

Port Valdez Spot Shrimp Hydrocarbon Uptake

FACT SHEET

Overview

This project is designed to answer the question – are personal use shrimp caught in Port Valdez contaminated by hydrocarbons from crude oil?

Crude oil hydrocarbons do enter Port Valdez, discharged from the terminal's ballast water treatment facility. The concentrations are probably low. The amount has declined in recent years because of decreased oil flow and more tankers are able to separate ballast water from the oily cargo tanks. This reduced amount of oil is estimated to be less than a barrel per day, which may be within the capacity of the ecosystem to degrade the contaminants to very low levels.

This project has four objectives:

1. Assess the concentrations of hydrocarbons from crude oil in shrimp, including whether the level of hydrocarbons are a risk to human consumers
2. Assess total hydrocarbons in the shrimp body compared to the edible portion consumed by humans. This assessment will also look at the hepato-pancreas (the organ that filters toxins similar to a liver in a human) to determine whether the shrimp's system is breaking down the hydrocarbons.
3. Assess whether contamination from hydrocarbons pose a risk to the shrimp's reproduction.
4. Sediments from the collection sites will be compared to tissue of the shrimp to determine the source and significance. A sampling plan for the collection sites and comparisons of tissues will be developed.

A council study done in early 2000 looked at the concentrations of hydrocarbons in pelagic copepods. Testing determined that hydrocarbons from the Valdez terminal were detectable in the copepods. While shrimp do not have similar lipid

concentrations as copepods, they are intimate with the sea floor, which provides a food source and cover from predators. Some shrimp species that bury into the soft sediments may be at higher risk of exposure.



This project is part of the work of the council's Scientific Advisory Committee. For more information, contact council project manager, Joe Banta, banta@pwsrca.org. On the web: www.pwsrca.org