

State of California—Health and Human Services Agency
Department of Health Services



California
Department of
Health Services

SANDRA SHEWRY
Director

ARNOLD SCHWARZENEGGER
Governor

March 3, 2006

Mary Middleton, Senior Biologist
Pacific Shellfish Institute
20 State Ave. NE #142
Olympia, WA 9850

Dear Ms. Middleton:

Thank you for your request for information regarding the potential impact of dioxin on shellfish harvested from Humboldt Bay, California. The delay in response was due to locating data previously maintained by staff that have since retired.

As you are aware, dioxin studies were conducted in Humboldt Bay by Environ on behalf of Sierra Pacific Industries in 2002. These studies provided some baseline data regarding the potential impact of dioxins in shellfish from the area. Subsequent to the Environ study, the California Department of Health Services (CDHS) conducted, sampling and analysis of shellfish harvested from Humboldt Bay. The samples consisted of aquacultured oysters (Pacific and Kumomoto varieties) and clams (Manila), aquacultured mussels, wild clams (Gaper and Washington varieties), and Humboldt Bay sediment obtained during the week of April 15, 2003. The samples were intended to represent the potential impact of dioxins on aquacultured shellfish in contact with sediment and those utilizing long-line, and/or rack and bag growing methods.

Thirty-four shellfish and fourteen sediment samples were submitted to laboratories of the US Food and Drug Administration (FDA) for dioxin analysis. The FDA reported toxic equivalence levels in shellfish ranging from 0.000 to 0.170 parts per trillion (Table 1).

Should you have any additional questions or concerns, please feel free to contact me at (916) 650-6500.

Sincerely,

A handwritten signature in blue ink that reads "Michael F. Hernandez".

Michael F. Hernandez
Food and Drug Branch

TABLE 1
California Department of Health Services
Dioxins in Molluscan Shellfish¹
Humboldt Bay Sampling
April 15 – 18, 2003

SHELLFISH			SEDIMENT	
Sample Area	Sample	Total Toxic Equivalence (parts per trillion)	Sample Area	Total Toxic Equivalence (parts per trillion)
E	Pacific Oyster	0.000	C	0.000
SB ²	Wild Clam	0.000	A	0.000
SB	Wild Clam	0.000	E	0.000
NB ³	Wild Clam	0.000	SB	0.000
NB	Wild Clam	0.000	B	0.000
NB	Wild Clam	0.000	B	0.000
D	Mussel	0.000	C	0.000
C	Pacific Oyster	0.003	C	0.001
B	Pacific Oyster	0.003	B	0.001
C	Pacific Oyster	0.004	B	0.002
C	Pacific Oyster	0.004	B	0.003
B	Pacific Oyster	0.004	A	0.004
B	Kumomoto	0.004	NB	0.059
SB	Wild Clam	0.004	C	0.550
C	Pacific Oyster	0.005		
B	Pacific Oyster	0.006		
C	Clam	0.007		
A	Pacific Oyster	0.010		
E	Pacific Oyster	0.010		
E	Pacific Oyster	0.020		
B	Kumomoto	0.024		
C	Pacific Oyster	0.027		
A	Kumomoto	0.028		
C	Pacific Oyster	0.028		
B	Kumomoto	0.029		
B	Pacific Oyster	0.030		
B	Pacific Oyster	0.031		
B	Pacific Oyster	0.037		
B	Pacific Oyster	0.039		
B	Pacific Oyster	0.039		
B	Pacific Oyster	0.043		
C	Pacific Oyster	0.070		
A	Pacific Oyster	0.150		
A	Pacific Oyster	0.170		

¹ Dioxin analyses were conducted by the U.S. Food and Drug Administration.

² SB = South Bay

³ NB = North Bay

*0.0213
SB 0.0117*

*WC
0.0007
SB 0.0014*

*0.0333
SB 0.0118*

MAP 1 Humboldt Bay Shellfish Harvest Locations

