Interpreting the Sensory and Chemistry Data

The data table shows the results of sensory and chemical analysis on fish samples caught from the area to be re-opened between July 26 and July 29, 2010. Detailed information on the steps taken to analyze the samples can be found in the NOAA-FDA Opening Protocol. In short, a subset of all of the samples went through a battery of sensory analyses to ensure there was no detectable odor or taint from petroleum or the dispersant formulations used on the spill. The specimens sampled for sensory analysis and additional specimens were analyzed for polycylic aromatic hydrocarbon (PAH) chemical contaminants using an analytical chemical technique.

Species Sampled: 56 finfish samples and 21 shrimp samples of "sentinel" species were caught, representing the commercially and recreationally important species in the area to be re-opened. Except for large specimens, a "sample" constitutes a gallon of smaller fish (eg; menhaden) or shrimp. A subset of all samples were analyzed by sensory and either analyzed individually or combined with samples of the similar species at the same site to make a composite sample for chemical analysis. All 56 finfish and 21 shrimp samples underwent chemical analysis.

Adjacent Samples Due to Hypoxia: A zone of hypoxia, generally described as areas with bottom oxygen levels below 2mg/liter, has been an annual recurring feature west of the Mississippi River for decades. This hypoxia develops as a result of nutrient loading from the river outflow and is not associated with the Deepwater Horizon oil spill. Sampling efforts in grids C2 and C3 were complicated by the fact that the majority of these grids were hypoxic, thus finfish and shrimp were not significantly present. To augment the small number of samples gathered in these grids, samples were also taken from surrounding grids (D1, D4, D6, D7). A total of 36 finfish and 12 shrimp samples from these adjacent grids were analyzed to augment the samples from the grids to be re-opened (C1, C2, C3, C4). These results also appear in the table.

Latitude/Longitude: Coordinates of the precise locations where the fish were caught are given in the results table.

Date: Samples were collected between July 26 and July 29, 2010.

Sample Label: The sample label is a unique identifier that follows the sample from the time it is caught until the all processing has been completed.

Sensory Results: Every sample tested passed the battery of sensory analyses, including raw sample odor, cooked odor and cooked taste. The analyses are performed by teams of highly trained sensory technicians. The analyses detect petroleum odor or taint at levels far below what the average person can detect. The sensory technicians were also trained to sense the dispersant formulations used on the Deepwater Horizon oil spill.

Chemical Results: The chemistry data are reported in nanograms per gram (parts per billion: ppb) PAH in edible tissue of finfish collected. Above each compound symbol is

a numeric value for the level of concern (LOC) expressed in ppb. Chemistry results below the LOC for that particular compound are indication that the fish sample is safe for human consumption. Results that include the "less than" (<) symbol indicate results that are less than the level at which advanced analytical instrumentation can measure the quantity present. The following table summarizes the LOC's and the highest level measured in any of the samples analyzed from the area to be re-opened. Note that many of the results are 3 to 4 orders of magnitude below the LOC. The result for benzo(a)pyrene is at least 129 times less than the respective LOC. This is the result that comes closest to the LOC of all the samples.

compound	Level of Concern (ppb)	data table symbol	highest value in fish sampled (ppb)
Naphthalene	32,700.0	**NPH**	1.20
Fluorene	65,300.0	**FLU**	0.28
Anthracene/Phenanthrene	490,000.0*	**ANT/PHN**	<0.76
Pyrene	49,000.0	**PYR**	<0.27
Fluoranthene	65,300.0	**FLA**	<0.27
Chrysene	35,000.0	**CHR**	<0.31
Benzo(k)fluoranthene	3,500.0	**BKF**	<0.30
Benzo(b)fluoranthene	350.0	**BBF**	<0.30
Benz(a)anthracene	350.0	**BAA**	<0.27
Indeno(1,2,3-cd)pyrene	350.0	**IDP**	<0.27
Dibenz(a,h)anthracene	35.0	**DBA**	<0.23
Benzo(a)pyrene	35.0	**BAP**	<0.27

*LOC for Anthracene and Phenanthrene combined.