

Shellfish Sampling: M/V Kuroshima:

Objectives: To document bioavailability and exposure pathways of the spilled oil, and to determine potential "worst-case" levels of contamination in subsistence resources

Sample Types: Three samples each of chitons, mussels, limpets, and urchins, for a total of 12 samples. These species were selected based on discussions with the Qawalangin tribe, and based on availability.

Sample Size: Attempted to collect at least 30 gms wet weight of tissue, or approximately 5-20 animals per sample.

Location: Rocky platform approximately 200 meters east of the vessel- essentially the first rocky area astern of the vessel. (see map) Oil stains were present on top of rocks near high tide line, about 2+ meters higher than the rocky platform where the samples were collected. No oil or sheens observed on the rocky platform or in tide pools. No odor. No dead or moribund animals observed. The area was well flushed and subject to high wave energy.

Time/Date: Samples were collected on the evening of 12/12/97. Low tide was at about 10 PM. Air temperature was approximately 0 degrees C, with light snow.

Method: Sampling method was taken from NOAA "Protocols for Collecting NRDA Samples" 1997. The following method was used: Areas of abundant invertebrates were located. Thin paring knives were used to pry animals from the substrate. Animals of approximately the same shell/body size were collected. Only live animals were collected. The sampler handling the animals wore surgical gloves. Between samples, the gloves were changed and the knives were cleaned. The samples, substrate, gloves, and knives were frequently inspected for evidence of visible contamination, but none was noted. Animals were collected whole and each composite sample was wrapped together in clean aluminum foil. Samples were double wrapped in foil and then placed in ziplock bags. Waterproof labels were placed inside the bag.

Preservation: Samples were placed in a custody sealed container and immediately frozen. Samples were then placed in a cooler on blue ice and hand carried to Seattle, where they were stored in locked freezer.

Analytical Methods: Samples were sent to AD Little Laboratories in Cambridge, MA for analysis using the Modified EPA Method 8270, (GC/MS) with the list of PAHs expanded to include alkylated homologs. A small source oil sample (250 ml) was also sent to the laboratory in a separate container.