

## Contingency Plan Report First Quarter 2007

### Ambient Monitoring

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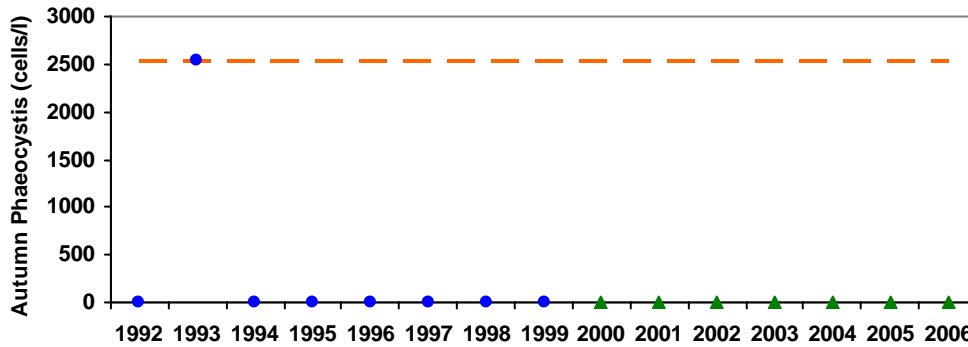
MWRA gathers data from the outfall location in Massachusetts Bay on various thresholds in its Deer Island outfall discharge permit. This report shows relevant ambient monitoring results that became available in the January-March 2007 time period. There were no exceedances of Contingency Plan thresholds.

#### NUISANCE ALGAE – Autumn 2006

In the figures below, we compare *Phaeocystis* and *Pseudonitzschia* data for autumn 2007 (September through November), which included four surveys, to the [nuisance algae thresholds](#) and results from previous autumns. We also compare *Alexandrium* data for each sample through the end of 2006 to the threshold. There were no nuisance algae threshold exceedances.

#### PHAEOCYSTIS

*Phaeocystis* was not observed in the nearfield in autumn 2006.

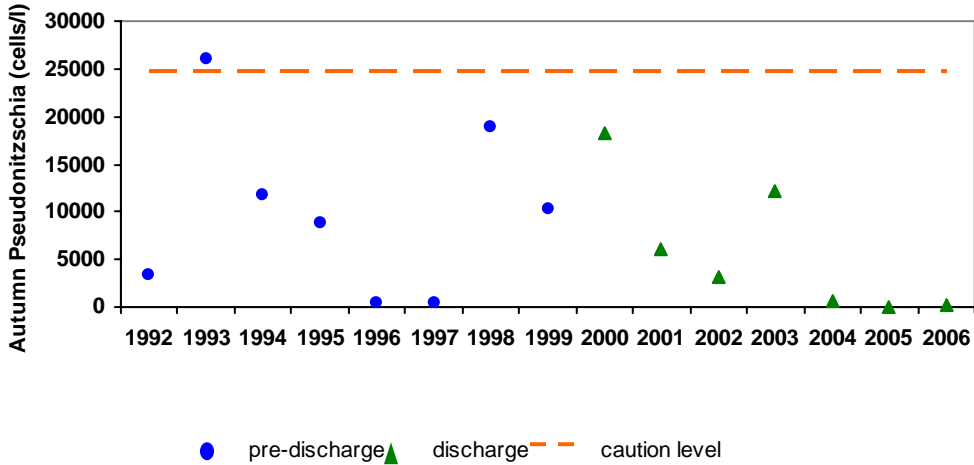


Autumn <i>Phaeocystis</i> mean abundance (cells/liter)	
Caution threshold	2,540
Autumn 2006	0

● pre-discharge ▲ discharge — caution level

**PSEUDONITZSCHIA**

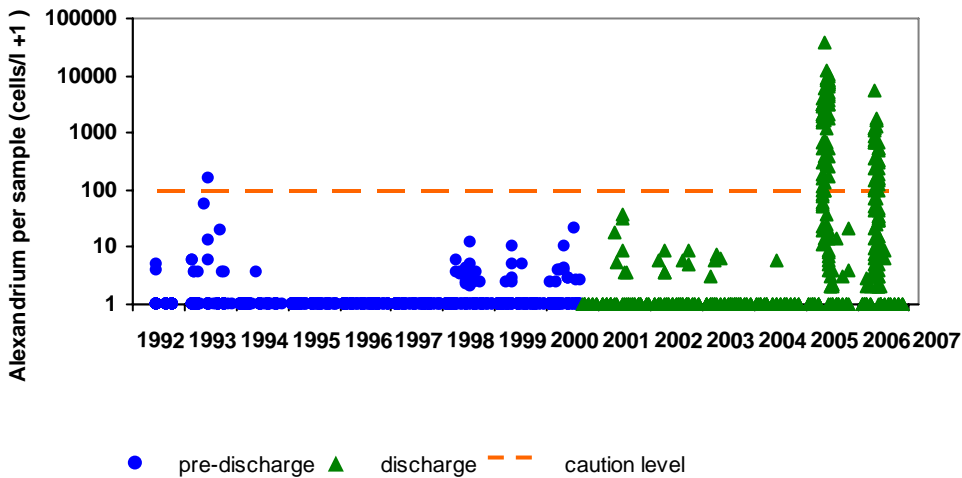
*Pseudonitzschia* was present only at very low abundances in the nearfield in autumn 2006, well below the threshold.



Autumn <i>Pseudonitzschia</i> mean abundance (cells/liter)	
Caution threshold	24,700
Autumn 2006	222

**ALEXANDRIUM**

*Alexandrium* was not observed in the nearfield in autumn 2006, the large spring bloom in 2006 having ended by early summer.



Autumn <i>Alexandrium</i> per-sample abundance (cells/liter)	
Caution threshold	100
Autumn 2006	0*

\* maximum of all samples collected between September 1, 2006 and December 31, 2006

## FISH AND SHELLFISH TISSUE CONTAMINATION - 2006

The fish tissue contamination thresholds are designed to identify unexpected effects on marine life. There were no exceedances of fish tissue contamination thresholds in 2006.

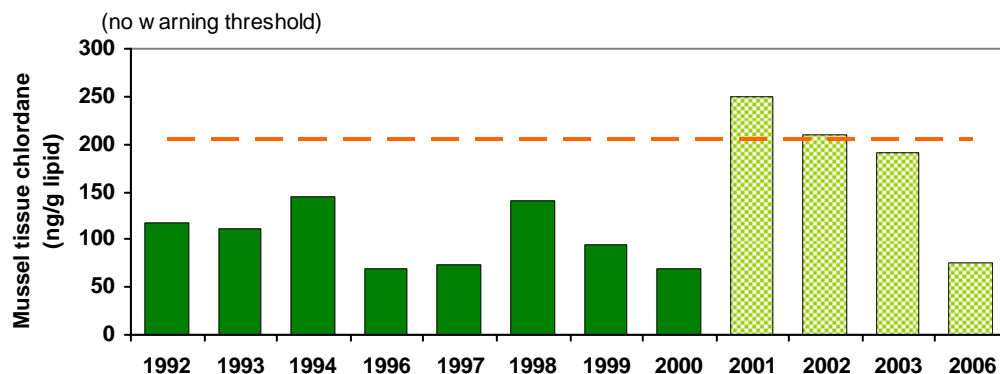
Contaminants are measured in three species of seafood: flounder, lobster, and mussels. For mercury and PCBs in flounder, lobster, and mussels, caution and warning thresholds are set at 50% and 80% of the FDA action limits. The threshold for lead in mussels is based on EPA risk assessment of lead in drinking water. Other fish/shellfish tissue contamination thresholds are based on change from baseline conditions at the outfall site.

Data available this quarter include tissue contamination in caged mussels, and in winter flounder and American lobster from the outfall site.

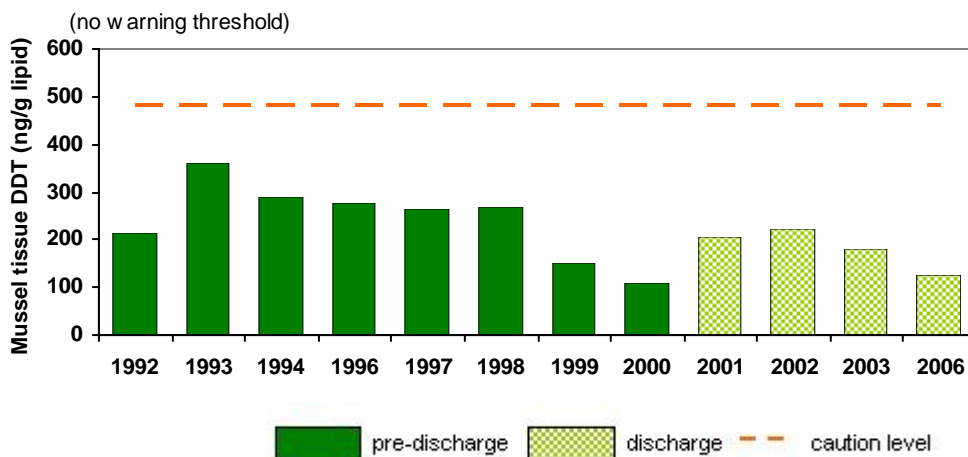
### MUSSELS

Mussels from a clean site were deployed in cages near the outfall from July-August 2006. Mussel bioaccumulation levels were lower than in previous discharge years.

#### Chlordane

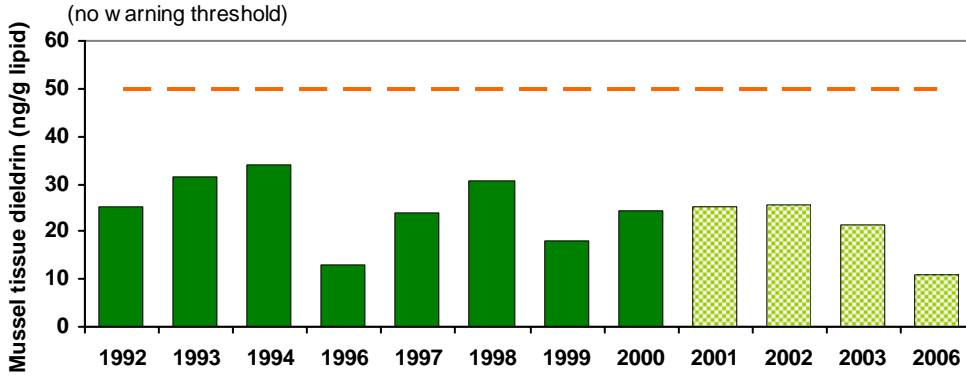


#### DDT

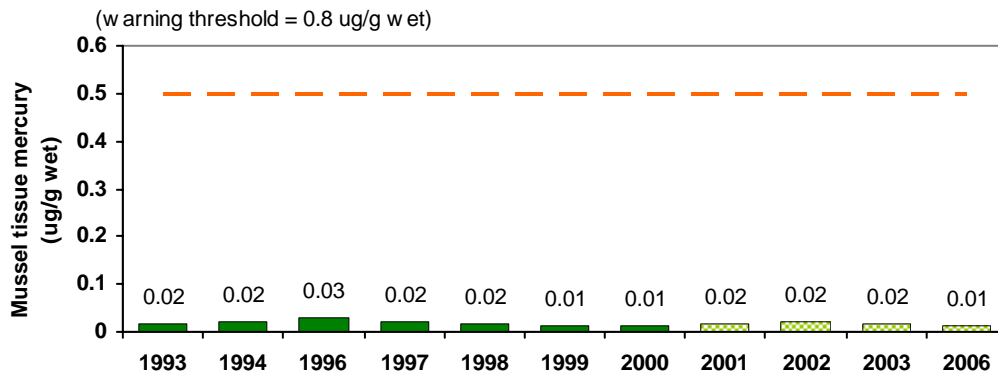


**Mussel tissue contaminant levels (continued on next page)**

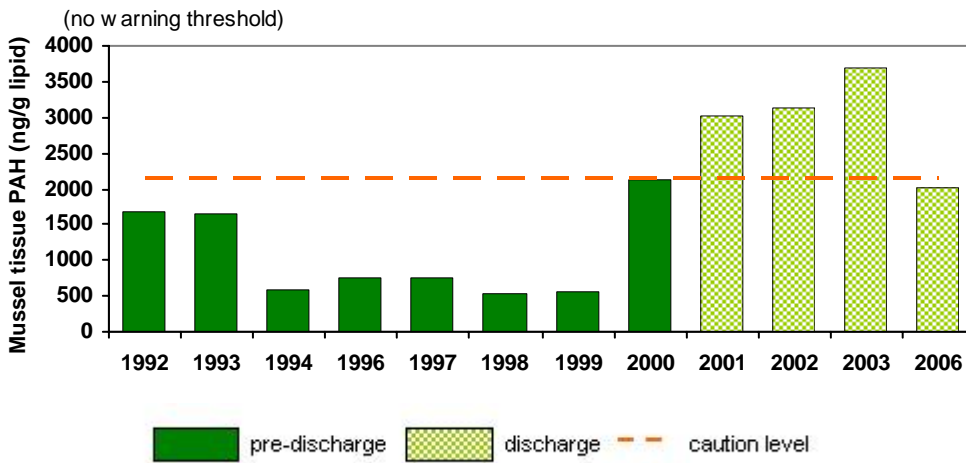
**Dieldrin**



**Mercury**

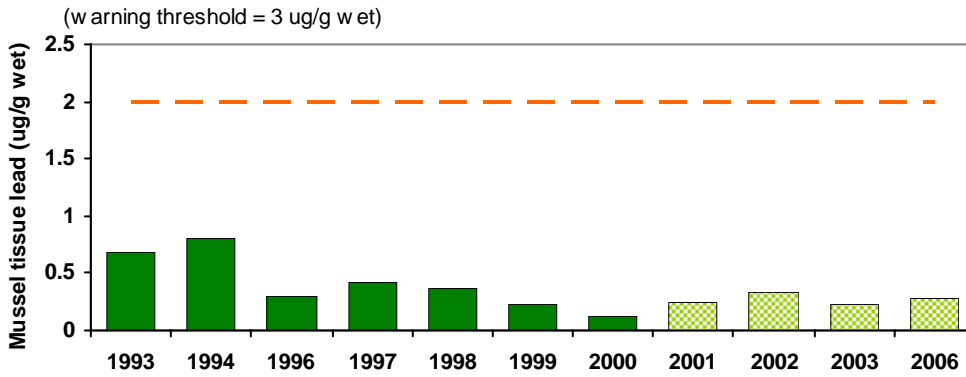


**PAHs**

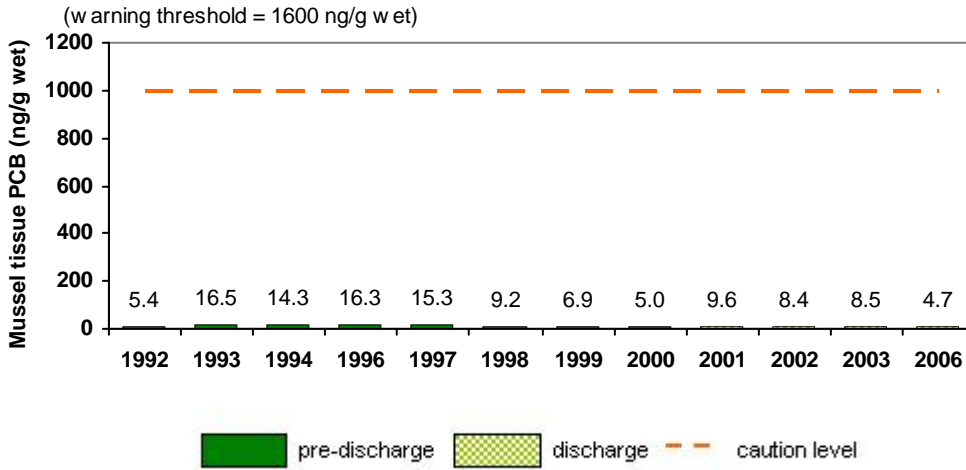


Mussel tissue contaminant levels (continued on next page)

**Lead**



**PCBs**

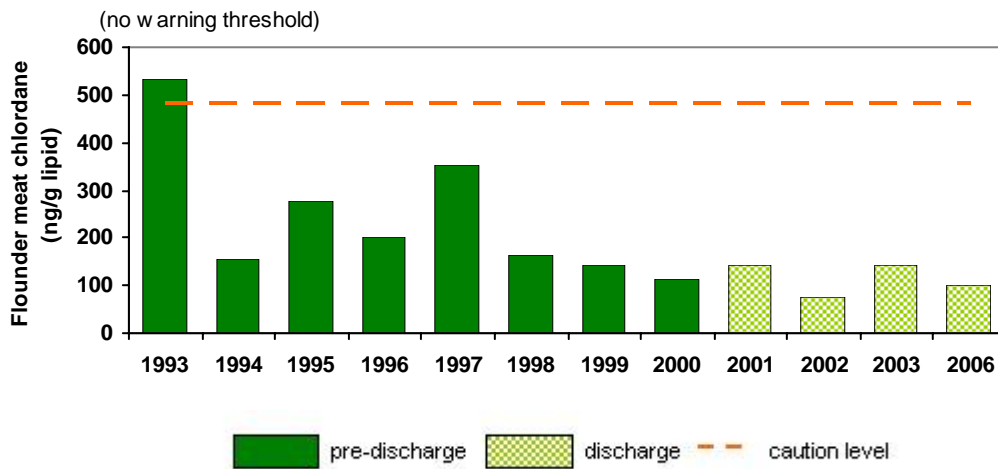


**Mussel tissue contaminant levels (continued)**

**FLOUNDER**

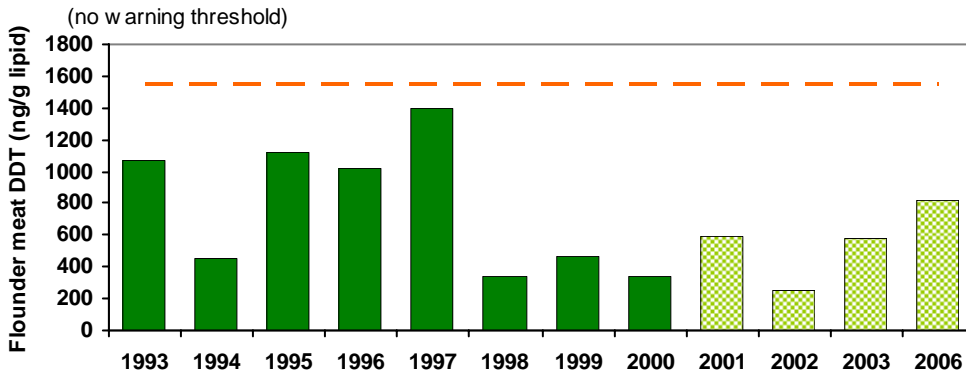
Flounder were sampled at the outfall site in April 2006. Flounder meat contamination remained low and similar to other years.

**Chlordane**

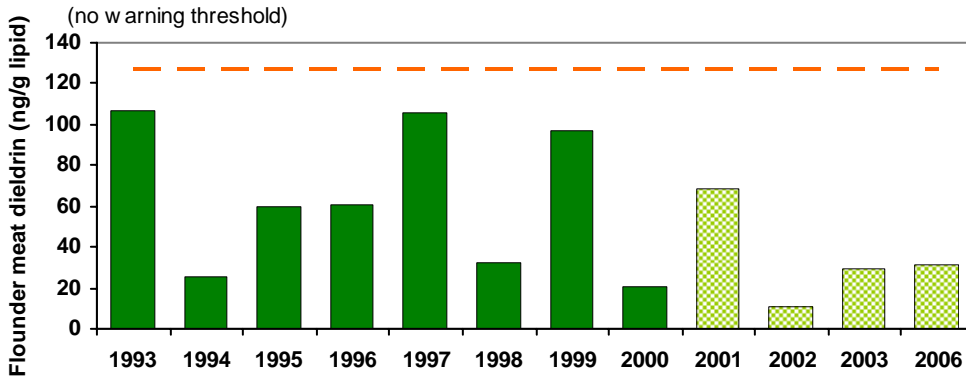


**Flounder tissue contaminant levels (continued on next page)**

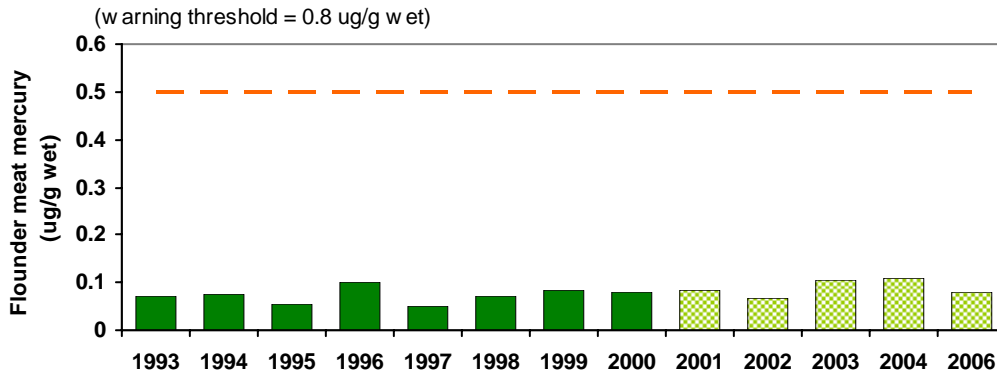
**DDT**



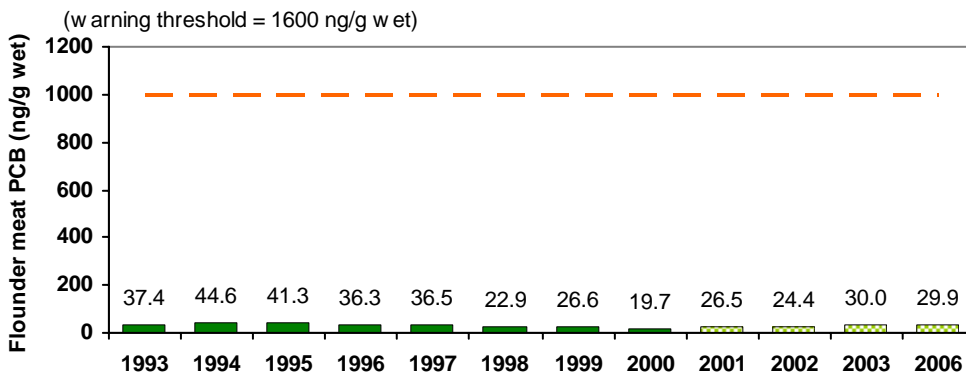
**Dieldrin**



**Mercury**



**PCBs**

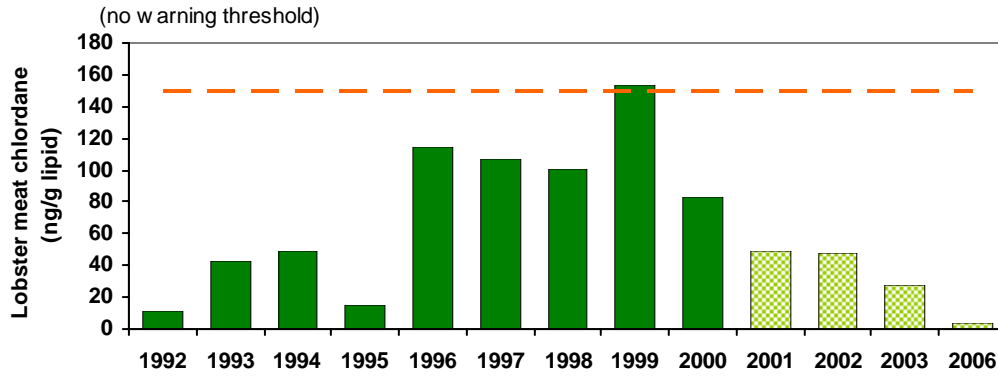


pre-discharge
  discharge
  caution level

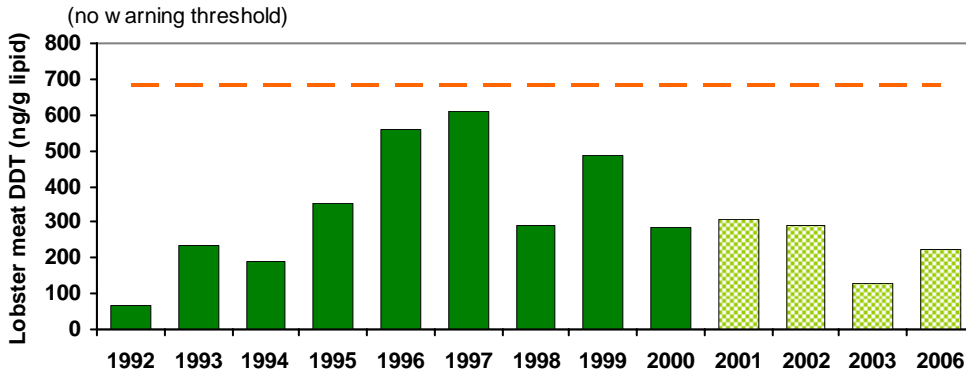
**LOBSTER**

Lobster were sampled at the outfall site in October 2006. Lobster meat contamination remained low and similar to other years.

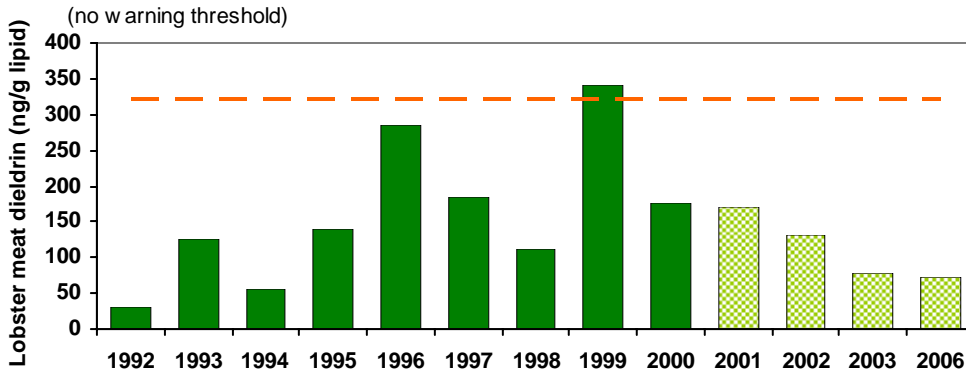
**Chlordane**



**DDT**



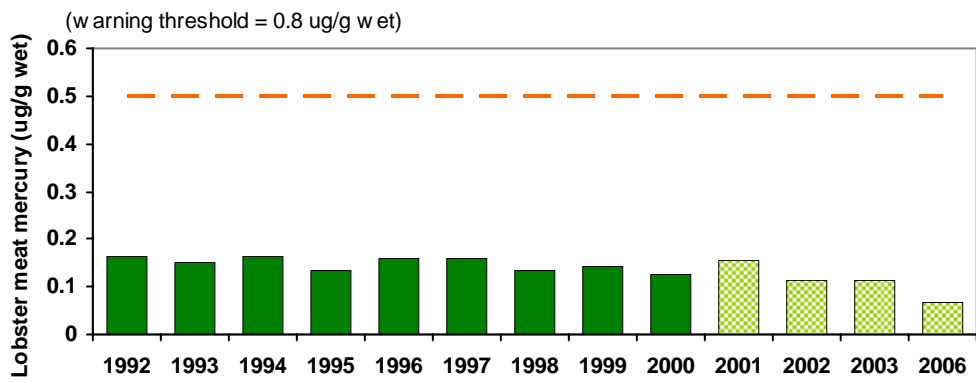
**Dieldrin**



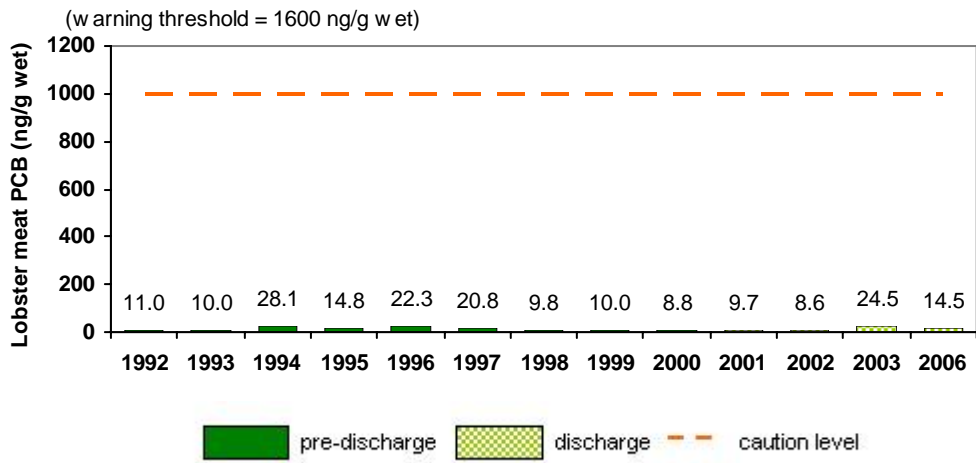
pre-discharge
  discharge
  caution level

**Lobster tissue contaminant levels (continued on next page)**

### Mercury



### PCBs



Lobster tissue contaminant levels (continued)