EXHIBIT H

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Northern RI Chapter 737 Trout Unlimited
C/O Roland C. Gauvin
2208 Mendon Rd.
Cumberland, RI 02864
September 22, 2008

US Environmental Protection Agency
Clerk of the Board Environmental Appeals Board
Colorado Building
1341 G Street N.W., Suite 600
Washington, DC20005

Re: NPDES Permit No. MA0102369

Dear Sirs:

The Northern RI Chapter 737Hearby contests the draft permit for the Upper Blackstone Water Pollution Abatement District 50 Route 20 Millbury, MA 01527.

In response to

Comment; #A7: Trout Unlimited commented that the permit should address concerns with aluminum toxicity.

Response #A7: We agree that aluminum toxicity is a potential concern. The final permit contains a monitoring requirement in order to obtain more information relative to the potential to violate receiving water criteria for aluminum. If the data indicates that there is a reasonable potential to violate receiving water criteria, future permit actions will include an aluminum limit.

In Comment #D2:EPA should utilize effluent data collected as part of the bioassay testing to determine whether reasonable potential exists for the UBWPAD facility to cause or contribute to water quality violations for additional pollutants. Since EPA does not enter pollutant data collected as part of the bioassay testing into ICIS, RIDEM was unable to evaluate reasonable potential for the following pollutants: Chromium, lead, nickel, and aluminum. At a minimum, based on typical lead levels seen in effluent from Rhode Island waste water treatment facilities, it appears that the UUBWPAD would have "reasonable potential" for lead and therefore would require lead limits. To ensure that bioassay pollutant monitoring data is readily available for review, RIDEM requests that EPA lists the pollutants monitored during the bioassay testing in Part1A1 of the permit.

Response#D2: We reviewed the bioassay reports from 2005 and 2006. The effluent chromium data are all below detection levels (detection levels ranged from 5-10 ug/l) and well below the applicable ambient criteria values in state standards. The effluent nickel data ranged from 5-20 ug/l which also is well below ambient criteria values. The effluent lead data are all below detection levels(detection levels ranged from 5-10 ug/l).

However the detection levels are higher than the ambient criteria values. Consequently we have included a monthly lead monitoring requirement in the final permit, with a quantification level of 0.5 ug/l in order to be able to assess the need for a permit limit in future permit action. Effluent aluminum levels are of concern. Effluent values ranged from 70-240 ug/l. As indicated in response #A7, we have included a monthly monitoring requirement for aluminum in the final permit. A permit limit will be established if the data indicate a reasonable potential to exceed criteria.

We concur that requiring reporting of selected effluent data from bioassay testing on Discharge Monitoring Reports (in addition to submitting the information to EPA in a separate report) would make it easier to review these results. Copper, zinc, cadmium, aluminum, and lead are all required to be monitored more frequently than quarterly. Accordingly, for these metals, the final permit requires that the effluent results from the WET tests must be included in the required discharge monitoring reports. For nickel, a quarterly monitoring requirement has been included in the final permit in order that the effluent results for nickel from the WET tests are also included in the required discharge monitoring reports.

It is our contention that aluminum limits should be set at this time because in Response#A7 it states that limits will be set if data indicates that there is a potential to violate receiving water criteria. In Response#D2 it is stated that effluent levels of aluminum are of concern. Quote "Effluent values ranged from 70-240 eg/l. Because of these levels and documentation in exhibits A an B that substantiate that aluminum levels in this range are detrimental to the reproduction of salmonids. We implore the EPA to set discharge limits for aluminum and urge EPA to advocate for the use of technology that does not use aluminum oxide in the remediation of nitrogen discharge. We have invested much time money and effort in our project to bring fish ladders to the Blackstone and return anadromous fish to the river. Aluminum discharge at the current levels by the UBWPAD are unacceptable and discharge limits should be set at this time.

Roland C. Gauvin

Roland [signature]

For Northern RI chapter 737 Trout Unlimited concentration in freshwater, and after 24-hr exposure to seawater. Hatchery smolts exposed to acidic water and wild smolts displayed sub-lethal ionoregulatory stress both in fresh and seawater. [illegible]

[illegible] similar for all three treatments. Acid-exposed hatchery-origin and wild Narraguagus River smolts were both under ionoregulatory stress that may have affected their migratory behavior, but not their survival for the time and area in which we tracked them.

1. Introduction

Atlantic salmon formerly occurred in nearly every river system in the U.S.A. north of the Hudson River, and annual returns are estimated to have been 300,000–500,000 fish. Reproducing stocks now exist in only seven rivers in Maine, and annual returns have declined to less than 50 in 1998 (USFWS, 1999). Harvest has been greatly reduced and the rivers are stocked with hatchery-produced fish, but populations have failed to increase. Atlantic salmon populations have been reduced by acidic deposition in Nova Scotia, Canada (Lacroix, 1989) and Norway (Hesthagen and Hansen, 1991), however in previous investigations we were unable to demonstrate significant mortality of river-resident life stages of Atlantic salmon in Maine rivers due to acidity (Haines et al., 1990). [illegible]

Water, Air, and Soil Pollution 130: 681–686, 2001.

[redacted]

EXHIBIT A

[illegible]

minum (Al) concentration was 200 µg L [illegible]. Chemicals were added by [illegible] from stock solutions into a mixing chamber with a retention time of [illegible] min. [illegible] smolts [illegible] 2 year olds [illegible] and were placed in the ambient water tank. One-year-old smolts of Penobscot River stock (mean total length ± SE = [illegible] and mean weight ± SE = [illegible]) were obtained from the Green Lake National Fish Hatchery in Ellsworth, Maine and 50 each were placed in ambient [illegible] and acidified tanks. [illegible]

[illegible]

[illegible] ion chromatography. Plasma thyroxine (T4) concentration was measured by radioimmunoassay (Dickhoff et al. 1978 as modified by [illegible] et al. [illegible]). A seawater (SW) challenge test was then conducted using modified methods of Clarke (1982).

Smolt migratory behavior was monitored with the use of surgically implanted ultrasonic transmitters ([illegible] and [illegible] 1996) and stationary receivers in the river system (Figure 1). Hatchery and wild smolts were released in groups of 4 to 5 on three occasions between 10 and 16 May, and were tracked until 28 May.

water would cause
the decrease in [illegible]

[illegible]
with seawater [illegible]
pH gradually [illegible]
from 4 March to [illegible]
physiology study [illegible]
[illegible] approximately
ambient river water [illegible]
[illegible] and one
[illegible] target
[illegible]

[illegible] from the [illegible]
each were placed in
[illegible] to be smolts
the smolts were cap-
[illegible] smolt migration
on 7 May. Three to
May. Smolts were
from within two min.
[illegible] ATPase activity
[illegible]

[illegible] methods of

[illegible] surgically im-

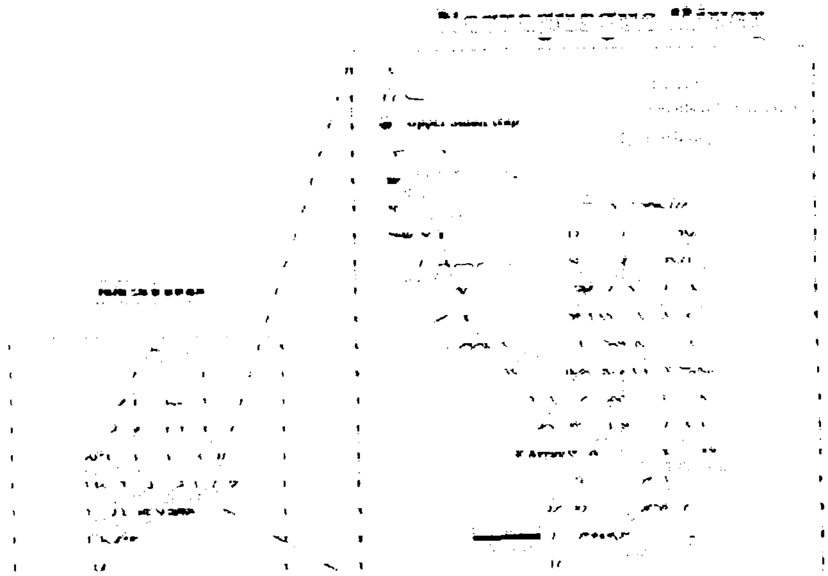
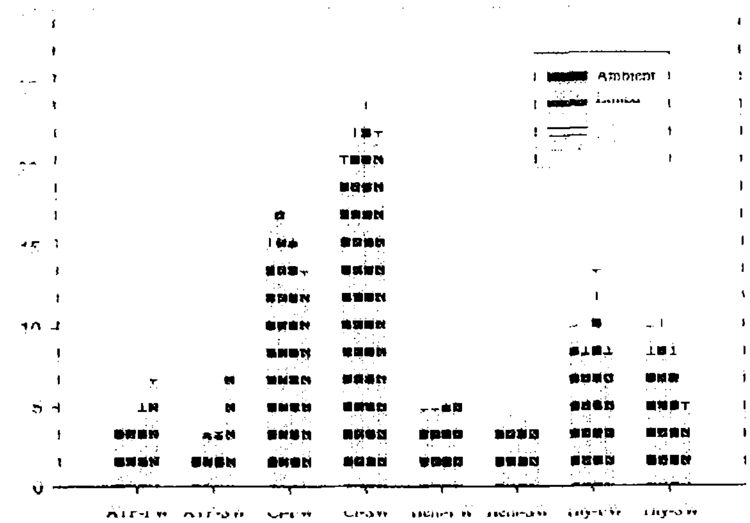


Figure 1. Map showing location of study area.

All water chemical analyses were done by standard methods (APHA, 1985). [illegible] were calculated by the method of [illegible] (1974). The Watson-Williams test was used to determine differences between treatments with respect to time of movement (Batschelet, 1981). Mortality in each river section was estimated using the Mark computer program with the Cormack-Jolly-Seber model (White, 1996).

5. Results

No hatchery-reared smolts from any treatment died in FW or SW, but after 24 h in SW one wild smolt died, one was immobile, and [illegible] [illegible] ATPase [illegible]



ATP=Na/K ATPase (umol/mg/h); Cl=plasma Cl (meq/L/10); Hem=hematocrit (%/10; Thy=plasma

Amb=ambient river water; Est=estuary

Treatment	Residence Time in days				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wild	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[redacted]