Proposal Subject Paralytic Shellfish Poison (PSP) Standard

Specific NSSP Guide Reference NSSP Guide Model Ordinance Chapter IV. Shellstock Growing Areas @ .04 Marine Biotoxin Control. C. (1)

Text of Proposal/ Requested Action

Amend Chapter IV. @ .04 C. (1) by adding the following new subsection:

(d) The concentration of paralytic shellfish poison (PSP) equals or exceeds 200 micrograms per 100 grams of geoduck viscera tested.

Problem:

Currently, geoduck fisheries occur in Washington State, British Columbia, and Alaska. Over the past ten years, the average annual harvest of these three areas has been 3,136,628 pounds, 4,283,227 pounds, and 204,60 pounds, respectively. Between 95-99% of this produce was sold live. The commercial fishery in Alaska has been in place since 1986. Most of the production has been processed and frozen with removal of the viscera. This frozen market is no longer economically viable.

The present standard for growing area certification for PSP, the mouse bioassay test, is based on results obtained from composite samples of three visceral balls. This is the only portion of the animal tests. The viscera ball reflects approximately 20% of the entire weight of the "edible portion" of the animal, and is the only section of the animal in which PSP has been found. This testing method (testing only the viscera) is a variation from the Model Ordinance for marine toxins, which requires the sample be composed of the entire mass of the edible portions of the shellfish.

Based on evaluation of consumption patterns, it has been established that the toxin concentration shall not equal or exceed 80 micrograms per 100 grams. We are proposing the geoducks have a species-specific toxin concentration level. For example, in geoducks, where only the visceral ball is sampled, the toxin concentration should be adjusted to reflect eh appropriate proportion of the edible portion of the shellfish that the visceral ball represents.

Based on industry processing yields, the proportions are as follows: neck meat (siphon) 22%, body 18%, and visceral ball 10% of the whole animal by weight. These figures should be doubled to reflect their corresponding percentage of the edible portion of the raw shellfish (or percentage without shell). If only 20% of the edible portion of the shellfish is being used to determine the concentration of toxin, the standard of "80 micrograms per 100 gram sample of edible shellfish of raw shellfish" could be raised, for geoducks only, by a factor of five to 400 micrograms per 100-gram sample. Erring on the side of being conservative, a standard of 200 micrograms per 100-gram sample specifically based on the current method of testing geoduck viscera is justifiable.

Public Health Significance

Evaluation of the historical data from Alaska (3210 lot samples from 1982 to 2000) indicates that if the PSP standard were raised to 200 microgram, 91% of the sample results would have certified product for live shipments. It has been demonstrated that when PSP levels in the geoduck viscera are at levels below 1000 micrograms per 100 grams of tissue, there is little or no accumulation in the body meat and siphon.

In Washington State, from the inception of the commercial fishery in 1970 until 1996 no PSP tests, or an insignificant number of PSP tests, were performed on geoducks for certification of growing area. This product was harvested and sold daily on a year-round basis for over 25 years. During that time, over 100 million pounds of geoducks were commercially harvested, sold, and consumed. Tens of millions of these pounds were harvested from all parts of Puget Sound and sold live. There has never been a reported case of illness or death from PSP associated with the consumption of geoducks. These facts are indicative of the reality that the viscera are not consumed. The current practice of testing only the viscera is not in compliance with the Model Ordinance, because it is not representative of the edible portion of this shellfish.

Cost Information (if available)	Live geoducks yield approximately $2.00 - $10.00 per pond, while eviscerated and frozen geoducks yield approximately 50¢ - $1.00 per pound. The low price and demand for frozen geoducks make this market no longer economically feasible.
Action by 2003 Task Force I	Recommended the proposal be sent to Committee with instructions to provide a report at the 2005 Annual Meeting of the Conference.
Action by 2003 General Assembly	Adopted recommendation of 2003 Task Force I.
Action by USFDA	Concurred with Conference action.
Action by 2005 Biotoxin Committee	Recommended no action on Proposal 03-106. Rationale – There is an inadequate amount of information and research at this time to formulate a higher standard for PSP in geoducks.
Action by 2005 Task Force I	Recommended adoption of the Biotoxin Committee recommendation of no action on Proposal 03-106. Rationale – There is an inadequate amount of information and research at this time to formulate a higher standard for PSP in geoducks.
Action by 2005 General Assembly	Adopted recommendation of 2005 Task Force I.
Action by USFDA	Concurred with Conference action.