



SDMS DocID 46224

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RECEIVED

Superfund Records Center
SITE: New Bedford
BREAK: 03.02
OTHER: 46224

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ME & VT WASTE
MANAGEMENT BRANCH

Dear Ms Sanderson,

Following my letter of 06 29 90 I can now give you a summary of my studies of *Fundulus heteroclitus* histopathology in the Acushnet River. We finally collected a good set of fish from the Aerovox plant site 41 40.39 N and 70 55.1 W, another site just south of the 195 bridge, and three control sites. 58 fish were examined visually from the Aerovox site. No visible lesions were evident on the livers. 19 were examined histologically, with no evidence of any neoplastic foci. In comparing these fish with fish from the other sites we did observe a trend towards increasing parasite burdens from the contaminated New Bedford sites.

These findings are in distinct contrast to those recently published for the same species in the Elizabeth River VA, where in one particular creek, which was heavily contaminated with creosote, 93% of the animals were found to have visibly abnormal livers, and 33% had hepatocellular neoplasms. The salient sediment chemistry and neoplasm prevalence is compared below. Thus the Acushnet River appears less carcinogenic for *Fundulus* than the creek off the Elizabeth River. In terms of chemical carcinogenesis it seems that this species responds more readily to genotoxic aromatic hydrocarbons, than it does to chlorinated hydrocarbon carcinogenic promoters, such as PCB's. This data was briefly mentioned at the Mass. Bay Marine Studies Consortium Symposium yesterday.

	tPAH ppm	tPCB ppm	% Neoplastic
Creosote contaminated creek (Eliz. R.)	2200 ¹	200 ³	33 ¹
Scuffletown Creek (Eliz. R.)	61 ¹	200 ³	0 ¹
Acushnet River	130 ²	2100 ²	0 ⁴

¹ Cancer Research 50: 5978-5986, ² Marine Environmental Research 29: 77-101
³ Pers. comm. P. Van Veld (approximate values), ⁴ This study.

You should be aware however that winter flounder from the New Bedford inner harbor have a significant prevalence of liver neoplasia (George Gardner - US EPA Narragansett pers. comm.).

Sincerely yours,

Michael J Moore 508 457 2000 x 3228

SCALE 1:20,000
NAUTICAL MILES

YARDS
500 0 500 1000

SITES SAMPLED
for *Fundulus*
heteroclitus
COPY



NEW BEDFORD

FAIRHAVEN

NEW BEDFORD HURRICANE BARRIER

Hurricane barrier traffic lights are displayed on the north side of the smaller, northerly house on the west side of the entrance and adjacent to the old fort at Clarks Point. Green lights are displayed when the gate is open. Red lights are displayed from 20 minutes before the start of closing the gate through reopening.

In addition to the traffic lights, three flashing white strobe lights are shown; two from atop the west barrier operating house, one facing toward the harbor and one facing toward the bay, and a third light facing toward the bay adjacent to the old fort at Clarks Point. These synchronized lights flash every 20 seconds, but only every 2 seconds from 20 minutes before the start of closing the gate through reopening.

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