

EXHIBIT J

UNITED STATES OF AMERICA
ENVIRONMENTAL PROTECTION AGENCY
BOSTON REGION

In the Matter of:

PUBLIC HEARING:

RE: CITY OF PORTSMOUTH, NEW HAMPSHIRE
PUBLICLY OWNED TREATMENT WORKS,
APPLICATION FOR SECTION 301(H)
VARIANCE FROM THE SECONDARY
TREATMENT REQUIREMENTS OF THE
CLEAN WATER ACT

City Hall
Portsmouth, New Hampshire

Monday
May 9, 2005

The above entitled matter came on for hearing,
pursuant to Notice at 7:00 p.m.

BEFORE: DAVID M. WEBSTER
DAMIEN HOULIHAN
New Hampshire NPDES Permit Section
Environmental Protection Agency
One Congress Street
Boston, MA 02114

GEORGE BERLANDI
NH Department of Environmental Services

1 national goal would be that wherever obtainable an interim
2 goal of water quality which provides for the protection and
3 propagation of fish, shellfish and wildlife, and provide for
4 recreation in and on the water be achieved by July 1st,
5 1983.

6 Well, when I think about the Pierce Island water
7 treatment plant, I think about the fact that there's a tidal
8 flow and that tidal flow carries some of that effluent down
9 to New Castle, where there's a public beach. Our area
10 children go there. What concerns me is that we're getting
11 bad water there, essentially, that these children are
12 playing in. And granting another waiver would allow this
13 problem to continue.

14 The city claims that this would cost \$30 million
15 per year, and goes on to discuss the aesthetics of a
16 secondary treatment facility, none of these which are in
17 consideration in regards to the Clean Water Act and granting
18 waivers. What is a consideration is recreation, and it
19 concerns me greatly that this is going to be allowed in an
20 area where children frequent the beaches. And I think that
21 it's up to the EPA to make sure that the town and the city
22 becomes in compliance with what is a Clean Water Act.

23 Thank you.

24 MR. WEBSTER: Thank you very much.

25 I next call on Dr. Frederick Short.

1 DR. SHORT: Thank you. My name is Fred Short.
2 I'm a research professor at the University of New Hampshire,
3 based at the Jackson History & Laboratory. I wanted to
4 speak against the waiver and particularly about the nitrogen
5 issue in the bay.

6 The Great Bay estuary is viewed as a pristine
7 system and the many places you can view the estuary, it
8 looks beautiful. It's always pristine. But under the
9 waters of the estuary, the system is in trouble. There is
10 increasing evidence of excessive nitrogen building up in the
11 estuary and it's quite well-documented.

12 As other people have mentioned, the sources of the
13 nitrogen have been looked into and the Portsmouth sewage
14 treatment plant is determined to be the largest source of
15 nitrogen into the estuary. Now they will say that when the
16 tide is running out, that all goes downstream, but the other
17 half of the time it all goes upstream, and it's not hard to
18 figure that those nutrients get up into the upper part of
19 the estuary, as well.

20 I mean, the salt that makes Great Bay 20 to 25
21 part per thousand salinity comes from the ocean and works
22 its way up into the bay, so certainly the nutrients are not
23 flushed out of the estuary. And those that are flushed out
24 go into the coastal zone and go down the shore or into a
25 little harbor, and I believe are responsible for the excess

1 of algae that's been documented.

2 If you remember the green balls or the green globs
3 that were found two or three years ago on the beaches in
4 Hampton, those large productions of seaweed are a result of
5 excess nutrient inputs, and I think that's evidence of the
6 plume that comes out of the Piscataqua River and Portsmouth
7 Harbor.

8 Increasing nitrogen levels in an estuary are a
9 problem because it increases gradually and suddenly -- all
10 of a sudden you get a change in the system, a dynamic
11 turnover in the system. And the prime example of that is
12 Chesapeake Bay, where in the 1980s the Chesapeake Bay
13 estuary ecosystem collapsed. It lost its eelgrass, it lost
14 its blue crabs, its oysters, because the system was too
15 heavily loaded with nitrogen and the system fell apart. And
16 I'm concerned at the levels of nitrogen that we're seeing
17 here in the Great Bay estuary.

18 Being a professor, I brought my references. The
19 State of New Hampshire put out the state of the estuary
20 report in 2003 and he shows a significant increase in
21 nitrate levels in the Great Bay estuary. And I looked up
22 those nitrogen levels and compared them to what the levels
23 were in Chesapeake Bay in the 1980s, at the time of the
24 collapse, and we are as high or higher than the levels were
25 in Chesapeake Bay, so I think that's a concern.

1 And there's other evidence. The EPA put out a
2 guide to the Gulf of Maine, and one of the things it lists
3 is inorganic nitrogen levels; that is, the levels of
4 nitrogen in the water, and it shows the coastline from
5 Massachusetts all the way across the coast of Maine with
6 green, yellow and white dots for different levels of
7 pollution, nutrient input, and the Great Bay estuary is the
8 only site that has red dots, aside from Boston Harbor.
9 Again, another line of evidence suggesting that there is a
10 problem.

11 Even Great Bay Matters put out by the Great Bay
12 Estuary & Research Reserve has an article talking about the
13 mysterious green algae that's appearing more and more on the
14 shores of the bay. Green algae is an indicator. It only
15 grows because there's excess nitrogen around. So I think
16 the system is building up, increasing amounts of nitrogen.

17 Dr. Art Mathison, who contributed a letter also
18 talked about other seaweeds that are called nuisance
19 seaweeds that develop under eutrophication conditions. So I
20 think we're in danger of upsetting the balance in the Great
21 Bay estuary and we need to pay a lot of attention to that.

22 In that regard, over the last four years, I've
23 developed an environmental indicator, which I call a
24 nutrient pollution indicator, and it uses eelgrass, which is
25 one of our local species, to detect levels of nitrogen in

1 the system, because eelgrass grows in the water and it
2 integrates the water that goes by, and we tested this all
3 the way up the estuary. And as you could imagine, when you
4 get close to the rivers coming in, you have higher levels of
5 nitrogen. As you come down the estuary, those levels drop
6 down until you get in Portsmouth Harbor, and then after you
7 get by the New Hampshire Port Authority, levels start to go
8 up, again, and they stay up until you get beyond Seavey
9 Island and out to Portsmouth Harbor.

10 So what that's saying is that we're detecting
11 higher levels, elevated levels of nitrogen in the vicinity
12 of the Portsmouth sewage treatment discharge. So it is
13 having an effect on the system and I think it is a system
14 under stress.

15 Thank you.

16 MR. WEBSTER: Thank you, Dr. Short.

17 I next call on Lee Roseberry.

18 MR. ROSEBERRY: Good evening, gentlemen. I'm Lee
19 Roseberry, Portsmouth resident, New Hampshire certified
20 wastewater treatment plant operator, former 15-year employee
21 of the City of Portsmouth wastewater treatment plant.

22 I've brought to the attention to the City of
23 Portsmouth, to NPDES and to US EPA some questions concerning
24 the reporting of discharge incidents in which I was
25 personally involved, and I would like to ask respectfully