a revised sampling plan that will require sampling of the off-bottom layer of unconsolidated sediment in the mud wave along the water-soil interface, as well as in the deep sumps that Exide creates or enlarges during its dredge remediation activities. (23)

Exide's undefined post-remediation net benefits analysis and supplemental remediation alternatives need to be described in additional detail in order to understand their significance.

For example, is Exide contemplating alternatives of doing nothing to mitigate residual exceedances, or a capping operation of clean soil material over the bottom residual lead exceedances (which may be compromised by future chromium remediation efforts), or of establishing a dedicated fund for future support of mitigation activities in Mill River?

(49) Exide should submit revised plans that clearly articulate and explain the likely factors/variables in its proposed net benefits analysis and supplemental remediation alternatives for post-remediation mitigation. (44)

Page 9
3.0 Mill River – Current Conditions
Exide describes the various remediation areas (Areas I-V), depicted in Figures 1 & 2 and Drawings 1 and 2, with respect to their physical features including bathymetry, topography, tidal regime, road crossings, pipe outfalls, structures, and history of the tidal dam and earlier gravel mining operations above I-95 for construction of the Connecticut Thruway.

Comment:
The Exide report acknowledges the 300 year old tidemill dam and the implication that the impounded mill pond may cover both Colonial and Native American materials, but does not reflect any pre-dredging survey or provision for artifacts of historical or archeological significance that may be encountered in the course of the project.

(6) Exide should submit revised plans providing for the conservation of historically or archaeologically noteworthy materials, e.g., Colonial, Native American, if encountered during the remediation project activities.

D. The Tidemill Dam
The tidal dam structure (tidemill) is over 300 years old and has experienced severe damage in that time period. The concrete spillway on the easterly side of the tidemill island was constructed by the town when it replaced the old wooden tidegates at different times in the 1950s and '60s when it believed that the town owned the dam. In 1985-87 the easterly concrete spillway was seriously undermined to the point where the river drained out beneath the spillway and exposed the lead-contaminated river bottom sediments upstream. Dr. Kueffner, tidemill dam owner, requested that the town assist him in repairing the breach in order to protect the contaminated river sediments from scour and redistribution downstream until they could be remediated by Exide. The Conservation Commission approved the project and the Conservation Department crew repaired the leak by placing sand bags in the bottom breach where the colonial foundation stones were washed out of position beneath the dam. Our SCUBA repairs were temporary in that they were merely sand-filled bags placed on the up- and down-stream faces of the dam breach and had to be replaced in 1987. They have apparently remained in position since that time, but no assessment of their condition has been made since installation. The entire multi-year Exide remediation proposal is uniquely dependent upon the structural integrity of the tidemill dam, but Exide has not provided any information as to the condition of the structure, or what Exide is prepared to do if the structure is compromised and loses significant amounts of water during remediation activities.

8

Exide should be required to provide to the CTDEEP and the property owner, a Connecticut-licensed professional engineer's evaluation and opinion of the structural integrity of the various elements of the tidemill dam, including its foundations and spillways, and recommendations concerning expedient measures for Exide to protect the dam during remediation activities, and recommendations for monitoring and reporting on its condition until Exide's sediment remediation obligations under the Consent Order have been discharged by the CTDEEP.

E. Property Ownership

Exide proposes to conduct its remediation activities in the Mill River above the head of navigation at tidemill dam (a 36-acre mill pond extending over 4,000 feet of river channel) on public and private properties most of which Exide has not yet acknowledged or identified. The dam is apparently the property of the tidemill owner, while the bottom of the river and the mill pond is owned by various entities, including Tidemill Associates and Exide Group Inc. Exide depicts its ownership of the bottom of Mill River (see Figure 9, p. 46) where the property extends into the river on the easterly side of the main channel between the Post Road and the railroad. This property configuration is apparently derived through Exide's acquisition of the aluminum factory which received it from the prior owners Lacey and Sturges. The remainder of the mill pond property not conveyed to Exide appears to rest with the successors of Sturges. The river bottom property above I-95 appears to be owned by the riparian owners along the shoreline who provided their permission to the turnpike construction contractor (D'Addario) to dredge their property for sand and gravel in the 1950s where the gravel borrow pit may be found in the northerly end of Area V today. Ownership of the affected property in the proposed remediation plan is important to what the owner may allow Exide to do in terms of: dredge or cofferdam placement and excavation, existing and possible future contamination or recontamination, deployment and location of silt curtains, diversion of upland tributary streamflow away from dredge cells, possible impacts to and integrity of the tidemill dam and other shoreline structural conditions, and the residual condition of the property following the conclusion of the remediation effort.

9

In addition to its own property holdings in the river, Exide should revise the proposed SedRAP and provide a delineation of, and acknowledgement from, all affected property ownerships for the properties located within the remediation areas above the head of navigation at the tidemill dam (I-V).

F. Contour and Jurisdiction Lines

On the Drawing Set submitted with the proposed SedRAP, Exide has superimposed the elevation 5 contour over the base topographic map detail thereby obscuring the base-map elevation contours which determine the boundaries between the state's tidal and the town's inland wetlands and watercourse jurisdictions.

10

Exide should submit revised drawings that clearly depict all contour lines and relevant elevations along the shore as well as all soils and watercourses and the newly defined State Jurisdiction Lines in the tidal area, so that regulatory agencies may make a determination of any regulated areas and regulated activities associated with the proposed remediation project (See discussion in the IWWC section at SedRAP page 73.)

G. West Trunk Sewer Siphon
Exide schematically depicts the town's west-trunk sanitary sewer siphon system on Drawing Set Sheet No. 2 and describes its location (SedRAP p. 17) with no details. This sewer system has two parallel siphon pipes approximately two to four feet deep in remediation Area V beneath the river at Henderson Road and its disturbance by driven piles or dredge cutterhead could result in a significant loss of water quality in Mill River.

(25) Exide should provide revised SedRAP plans, with plan, section, and profile views of this structure, over a Connecticut-licensed professional engineer's signature and seal, with recommendations in a report to the CTDEEP and Town of Fairfield, for such actions as are necessary to be taken by Exide for the proper protection of the siphon system during Exide's sediment remediation activities. (24)

H. I-95 Sampling Area Uncertainties
Exide has not depicted any sampling within the large culverts of the I-95 river crossing between remediation Areas I and V and it is unclear if Exide has already sampled this area or if it intends to sample this area following dredging to determine if the area is contaminated. This area is important as it supports some of the highest concentrations of blue-clawed crabs and the greatest numbers of subsistence fishermen along the I-95 embankment who persist in crabbing in this area despite the posted bi-lingual public health advisories.

(11) Exide should clarify the status of any existing sediment samples from the I-95 culverts and include the area within the culverts to ensure that the area is covered and to include the area in its pre-and post-remediation sampling program for Areas I and/or V.

I. Railroad Drain
As noted earlier, the SedRAP is silent on the open status of the railroad drain as an uninvestigated potential source of lead to the Mill River.

(12) Exide should submit a revised SedRAP acknowledging its intention for the investigation (cleaning and video inspection) and potential need for remediation of the railroad drain prior to implementation of the SedRAP.

Page 17
J. Exide's Deferral of SedRAP Details to Future Contractor
Exide states throughout the SedRAP that the details of the remediation project are not known at this time, but will be developed by Exide and the contractor after the SedRAP is approved through its bid documents, the contract documents, and by the successful bid contractor when it provides plans for actually conducting the work. In the proposed SedRAP, Exide describes the broad concepts and general methods of the proposed remediation project, but provides no details, stating instead (at p. 17, section 3.2, 2nd para.): "These drawings (and others) will be the basis on which contractors prepare their remedial action proposals and volume estimates."

As specified in Consent Order #SRD-193 B.2.d.6, Exide is required to submit detailed sediment remedial action plans for the Commissioner's approval – not tentative, schematic or conceptual outlines proposed for the Commissioner's approval after which Exide's contractor will decide

how it will carry out the remediation project in detail. With this conceptual SedRAP approach, Exide fails to comply with its consent order, makes it very difficult for regulatory agencies to determine jurisdiction and the need for relevant permits and conditions, and increases the likelihood for potential enforcement actions involving Exide and its contractor in the future.

24

Exide should not defer details to a future contractor, but rather submit a revised proposed SedRAP with the details necessary for the approval of the Commissioner as required in Consent Order #SRD-193.

25

Page 17
3.2 Sediment Lead Distribution
Page 19, 3.3 Physical Characteristics of Study Area Sediments
Page 20, 3.4 Hazardous Waste Characteristics of Study Area Sediments

Based on over 2,000 sediment samples, Exide reports that the highest average sediment lead concentrations are present in Area II (mill pond) with the next highest in Areas I and III. These areas also have some of the deepest sediment lead deposits beneath the water column. On page 20, Exide reports that it encountered hazardous sulfide-reactive sediment materials and hazardous waste conditions including TCLP lead (toxicity characteristic leaching procedure) requiring special treatment and disposal at a hazardous waste facility. Exide anticipates the need to add chemical stabilizers to the dredge slurry in the on-shore treatment facility, but expresses no concern and offers no treatment suggestions for such hazardous materials that may be mobilized in the water column by dredging and then transported as dissolved or particulate matter with resuspended sediment flowing out of the dredge cell into non-target areas and adversely affecting protected spawning species. Further, with respect to Overall Benefits Analysis and Socio-Economic Issues, in section 4.4 (page 27) Exide finds "That risk to humans through consumption of fish/shellfish or ingestion of lead-contaminated sediment is substantially elevated in Area II, and elevated in Area I, with no substantial risk in Areas III, IV, & V." The risk of incidental ingestion of lead-contaminated sediments through such activities as swimming "is deemed to be substantially elevated in Area II and elevated in Areas I & III, with no substantial risk in Areas IV & V" and thereby concluding that only a net benefit would be gained by dredging the river.

Instead of a One-Size-Fits-All remediation method to treat both high- and low-risk areas through dredging alone, the above information supports a far more effective approach wherein Exide should be selective and use the open-water dredge system to remediate the relatively low risk Areas while using a closed system cofferdam method to excavate the high risk Areas. The use of a cofferdam in Areas I, II, and III would allow Exide to isolate the worst sediments from the river and dewater and observe the areas to be dredged; clear all debris that would normally foul the dredge; allow Exide to directly obtain confirmation samples of residual lead and be able to chase any lead exceedances without resuspending the highest-risk sediments; it would allow Exide to easily replace the excavated sediment with clean material, refill and eliminate its anaerobic sumps; and replace submerged structural habitat elements. The use of cofferdams, especially in Areas I, II, and III, could allow Exide to avoid dredge entrainment and loss of aquatic and planktonic species and age classes of fish and shellfish during protective spawning seasons.

If the cofferdams were installed prior to the protected spawning periods, Exide would avoid in-water disturbance to spawning species and could continue to conduct these cofferdam activities within the protected spawning periods. Exide already owns the easterly shoreline and shares a large portion of the bottom of Mill River in Area II with Tidemill Associates; the State apparently owns much of Area I; and Tidemill in Area III.

Concerns for flooding due to cofferdam encroachment on the riverbed are acknowledged and may be ameliorated by avoiding their encroachment within the cross-sectional areas of the existing river control sections of the I-95, Railroad, and Post Road bridge crossings. With this dual approach, cofferdam – silt curtains, Exide could work within the cofferdams during the spawning seasons, and dredge with appropriate silt curtains outside of the spawning periods (with all water quality conditions and performance standards being met), thereby protecting ecological receptors, achieving the most successful residual lead targets in the sediments, and saving a great deal of time and expense in the project.

13 Exide should provide a revised SedRAP that includes provision for remediating the most-contaminated sediments, at least those located in Areas I, II, and III, within excavation cells that are physically and hydraulically isolated from the river, e.g., cofferdams.

Page 22
3.6 Federal Wetlands Delineation
And Drawing Set Dwg. Sheet #11 and #12
Exide notes the need for state and federal wetlands delineation by survey and map, but does not depict on drawings 11 and 12 the soil flag numbers, the soil types, or identify any municipal IWWC regulated areas which are present and mapped along the river. Exide also omits the Federal Wetland Delineation Transect for Area I, and Drawing #11 also apparently omits soil delineations along the southeast section of the I-95 shoreline for Area I.

27 Exide should provide this missing information. (This discussion continues at SedRAP sect. 11, p. 73-74.) 26

Page 22
3.7 Natural Diversity Database (NDDB) Research
As noted above, relict populations of river herring are located in Mill River.

19 Exide's proposed SedRAP of April 2012 should be revised to reflect the presence of river herring as state species of conservation concern plus the on-going review of the NOAA evaluation of river herring (alewife and bluebacked herring) for consideration under the Endangered Species Act. 18

2 Exide's proposed SedRAP should be revised to include the recommendations of the state fisheries biologist with respect to providing protection for the species of concern.

Page 25+

4.0 Human Health and Ecological Risk Assessment and Appendix II, Exponent Sediment Toxicity Study
Exide describes the human and ecological receptors that are affected in the project area and the derivation of the target residual sediment lead concentrations that are protective of those receptors on a chronic basis. Exide goes on to note (page 28, 4.4.2 Short Term/Long Term Impact) that "A proactive sediment remediation alternative (e.g., dredging) is expected to increase short-term risk factors due to physical disturbance of organisms and potential sediment resuspension thus possibly increasing (in the short term) bioavailability to river flora and fauna."

Exide does not indicate how the increased bioavailability of potentially acutely toxic materials is to be controlled in its remediation activities, or how it supports or negates Exide's intentions to allow resuspended sediment to be discharged from its dredge cells and affect spawning fish and shellfish species. This increased short-term risk of bioavailability to ecological receptors, such as spawning fish and shellfish, motivated Exide to conduct its remediation technology search and to propose to the CTDEEP in 2010 that it be allowed to conduct its in-water remediation activities in the Mill River during spawning periods if it could demonstrate protection of spawning fish and shellfish species.

Exide does not include any information on the short-term risk that it acknowledges, no information on what receptors may be affected, such as shellfish larvae, or when, where, or for what duration; no data on the contaminants and concentrations that may be associated with the dredge slurry, or with the resuspended sediment in the water column silt plume or the unconsolidated semi-liquid mud wave discharging at the bottom of the dredge cell silt curtain; no information on the volumes of resuspended sediment involved or potentially discharging from an active dredge cell or from all cumulative dredge cells; no information for any modified elutriate test or bioassay to determine acute toxicity of the resuspended sediment against the spawning species and age classes that Exide proposes to protect so that it may justify in-water remediation activities during their spawning periods. Exide should provide the above information in a revised proposed SedRAP.

(1)

Page 27
4.4.1 Socio-Economic Issues
Exide notes that its consultant, Exponent, Inc., expects recovery of the remediated benthic community within one to three years, but offers no information on which areas of the river it refers to, or what studies were used to support its projection, or how the different substrates, depths, and anaerobic bottom sumps affect actual recovery.

Exide has not provided any quantitative data on the pre-dredge, i.e., existing, plant and animal communities found in the proposed project area in terms of information that can be used following remediation for an objective assessment of its progress in restoring the plant and animal communities in species and numbers to pre-disturbance or Reference Site conditions. Exide, and its consultant Exponent, are silent on the environmental impacts of the post-dredging homogenized and leveled river substrates with all dredge-fouling submerged structural habitat elements removed; with new, deeper or enlarged anaerobic sumps or holes excavated in the bottom of the river. While the river is an open system and its populations of flora and fauna may be expected to re-equilibrate under normal conditions within a few years, Exide proposes to

(5)

excavate new, or aggravate existing, very abnormal bottom conditions that will inhibit or prevent long-term recolonization of flora and fauna in subaqueous pits. These are the areas where Exide will excavate three to five feet or more of bottom materials in deep pits or sumps when chasing lead exceedances. These bottom holes will fill with resuspended sediment, organic matter, and fine-grained silt characterized by acidic, anaerobic, and azoic conditions, hydrogen sulfide, and extremely soft and unstable substrates of no significant value to river flora and fauna.

5, 15, 23

Exide should provide a revised SedRAP that describes a sampling program, schedule, and how and for what time period it will monitor the post-dredging remediation river plant and animal communities, including the dredge-excavated holes or borrow pits, to ensure their restoration or compensatory mitigation, as well as the eventual removal of the lead-induced blueclaw crab health advisory and related public and private use restrictions for the river.

22

Page 29+
Remediation Methodology
Figure 6 Remedial Options; Figure 7 Dredging Options
Exide states that "The ultimate over-arching goal is to select the solution, which maximizes the overall benefit to the environment." Exide summarizes five remedial options: Taking No Further Action; Monitored Natural Recovery; Capping-In-Place; Excavation In-The-Dry (Cofferdams) with off-site disposal; and Dredging with off-site disposal; noting associated risks, advantages and disadvantages, time and relative costs. Exide then compares six different dredging methods settling on Hydraulic Cutterhead Dredging as the method of choice for remediation of the lead-contaminated sediments. This one-size-fits-all approach is not conducive to an effective or efficient remediation project where conditions of lead concentrations, hazardous constituents, and threats to human and eco-receptors vary widely in degree and location.

13

Exide needs to fit the dredge cell remediation method to the site conditions where there are five different Areas, I-V, with different conditions of topography and bathymetry, contamination, hazardous waste materials, total and TCLP exceedances, vegetation, substrate depths, submerged debris, property ownerships, all of which require adaptive management and flexibility in remediation methods in order to achieve success in the project.

Page 32
5.5.1.1 Hydraulic Cutterhead Dredge

Exide acknowledges the need to control the generation of contaminated resuspended sediment as it is far more difficult and more costly to chase, recover, and treat it after its dispersion. Exide notes the ability to minimize resuspended sediment through adjustments to cutterhead speeds, pumping rates, and the use of floating silt screens (suspended off the bottom allowing mud waves to by-pass the curtain perimeter). Although Exide recounts how its in-situ contaminated sediment poses a threat to ecological receptors due to its chronic toxicity and must be removed down to established residual sediment-lead targets, Exide does not explain "why" it is necessary to control its resuspended sediments during the removal process. Exide provides no description of its resuspended sediment with respect to its physical and chemical properties and characteristics or its contaminants, bioavailability or degree of toxicity to protected spawning species in the river. Exide provides no lab or field test information as to the volumes of resuspended sediment that it will generate, how this

material may travel through the water column or along the bottom, or what distances it may travel up-stream or down- depending on river and tidal water current conditions.

K. Hydraulic Cutterhead Dredging and the Use of Silt Curtains

A note about hydraulic cutterhead dredging within silt curtains as proposed by Exide and why the method is not a viable alternative for blanket application in the waters of Mill River. A review of the literature (Collins 1995) shows that "Perfectly designed and operated cutters [hydraulic cutterhead dredges] will introduce a sediment slurry that will be completely entrained by the flow to the dredge pump. However, spatially varying sediment properties and cutter operations inevitably lead to a sediment slurry that the pump cannot handle, resulting in sediment resuspension or release."

How much sediment resuspension or release? In its April 2013 SedRAP (p. 35), Exide suggests that it could be as little as 0.013% or less than three cubic yards of material from the proposed 21,440 cubic yard (CY) SedRAP remediation project. In its literature review, Anchor (2003) cites studies of resuspended sediment from hydraulic dredges varying from less than one percent to over eight percent of the project material (dry weight) which could mean over 1,715 CY of contaminated material resuspended into the supposedly-isolated dredge cell water column from this 21,440 CY project. This is not unreasonable when we consider that in 1983, Exide remediated the mill pond by dredging over 4,100 CY of lead-contaminated sediment and then had to recover approximately 283 cubic yards of additional material (6.9% of project) that included mud wave and resuspended sediment within the silt curtain. The additional resuspended sediment in the water column and the bottom mud wave that were discharged from the silt curtain dredge cell into the Mill River were unaccounted for.

What happens to the resuspended sediment within the dredge cell silt curtain? Francingues and Palermo (2005) report useful information that is worth repeating here: "What Processes Affect Silt Curtains? In many cases where silt curtains are used, the concentration of fine-grained suspended solids inside the curtain enclosure may be relatively high (i.e., in excess of 1 g/L). The suspended material may be composed of relatively large, rapidly settling particles or flocs. In the case of a typical pipeline disposal operation surrounded by a silt curtain where suspended solid concentrations are high and material usually flocculated, the vast majority (95 percent) of the fine-grained material descends rapidly to the bottom where it forms a fluid mud layer that slopes away from the source at an approximate gradient of 1:200. The other 5 percent of the material remains suspended in the water column above the fluid mud layer and is responsible for the turbid appearance of the water inside the curtain. While the curtain provides an enclosure where some of the fine-grained material may flocculate and/or settle, most of this fine-grained suspended material in the water column escapes with the flow of water and fluid mud under the curtain. The silt curtain does not indefinitely contain turbid water but instead controls the dispersion of turbid water by diverting the flow under the curtain, thereby minimizing the turbidity in the water column outside the silt curtain. Whereas properly deployed and maintained silt curtains can

effectively control the distribution of turbid water, they are not designed to contain or control fluid mud. In fact, when the accumulation of fluid mud reaches the depth of the ballast chain along the lower edge of the skirt, the curtain must be moved away from the discharge; otherwise sediment accumulation on the lower edge of the skirt can pull the curtain underwater and eventually bury it. Consequently, the rate of fluid mud accumulation relative to changes in water depth due to tides must be considered during a silt curtain operation". This report suggests that Exide's proposed remediation project may discharge over 85 cubic yards of lead-contaminated resuspended sediment into the water column as well as a potentially much greater, but unknown volume of contaminated fluid mud in bottom waves to the open waters of the Mill River. If Exide's new sediment estimate of 27,600 CY is correct, the amount of contaminated resuspended sediment could be well into the hundreds, if not thousands, of cubic yards.

Exide has not provided any test data on the matter of resuspended sediment volumes resulting from its proposed dredging activities.

In keeping with the Francingues and Palermo recommendation, Exide does not propose to secure the bottom of the supposedly-isolated dredge cell silt curtain, but instead to suspend the curtain approximately six inches off the bottom and to lift the curtain up to avoid damage during storm events. According to the Francingues and Palermo findings, we may expect that Exide's management of the dredge cell silt curtain when deployed as designed will initially discharge the bottom mud waves to spread approximately one hundred feet beneath and beyond the silt curtain and then be redistributed by river and tidal currents into uncontaminated or previously-remediated areas, as well as into the water column where it will impact the life forms and varied age classes of normally-protected fish (river herring are designated as species of state conservation concern) and shellfish species during their spawning seasons. When Exide lifts the silt curtain to protect it from damage due to storm events or operational needs, the contaminated resuspended sediment will be distributed throughout the unprotected waters of the Mill River in what will essentially be an unconfined dredging operation – inconsistent with the Clean Water Act and contrary to the CTDEEP's consent order.

In summary, Exide's lead recovery activity will entail the isolation of successive dredge "cells" by sequentially deploying a suspended perimeter panel or silt curtain around the active in-river dredging area or "cell"; then, within the supposedly-isolated dredge cell, mechanically agitating and resuspending the contaminated river sediments into the water column with a hydraulic cutterhead dredge while the dredge pump sucks up the resuspended sediment and water at about 1,500 gallons per minute and pumps most of the sediment and water as a dredge slurry to a dewatering facility. It is during this period of dynamic mechanical agitation and cutterhead motion where the contaminated resuspended sediment is not completely captured by the dredge pump, but is allowed to be distributed within the "mixing zone" of the dredge cell which is defined by the perimeter silt curtain.

Exide claims in its NPDES permit application Attachment G: Coastal Consistency Review Form (p. 2 of 5, Part III: consistency with applicable coastal use and activity goals and policies), that "Floating turbidity curtains will be in place forming dredge "cells", within

which any released suspended sediments would be contained, and outside which fish migration would be allowed at all times during the project." Exide continues in stating that turbidity instruments will be in place to notify its Operators if turbidity levels are exceeded due to a discharge of resuspended sediment from the dredge cell. Exide's statements create the impression that the resuspended sediment will be "contained" securely within the dredge cell to protect spawning species and that Exide will cause the dredging to stop if a discharge of resuspended sediment occurs, but Exide doesn't say that. Exide states in its SedRAP that resuspended sediment will in all likelihood occur and it is expected to be discharged from the dredge cell – that's the reason why Exide proposes to deploy monitoring instruments and notify the Operator of a discharge problem.

It is when the dredge cell perimeter silt curtain is compromised by river, wind or tidal currents, or by slippage of the bottom substrate, or silt curtain and equipment failure (and in Exide's application by having the silt curtain intentionally suspended off the river bottom approximately six inches and periodically removed to prevent silt curtain damage during storm and work events) that the contaminated resuspended sediment will be discharged as a point source from the dredge cell silt curtain wall into the open waters of Mill River.

At the dewatering facility where it will receive the dredge slurry at approximately 1,500 gallons per minute, the sediment-water slurry will be dewatered either mechanically or by gravity in geo-textile bags for production of a contaminated sediment cake product that will be shipped for disposal or reuse off the site. Following dewatering, the filtrate water will be treated and discharged back to the Mill River at up to approximately 330 gallons per minute (475,000 gallons per day).]

Literature Cited

1. Collins, M.A. 1995. Dredging Induced Near-field Resuspended Sediment Concentrations and Source Strengths. Dredging Operations Technical Support Program misc. paper D-95-2, Prepared for US Army Corps of Engineers, US Army Engineer Waterways Experiment Station, Vicksburg, [page 10.]
2. Anchor Environmental C.A. L.P. 2003, Literature review of effects of suspended sediment due to dredging operations. Prepared for Los Angeles Contaminated Sediments Task Force Los Angeles, California.. One Park Plaza, Suite 600 Irvine, California 92614. June 2003. 140pp.
3. Francingues, N. R., and Palermo, M. R. (2005). Silt curtains as a dredging project management practice, DOER Technical Notes Collection (ERDC TN-DOER-E21). U.S. Army Engineer Research and Development Center, Vicksburg, MS. 18p.

Exide should provide a water budget and detailed explanation in a revised SedRAP for the apparent discrepancy between river dredge production slurry input rates and volumes at 1,500 gallons per minute (SedRAP Appendix VI) and treated filtrate water output discharged to the river at 330 gallons per minute (NPDES application file) and how they will be reconciled during the project.

Exide proposes to monitor the discharge of contaminated resuspended sediment from the active dredge cell by deploying monitoring instruments approximately one to two hundred feet upstream and downstream thereby proposing an enlarged mixing zone around the already defined mixing zone within the dredge cell perimeter silt curtain. Exide's expanded mixing zone in the open waters of Mill River, i.e., in the intermediate area of water space between the silt curtain and the monitoring instruments hundreds of feet away, will provide no protection to the fish and shellfish species in that portion of the river during their spawning seasons.

1

Exide should deploy instruments to monitor the discharge of contaminated resuspended sediment from the dredge cell silt curtain perimeter at locations along the cell's silt curtain perimeter at the bottom, top and mid-point of water depths, and with instruments and in a manner that relate the parameters monitored in the water column to the parameters of importance identified in the elutriate and toxicity tests related to the species and age classes of the fish and shellfish species expected to be present in the Mill River estuary while Exide is actively dredging during their spawning seasons.

1

Exide should provide an evaluation of its resuspended sediment with respect to its contaminants and biotoxicity to protected spawning species and age classes with the variables noted above, and describe how it proposes to mitigate any adverse effects consistent with the performance standards noted below.

L. Performance Standards

Exide's SedRAP project is not yet defined with respect to the performance standards within which it must operate. At this time, Exide expresses no knowledge of the volume of resuspended sediment that may be discharged from a dredge cell; or of the degree of contamination of its resuspended dredge sediments; or of their bioavailability or potential acute toxicity to eco-receptors; no idea of how the physical, chemical or biotoxic properties of the resuspended sediment silt plume and mud wave will affect non-target organisms; or be relevant to the optical monitoring instruments proposed to be deployed in a mixing-zone from 100 to 200 feet downstream of the dredge cell in order to signal potential failure of mitigation measures designed to protect non-target conditions in the open river.

Performance standards should include:

1

- No discharge of potentially harmful materials outside the perimeter of the dredge cell if these materials could harm the range of age classes or spawning behavior of the fish and shellfish species intended to be protected during their spawning seasons. Consider the interior of the remediation cell (whether defined by dredge silt curtain or cofferdam) as a mixing zone and the cell perimeter as a point source discharge for these resuspended contaminated sediments.

4

- Exide should conduct an inventory of all large naturally-occurring materials encountered in the remedial project, such as submerged stones, boulders, submerged logs and other woody debris, to their source locations, if removed, and restore them in post-dredging mitigation activities.
- Replace all sediment volumes dredged from the river with suitable clean material to restore the pre-disturbance bottom profile and physical habitat conditions.
- Restore with suitable clean materials, all sediment removed during the creation or enlargement of deep holes and anaerobic sumps.

- Monitor recovery of post-disturbance flora and fauna, including within bottom holes and depressions, and provide plans and schedules to actively restore the remediation site if natural recovery does not approximate pre-disturbance or Reference Site conditions after three years following sediment dredging in the remediation areas.
- Provide a revised SedRAP with a post-disturbance mitigation proposal with plans and schedule to accommodate activities and structures needed to achieve river restoration and its floral and faunal communities.

Page 35
5.5.3 Summary Comparison of Hydraulic and Mechanical Dredging.
Exide cites Hayes and Wu (2001) and others [no list of references cited in the report]

Exide should provide a list of cited references which it omitted from the SedRAP document.

Page 36,
5.6 Excavation (in-the-dry) Exide notes that the use of cofferdams and their water-tight enclosures with dewatering to expose the bottom sediments presents the advantage, over the alternative of dredging, of being able to view the river bottom and thereby result in lower residual lead contamination. Exide's list of disadvantages include:

- inconvenient access in the residential areas of some of the river remediation sites;
This note concerning residential areas applies to Areas III, IV and V , but Areas I and II are substantially industrial in land use, located between I-95 and the railroad with the State of Connecticut as the apparent major property owner with access to the river; and in Area II between the railroad and the Post Road where Tidemill and Exide own the river bottom property with Exide's riverbank access from its factory site. These are also the most contaminated Areas with hazardous wastes and with the greatest risk to human and ecological receptors and are the ideal candidates for consideration of remediation within cofferdams.

-uncertain bottom conditions to support cofferdam structures;
Exide should reduce its uncertainty concerning river bottom conditions by investigating the river bottom remediation areas in terms of their ability to support the use of cofferdams.

-disturbance to river sediments from driving and removing sheet piling;
Driving and removing sheet piling may disturb river sediments, but typically to a much lesser degree than the sediment disturbance associated with hydraulic dredging; and any cofferdam's sediment disturbance may be mitigated with a suitable temporary silt curtain until the cell wall is installed or subsequently removed. Further, Exide's potential dredge cell configurations depicted in Drawing Set Sheets 13 and 14 demonstrate the use of common boundary walls between contiguous cells that allow sequential remediation on both sides of the wall prior to removal of the intermediate wall thus lending themselves to minimizing sediment resuspension by serving at least two cells with the one common wall installation disturbance.

-localized diversion of river flow around the cofferdams with possible scour and redistribution of potentially-contaminated sediments.

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This concern warrants investigation by Exide to determine if such possibilities exist in specific areas (e.g., see dredge prisms in Drawing Set sheet #8), but Exide's preferred alternative of anchored silt curtain dredge cells apparently poses the same type of conditions and characteristics from the river and tidal currents as would occur with a cofferdam.

I. Exide's Area I lead-contaminated sediments are primarily located in the quiescent area to the west of the main channel which focuses water currents flowing from the I-95 culverts into the railroad bridge thereby providing an apparent opportunity to isolate the most highly contaminated sediments within a cofferdam cell without significantly affecting scour of other sediments.
II. Exide's Area II lead-contaminated sediments are primarily located in the mill pond area located to the easterly side of the relatively uncontaminated channel that is on the west side of the river which flows directly from the railroad bridge to the Post Road bridge. This configuration appears to allow the construction of a cofferdam wall on the easterly side of the channel between the Post Road and the railroad without significant scour or disturbance to potentially contaminated sediments.

Page 38
6.0 Sediment Processing Options

Page 45
7.0 Material Handling and Disposal
Page 49
7.5 De-Watering Wastewater Handling, Treatment & discharge
Exide notes that its dredge pipe slurry water must be treated and discharged back to the river because its volume will exceed the capacity of the town sanitary sewer system. This discharge of treated dredge slurry waste water into the Mill River constitutes an industrial waste treatment point-source and will require an NPDES permit application under the Clean Water Act (see Commission comments on NPDES application).

As indicated in its NPDES application, Exide proposes to construct its treated filtrate discharge pipeline to Mill River on the Metro – North railroad embankment property without providing any indication from the RR if it is in agreement with this Exide plan in terms of access for construction and maintenance or for potential pipe failure and scouring of the embankment. In its plans, Exide indicates significant design conflicts in the dimensions of its in-river discharge float assembly; it locates the float in the mid-channel throat of the RR bridge where it may be damaged by debris and currents from storm events or it where it may be a source of damage to other properties; where it will interfere with boating access in the river and where it will interfere with the spawning runs of river herring in this confined area.

36

Exide should provide revised plans addressing the discharge float's design dimensions, pipeline construction and access, and float location; confirm RR approval of the use of its property and relocate the discharge float assembly out of the main channel of the river to avoid interference with boating, river and tidal flood events, and fish spawning runs.

See NPDES

It appears that the proposed hydraulic cutterhead dredge cell (where chemically reduced contaminated sediments will be mechanically agitated and diluted with water of different acidity, dissolved oxygen, etc.) will also be a point source of potential industrial waste discharges in the form of contaminated resuspended sediment from the dredge, contained within the mixing zone of the dredge cell, and, if it escapes, will be subsequently discharged from the dredge cell into the receiving waters of Mill River where it may contaminate non-target areas and, through potentially toxic effects on protected species and their life forms, significantly impact these ecological receptors. In light of the experience in Exide's 1983 remediation effort of the mill pond with its extensive discharge of resuspended sediment out of the dredge cell (see photos), the CTDEEP should anticipate extensive secondary contamination of the river.

C1 Exide should investigate all aspects of its contaminated resuspended sediment with respect to the nature and extent of its constituents, its contamination, any acute biotoxicity, its volume, its characteristics in the mixing zone of the dredge cell, discharge beyond the dredge cell perimeter, and its forms and modes of transport, and the distances it may travel to impact downstream receptors.

Page 50
8.0 Controls
8.1 Fugitive Sediment Mitigation
Exide notes that the redistribution of some sediment is unavoidable during the implementation of any dredging project, and asserts that the mitigation objectives are to localize sediment redistribution as much as possible through the use of best management practices, engineered controls and monitoring of turbidity.

C1 Exide should provide a sampling plan and schedule that documents the nature of its resuspended sediment, identifying its degree of contamination; potential bioavailability, any acute toxicity to fish and shellfish spawning species and their age classes, and what risk the resuspended sediment will pose to ecological receptors.

C1 Exide should provide a study plan and schedule to document its proposed resuspended sediment monitoring procedures using optical instruments and visual observations and their relationships to the physical, chemical, and biological properties of the resuspended sediments in order to be able to determine if the proposed mitigation and monitoring systems, distances, depths, or any other variable or sampling results are protective of the environment and ecological receptors.

8.1.2 Turbidity Mitigation
Without committing Exide's contractor to a course of action, Exide's consultant, CCA, recommends that the successful bid contractor use the American Boom & Barrier Corporation's Model PC-2 silt curtain as it performed satisfactorily with the tidal currents in the Thames River. Exide states that the silt curtain will not come in contact with the river bottom (it proposes to deploy the silt curtain six inches off the bottom). Exide does not indicate the nature of the project at the Thames River reference site (e.g., for navigation or remediation?) or how it deployed the curtain with respect to the bottom, or what performance standards were evaluated with respect to satisfactory performance of the silt curtain in terms of mitigating the discharge of resuspended sediment from the dredge cell, e.g., what was the configuration of the silt curtain;

what was the physical nature and volume of the dredged sediment, the contaminated status of the resuspended sediments, what volume or percentage of the total was discharged from the dredge cell as resuspended sediment? These concerns are important to the applicability of the silt curtain product to the Exide remediation site in light of the release of contaminated resuspended sediments in the 1983 mill pond hydraulic cutterhead dredge remediation project where the additional dredge volume, 283 cu. yds., removed from the cell represented 6.9% of the design volume and did not include the suspended sediment in the plume and mud wave that discharged from the cell silt curtain.

Exide should provide a report on the operational details and performance of the recommended silt curtain in the referenced Thames River location for comparison with conditions in, and applicability to, Exide's Mill River remediation project.

In Drawing Set Sheet #13 and #14, Potential Dredge Cell Layout, Exide depicts 16 potential silt curtain layouts in the four remediation Areas, I, II, III, and V, that, while their final layout will be decided by the successful bid contractor, will have an effect on spawning species, especially river herring on their spawning runs. These silt curtain configurations encroach on the width of the river to a considerable extent and they will reduce the width and depth of the control points along the river at the tidemill dam and three bridge locations to approximately one-third to one half of the design width of the openings. This contraction of opening area, width and depth could significantly interfere with, even prevent, fish migration during spawning runs.

With Exide's consultant only "recommending" the use of the PC-2 silt curtain suspended one-half foot off the bottom, and the successful bid contractor who may decide on a different silt curtain and a greater distance off the bottom, we may expect that there will be significant adverse effects on the river herring spawning runs because the cross-sectional areas of the river channel and bridge openings are not uniform and the silt curtain layouts may not physically allow sufficient area or depth for the fish to pass by the silt curtain structures and bottlenecks without adverse effects.

If the 1983 Exide mill pond lead-contaminated sediment remediation experience with its cutterhead hydraulic dredge serves as an example, then we may expect that the spawning herring will also encounter clouds of silt plumes and mud waves of contaminated resuspended sediment being discharged from the active dredge cells into the water column at these bottlenecks. These barriers, whether due to dredging noise, clouds of resuspended sediment, or physical obstruction of the channel, will cumulatively impair or eliminate the river herring spawning run in these affected areas. To mitigate these impacts:

Exide should not conduct any in-water remediation activities that generate resuspended sediments discharging outside of the dredge cell within any protective fish or shellfish spawning seasons; Exide should limit its in-water activities to no more than twelve hours per day; Exide should conduct its in-water dredging activities only during a rising (in-coming) tide.

Exide should define the geometry and substrate conditions of the minimum submerged cross-section of river channel, as determined by an anadromous fisheries biologist, to satisfactorily pass spawning herring without any adverse effects on their behavior and meet that geometrical

and substrate configuration as a performance standard, with daily field inspections, during all in-water remediation efforts and activities.

(1) Instead of suspended off-bottom silt curtains, Exide should examine alternative designs, including "engineered" silt curtain designs, e.g., Gunderboom, and cofferdams, and report on their performance in keeping with the intent of Exide's representatives who researched and described them during the November 10, 2010 CTDEEP meeting in which Exide requested an exemption from dredging prohibitions during protective spawning seasons if it could demonstrate no adverse impacts on the spawning fish and shellfish species.

Page 52
In describing its deployment of silt curtains and the need to protect the curtains during storm events, Exide states that its silt curtains will be retracted, pulled up from the water column and secured to the float line, in advance of storm events. Such action to remove the protective silt curtain from an active dredge cell and allow storm-driven river or tidal currents to flush the disturbed sediment materials out of the cell will facilitate the mobilization of contaminated resuspended sediment throughout non-target areas and protected spawning species.

(1) Exide should provide revised SedRAP plans that document the environmental impacts associated with the raising and removal of suspended off-bottom silt curtains and such actions as will mitigate these adverse impacts of the proposed dredge remediation method.

From its 1983 experience with the cutterhead hydraulic dredge working within the dredge cell defined by the Post Road and railroad embankments and a floating silt curtain along the westerly side of the mill pond, Exide may expect to find during its SedRAP implementation that the dredge-disturbed resuspended sediments will create contaminated silt plumes and mud waves of unconsolidated semi-liquid flocculants and fine-grained organic matter and sediment that will recontaminate areas that have been successfully remediated and contaminate initially clean areas having no exceedances -- both within the active dredge cell and outside of the active dredge cell.

If Exide's earlier hydraulic cutterhead dredging experience is used, the necessary redredging of 283 CY after the targeted 4,100 CY had been remediated in 1983 suggests that there may be a 7% resuspended sediment variable as an overdredge requirement that is not accounted for in Exide's proposed remediation sediment recovery projections; which would be even greater if it included the unknown volumes of silt plumes and mud waves discharged from the silt curtain. This behooves Exide to design its dredge cells as small as needed to remediate the target areas, and construct the dredge perimeter wall as tightly as possible, e.g., with cofferdams whenever feasible.

(1) Exide should provide a revised SedRAP in which it documents the anticipated volumes of contaminated sediment for the base design of 21,440 (27,600) CY, and the resuspended sediment mud-wave volume, and the volume of resuspended sediment in the water column potentially discharged from the dredge cells.

Page 52
8.2 Turbidity Monitoring

Exide proposes to deploy sensors to monitor the optical properties of resuspended sediment in the water column "to ensure that any resuspended sediment is kept to a minimum and limited to the area immediately adjacent to the dredge intake and, in particular, does not migrate outside of the turbidity curtain constructed around the remediation area being dredged".

If this were a conventional navigation project involving maintenance dredging of "clean" sediments, its primary concern would be to minimize resuspended sediment that could stress spawning species in many ways such as by physically interfering with or altering their behavior, or by silt-smothering of adult and juvenile age classes of shellfish. With contaminated materials, in addition to their physical properties, resuspended sediments present a completely different and more complex condition whose potential impacts have far more significance to non-target and protected species (and their age classes and life stages found during the protected spawning seasons) in the affected area.

(1) Exide should provide a description of its dredge slurry and the resuspended sediment plume and mud waves and their constituents and potential contaminants; potential contaminant bioavailability and acute toxicity to protected spawning species and their age classes; and information on how Exide will translate the physical, chemical, and potentially biotoxic properties of the resuspended sediment to the optical properties it proposes to measure in the water column in order to protect non-target areas and animals.

Page 53
8.2.1 Equipment
Exide proposes that a wireless local area network be used to relay optical monitoring instrument signals (nephelometric turbidity units or NTUs) to representatives of the remediation contractor and Exide's representative, CCA and to their cell phones whenever an exceedance is detected whereupon remediation operations will be immediately halted.

(14) To enhance public understanding and provide for public education and information, Exide should provide a publicly accessible website for recording monitoring results on a timely basis and a forum for comment and explanation of its activities and its progress in achieving remediation goals for the river sediments.

(14) In addition to Exide's representatives with cell phones, the in-water suspended sediment monitoring instrument signals should be made available by relay to representatives of any regulatory or approval agency from which Exide holds a permit.

Page 53
8.2.2 Monitoring Locations
Exide proposes to locate its monitoring instruments approximately 100 and 200 feet from the outside of the turbidity curtain without knowing if the 100 – 200 foot intervening discharge mixing zone is adequate to protect non-target areas and species from the adverse effects of the contaminated resuspended sediment.

The CTDEEP and Exide should define any dredge cell mixing zone with respect to contaminated

(1) resuspended sediment to be within the dredge cell perimeter and the "action level" to be any discharge of resuspended sediment beyond the remediation cell perimeter wall or curtain.

Page 54
8.2.2 Monitoring Locations
Exide proposes to use a mid-depth monitoring location for its NTU measurements, and in deep water (greater than ten feet) allow the Engineer to use her or his observations to decide if two depth measurements are warranted – at one-third and at two-thirds of the depth at such location.

(1) These depth locations are not unreasonable, but should be supplemented by Exide with a third sample array by depths and locations at every active dredge cell perimeter so that Exide will monitor the resuspended sediments being discharged at the silt curtain perimeter.

Page 54
8.2.4 Parameters
Exide proposes to use action levels based on background turbidity levels without knowing the relationship between these background levels and the degree of threat posed by the proposed 5 NTUs of contaminated resuspended sediment above background level (for readings between 0 – 20 NTUs) and a 35% increase over background levels above 20 NTUs.

(1) Before proposing specific ranges and thresholds for permissible conditions, Exide should define the properties of the resuspended sediments, their potential adverse effects on protected spawning species, and how these properties relate to the optical and visual properties and the specific ranges and thresholds of background turbidity levels that Exide proposes to use in determining "action levels".

Page 55
Figure 10, Turbidity Monitoring Station Placement
Exide proposes to use in-river turbidity monitoring stations above and below the active dredge cell to determine the net difference for its action-levels when monitoring up-current background, or ambient, levels of turbidity, but Exide does not acknowledge the potentially significant probability of "upward creep" of the background monitoring NTU readings due to river- and tidal currents mobilizing dredged resuspended sediment travelling up- and down-stream outside of the dredge cell to artificially bias the readings of background sediment levels and thereby artificially, and mistakenly, increase the acceptable levels of resuspended sediment before action-levels are noted.

(1) Exide should revise its SedRAP to eliminate the potential bias for upward background turbidity "creep" in its in-water remediation monitoring program.

Page 56
8.2.5 Action Levels, Record Keeping & Reporting
If its NTU action levels are exceeded, Exide proposes to use a linear time-driven sequence of inquiries, inspections and samples to seek to determine the possible cause of such discharge exceedances thereby rendering uncertain its section 8.2.2 Monitoring Locations (page 54) statement that dredging operations will halt if one of two readings exceeds a turbidity limit.

Exide's proposed sequence no longer includes a directive to halt dredging activities as it did in Exide's first edition of the SedRAP of October 2011 (page 55 "Dredging operations will be halted if the background turbidity value is significantly exceeded....").

(1) Exide should reinstate its directive to halt dredging operations if "action level" exceedances are encountered at the outer perimeter of the dredge cell.

(1) Exide should define objective parameters for what constitutes "significance" for evaluating any exceedances of action levels.

Page 57, section 8.3 Confirmation Sampling of River Sediments
Exide proposes post-dredging residual lead-sediment confirmation samples from the remediation areas according to a predetermined grid pattern; with samples collected from the top six inches of dredged river bottom; and directs the reader to shaded areas in the attached drawings for further detail.

(28) To eliminate confusion over the multiple sets of shaded drawings, Exide should state specifically which set of shaded drawings it is referring to in this section, e.g., 5 & 6; 7, 8 & 9; or 13 & 14? (27)

(24) Exide should expand its sampling program to capture the potential layer of contaminated and unconsolidated semi-liquid flocculated materials of resuspended sediments in the interface between the water column and the bottom substrate of dredged and undredged sediment areas within a dredge cell, as well as those nearby bottom areas immediately outside of the active dredge cell. (23)

(24) Exide should expand its sampling program to include all excavated or enlarged bottom sumps or holes due to dredging where potentially contaminated fine-grained material will tend to collect. (23)

(28) Exide should expand its sampling program to monitor multiple SedRAP remediation indicators of project compliance: including post-dredging sediment depths achieved; volume of sediment disturbed by dredge cell and the volume removed by dredging; mass balance of contaminants in the river sediment and those extracted; residual lead-sediment concentrations achieved in the river. (27)

(28) Exide should expand its sampling program to include RCRA metals, especially chromium, and fecal coliform bacteria, as these TMDL constituents may also be found in close association with the lead-contaminated sediments; all three constituents are causes of the impaired waters of the Mill River and Southport Harbor; and may significantly affect the success of the remediation effort. (27)

Chromium is of importance in order to know if this pollutant has been mobilized during lead remediation activities; if the removal of lead-sediment deposits has exposed residual chromium sediment exceedances that were present, but not exposed, earlier; or if lead remediation activities have resulted in contaminating new areas with chromium where there was no chromium detected in pre-dredging sampling efforts. In such cases, the questions may arise as to who "owns" such contaminated material and who is accountable/responsible for its remediation?

The highly organic sediments and shallows of the remediation Areas (I – V) in Mill River are potential sources not only of heavy metals, but also of fecal coliform bacteria. Fairfield's shellfish water quality in Southport Harbor and nearby LIS is determined by the presence of such bacteria, as is the success of Fairfield's commercial and recreational shellfishing programs that depend on relay access to these waters. When Fairfield excavated accumulated sediments from the Pine Creek marsh channels and ditches several years ago for marsh restoration and mosquito control purposes, it apparently mobilized large numbers of bacteria in the ebb tides flowing out to LIS that subsequently resulted in the closure of recreational and commercial shellfish beds off Pine Creek and Kensie Points and Sasco Hill Beach. Exide's dredging activities may mobilize such concentrations of heavy metals and bacteria that shellfish water quality may be compromised and the shellfishing waters closed during Exide's in-water remediation activities.

52 Exide should provide a sampling plan and schedule for monitoring TMDL metals and bacterial contamination of shellfish waters and describe Exide's proposed mitigation actions to counteract or compensate for any impacts. 47

51 Exide's proposed SedRAP should be revised to reflect the recommendations of the state Bureau of Aquaculture with respect to monitoring shellfish water quality. 46

14 Exide should post its post-dredging remediation residual lead-sediment results to a public I & E website in a timely manner for each remediation Area (I-V) as it progresses through the project.

Page 64
9.0 Concurrent Out-of-River Remediation
Exide limits this discussion to the remediation of the upland riverbank area along the easterly side of the mill pond adjacent to the factory property.

4 Exide should add a new SedRAP section to include "Concurrent In-River Remediation" for the restoration of the structural elements of submerged habitat (natural debris such as stones and boulders, sunken logs and woody debris) restored to their locations as mapped during Exide's remediation activities in Areas I-V; as well as replacing clean sediment material where Exide excavates the bottom of the river; especially where Exide has excavated or enlarged deep bottom holes that will become unflushed, azoic anaerobic sumps.

Page 72
10.0 Post-Remediation Monitoring
10.1 Sediment
Exide proposes a single post-project study area-wide sampling effort to confirm the effectiveness of the remediation project using the top six inches of substrate on a pre-established grid system that may not reflect the unique conditions associated with resuspended sediment mud waves and the excavated bottom pits or sumps excavated or enlarged by Exide during its remediation project.

Exide should provide an expanded SedRAP post-remediation sampling program to include the potential layer of contaminated and unconsolidated semi-liquid flocculated materials of

resuspended sediments in the interface between the water and the bottom substrate of dredged and undredged sediment areas, as well as all sumps and holes in the bottom of the river, for RCRA metals, especially lead and chromium.

Exide's monitoring proposal appears to be limited to the one-time post-remediation mapping effort for residual lead in 10.1 Sediment.

Exide should revise its proposed SedRAP to include a new section "10.2 Long-Term Environmental Conditions and Ecological Receptors".

Exide should expand its long-term annual monitoring program with an objective sampling program to quantify flora and fauna in the river until such time as these disturbed riverine communities approximate the river's pre-disturbance baseline condition or that of the Reference Site locations.

Exide should expand its annual monitoring program of blue-clawed crabs to determine when the associated health advisory for lead may be safely removed.

Exide should expand its long-term monitoring program to include the sumps and holes that it excavated or expanded and refill them with clean soil material until they approximate adjacent non-sump areas for restored communities of plant and animal species.

Page 73
11.0 Project Permitting
(see Figure 13 and page 74)
Exide acknowledges the need for state and federal permits, the Corps of Engineers permit having already been approved in September 2012. In its first edition of the SedRap of October 2011 page 71, Exide noted that site conditions may require that Exide revise or modify its existing inland wetland permit or apply for a new permit. In this April 2012 draft, Project Permitting and Exide's Figure 13 Permitting Summary, Exide does not acknowledge any municipal regulations with which it must comply, although it notes that it is relying on the assistance of soil scientists and local permitting experts to evaluate the applicability of any town regulations.

In a project such as this proposed Exide SedRAP where Exide will be conducting activities in the river, where limited tidal action exists placing it under state and federal jurisdiction, and on and above the riverbank in soils and watercourses where federal and municipal IWWC jurisdiction may exist, the only entity in Connecticut that may determine an inland wetland regulated area through its interpretation of relevant information and definitions is the municipal inland wetland agency, i.e., the Fairfield Conservation Commission; which agency also uniquely determines what activities may be considered regulated activities in the context of the IWWC regulations.

When an activity is first proposed in Fairfield, the IW Agency initially relies on its official 100-foot scale IWWC Regulated Areas Maps to acknowledge regulated areas which consist of wetland soils, watercourses, and setbacks or upland review areas, often supplementing that mapped information with site inspections and the potential applicant's and IW Agency's soil scientists' delineations of the area in question. In areas influenced by tidal action, the state has

regulatory jurisdiction within which municipal regulation is excluded, and any municipal IWWC regulated areas will be determined to exist above the state's jurisdiction line which was previously defined as the elevation of property located one foot above local extreme high water, but is now defined by the Connecticut statutes to be a formally specified State Jurisdiction Line which has been recently established by the CTDEEP in each municipality along the Connecticut coast. Exide has not yet depicted the State Jurisdiction Line on any of its drawings, but it will need to do so on all maps so that the IW Agency may determine where its lower IWWC boundary may exist.

On its maps, Exide has apparently not yet depicted all wetland soil areas of the remediation project, nor identified the soil types that it has depicted, nor depicted the soil flagging by their unique numbers typically associated with a soil mapping effort. The Fairfield official IWWC maps depict wetland soils, watercourses and 144-foot setback upland review areas in and around the remediation project and neither set of maps, Exide's or the town's, depict the State Jurisdiction Line.

By essentially leaving the remediation project details up to the successful bidding contractors, Exide has not proposed any specific actions, structures, or locations to enable anyone to determine that a regulated activity is proposed in a regulated area and so may require a permit application. If Exide fails to provide adequate information to allow regulatory agencies to determine compliance requirements for Exide's contractor's remediation activities, Exide may find its project subject to subsequent enforcement action that could lead to a less than satisfactory remediation experience.

10

17

In keeping with the terms and intent of Consent Order #SRD-193 sec.B.2.d. and B.2.f., Exide should provide a revised proposed SedRAP that includes IWWC compliance topographic maps and plans and depict all standard contours within the project area; depict the Connecticut State Jurisdiction Line (SJL) in all views; depict the regulated areas as indicated on the official IWWC maps of the Town of Fairfield; provide a composite map of Exide's official soil map and the surveyed numbered soil flags between the SJL and the 144-ft. buffer upland review area boundary as placed by a soil scientist [the IW Agency's soil scientist retained by the IW Agency to be reimbursed at Exide's expense]; depict the watercourses that exist within the 144-ft. buffer upland review area; depict all temporary and permanent remediation activities and structures in their intended locations that Exide proposes to implement in this remediation project; depict all 10-ft. setbacks around all such activities and structures as required in the regulations of the Office of Long Island Sound Programs [CTDEEP General Permit for Coastal Remedial Activities Required By Order Sec. 3.(b)(2)(F).

16

Exide should then submit to the Inland Wetland Agency a "Request for Declaratory Ruling" with the above information. After reviewing these data and the site, the IW agency may then make a determination as to whether there are any inland wetland regulated activities in regulated areas.

Page 76
Figure 14 Revised Implementation Timeline
Exide's timeline specifies remediation of river sediments in a generally downstream direction, Areas I, II, III, IV, and then upstream to Area V. Remediation activities in rivers typically

proceed downstream in order to capture contaminants that may have been mobilized during the project and avoid recontamination of remediated areas.

Exide should provide a revised SedRAP report explaining its objectives in the reversed sequence for Area V and describe its program with respect to capturing potential contaminated resuspended sediments downstream of active dredge cells.

M. Additional Concerns

1. Increased Sediment Volume.
   Although not addressed in its SedRAP, Exide proposes, in its regulatory permit applications, a significant increase in sediment volume to be dredged from the Mill River, i.e., from 21,440 CY to 27,600 CY. This thirty percent increase in volume is expected to affect every aspect of the proposed remediation project.

   Exide should provide a revised SedRAP describing the reason(s) and justification for this significant increase in volume and integrate it with all related elements of the remediation project including, but not limited to, project depths, access points, dredge cell layouts, work schedules, multi-year timelines, sediment treatment programs, base-line surveys of flora and fauna if new remediation areas are affected, replacement volumes of clean fill material for increased depths, and related project activities.

2. Dredge Pump Capacity and the Potential to Dewater and Isolate the River Remediation Areas
   Exide's hydraulic cutterhead dredge apparently has a production capacity of 1,500 gallons per minute (GPM) for a 12-hr./day operation (SedRAP Appendix VI) with a treated sediment filtrate water discharge return flow to Area II in the river of 330 GPM. In its review of the Exide NPDES application the CTDEEP notes that Exide's return discharge (based on a potential maximum flow of 475,000 gallons per day) will approximate forty percent of the 7Q10 baseflow of the Mill River which suggests that the dredge pump could represent a flow in excess of 1.8 times the baseflow of the river during low-flow periods. Under such conditions Exide could significantly lower the river water level during its dredging activities – especially if the tidemill dam water leakage increases. Exide's representatives expressed their concern for this possibility at the January 10, 2013 public meeting with the clear implication that such a low-flow condition could prevent the sediment remediation project from going forward as planned.

   A plotted channel bottom profile of the remediation areas describes a series of deeper remediation basins (Areas I, II, III, and V) separated by shallow sections of channel beneath the Post Rd., RR, and I-95 bridges. The Exide SedRAP Drawing Set sheets 1 & 2 Inventory of Physical Features, and sheets 3 & 4 Mill River Water Column Thickness, are unclear, conflicting, and missing depth data within and around these bridge crossings and so make it impossible to clearly determine their invert elevations and the degree of connectivity of baseflow water between adjacent basins under the 7Q10 low flow conditions. This is important because if the river water level drops below the shallow bridge channel inverts, the dredge could quickly entrain all flora and fauna in the water column and dewater the active dredge basin between bridges, thereby cutting off the spawning fish run and preventing dredge operation due to a lack of water – especially if the dredge is working in an Area other

than Area II with its partial resupply of treatment water discharge.

In addition to the low flow conditions from the watershed (the Mill River watershed is a water supply watershed with three Aquarion Company diversions to two reservoirs plus wells and public and private impoundments downstream), the remediation river water is further reduced by the tidemill dam's ever-increasing leaking spillways and gate valves, the headrace flow, and evaporation. All of these water losses could result in significant interruption of the remediation effort and its project goals if Exide's dredge operation cannot obtain adequate make-up water without destroying the natural connectivity of river flow. Exide could then be placed in a position of having to periodically wait for rain, groundwater discharge, and tidal replenishment before restarting the dredge operation.

Exide should integrate the following in a revised SedRAP:

1. Provide a revised drawing set that clearly depicts a channel profile of the underwater contours, invert elevations, and water column thicknesses for all basins and at bridge/culvert crossings within the project area under 7Q10 low flow conditions.
2. With the assistance of a fisheries biologist, define the minimum water flow requirements and channel widths, depths and substrates needed for maintaining a channel condition satisfactory for fish passage during the sediment remediation project; and incorporate this information, with daily field inspections and monitoring, as a project performance standard for the sediment remediation work.
3. Provide a program that addresses a water budget and includes daily monitoring of river and dredge water flows and elevations with "action levels" to halt dredging if the fish-passage performance standard is not met with respect to water and invert elevations for basin Areas I, II, III, and V.
4. Provide an engineer's evaluation of the structural integrity of the tidemill dam; the nature and rate of river water discharge into the harbor from below the spillway lip, i.e., through leaks in the dam structure and headrace; recommended actions to take for limiting or reducing such discharge; recommended actions that Exide should take for protecting the tidemill dam structures during the remediation period; and a plan and schedule for monitoring of the leakage and the dam's structural integrity until the CTDEEP discharges Exide from further obligations under its Consent Order.

III. SedRAP APPENDICES

- Appendix I
  Executive Summary of the Sediment Sample Collection and QAPP Report, June 2009
- Appendix II
  The Exponent, Inc. "Sediment Toxicity Study: Mill River, Fairfield, Connecticut", June 2009. While limited toxicity issues were addressed in the study report with respect to the treated dredge dewatering filtrate, there is no discussion concerning potential contamination of the dredge slurry or resuspended sediment discharged from the dredge cell into the unprotected river.
  Exide should provide a revised SedRAP report based on test results on the dredge elutriate and resuspended sediments and their physical, chemical, and biological properties and their potential contaminants and bio-availability and toxicity to the flora and fauna in the river

with particular emphasis on the fish and shellfish species and age classes in the river during their spawning seasons.

- Appendix III
  Request for Natural Diversity Data Base (NDDB) State Listed Species Review in which Exide describes its proposed dredge project of ± 27,600 cu. yds.
  Exide provides a copy of the CTDEEP August 18, 2011 response letter for a finding of no impact which was included in its October 2011 edition of the SedRAP.
  Exide should update the NDDB review and reflect the fact of NOAA's review of the river herring species for potential inclusion under the Endangered Species Act.
- Appendix IV
  CCA, LLC Health and Safety Plan
- Appendix V
  Federal Wetlands Delineation Report by Environmental Planning Services March 2009.
  Exide conducted federal wetland delineation transects for remediation Areas II, III, IV, and V, but did not do so for Area I; nor did it complete the soils mapping and delineation for Area I.
  Exide should explain this omission, revisit the site, and provide these data for an accurate and complete delineation.
- Appendix VI
  Dewatering Trial Performance December 2009
  Exide provides useful information on its dewatering treatment alternatives and their total suspended solids and residual filtrate lead concentrations for all chemical conditioners in the sample trials. Exide does not indicate if its consultants conducted any analyses of the raw (untreated) sample sediment as a composite from sample containers after homogenizing and blending to approximate dredging resuspension of sediment and what that resuspended material contained in terms of lead concentrations or its potential toxicity to eco-receptors.
  Exide should provide the lab bench or field trial data on resuspended sediment and an explanation describing the effects of the dredged resuspended sediments on eco-receptors with appropriate plans to mitigate any adverse effects.

IV. SEDRAP DRAWING SET

(N.B. All drawings should be revised as needed to reflect the thirty percent increase in sediment volumes to be removed in the remediation project.)

Dwg. #1 & 2: Inventory of Physical Features

The Figure 2 color aerial photograph, Mill River Sediment Study Area (11 X 17), depicts two more pipe outfalls than are indicated on Dwg. # 2 in the area northwest of I-95 north of the siphon sewer and south of Outfall #26.

Exide should explain this discrepancy as it may be relevant to its remediation activities.

See page 36 of this report section M. Additional Concerns, #2 for revising drawings to reflect bottom contours and water depths.

Dwg. #3 & 4: Mill River Water Column Thickness (Depicts the depth of the river in the remediation Areas)

See page 36 of this report section M. Additional Concerns, #2 for revising drawings to reflect bottom contours and water depths.

Dwg. #5 & 6: Final Intended Dredging Depths (in feet below river bottom) based on the clean-up criteria of 220 and 400 mg/kg of residual lead in sediment.
Exide depicts the areas where new anaerobic sumps or holes in the river bottom will be created or enlarged by the remediation activities.
Exide should provide related drawings depicting the restoration of the river bottom profile wherever it is altered by the remediation activities.

Dwg. #7, 8 &9: Dredge Prisms illustrating lead concentration at depth.
Dwg. #8 – Explain why there are no dredge prisms and no pre- or post-dredging sampling data for the large bottom area (approx. 80' X 150') in the I-95-culvert river crossing. Exide should provide pre-disturbance sampling data for this area as well as include it in its post-dredging confirmation sampling activities.

Dwg. #9 – Exide should explain why Area V sample location F-17 with a third level lead concentration of 440 mg/kg (in excess of the residual target of 400 mg/kg) has no dredge prism associated with its remediation.

Dwg. #10: Dredging Depth Cross Sections
In addition to the representative sample locations depicting existing and proposed grades with material to be removed, Exide should provide revised drawings depicting the bottom profile and cross-section views of all excavated or enlarged anaerobic sumps or holes in the river bottom as well as the suitable clean material required to restore the river bottom to predisturbance conditions wherever altered by Exide.

Dwg. #11 & 12: Edge of Mill River Survey Showing Federal Wetlands
Exide should revisit Area I and provide the missing transect and soils data for the Area. Exide should revise the drawings for local, state and federal regulatory agencies and depict the topographic contours for the project area and uplands at a uniform contour interval and in their entirety within the project areas; the State Jurisdiction Line; the IWWC regulated areas as depicted on the official IWWC maps of Fairfield; the IWWC soils as mapped by Exide's and the Wetland Agency's soil scientists; the CTDEEP GP Required by Order Section 3(b)(2)(F) 10-ft. setbacks; upland property lines and in-water property lines where located above the head-of-navigation; and all regulated activities within any regulated area.

Dwg. #13 & 14: Potential Dredge Cell Layout Non-Restrictive of Anadromous Fish Runs
As a performance standard to be applied to the in-water activities and structures of this remediation project, Exide should consult with anadromous fisheries experts and define the parameters, such as channel width and water depth, as needed to satisfactorily allow fish passage to pass artificial structures (silt curtains, bridges, etc.) without adversely affecting their behavior and ensure that it is provided.

With respect to the tidemill dam and its spillways being available for fish migration during the remediation project and deployment of silt curtains that may obstruct their passage, it should be noted that the river herring congregate and pass the dam over the easterly spillway far more frequently than over the westerly spillway. This is apparently due to the fact that the easterly

spillway is lower in elevation, of much greater depth in the attraction water plunge pool below the spillway, with a lower gradient flow-line below the spillway, and with three tidegates that open into the mill pond with the in-coming tide; all of which appear to provide more desirable conditions for passage for the river herring on the easterly rather than the westerly spillway. This important information is not reflected in Exide's plans and that could result in the obstruction of the herring run through improper location and deployment of the dredge cells during the spawning migrations.

(2) Exide should revise the SedRAP and provide a program and schedule for documenting the passage of river herring during their spawning runs as they pass the two spillways at the tidemill dam; a revised layout of dredge cells or cofferdam in Area III, and a monitoring plan to be used during the remediation project to ensure that the project does not interfere with the spawning runs of the river herring.

V. ADDENDUM: Comments concerning the Exide Mill R. SedRAP OLISP General Permit Registration

A. GENERAL COMMENTS
(See general comments noted above in SedRAP review)

B. SPECIFIC COMMENTS
Exide Group, Inc. OLISP General Permit Registration Form

Part I: Registration Type and Fee Information:
Please identify any previous or existing permit/certificate/registration or order numbers associated with the site where the activity is proposed.
Exide responds by stating: "SRD-193; Fairfield; Hydraulic dredging, dewatering, & disposal of lead-impacted river sediment
[Exide's response implies that the hydraulic dredging activity is required by CTDEEP Consent Order #SRD-193, when in fact, Exide is proposing hydraulic dredging as its choice from several alternative methods of extracting lead-contaminated sediment from the Mill River. This dredging method is predicated on Exide's mistaken belief that it can implement such measures as are needed to effectively isolate the hydraulic dredging activity and its contaminated resuspended sediment discharges from the open waters of the Mill River. Such isolation of the sediment extraction method and discharge of contaminated resuspended sediment from the open river could be achieved by first containing the active dredge cell within a watertight perimeter cofferdam, but, instead, Exide has proposed use of a suspended off-bottom silt curtain similar to Exide's 1983 hydraulic cutterhead dredging and silt curtain activities that resulted in gross contamination of the unprotected river due to the discharge of lead-contaminated resuspended sediment from the dredge cell silt curtain into the unprotected river.

Exide has demonstrated the effectiveness of lead remediation with watertight cofferdams in confining contaminated soils and sediment in its use of steel sheet-piling along the east bank of the Mill River where Exide is currently remediating the contaminated soils of the former factory septic system leaching field. After isolation of the soils/sediments within its cofferdam, Exide

uses a back-hoe to extract the contaminated materials. Exide could as easily use a hydraulic dredge, clam-shell, drag-line, back-hoe or other excavator to remove contaminated sediments from a confined in-river cell without discharging lead-contaminated resuspended sediment to the unprotected waters of Mill River; especially, when these sediments are so highly contaminated as in Areas I, II, and III, and during the spawning season of fish and shellfish whose varied age classes will be exposed to the adverse impacts of the discharge. The issue at hand is not whether Exide should use hydraulic dredging or any other method of extracting contaminated sediment from the Mill River, but only that whatever method that Exide elects to use, Exide shall first demonstrably secure and isolate the active excavation cell and any subsequent discharge of contaminated resuspended sediment from the open waters of the river.]

(13)
(1)

Exide should provide a revised SedRAP with a proposal that will demonstrably protect eco-receptors by securing and isolating the active in-river excavation cell, and any subsequent discharge of contaminated resuspended sediment, from the open waters of the river. Exide should also protect the river flora and fauna by testing the dredge elutriate and resuspended sediment for their chemical, physical, and biological properties, constituents, contaminants, and bio-assay for acute toxicity against the species and their age classes of the fish and shellfish species present during their spawning seasons and demonstrate no adverse effects on them.]

A note about hydraulic cutterhead dredging within silt curtains as proposed by Exide and why the method is not a viable alternative for blanket application in the waters of Mill River. A review of the literature (Collins 1995) shows that "Perfectly designed and operated cutters [hydraulic cutterhead dredges] will introduce a sediment slurry that will be completely entrained by the flow to the dredge pump. However, spatially varying sediment properties and cutter operations inevitably lead to a sediment slurry that the pump cannot handle, resulting in sediment resuspension or release."

How much sediment resuspension or release? In its April 2013 SedRAP (p. 35), Exide suggests that it could be as little as 0.013% or less than three cubic yards of material from the proposed 21,440 cubic yard (CY) SedRAP remediation project. In its literature review, Anchor (2003) cites studies of resuspended sediment from hydraulic dredges varying from less than one percent to over eight percent of the project material (dry weight) which could mean over 1,715 CY of contaminated material resuspended into the supposedly-isolated dredge cell water column from this 21,440 CY project. This is not unreasonable when we consider that in 1983, Exide remediated the mill pond by dredging over 4,100 CY of lead-contaminated sediment and then had to recover approximately 283 cubic yards of additional material (6.9% of project) that included mud wave and resuspended sediment within the silt curtain. The additional resuspended sediment in the water column and the bottom mud wave that were discharged from the silt curtain dredge cell into the Mill River were unaccounted for.

What happens to the resuspended sediment within the dredge cell silt curtain? Francingues and Palermo (2005) report useful information that is worth repeating here: "What Processes Affect Silt Curtains? In many cases where silt curtains are used, the concentration of fine-grained suspended solids inside the curtain enclosure may be relatively high (i.e., in excess of 1 g/L). The suspended material may be composed of relatively large, rapidly settling

particles or flocs. In the case of a typical pipeline disposal operation surrounded by a silt curtain where suspended solid concentrations are high and material usually flocculated, the vast majority (95 percent) of the fine-grained material descends rapidly to the bottom where it forms a fluid mud layer that slopes away from the source at an approximate gradient of 1:200. The other 5 percent of the material remains suspended in the water column above the fluid mud layer and is responsible for the turbid appearance of the water inside the curtain. While the curtain provides an enclosure where some of the fine-grained material may flocculate and/or settle, most of this fine-grained suspended material in the water column escapes with the flow of water and fluid mud under the curtain. The silt curtain does not indefinitely contain turbid water but instead controls the dispersion of turbid water by diverting the flow under the curtain, thereby minimizing the turbidity in the water column outside the silt curtain. Whereas properly deployed and maintained silt curtains can effectively control the distribution of turbid water, they are not designed to contain or control fluid mud. In fact, when the accumulation of fluid mud reaches the depth of the ballast chain along the lower edge of the skirt, the curtain must be moved away from the discharge; otherwise sediment accumulation on the lower edge of the skirt can pull the curtain underwater and eventually bury it. Consequently, the rate of fluid mud accumulation relative to changes in water depth due to tides must be considered during a silt curtain operation". This report suggests that Exide's proposed remediation project may discharge over 85 cubic yards of lead-contaminated resuspended sediment into the water column as well as a potentially much greater, but unknown volume of contaminated fluid mud in bottom waves to the open waters of the Mill River. If Exide's new sediment estimate of 27,600 CY is correct, the amount of contaminated resuspended sediment could be well into the hundreds, if not thousands, of cubic yards.

Exide has not provided any test data on the matter of resuspended sediment volumes resulting from its proposed dredging activities.

In keeping with the Francingues and Palermo recommendation, Exide does not propose to secure the bottom of the supposedly-isolated dredge cell silt curtain, but instead to suspend the curtain approximately six inches off the bottom and to lift the curtain up to avoid damage during storm events. According to the Francingues and Palermo findings, we may expect that Exide's management of the dredge cell silt curtain when deployed as designed will initially discharge the bottom mud waves to spread approximately one hundred feet beneath and beyond the silt curtain and then be redistributed by river and tidal currents into uncontaminated or previously-remediated areas, as well as into the water column where it will impact the life forms and varied age classes of normally-protected fish (river herring are designated as species of state conservation concern) and shellfish species during their spawning seasons. When Exide lifts the silt curtain to protect it from damage due to storm events or operational needs, the contaminated resuspended sediment will be distributed throughout the unprotected waters of the Mill River in what will essentially be an unconfined dredging operation – inconsistent with the Clean Water Act and contrary to the CTDEEP's consent order.

Literature Cited

4. Collins, M.A. 1995. Dredging Induced Near-field Resuspended Sediment Concentrations and Source Strengths. Dredging Operations Technical Support Program misc. paper D-95-2, Prepared for US Army Corps of Engineers, US Army Engineer Waterways Experiment Station, Vicksburg, [page 10.]
5. Anchor Environmental C.A. L.P. 2003, Literature review of effects of suspended sediment due to dredging operations. Prepared for Los Angeles Contaminated Sediments Task Force Los Angeles, California.. One Park Plaza, Suite 600 Irvine, California 92614. June 2003. 140pp.

Francingues, N. R., and Palermo, M. R. (2005). Silt curtains as a dredging project management practice, DOER Technical Notes Collection (ERDC TN-DOER-E21). U.S. Army Engineer Research and Development Center, Vicksburg, MS. 18p.

Continuing, Exide's lead recovery activity will entail the isolation of successive dredge "cells" by sequentially deploying a suspended perimeter panel or silt curtain around the active in-river dredging area or "cell"; then, within the supposedly-isolated dredge cell, mechanically agitating and resuspending the contaminated river sediments into the water column with a hydraulic cutterhead dredge while the dredge pump sucks up the resuspended sediment and water at about 1,500 gallons per minute and pumps most of the sediment and water as a dredge slurry to a dewatering facility. It is during this period of dynamic mechanical agitation and cutterhead motion where the contaminated resuspended sediment is not completely captured by the dredge pump, but is allowed to be distributed within the "mixing zone" of the dredge cell which is defined by the perimeter silt curtain.

Exide claims in its NPDES Attachment G: Coastal Consistency Review Form (p. 2 of 5, Part III: consistency with applicable coastal use and activity goals and policies), that "Floating turbidity curtains will be in place forming dredge "cells", within which any released suspended sediments would be contained, and outside which fish migration would be allowed at all times during the project." Exide continues in stating that turbidity instruments will be in place to notify its Operators if turbidity levels are exceeded due to a discharge of resuspended sediment from the dredge cell. Exide's statements create the impression that the resuspended sediment will be "contained" securely within the dredge cell to protect spawning species and that Exide will cause the dredging to stop if a discharge of resuspended sediment occurs, but Exide doesn't say that. Exide states in its SedRAP that resuspended sediment will in all likelihood occur and it is expected to be discharged from the dredge cell – that's the reason why Exide proposes to deploy monitoring instruments and notify the Operator of a discharge problem.

(1) It is when the dredge cell perimeter silt curtain is compromised by river, wind or tidal currents, or by slippage of the bottom substrate, or silt curtain and equipment failure (and in Exide's application by having the silt curtain intentionally suspended off the river bottom approximately six inches and periodically removed to prevent silt curtain damage during storm and work events) that the contaminated resuspended sediment will be discharged as a point source from the dredge cell silt curtain wall into the open waters of Mill River.

At the dewatering facility where it will receive the dredge slurry at approximately 1,500 gallons per minute, the sediment-water slurry will be dewatered either mechanically or by gravity in geo-textile bags for production of a contaminated sediment cake product that will be shipped for disposal or reuse off the site. Following dewatering, the filtrate water will be treated and discharged back to the Mill River at up to approximately 330 gallons per minute.]

Exide:
-Exide should provide a water budget and detailed explanation in a revised SedRAP for the apparent discrepancy between river dredge production slurry input rates and volumes at 1,500 gallons per minute (SedRAP Appendix VI) and treated filtrate water output discharged to the river at 330 gallons per minute (NPDES application file) and how they will be reconciled during the project.

See NPDES

Exide proposes to monitor the discharge of contaminated resuspended sediment from the active dredge cell by deploying instruments approximately one to two hundred feet upstream and downstream from the mixing zone of the dredge cell perimeter silt curtain, which will provide no protection to the open waters of Mill River and the anadromous fish and shellfish species in the river during their spawning seasons.

Exide should deploy instruments to monitor the discharge of contaminated resuspended sediment from the dredge cell silt curtain perimeter at locations along the cell perimeter at the bottom, top and mid-point of water depths, and with instruments and in a manner that relate the parameters monitored in the water column to the parameters of importance identified in the elutriate and toxicity tests related to the species and age classes of the fish and shellfish species expected to be present in the Mill River estuary while Exide is actively dredging during their spawning seasons.

Part II: Registrant Information

Part III: Site and Resource Information

1. Site Name and Location:
The former Exide Battery Facility of 6.25 acres at 2190 Post Rd. and adjacent +/- 4000 ft. stretch of Mill River
Assessor's Map 231 Lot 381
[Incomplete; Exide provided two tax assessor's maps for the Area I-V project, but only identified one map and one property owner, itself, for the 4,000-foot, 36 acre project involving nearly sixty property owners.]
[This is an important section as Exide acknowledges that the project extends beyond the property boundaries of the Exide property beneath the waters of Mill River above the "Head of Navigation" as indicated on the copies of the Assessor's Maps submitted by Exide. Exide has not provided any indication of ownership or consent of the 50-60 public and private properties upon which it proposes to conduct its operations.]

Exide:
-Provide the tax assessor's maps and lot numbers for all properties lying in or adjacent to the project.

- Provide a mapped description of, and identify and delineate, the public and private property owners and their property boundaries within, adjacent to, above, and below the water surface of the Mill River in the project area.

Attachment II: Part III-9 (from OLISP application page 5 of 8) Identify all aquatic (coastal) resources on and adjacent to the site and describe the characteristics and condition of each resource.
[Exide fails to identify the existence of all coastal resources, including inland wetlands and watercourses, located within and adjacent to the project area. Exide prefaces its response by stating "The following submitted by Exponent, 2011." with no indication of the background or expertise of Exponent and the basis for its information on coastal resources; and then proceeds to list ten resource categories with generalized descriptions of their location and function, but with no acknowledgement of the presence of inland wetlands or watercourses regulated areas in the project area -- despite the fact that Exide has mapped such IWWC and presently holds an IWWC permit for regulated activities in regulated areas along the Mill River, with approved permit time extensions, from the Fairfield Conservation Commission as Inland Wetlands Agency.]

Exide:
-Provide a revised SedRAP response with a list and description of coastal resources which addresses the presence of inland wetlands and watercourses within, and adjacent to, the project area.

Part IV: Project Information

1. Describe proposed work:
Exide proposes to dredge 27,600 cubic yards of lead-impacted sediment by hydraulic dredging, pumped in a pipeline to the former factory site and dewatered via permeable textile bags; filtrate to be treated and returned to the river with the dewatered sediment cake to be disposed off-site.

[This response is important because this OLISP permit application is predicated on a required work product of Consent Order #SRD-193, i.e., the Proposed Mill River SedRAP, which specifies a volume of only 21,440 CY of sediment indicating that the scope of project expanded by 30 % without any explanation in the first two versions of the proposed SedRAP, Oct. 2011 and April 2012. This reversed procedural linkage of the SedRAP and derivative permit applications suggests that the applications are driving the proposed SedRAP – in direct opposition to the required sequence in the Consent Order. Where is the third version of the Mill River SedRAP that addresses the thirty percent increase in sediment volume from 21,440 to 27,600 cubic yards?]

Exide:
-Provide a revised Proposed Mill River SedRAP that fully explains how and why the scope of project expanded by 30% and describe how this increase in dredge volume of sediment affects all other relevant project aspects, such as phasing, operating conditions and durations, sub-systems, schedules, seasons, structures, areas, depths, and local, state,

and federal permit implications for the project.

2. Identify and evaluate any adverse environmental impacts associated with the proposed work and mitigation measures to be employed.
[Exide states that the project will disturb the benthic community of the river, stating that it is unavoidable. That turbidity curtains will be used to reduce the possibility of resuspended sediment, and the latest dredging technology will be utilized to produce the least amount of turbidity. Return water will be treated according to NPDES requirements.]

[Exide's explanation is non-responsive in that it fails to identify several obvious adverse environmental impacts and neglects to address any mitigation thereof:
-- Loss of state tidal wetlands and impacts on intertidal mudflats;
-- In addition to the temporary dredge-disturbance impacts to the general river bottom it does not identify the specific and discrete dredge excavation, by creation of new or expansion of existing, anaerobic sumps or holes in the bottom of the Mill River thereby increasing the significant long-term loss of benthic plant and animal habitat to conditions of organic black mayonnaise and hydrogen sulfide in anaerobic, azoic pits;
--it does not acknowledge the adverse impacts of contaminated resuspended sediments discharged from the active dredge-cell silt curtain on the life forms and age classes of fish and shellfish during their spawning seasons.]
Exide to document:
- the nature and extent of environmental impacts on, and provide progressive mitigation alternatives, i.e., avoid impacts, minimize impacts, and compensate for unavoidable impacts) for the following:
- state tidal wetlands and intertidal mud flats above and below the tidemill dam ;
- benthic substrates and environmental conditions of the bottom sediments and surrounding water column (physical, chemical and biological) within the dredged areas and created or enlarged subaqueous holes of the Mill River and Southport Harbor affected by the project.
- life forms of indigenous fish and shellfish as they may be affected by the adverse impacts of contaminated resuspended sediments discharged from the active dredge-cell silt curtain during their spawning seasons. Provide species and age class-specific toxicity studies if Exide proposes to conduct dredging activities within normally protective spawning periods.

Part V: Supporting Documents
Attachment A: plans, topographic map, tax assessor's map (OK)
Attachment B: NDDB State Listed Species Review
[Incomplete. Needs further description to include the river herring known as Alewife as well as the Blueback Herring, their current protected status under state and federal agencies, and their typical protected spawning periods.]
Exide should provide documentation of the river herring species in Mill River, their current conservation status with respect to state and federal agencies, and their respective annual

spawning periods.

[Conflict with other permit applications and Proposed Mill River SedRAP: Exide states in Attachment B: CT NDDB Information for Section IV.3. "The dredging of +/- 27,600 cu. yds. of lead-contaminated sediment. Hydraulic dredging methodology will be used, with sediments transported via pipeline to the site and dewatered via either mechanical dewatering or permeable textile bags."]

Exide should:

(3) -Provide a copy of the revised Proposed Mill River SedRAP wherein is explained the thirty percent increase in dredged sediment volume and all consequent changes to any and all project elements.

(13) -Clarify and explain the specific dewatering methodology ("via either mechanical dewatering or permeable textile bags") and revise the proposed SedRAP as necessary to reflect this method and any consequential revisions to related project elements.

Attachment D: Any additional information ...., including,

-if the Registrant is not the property owner, documentation from the property owner acknowledging the proposed activity.

[This item is omitted by Exide for all of the 50-60 properties in and along the Mill River above the Head of Navigation except for Exide's in-river property south of the railroad and north of the Post Road. See Tax Assessor's Maps submitted by Exide.

(9) -Exide should identify all property owners (upland and in-water above the head of navigation at tidemill dam) in and adjacent to the project. Provide documentation from all affected property owners acknowledging the proposed remediation activities on their properties.

A remediation or restoration plan if one has been prepared pursuant to the order.

[Exide submits a copy of its Proposed Mill River SedRAP.]

Request for Natural Diversity Data Base Review

Attachment C: Supplemental Information, Group 2 requirement.

Section i: Supplemental Site Information

1. Existing Conditions

Describe all natural and man-made features including wetlands, watercourses, fish and wildlife habitat, floodplains and any existing structures potentially affected by the subject activity. Such features should be depicted and labeled on the site plan that must be submitted.

Exide states to see attachment C-1 [The consultant's, Woodlot Alternatives, June 2001 qualitative description of the project area.]

2. Biological Surveys for species of conservation concern

Exide states no special survey conducted.

Section ii: Supplemental Project Information

1. Provide a schedule of all phases of the project....

Exide states its proposed project calendar.

2. Describe and quantify the proposed changes to existing conditions and describe any on-site or off-site impacts. In addition, provide an annotated site plan detailing the areas of impact and proposed changes to existing conditions.
Exide states the number of cubic yards proposed to be dredged in each Area I -- V.

(Comments on Sections i and ii:
[Exide retained a consultant, Woodlot Alternatives, to conduct a field survey in June 2001 and it is unknown as to how the 2001 survey was conducted, whether it had any quantitative components, and whether the consultant had available the hydrography of the project area, the residual lead targets and depths and how the study and these variables were integrated with the SedRAP. Since the Woodlot Alternatives study is reported to have occurred seven years prior to the Consent Order and ten years prior to the SedRAP it is unclear whether the Woodlot consultants had the remediation plan for the residual lead targets, the proposed dredge cells, depths and affected areas of dredging so that it could know how extensive the project would be and objectively evaluate its impacts. The consultant offers no opinions as to the merits of the project with respect to mitigation alternatives, or to when the affected area may be restored to a natural condition, or how the observer will be able to objectively determine when a future restored condition will have been achieved in all respects or whether additional mitigation is needed.

Exide's response is significantly deficient and incomplete as the plans only address upland/wetland and aquatic surficial conditions without discussion of existing conditions related to wildlife and fisheries habitat; and the tide mill dam and its condition that determines all plant and animal relationships within the Mill River estuary above the dam; benthic plants and animals with respect to water depth; presence of anaerobic, azoic subaqueous holes or anaerobic sumps and their relationship to the productivity of the estuarine system of Mill River.]

Exide should:
-Expand and quantify the description of existing resource conditions initially addressed by Woodlot Alternatives including the tide mill dam and its relationship to the Mill River estuary within the project area; the water depths and their relationship to estuarine plants and animal habitats; the existing and proposed location, dimensions and configuration of the anaerobic depressions in the river bottom and their affect on estuarine productivity; and a plan and schedule for monitoring and implementing recovery of the post-remediation plant and animal estuarine communities with a compensatory mitigation plan if these elements of the estuary are not restored within three years of post-dredging remediation.

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Fusaro, Carolyn

From:	dancingUSA [dancingusa@optonline.net]
Sent:	Thursday, February 28, 2013 8:54 AM
To:	Fusaro, Carolyn; Gonyea, Donald
Cc:	John.McKinney@cga.ct.gov; Brenda.Kupchick@cga.ct.gov; Kim.Fawcett@cga.ct.gov; thwang@optonline.net; Mike Tetreau; kkiley@town.fairfield.ct.us; cmccarthyvahey@town.fairfield.ct.us; tsteinke@town.fairfield.ct.us; Kathryn Braun
Subject:	Mill River Exide Cleanup/Public Comment 2/28

Thursday, February 28, 2013

To:
Carolyn Fusaro and Donald Gonyea
Connecticut DEEP
Attn: Public Comment on Mill River Exide Cleanup, Fairfield, CT

From:
Ellen Jacob, RTM D-9
637 Cedar Rd
Southport, CT 06890
203-259-3747; email: dancingusa@optonline.net

Re: Mill River Exide Cleanup/Public Comment 2/28

Proper Mill River cleanup on the Exide site in Fairfield directly affects my constituents, as well as our town's future appeal and planned development.

(87) **I urge DEEP to comply with its own Consent Decree signed on 10/20/2008, and recorded in the Town of Fairfield's land records, requiring Exide to file for necessary permits only after the SEDRAP was officially approved by DEEP. Cutting short this process now undermines your own authority, does a great disservice to the quantities of time and taxpayer dollars already invested, rushes proper protocols already in place and reduces public input.** (35)

Thank you,

Ellen Jacob, Fairfield RTM D-9

Fusaro, Carolyn

From: Pamela Ritter [ritterpw10@gmail.com]
Sent: Thursday, February 28, 2013 10:16 AM
To: Fusaro, Carolyn; Gonyea, Donald
Subject: Exide cleanup, Fairfield

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Please follow the procedure required in previous cleanup order: do NOT give final DEEP permits until SEDRAP-permit work has been finished. We need to do this RIGHT and include Superior Plating cleanup while Mill River is disrupted. After decades already, don't rush the cleanup!

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I attended the DEEP public meeting here and was both disappointed and disgusted by the time scheduling that left hardly any public-comment time. Who determines this kind of arrangement? DEEP officials seem so qualified and conscientious that I would not have expected such a Shut-the-Public-Out setup. DEEP explanation was far too long, and Exide had every reason to drag theirs out to shorten public-comment time. They should not have been permitted so much time for their cleanup explanation. Surely we shouldn't have to stay at extended meetings running until 11 PM (and you need to get home upstate and be able to have a decent night's sleep). How can you improve your process? - Pam Ritter, Fairfield

Fusaro, Carolyn

From:	Charlene Brauns-Schindler [cbsfive@yahoo.com]
Sent:	Thursday, February 28, 2013 3:36 PM
To:	Fusaro, Carolyn; Gonyea, Donald
Cc:	john.mckinney@cga.gov; Brenda.kupchick@cga.ct.gov; kim.fawcett@ct.gov; thwang@optonline.net; FirstSelectmanFfld@town.fairfield.ct.us; Kkiley@town.fairfield.ct.us; cmcarthyvahey@town.ct.us; tstelnke@town.fairfield.ct.us
Subject:	Proposed Exide SedRAP for Mill River and Southport Harbor, Fairfield, CT
Attachments:	Exide letter 2.28.13-1.doc

To: Carolyn Fusaro and Donald Gonyea

From: Mill River Wetland Committee, Inc.

Attached is our letter pertaining to the Exide remediation proposal. Thank you for taking the time to read our concerns. I have also copied government officials connected to the town of Fairfield.

Charlene Brauns-Schindler
President, MRWC

February 28, 2013

Dear Sir/Madam,

Concerning: Proposed Exide SedRAP for Mill River and Southport Harbor, Fairfield, CT

We, the Board of the Mill River Wetland Committee, Inc (MRWC), a non-for-profit 503(c) corporation providing environmental education to Fairfield students in grades 3-6, would like to express our concerns with the proposed SedRAP of the Mill River and Southport Harbor by Exide which is currently under consideration before DEEP. We applaud Exide for their diligence in plans to reinstate a healthy river. However, we are concerned with the proposed hydraulic design as the method of dredging, the lack of plans for the refilling of the excavated holes with clean fill to restore the stream bottom community, dredging during spawning season, and the incomplete testing of a pipe running along the railroad tracks.

The same type of hydraulic dredging system was used in 1983 unsuccessfully. According to reports, additional dredging was necessary because lead and other toxic particles were re-suspended in the water and escaped through and over the proposed "silt curtain". We do not want to see this degree of re-suspension to happen again, necessitating further dredging. We urge DEEP to consider the coffer dam system. The coffer dam system totally seals off the dredging site resulting in a lesser chance of contaminating the water through re-suspension. This system would also make it easier to refill the dredged areas with clean fill to restore the bottom of the river to allow for the stream bottom community of organisms to repopulate. The coffer dam system would also allow the project to proceed continuously. The coffer dam system would also have minimal impact on the spawning species.

We prefer that no dredging take place during spawning season, to allow those organisms to repopulate their species. We are particularly concerned about the alewives, whose population is declining. Alewives are one of the organisms 5th graders study during their spring River-Lab unit and students always look forward to observing them during their study-trips to the Mill River.

We also understand that there is a pipe that runs along the railroad tracks from the old Exide factory site to the river that has not been fully tested for contaminates. There needs to be a through investigation of this pipe and necessary removal of it carried out before any remediation of the river bottom takes place. This job would be less costly to complete now to prevent any recontamination from this source versus having to dredge again at a later date.

The goal of our environmental education program, River-Lab, through the study of river basin systems, is to instill in students the need to be good stewards of our environment. They learn that whatever we do to one part of a river basin system will affect other parts of the river basin system. In this case, a good steward would make sure that the best method to dredge was used to minimize the re-suspension of contaminants. The steward would not leave the stream bottom with gaping holes making it harder, if not impossible, for the complete balance in the natural restoration of life. Whatever is done in this particular portion of the Mill River will affect upstream because of the tidal action, downstream because of the natural river flow to the estuary, and the Long Island Sound. We hope DEEP and Exide will step up to the challenge and finalize a plan that will make them the best stewards of our Mill River Basin System.

Sincerely,

Charlene Brauns-Schindler
President, MRWC, Inc.

Fusaro, Carolyn

From: Tom Naughton [tjnsanra@aol.com]
Sent: Thursday, February 28, 2013 4:51 PM
To: Fusaro, Carolyn
Subject: Exude/superior plating responsibility for cleanup

Please push these companies for clean the river and land.My mother-in-law worked at Superior Plating and knew of the chemical disposal precesses 40 years ago. Someone should force the Raymond's to stop dragging their feet. You should also push Strum Ruger to pay since they knew what Superior Plating was doing.

Sent from my iPad

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Gonyea, Donald

From: Gaylord [gaylordvp@aol.com]
Sent: Thursday, February 28, 2013 6:09 PM
To: Gonyea, Donald
Cc: Gonyea, Donald
Subject: Exide Mill River

Re: Mill River Remediation- SEDRAP review

Dear Ms Fusaro:

I writing on behalf of my constituents and as a longtime Fairfield resident. I strongly urge you to adopt as conditions of approval all the various detailed suggestions that our Fairfield Conservation, Shellfish and Harbor Management Commisssions asked you to do. These appear to fall pimarily in several areas:

1. Suspend all action on all permits until the SEDRAP is approved per the 2008 Consent Order

2. Require sufficient detail and contour lines on the plans so that our Wetlands Agency can determine its jurisdiction, or to any further action on the project by DEEP. As it is the plans are too conceptual and incomplete.

3. Require 100% testing of the so-called "Railroad Drain" - otherwise it will be nearly impossible to require should contamination be found after the work is done per the pemits.

4. Require cofferdams be used- this will solve 2 problems- the high risk and likelihood of recontamination and re-suspension while working in a volatile river setting with only silt curtains separating the work area from the rest of the river; and the desire to work during the spawning season jeopardizing the existence of fragile herring and aylewives species that are soon likely to be listed as endangered. By installing the cofferdams prior to spawning season these 2 issues are largely alleviated.

5. Require replenishment of productive and envrionmentally helpful fill for the 3-5' 'sinks' to ensure they will support life after the work is done.

6. Require continuous, streaming monitoring for a number of criteria during the project and for at least 2 years thereafter (salinity, temperature, pH, toxins, etc).

7. Work towards a concurrent clean up of those areas known to contain chromium that are outside the lead cleanup footprint.

8. Require mitigation such as restoration of the river bottom with natural features, restoring shellfish and benthic creatures to ensure the River springs to life after the work is done; installation of public access amenities.

9. Require a performance bond and post- project fund to be made available should future problems arise with added lead unknown at this time; recontamination; or to restore the river to ecological life.

10. Require the resopondent to obtain permission from all private property owners before initiating any work- this will put the onus on the responsible party rather than impose legal and title search costs on longime residents to protect their property rights

If the above conditions are placed upon the responsible party, it will go a long way towards ensuring that public funds and taxpayer monies are never going to be required in the future to not just remediate but to restore our largest river which has been contaiminated for over 60 years, and unable to be used by the public.

Sincerely,

Gaylord Meyer
District t RTM

Fusaro, Carolyn

From: G.A. Morresi [gmorresi@gmail.com]
Sent: Thursday, February 28, 2013 11:59 PM
To: Fusaro, Carolyn; DEEP Webmaster; Senator Musto; State Rep Hennessy
Subject: Exide's Mill River Remediation Action Plan (NPDES Application No. 201205444 - Exide Group, Inc. at 2190 Post Road, Fairfield, CT)
Attachments: Shellfish NPDES 2-19-13.pdf

Dear Ms. Fusaro, DEEP Commissioner Esty, Senator Musto and Representative Hennessy;

I am concerned about the proposed Exide Mill River Remediation Action Plan and its significant deficiencies as an adequate restoration program for the damage this river has suffered. As a member of Trout Unlimited's local Nutmeg Chapter in whose geographic area the Mill River flows, please allow me to express my views by reiterating below our Chapter's position, representing almost four hundred members residing in Fairfield and surrounding towns, which succinctly reflects the serious shortfalls of the Plan, and therefore my strong concerns about it.

Trout Unlimited's (TU) mission is to conserve, protect and restore coldwater fisheries and their watersheds. As such, it has been carefully following Exide's remediation effort with great interest for many years. Nutmeg chapter TU and I, one of its members of the Board of Directors, are encouraged to see a Remedial Action Plan come together, but we do have some substantial concerns that echo those expressed by the Town of Fairfield's Conservation Department among others:

1. We question the wisdom of any Remedial Action Plan for lead impacted river sediment that does not include a comparable action plan for chromium impacted river sediment.
2. We do not believe Exide has done enough to evaluate and explain the environmental risks potentially associated with in-water dredging activity during the spawning season of numerous fish species.
3. This plan does not address the need for a fish passage as an essential component of remediation.
4. No provision of public access is addressed.
5. The issue of sediments, its monitoring (or lack thereof) and its effect on shellfish and fisheries is not properly addresses (see the attached 2/19/2013 letter of the Fairfield Shellfish Commission).
6. We have yet to see any plan to restore the river to its natural state once the dredging is complete. A true remediation effort would include re-filling the dredged holes with clean soil, restoring the river bottom with structural habitat including rocks and logs and finally, re-planting the river banks with native plant species.

Related to these concerns and warranting specific attention is the issue of the river herring run (alewives and blueback herring.) NOAA is considering them for *endangered species* status. Exide is saying that their dredging process poses no issue to the spawning of these fish because the slurry will be contained and therefore they should be allowed to dredge during the spring spawning season. However, the actual process of hydraulic dredging as a point-source discharge of lead-contaminated re-suspended sediment from the dredge cell silt curtain into the unprotected waters of the Mill River, especially during the protected spawning periods, is not acknowledged as an NPDES regulated activity; this activity should be included in any NPDES application submitted to the CT DEEP. So, just as in the almost identical technology used in 1983 which resulted in lead spillover which moved lead all over the river, we can deduct that this will seriously jeopardize successful river herring spawning.

The Mill River is one of Fairfield County's natural treasures. It is one of only a handful of specially designated "Class One Wild Trout Streams" in Connecticut. It's estuarine confluence with Long Island Sound could, with an adequate restoration plan, once again be a healthy environment for our unique natural treasures (and

economic resources) such as sea-run trout and for safe use and enjoyment by residents of Fairfield and adjacent towns. This is finally the moment for a prudent plan to correct the damage to the Mill and restore its health and value to all of us.

Thank you for considering my views on this very important issue.

Sincerely,

Gian A. Morresi
2625 Park Avenue, Unit 15 T
Bridgeport, CT 06604

From: *Kathryn Braun <kathrynbraund8@yahoo.com>*

To: *"daniel.esty@ct.gov" <daniel.esty@ct.gov>*

Cc: *MTetreau@town.fairfield.ct.us; "Tsteinke@town.fairfield.ct.us" <Tsteinke@town.fairfield.ct.us>; "ajacobson@town.fairfield.ct.us" <ajacobson@town.fairfield.ct.us>; "John.mckinney@cga.ct.gov" <John.mckinney@cga.ct.gov>; "Brenda.Kupchick@cga.ct.gov" <Brenda.Kupchick@cga.ct.gov>; "Kim.Fawcett@cga.ct.gov" <Kim.Fawcett@cga.ct.gov>; "KeKiley@yahoo.com" <KeKiley@yahoo.com>; "cmccarthyvahey@town.fairfield.ct.us" <cmccarthyvahey@town.fairfield.ct.us>; "Carolyn.Fusaro@ct.gov" <Carolyn.Fusaro@ct.gov>; "Donald.Gonyea@ct.gov" <Donald.Gonyea@ct.gov>*

Sent: *Tuesday, February 19, 2013 5:10 PM*

Subject: *Mill River Fairfield Cleanup - Exide- DEEP Action Needed*

February 19, 2013

Via email only to: daniel.esty@ct.gov

Daniel C. Esty, Commissioner
State of Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106

RE: Exide/Mill River Cleanup- Fairfield, CT

Dear Commissioner Esty:

The undersigned residents of the Town of Fairfield, Connecticut are concerned about the proposed cleanup of Mill River, the largest river in Fairfield, which flows into Southport Harbor and Long Island Sound. Mill River has been polluted by lead, chromium and other toxins for over 50 years.

We ask that you intervene into the permitting process and ensure that DEEP adheres to the permitting sequence set forth in its Consent Order dated October 20, 2008, which states that the remediation action plan ("SED/RAP") was to be approved *prior to* applications being filed for various required permits. The Consent Order was recorded in the Land Records of the Town of Fairfield, and has been relied upon by the public since 2008. However, it appears that Exide has filed applications for coastal permits ("OLISP") and discharge permits ("NPDES") simultaneous with the SED/RAP. We believe this has resulted in inadequate review and participation by the public and the Town of Fairfield.

On behalf of our Town, and Mill River, an important natural resource of the State, we ask that you require that the permitting sequence set forth in the Consent Order be followed and that any permitting activity be suspended and/or terminated and re-submitted after the SED/RAP has been fully evaluated and approved by DEEP, pursuant to the Consent Order.

We also ask that you ensure that DEEP seriously considers the substantive recommendations it is receiving from the Fairfield Conservation Commission, Fairfield Shellfish Commission, Fairfield

Harbor Management Commission and from other public officials, in its final review and approval of the SED/RAP and related State permits.

Signed by (note: the following residents are members of Fairfield's Representative Town Meeting, although they are supporting this letter as private citizens):

Peter Ambrose, Edward J Bateson III, David M. Becker, Kathryn L. Braun, Thomas P. Conley, Heather Dean, Joseph M. DeMartino, Francis Ference, Michael Herley, Jennifer Hochberg, Arthur G. Hug, Ellen Jacob, Amy M. Jennings, Dana Kery, Jay Lipp, G. David Mackenzie, Allen Marks, Sheila H. Marmion, Thomas E. McCarthy, Mary I. McCullough, Amy Mezoff, Gaylord Meyer, Nicholas D. Mirabile, Eric S. Newman, Joseph J. Palmer, Carol Pontrelli, Harold G. Schwartz, Ann Stamler, Jeffrey R. Steele, Jeffrey Stopa, Eric G. Sundman, Carol J. Way, Jay G. Wolk

cc: Fairfield First Selectman Michael Tetreau; Fairfield Selectmen Christin Mcarthy-Vahey and Kevin Kiley; Fairfield Conservation Department Director Thomas Steinke and Administrator Annette Jacobson; State Legislators John McKinney, Brenda Kupchick, Kim Fawcett and Tony Hwang; DEEP contacts Carolyn Fusaro and Donald Gonyea