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



EDMUND G. BROWN JR.  
Governor

November 18, 2015

Stephanie Mutz  
Commercial Fisherman of Santa Barbara, Inc.  
6 Harbor Way, #155  
Santa Barbara, CA 93109

Dear Ms. Mutz,

The California Department of Public Health (CDPH) and the Office of Environmental Health Hazard Assessment (OEHHA) are in receipt of your November 10, 2015 letter regarding the recent closure of the rock crab fishery as a result of elevated levels of domoic acid. CDPH and OEHHA have collaborated on the responses to your questions and they are being provided to you under this cover letter.

**1. What is the protocol to evaluate opening Santa Barbara County, how many samples from how many locations are needed?**

*Response: The sampling protocol requires evaluation of two consecutive sets of crabs, six crabs per sample, collected at least seven days apart, with all analytical results reporting below the action level of 30 parts per million (ppm) for viscera, before the health advisory can be lifted. CDPH has collected and tested rock crab samples from the coastal areas of Santa Barbara County and areas around Santa Rosa Island and San Miguel Island. The frequency of sample collection from various locations in Santa Barbara County will vary depending upon the domoic acid levels found from the latest sets of samples. Areas that show decreasing toxin levels that are approaching the action level will be sampled more frequently.*

**2. What are future plans to test for domoic acid regularly?**

*Response: CDPH will continue to test the levels of domoic acid in dungeness crab and rock crab from various coastal and offshore regions throughout the state. The frequency of monitoring will be determined by the presence of the toxin-producing diatom as well as the detection of domoic acid in other seafood samples (e.g., shellfish) being analyzed.*

**a. How can fishermen be more involved in testing?**

*Response: We appreciate the fishermen's interest in becoming more involved with the testing of dungeness and rock crabs on an ongoing basis. Fishermen willing to provide periodic samples can contact Nicole Givens at CDPH at [Nicole.givens@cdph.ca.gov](mailto:Nicole.givens@cdph.ca.gov).*

**b. What is funding mechanism to test regularly?**

*Response: State funding for current and future testing has and will continue to come from the state's General Fund. There is currently no other funding source to support ongoing domoic acid analysis.*

**3. Have any DA tests been conducted on the meat, what are details of results?**

*Response: CDPH has implemented protocols to test crab body meat when significantly elevated levels of domoic acid are reported in crab viscera. One of the current rock crab samples collected on 11/6/2015 from Block #690 had a level of domoic acid at 29 parts per million (ppm) in the crab's body meat, which exceeded the action level of 20 ppm. Several other rock crab samples collected from the Santa Barbara region in 2015 have also had concentrations of domoic acid in the body meat above the action level, ranging from 27 to 36 ppm.*

**4. In July results were 260 ppm, recent results were lower and show a decreasing trend, why is a closure in the Santa Barbara Channel recommended now?**

*Response: The levels of domoic acid in crabs has been declining since the earlier summer months in certain areas in Santa Barbara County; however, some of the samples have and continue to exceed the action level; therefore, CDPH will keep the health advisory in place and will continue to recommend that consumers not eat commercially or recreationally caught crabs in Santa Barbara County until the domoic acid levels subside below the action level. CDPH and OEHHHA have determined that crabs caught from Santa Barbara County currently pose a risk to public health.*

**5. What are the details of all domoic acid tests over the last six months in the Santa Barbara area, including Channel Islands, specifically the 260 ppm?**

*Response: CDPH laboratory results for samples collected in June and July 2015 revealed dangerous levels of domoic acid in certain seafood caught in three counties, including Santa Barbara. This data supported the issuance of this summer's health advisory warning consumers not to certain shellfish, finfish and crabs from these regions. CDPH has limited data for the rock crabs collected from*

the Channel Island areas due to an inability to obtain crab samples following the announcement of the state's health advisory; however current data are available on the CDPH website at: <http://www.cdph.ca.gov/HealthInfo/Pages/fdbDomoicAcidInfo.aspx>.

**6. What are the criteria for alerts, vs. closure recommendations? Are there approved written protocols for this?**

*Response: Pursuant to California Health and Safety Code Section 110175, CDPH has the authority to warn the public regarding any health risk associated with a food product as determined necessary for the protection of the health and safety of consumers. Health advisories, such as those issued this year, warn consumers about significant events as they are identified. As events become extremely widespread, rise to a level of significant concern based on the potential exposures to toxins, or appear not to be voluntarily complied with by the public, CDPH and OEHHA discuss the public health concerns with CDFW so they can determine if a closure is warranted. Because the types of events and contaminants can vary greatly, there are no specific written protocols that describe this process.*

**7. Is it possible to consider regional testing and management areas (Islands vs. coast)?**

*Response: Yes. CDPH has developed its sampling plan to ensure that regional data are available for each port identified in California. In Santa Barbara County, crab samples will be collected from both coastal and off-shore areas, in addition to areas around the Channel Islands. Crabs collected around the Channel Islands can have different levels of domoic acid than samples collected along the immediate coast.*

**8. Why do the tests take 2-3+ days, when shellfish growers gets results in 24 hours? During a fishery closure may we get test results in 24 hours?**

*Response: CDPH is diligently working to process samples, conduct testing and ensure the accuracy of results before reporting their analytical results to the public. The laboratory staff has made domoic acid testing and reporting results its top priority and has been reporting results within 48 hours upon receipt of the samples in the laboratory. Each crab sample consists of six or more crab, each of which requires individual processing (cooking, dissecting tissues, homogenizing, extracting) prior to analysis, in comparison to a single shellfish sample that requires minimal processing before being analyzed. A single sample can often be reported tentatively by the end of the day; however, the large number of crab samples requires a corresponding longer analysis time, with samples being run overnight and into the weekend. Given that a recommendation to open a closed fishery requires two set of samples collected one week apart, a 24-hour turnaround is not necessary. The shellfish test you are referring to is a presumptive screening test and the results are only used to close harvest areas to prevent potentially adulterated shellfish from entering the marketplace while confirmatory laboratory testing is completed.*

**9. How can we go about changing testing protocols so viscera is removed prior to cooking for sampling – such as claws or body meat only?**

*Response: Samples are prepared for analysis based on the common methods that the public uses to prepare their crabs for consumption, including cooking whole intact crabs. By preparing and analyzing the crabs in this method, the results more accurately depict the actual exposure that a consumer might face while consuming the crab.*

**10. How do you set advisory and/or closure lines based on sampling locations?**

*Response: CDPH sets boundaries in its advisories based on available data. In the 2015 event, we have identified elevated levels of Pseudo-nitzschia in Santa Barbara County waters and elevated levels of domoic acid in a variety of different species over the last few months. Testing of waters in the Ventura County area for Pseudo-nitzschia as well as other seafood species caught from those areas did not identify any elevated levels of concerns, which is why the current boundary only went as far south as the Santa Barbara County line. A lack of data from the Channel Islands unfortunately limited CDPH's ability to specifically address the conditions in those areas. Current testing of products caught in that area will help refine the advisory if the analytical results indicate it would be necessary.*

**11. What are the criteria/protocols for a meat-only consumption advisory?**

*Response: CDPH is not prepared to issue a meat-only consumption advisory at the current time. Based on analytical data, the higher the level of domoic acid found in the viscera, the more likely that concentrations of domoic acid exceeding the action level will also be present in the body meat. Analysis of samples of crab body meat this year has identified crabs with domoic acid in excess of the action level of 20 ppm for meat.*

**12. Are imported crab tested (concerns with crab coming in from Mexico)?**

*Response: Imported crabs from Mexico, are not part of CDPH's sampling plan at the current time. CDPH does not have any information that would suggest that there are currently elevated levels of domoic acid in crabs caught in Mexico. The US Food and Drug Administration would be the lead agency for testing and evaluating imported seafood products for the presence of domoic acid.*

**13. Can testing be grouped by species of rock crab? Do different species of rock crab show different trends?**

*Response: CDPH tests each crab's viscera individually; however, the majority of samples have not identified individual crabs to species level. Since the reporting has*

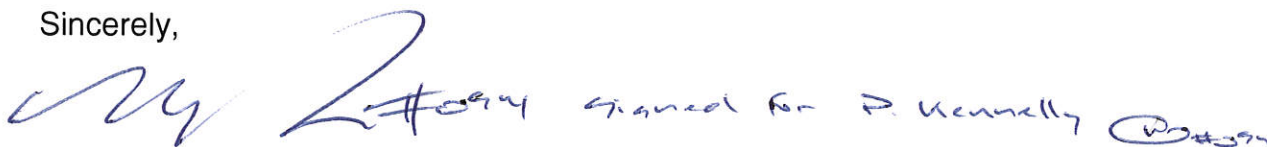
*not specified the different types of rock crabs, information regarding trends for species-specific rock crab is not currently available. However, current and past data shows that domoic acid has been detected at concentrations well above the action level for red, yellow and brown rock crab, as well as for dungeness crab.*

**14. Is it possible to open the rock crab fishery in Santa Barbara County before the Dungeness fishery if sufficient tests come back clean in Santa Barbara County?**

*Response: CDPH and OEHHA will recommend that CDFW reopen the rock crab fishery when the analytical data satisfies the testing criteria currently in place (as specified above).*

If you have any additional questions or need additional clarification, please contact Nicole Givens at (916) 319-9661.

Sincerely,

 signed for P. Kennelly

Patrick Kennelly, Chief  
Food Safety Section

Cc: Craig Shuman  
California Department Fish and Wildlife

Susan Klasing, Ph.D.  
Office of Environmental Health Hazard Assessment