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Data and Quality Assurance/Quality Control Report For Trace Metals

Coastal Fish Contaminant Project Year 2, 1999-2000

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October, 2000

Quality Assurance/Quality Control Report For Trace Metals Coastal Fish Contaminant Project Year 2, 1999-2000

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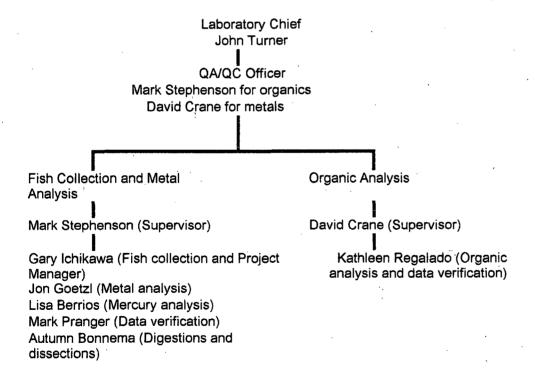
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Introduction

In July 1998, the State Water Resources Control Board (SWRCB) initiated the Coastal Fish Contamination Project. By February 1999, the planning phase was completed and the Department of Fish and Game (DFG) initiated the field work. The purpose of the program was twofold: 1: Determine if sport-caught fish contained concentrations of pollutants that were too high for human consumption based on the Office of Environmental Health Hazard Assessment (OEHHA) criteria and, if so, OEHHA would issue health advisories, and 2: Determine if the concentration of pollutants in sport-caught fish was increasing or decreasing. This report contains the QA/QC evaluation of the trace metal data from the second year of the program. Trace metal results from the first year are contained in a previous document. The station information and analysis results are listed in Appendix A by order of the region.

Laboratory Organization

The Department of Fish and Game was contracted to conduct the study for the State Water Resources Control Board and coastal Regional Water Quality Control Boards. This involved catching the fish and analyzing the samples for pollutants. The organizational chart is as follows:



Description of Methods:

The Field Sampling Methods Standard Operating Procedures (SOPs) and the Analytical Methods SOPs are contained in the Department of Fish and Game Quality Assurance Plan for the Marine Pollution Studies Laboratories (Moss Landing, CA) and the Water Pollution Control Laboratory (Nimbus, CA), which are available by request from David Crane or Mark Stephenson.

(D)

Standard collection and laboratory procedures were followed in preparing samples. Fish collected that were too large to fit in our clean bags (>500 mm) were initially dissected in the field. A large cross section from behind the pectoral fins to the gut was saved. These sections were wrapped in Teflon®, double bagged and packed in dry ice before transfer to the freezer. During lab dissection, a subsection of the filet was removed, discarding any tissue exposed by field dissection.

Sampling SOPs call for the smallest fish in a sample to be no less then 75% of the largest fish. Four samples analyzed were outside this range, indicated by a Y in the >25% column in Appendix A. Three of these samples were within 70% of the largest fish size. Weights and lengths for individual fish and crabs are given in Appendix A. For bivalves, fifteen were chosen at random from each sample for length measurements. Total weights, final weight of all individuals, were reported in Appendix A. Samples were analyzed for arsenic, cadmium, mercury and selenium.

Setter

QAPP and Control Limits

A Quality Assurance Project Plan (QAPP) has not yet been written for this program. In lieu of this document, the QA/QC parameters for collection and analysis are contained in the Department of Fish and Game Quality Assurance Plan for each lab as described in the preceding paragraph. In addition, guidelines that are specific to fish contamination studies have been modified from the EPA document entitled "Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories. Volume 1. Fish Sampling and Analysis. Second edition. 1995." The control limits adapted from this document are found in Table 1. These limits have been agreed to by DFG, OEHHA, and SWRCB, and are the interim parameters until a QAPP can be written.

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Table 1. QA Control Limits for Coastal Fish Contaminant Year 1

| | • | | |
|--|--|--|--|
| Sample Type (definition) | Frequency of Analysis | Recommended Control Limits | Recommended Corrective Action |
| External Calibration Calibration Standards (3-5 standards over the expected range of sample target analyte conc., with the lowest conc. Std at or near the MDL) | Follow manufacturer's or procedures in specific analytical protocols. A min., 3 point calib. Each set up, major disruption, and when routine-calib check exceeds specific control limits | Linear regression, r>0.995 | Determine cause and take appropriate corrective action. Recalibrate and reanalyze all suspect samples or flag all suspect data |
| Continuing Calibration Verification (CCV) Calibration Check Standards (minimum of one mid-range standard prepared independently from initial calibration standards: an instrument internal standard must be added to each calib. check std. when internal std. calib. is being used) | | Mercury %R = 80-120%, all other metals %R = 90-110% | Determine cause and take appropriate corrective action. Recalibrate and reanalyze all suspect samples or flag all suspect data |
| Method Detection Limit Determination Spiked matrix samples (analyte- free tissue samples to which known amounts of target analytes have been added; one spike for each target analyte at 3-10 times the estimated MDL) | Seven replicate analyses prior to use of method. Reevaluation of MDL annually | MDLs (in ppm, dry) weight) are as follows; Arsenic 0.1, Cadmium 0.01, Mercury 0.06, Selenium 0.1 | Redetermine MDL |
| | : . | ave wet w | t Oi 7 |
| | • | 1. V. V. V. | a log which |

Table 1 (continued)

Frequency of Analysis

Recommended Control Recommended Limits

Corrective Actions

Accuracy and Precision Assessment

Sample Type

Reference materials (SRMs or CRMs, prepared from actual contaminated fish or shellfish tissue if possible, covering the range of expected target analyte conc.)

Method validation: As many as required to assess accuracy and precision of method before routine analysis of samples. Routine accuracy assessment: one per 20 samples or one per batch.

Method validation and Routine accuracy assessment: %R = 75-125%

If matrix spikes are in control then proceed. If not, determine cause and take appropriate corrective action. Recalibrate and reanalyze all suspect samples or flag all suspect data

Matrix spikes (MS) (composite tissue homogenates of field samples to which known amounts frequent. of target analytes have been added: 0.5 to 10 times the concentration of the analyte of interest or 10 times the MQL).

One per 20 samples or one per batch, whichever is more

%R = 75-125%

If SRMs are in control then proceed. If not, determine cause and take appropriate corrective action. Recalibrate and reanalyze all suspect samples or flag all suspect data. Zero percent recovery requires rejection of all suspect data.

Matrix spike replicates (replicate One duplicate per 20 aliquots of matrix spike samples: 0.5 to 10 times the concentration of the analyte of interest or 10 times the MQL.). MS-MSD

samples or one per batch, whichever is more frequent. RPD <25% for duplicates.

Determine cause and take appropriate corrective action. Recalibrate and reanalyze all suspect samples or flag all suspect data

Laboratory replicates (replicate aliquots of composite tissue homogenates of field samples). One replicate (duplicate) sample per 20 samples or one per batch, whichever is more frequent.

RPD <25% for duplicates.

Determine cause and take appropriate corrective action. Recalibrate and reanalyze all suspect samples or flag all suspect data

| Sample Type | Table 1 (continued) Frequency of Analysis | Recommended Control Limits | Recommended Corrective Actions |
|--|---|--|--|
| Analytical replicates (replicate aliquots of final sample extract o digestate) | One duplicate per 20 r samples or one per batch, if laboratory replicates are out of control | | Determine cause of problem, take appropriate corrective action, and reanalyze sample |
| Field replicates (replicate composite tissue samples) | No field replicates for the scr number of replicates used in assessment sites will be dete program manager, OEHHA, Board. | the health risk ermined by consensus of | Determined by program manager |
| External QA Assessment Accuracy-based performance evaluation samples (NOAA intercalibration) | Once prior to routine analysis of field samples | %R=85-115% | Determine cause of problem and reanalyze sample |
| | One exercise per year | %R = 75-125% | Determine cause of problem and reanalyze sample. Do not continue analysis of field samples until laboratory capability is clearly demonstrated |

General Provisions

For a data set to be considered acceptable the CCV Recoveries must be within control limits and either the SRM or spiked matrix recoveries must also be within control limits

Quality Assurance and Quality Control

The following summarizes the results of the main QA/QC parameters for trace metals that are shown in Table 2. For this data set, the mercury and other trace metals were analyzed in four batches. Appendix B lists the batch number for mercury and the other metals and the samples associated with each batch

Accuracy

Mercury

The QA/QC parameters for accuracy include SRM and spiked matrix recoveries. They were within control limits (75-125%) 8 of 8 times for the SRMs and 13 of 16 times for spiked matrices. The three matrix spikes out of range were from Hg Batch 3. This batch contained acceptable SRM percent recoveries. Using the General Provisions at the bottom of Table 1, that the CCVs and either the SRMs or spiked matrix had to be within the control limits, the data sets passed QA/QC for accuracy.

Arsenic, Selenium, and Cadmium

All SRMs for arsenic and cadmium were within control limits. One SRM for selenium was out of the percent recovery range in TM Batch 1 (139%). For this batch and all other batches matrix spike samples were within control limits (75-125%). Overall, the accuracy QA/QC checks were very good and the out of control measurements were rare and not thought to affect data quality.

Precision

The QA/QC parameters for precision are sample, SRM, and spiked matrix duplicates relative percent differences (RPDs). Only 2 of 60 RPDs were out of range (>25%). Both RPDs were for selenium sample duplicates, one in TM Batch 1 (48.9%) and one in TM Batch 2 (33.7%). Both of these batches had a second sample duplicate that was within control limits as well as three other RPDs from matrix spikes and SRMs.

SRM duplicate RPDs were within control limits 12 of 12 times. These were not required in our agreed upon QA/QC parameters, but makes the data quality better. Overall, the precision QA/QC checks were very good and the out of control measurements were rare and not thought to affect data quality.

Continuing Calibration Verification

The continuing calibration verifications were all within the control limits (90-110 for trace metals other than mercury, 80-120 % for mercury).

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Table 2. QA/QC values for trace metal analysis reported in µg/g dry weight.

| Sample | Mercury | _ |
|------------------------|--------------|----------|
| | Conc. | % |
| MDI | | |
| RI | L 0.180 | |
| | ppm | |
| SRM | • | |
| Certified | 4.64 | |
| Value : | ± 0.260 | |
| DORM2 (50) | 4.72 | 102% |
| DORM2 (51) | 4.91 | 106% |
| RPI | 3.95 | |
| Duplicates | | - |
| 99-1059 | 0.578 | |
| 99-1059-D | 0.510 | |
| RPI | | |
| | | |
| 99-1139 | 0.227 | |
| 99-1139-D | 0.229 | |
| RPI | 0.877 | |
| Blank | | |
| Blank-317 | -0.0600 | |
| Blank-318 | -0.0600 | |
| Diame 510 | | |
| MS/MSD | | |
| 99-1059 | 0.578 | |
| 99-1059-SP | 2.55 | 109% |
| 99-1059-SP-D | 2.37 | 102% |
| RPI | 7.32 | |
| 99-1139 | 0.227 | |
| 99-1139-SP | 1.16 | 101% |
| 99-1139-SP-D | 1.13 | 96.0% |
| RPI | 2.62 | |
| Continuing Calibratio | n Verificati | on (daa) |
| Standard Concentration | | (FF-) |
| CCV-57 | 1072 - | |
| CCV-58 | 1048 | |
| CCV-59 | 1014 | |
| CCV-60 | 1045 | |

| Sample | | Mercury | Recovery |
|-----------------------|------|------------|----------|
| • | | Conc. | % |
| M | DL | 0.0600 | |
| | RL | 0.180 | |
| | | ppm | |
| SRM | | | |
| | ied | 4.64 | |
| Valu | | | |
| DORM2 (52) | | 4.67 | 101% |
| DORM2 (53) | | 4.43 | 95.5% |
| | PD | 5.25 | • |
| Duplicates | | | |
| 99-1257 | | 0.137 | |
| 99-1257 - D | | 0.155 | |
| | PD | 12.3 | |
| 99-1993 | | 0.100 | |
| 99-1993 99-1993-D | | 0.106 | |
| -: | PD | 5.83 | |
| | | | |
| Blank | | 0.000 | |
| Blank-319 | | -0.0600 | |
| Blank-320 | | -0.0600 | * |
| MS/MSD | | | |
| 99-1257 | | 0.137 | |
| 99-1257-SP | | 0.498 | 84.7% |
| 99-1257-SP - D | | 0.553 | 97.4% |
| R | PD | 10.5 | |
| 99-1993 | | 0.100 | |
| 99-1993-SP | | 0.397 | 102% |
| 99-1993-SP-D | | 0.414 | 101% |
| R | PD | 4.19 | |
| Continuing Calibrati | on V | /erificati | on (ppb) |
| Standard Concentratio | n | 1000 | |
| CCV-62 | | 1061 | |
| CCV-63 | | 1014 | |
| CCV-64 | | 1007 | |

| Sample | | Mercury | Recovery |
|----------------|-----------|------------|----------|
| • . | | Conc. | % |
| | MDL | 0.0600 | |
| - | RL | 0.180 | |
| | | ppm | |
| SRM | | | |
| (| Certified | 4.64 | |
| | Value ± | 0.260 | |
| DORM2 (54) | | 4.93 | 106% |
| DORM2 (55) | | 4.81 | 104% |
| | RPD | 2.46 | |
| Duplicates | | | |
| 99-1495 | | 0.242 | |
| 99-1495-D | | 0.234 | |
| ,,, | RPD | 3.36 | |
| 99-1248 | | 0.558 | |
| 99-1248-D | ٠ | 0.591 | |
| | RPD | 5.74 | |
| Blank | | | |
| Blank-321 | | -0.0600 | |
| Blank-322 | | -0.0600 | |
| Diame 322 | - | 0.0020 | 1 |
| MS/MSD | | | 7 |
| 99-1495 | | 0.242 | 6 |
| 99-1495-SP | | 1.36 | 174% |
| 99-1495-SP-D |) | 1.35 | 170% |
| | RPD | 0.738 | |
| | | | 1 |
| 99-1248 | | 0.558 | |
| 99-1248-SP | | 1.84 | 74.5% |
| 99-1248-SP-D |) | 2.25 | 97.9% |
| | RPD | 20.0 | <u> </u> |
| Continuing Cal | ibration | Verificati | on (ppb) |
| Standard Conce | | 1000 | |
| CCV-67 | | 1060 | |
| CCV-68 | | 1060 | |
| CCV-69 | | 1045 | |

| Mercury Batch 4 | | | |
|------------------------|------|--------------|---------------|
| Sample | | Mercury | Recovery |
| | | Conc. | % |
| M | DL | 0.0600 | |
| • | RL | 0.180 | |
| - | | ppm | |
| | | | |
| SRM | | : | |
| Certif | | 4.64 | |
| Valu | ie ± | | |
| DORM2 (62) | | 5.39 | 116% |
| DORM2 (63) | | 5.44 | 117% |
| R | PD | 0.923 | |
| Dunlington | | | |
| Duplicates 99-1089 | | 0.118 | |
| 99-1089-D | | 0.116 | j |
| | PD | 3.45 | |
| K | rD | 3.43 | |
| 99-664 | | 0.546 | |
| 99-664-D | | 0.667 | 1 |
| R | PD | 20:0 | غرر د .) |
| | | | |
| Blank | | | |
| Blank-329 | | -0.0600 | |
| Blank-330 | | -0.0600 | • |
| MS/MSD | | | |
| 99-1089 | | 0.118 | |
| | | | 09.00/ |
| 99-1089-SP | | 0.419 | 98.9% 104% |
| 99-1089-SP-D | DD | 0.439 | 104% |
| K | PD | 4.66 | |
| 99-664 | | 0.546 | |
| 99-664-SP | | 2.22 | 103% |
| 99-664-SP-D | | 2.18 | 101% |
| | PD | 1.82 | |
| | | | |
| Continuing Calibrat | | /erification | on (ppb) |
| Standard Concentration | n | 1000 | |
| CCV-71 | | 1019 | ĺ |
| CCV-72 | | 1029 | |
| CCV-73 | | 1002 | |
| CCV-74 | | 1019 | |

12 = Colotive 3 500

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| Sample | Arsenic | % | Cadmium | % | Selenium | % |
|------------------------|---------|----------|---------|---------------------------------------|-----------------|----------|
| • | Conc. | Recovery | | Recovery | Conc. | Recovery |
| MDL | 0.100 | | 0.0100 | <u>-</u> | 0.100 | |
| RL | 0.300 | | 0.0300 | | 0.300 | |
| • | ppm | | ppm | | ppm | |
| CDM | | · | | · · · · · · · · · · · · · · · · · · · | | |
| SRM Certified | 18.0 | | 0.0430 | | 1,40 | |
| Value ± | 1.10 | | 0.00800 | | 0.0900 | • |
| DORM2-50 | 15.8 | 87.8% | 0.0400 | 93.0% | 1.60 | 114% |
| DORM2-51 | 16.0 | 88.9% | 0.0430 | 100% | 1,94 | 139% |
| RPD | 1.26 | | 7.23 | | 19.2 | |
| D. Weiden | | | | | • | |
| Duplicates 99-1059 | 2.53 | | -0.0100 | | 1.06 | |
| 99-1059-D | 2.70 | | -0.0100 | | 1,16 | |
| 99-1039-D RPD | 6.50 | | 0.000 | | 9.01 | |
| NFD . | 0.50 | | 0.000 | | - | |
| 99-1139 | 11.3 | • | 7.60 | | 3.63 | |
| 99-1139-D | 11.9 | | 7.60 | | 5,98 | , |
| RPD | 5.17 | | 0.00 | . (| 48.9 | 6 |
| Blank | | • | | | The same of the | |
| Blank-317 | -0.100 | | -0.0100 | | -0.100 | |
| Blank-318 | -0.100 | | -0.0100 | | -0.100 | |
| Didna 310 | | | 5,0200 | | | |
| MS/MSD | | | | • | | ı |
| 99-1059 | 2.53 | | -0.0100 | | 1.06 | |
| 99-1059-SP | 11.5 | 93.0% | 0.220 | 81.0% | 5.04 | 84.0% |
| 99-1059-SP-D | 11.8 | 90.0% | 0.210 | 87.0% | 5,25 | 80.0% |
| RPD | 2.58 | | 4.65 | | 4,08 | |
| 99-1139 | 11.3 | • | 7.60 | | 3.63 | |
| 99-1139-SP | 107 | 91.0% | 16.3 | 91.0% | 15.3 | 116% |
| 99-1139-SP-D | 105 | 92.0% | 16.8 | 95.0% | 16.0 | 124% |
| RPD | 1.89 | | 3.02 | | 4.47 | |
| | | | | | | |
| Continuing Calibration | | (ppb) | | | 100 | |
| Standard Concentration | 100 | | 100 | | 100 | |
| CCV-45 | 100 | | 100 | | 100 | |
| CCV-46 | 99 | | 100 | | 101 | |
| CCV-47 | 100 | | 100 | - | 100 | |
| CCV-48 | 100 | | 99 | | 102 | |

| D | ata | h | • |
|---|-----|---|---|

| Sample | | Arsenic | % | Cadmium | % | Selenium | % |
|---|-----------|---------|------------|---------|-------------|---|----------|
| • | | Conc. | Recovery | Conc. | Recovery | | Recovery |
| | MDL | 0.100 | | 0.0100 | | 0.100 | |
| | RL | 0.300 | | 0.0300 | | 0.300 | |
| | | ppm | | ppm | | ppm | |
| | | | | | | ~ | |
| SRM | | | | | | | |
| (| Certified | 18.0 | | 0.0430 | | 1.40 | |
| | Value ± | 1.10 | | 0.00800 | | 0.0900 | |
| DORM2-52 | | 15.9 | 88.3% | 0.0400 | 93.0% | 1.30 | 92.9% |
| DORM2-53 | | 15.9 | 88.3% | 0.0350 | 81.4% | 1.43 | 102% |
| | RPD | 0.00 | | 13.3 | | 9.52 | <u> </u> |
| Duplicates | | | | | | | |
| 99-1257 | | 1.77 | | -0.0100 | | 0.840 | |
| 99-1257-D | | 2.13 | | -0.0100 | | 1.18 | ./ |
| | RPD | 18.5 | | 0.000 | | (33.7) | 3 / |
| | | • | | | | - Andrewson Anni | - |
| 99-1993 | | 3.48 | | -0.0100 | | 1.39 | |
| 99-1993-D | | 3.40 | | -0.0100 | | 1.42 | |
| | RPD | 2.33 | | 0.00 | | 2.14 | |
| Blank | | | | | | | |
| Blank-319 | | -0.100 | | -0.0100 | | -0.100 | |
| Blank-320 | | -0.100 | | -0.0100 | | -0.100 | |
| | | | | | | | |
| MS/MSD | | | | | | | |
| 99-1257 | | 1.77 | | -0.0100 | | 0.840 | |
| 99-1257-SP | - | 9.83 | 94:0% | 0.190 | 88.0% | 4.88 | 95.0% |
| 99-1257-SP- | D | 10.0 | 97.0% | 0.180 | 87.0% | 4.63 | 89.0% |
| | RPD | 1.71 | | 5.405 | • | 5.26 | |
| 99-1993 | | 3.48 | | -0.0100 | | 1.39 | |
| 99-1993-SP | | 12.5 | 95.0% | 0.210 | 85.0% | 5.69 | 91.0% |
| 99-1993-SP- | D . | 12.6 | 96.0% | 0.210 | 92.0% | 5.59 | 88.0% |
| ,,, <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u> | RPD | 0.797 | | 4.65 | 72.070 | 1.77 | 30.070 |
| | - 10 D | | | | | | |
| Continuing C | | | ation (ppb | | | | |
| Standard Conc | entration | | | 100 | | 100 | |
| CCV-50 | | 100 | | 99 | | 104 | |
| CCV-51 | | 99 | | 101 | | 98 | |
| CCV-52 | | 99 | | 100 | | 100 | |
| CCV-53 | | 100 | | 101 | | 104 | |

| ъ | - 4 | ۱. | R. | - |
|---|-----|----|----|---|
| | | | | |

| Daten 3 | | A | % | Cadmin | - % | Selenium | % |
|------------------|--------------|---------------|----------|------------------|-------------------|--------------|-------------|
| Sample | , | Arsenic | | Cadmium | | Conc. | % Recovery |
| |) (D) | Conc. | Recovery | Conc. | Recovery | 0.100 | Recovery |
| | MDL | 0.100 | | 0.0100 0.0300 | | 0.100 | |
| | RL | 0.300 | | | | | |
| | | ppm | | ppm | | ppm | |
| SRM | | | | | | | |
| SKW | Certified | 18.0 | | 0.0430 | | 1.40 | |
| | Value ± | 1.10 | | 0.00800 | | 0.0900 | |
| DORM2-54 | v aluc 1 | 17.5 | 97.2% | 0.0430 | 100.0% | 1.46 | 104% |
| DORM2-55 | | 17.6 | 97.8% | 0.0420 | 98% | 1.65 | 118% |
| DOMWIZ-33 | RPD | 0.570 | 21.070 | 2.35 | | 12.2 | |
| | IGD | 0.570 | | 2.55 | | 12.2 | |
| Duplicates | | | | | | | |
| 99-1495 | • | 21.4 | | 0.0100 | 7 | 1.78 | |
| 99-1495-D | | 21.60 | | 0.0100 | 4 | 1.61 | |
|)) 11,55 E | RPD | 0.930 | | 0.000 | $x \mathcal{U}$ | 10.0 | |
| | 14.0 | 0.550 | | 0.000 | * [| | |
| 99-1248 | | 4.25 | | 0.010 | 1 | 1.38 | |
| 99-1248-D | | 4.35 | | 0.010 | Ź | 1.56 | |
| | RPD | 2.33 | | 0.00 | | 12.2 | |
| | | | | | | | |
| Blank | • | | | | | | |
| Blank-321 | | -0.100 | | -0.0100 | | -0.100 | |
| Blank-322 | | -0.100 | | -0.0100 | | -0.100 | · |
| | | | | | | | |
| MS/MSD | | 21.4 | | 0.0100 | | 1 70 | |
| 99-1495 | | 21.4 | | 0.0100 | 07.00/ | 1.78 | 70.00/ |
| 99-1495-SP | . | 117 | 89.0% | 0.240 | 87.0% | 6.01 5.00 | 79.0% |
| 99-1495-SP- | | 117 | 90.0% | 0.230 | 83.0% | 5.99 | 79.0% |
| | RPD | 0.00 | • | 4.26 | | 0.333 | |
| 00 1249 | | 4.25 | | 0.010 | | 1.38 | |
| 99-1248 | | 4.25 14.2 | 93.0% | 0.010 | 82.0% | 5.92 | 85.0% |
| 99-1248-SP | D | 14.2 14.1 | 93.0% | 0.230 | 82.0% 83.0% | 5.88 | 84.0% |
| 99-1248-SP- | D RPD | 14.1 0.707 | 7Z.U70 | 4.26 | 03.070 | 0.678 | UT.U/0 |
| | RPD ; | 0.707 | | 4.20 | | 0.076 | |
| Continuing Ca | alibration ` | Verificatio | ր (թթե) | | | | |
| Standard Conce | | 100 | 41.7 | 100 | | . 100 | |
| CCV-56 | | 99 | | 100 | | 103 | |
| | | 99 | | 100 | | 100 | |
| CCV-57 | | 77 | | | | | |
| CCV-57 CCV-58 | 4 | 99 | • | 100 | | 102 | |

Batch 4

| ~ • | | | | | | | |
|---|------------|---|-------------------------|---|----------------|--|----------------|
| Sample | | Arsenic | % | Cadmium | % | Selenium | - % |
| |) mt | Conc. | Recovery | Conc. | Recovery | Conc. | Recovery |
| | MDL | 0.100 | | 0.0100 | | 0.100 | |
| | RL | 0.300 | | 0.0300 | | 0.300 | |
| | | ppm | | ppm | | ppm | |
| SRM | | | • | | | | |
| Co | ertified | 18.0 | | 0.0430 | | 1.40 | |
| • | Value ± | 1.10 | | 0.00800 | | 0.0900 | |
| DORM2-62 | | 17.9 | 99.4% | 0.0450 | 105% | 1.50 | 107% |
| DORM2-63 | | 17.6 | 97.8% | 0.0390 | 90.7% | 1.51 | 108% |
| · | RPD | 1.69 | | 14.3 | | 0.664 | |
| Duplicates | | | | | ۷. | | |
| 99-1089 | | 5.43 | • | -0.0100 | 11171 | 1.57 | |
| 99-1089-D | | 5.36 | | -0.0100 | · · · · · | 1.52 | |
| _ | RPD | 1.30 | | 0.000 | | 3.24 | |
| 00-0664 | | 8.92 | • | -0.0100 | : | 1.41 | |
| 00-0664-D | | 8.89 | | -0.0100 | į | 1.42 | |
| 00 0001 B | RPD | 0.337 | | 0.000 | • | 0.707 | |
| | | | | | | | |
| Blank | | 0.100 | | 0.0100 | | 0.100 | |
| Blank-329 | | -0.100 | | -0.0100 | | -0.100 | |
| Blank-330 | | -0.100 | | -0.0100 | | -0.100 | |
| MS/MSD | | | | | | • | |
| | | | | | | | |
| 99-1089 | | 5.43 | | -0.0100 | | 1.57 | |
| 99-1089 99-1089-SP | • | 5.43 12.9 | 94.0% | -0.0100 0.176 | 88.0% | 1.57 4.67 | 82.0% |
| | | | 94.0% 92.0% | | 88.0% 86.0% | | 82.0% 81.0% |
| 99-1089-SP | RPD | 12.9 | | 0.176 | | 4.67 | |
| 99-1089-SP 99-1089-SP-D | | 12.9 12.3 4.76 | | 0.176 0.168 4.65 | | 4.67 4.43 5.27 | |
| 99-1089-SP 99-1089-SP-D 00-0664 | | 12.9 12.3 4.76 8.92 | 92.0% | 0.176 0.168 4.65 | 86.0% | 4.67 4.43 5.27 | 81.0% |
| 99-1089-SP 99-1089-SP-D 00-0664 00-0664-SP | RPD | 12.9 12.3 4.76 8.92 75.0 | 92.0% 92.0% | 0.176 0.168 4.65 -0.0100 0.169 | 92.0% | 4.67 4.43 5.27 1.41 4.38 | 81.0% 87.0% |
| 99-1089-SP 99-1089-SP-D 00-0664 | RPD | 12.9 12.3 4.76 8.92 | 92.0% | 0.176 0.168 4.65 | 86.0% | 4.67 4.43 5.27 | 81.0% |
| 99-1089-SP 99-1089-SP-D 00-0664 00-0664-SP 00-0664-SP-D | RPD RPD | 12.9 12.3 4.76 8.92 75.0 71.2 5.20 | 92.0% 92.0% 91.0% | 0.176 0.168 4.65 -0.0100 0.169 0.159 | 92.0% | 4.67 4.43 5.27 1.41 4.38 4.11 | 81.0% 87.0% |
| 99-1089-SP 99-1089-SP-D 00-0664 00-0664-SP 00-0664-SP-D | RPD RPD | 12.9 12.3 4.76 8.92 75.0 71.2 5.20 | 92.0% 92.0% 91.0% | 0.176 0.168 4.65 -0.0100 0.169 0.159 6.10 | 92.0% | 4.67 4.43 5.27 1.41 4.38 4.11 6.36 | 81.0% 87.0% |
| 99-1089-SP 99-1089-SP-D 00-0664 00-0664-SP 00-0664-SP-D Continuing Cal Standard Concer | RPD RPD | 12.9 12.3 4.76 8.92 75.0 71.2 5.20 | 92.0% 92.0% 91.0% | 0.176 0.168 4.65 -0.0100 0.169 0.159 6.10 | 92.0% | 4.67 4.43 5.27 1.41 4.38 4.11 6.36 | 81.0% 87.0% |
| 99-1089-SP 99-1089-SP-D 00-0664 00-0664-SP 00-0664-SP-D Continuing Cal Standard Concent | RPD RPD | 12.9 12.3 4.76 8.92 75.0 71.2 5.20 Verificati 50 51 | 92.0% 92.0% 91.0% | 0.176 0.168 4.65 -0.0100 0.169 0.159 6.10 | 92.0% | 4.67 4.43 5.27 1.41 4.38 4.11 6.36 | 81.0% 87.0% |
| 99-1089-SP 99-1089-SP-D 00-0664 00-0664-SP 00-0664-SP-D Continuing Cal Standard Concer | RPD RPD | 12.9 12.3 4.76 8.92 75.0 71.2 5.20 | 92.0% 92.0% 91.0% | 0.176 0.168 4.65 -0.0100 0.169 0.159 6.10 | 92.0% | 4.67 4.43 5.27 1.41 4.38 4.11 6.36 | 81.0% 87.0% |

Frequency of analysis of QA/QC parameters

The requirements for frequency of analysis outlined in Table 1 have been met for all the parameters listed.

Completeness

The samples were analyzed for all the trace metal contaminants required and all batches were analyzed for the appropriate QA/QC parameters.

Summary of QA/QC

Overall, the data set passed QA/QC. There was one matrix spike set for mercury, Batch 3, that was substantially out of control, but because the SRM percent recovery was good the batch is thought to be spike error and not thought to affect the quality of the data from this batch. The other data sets were considered valid and passed QA/QC since they contained only a few minor out of control QA/QC measurements.

List of Abbreviations

CCV Continuing Calibration Verification (one independent standard)

DFG Department of Fish and Game EPA Environmental Protection Agency

ICV Initial Calibration Verification (one independent standard)

Matrix Spikes (MS)

Also called Spiked Matrix. A composite tissue homogenate of

field sample to which known amounts of target analytes have been

added.

Matrix Spike Replicate Also called (MSD). Replicate aliquots of Matrix Spike samples

MDL Method of Detection
MQL Method Quantitation Limit

NOAA National Oceanographic and Atmospheric Administration

OEHHA Office of Environmental Health Hazard Assessment

QA Quality Assurance

QAPP Quality Assurance Project Plan

QC Quality Control

RPD Relative Percent Difference

Sample Duplicate Also called Laboratory Replicate. Replicate aliquot of composite

tissue homogenate of field sample.

SOPs Standard Operating Procedures

SRM or CRM Standard Reference Material or Certified Reference Material

SWRCB State Water Resources Control Board

Appendix A

Year 2 Coastal Fish Contamination Program Station Information and Trace Metal Data

| | V | 2 Coastal Fish Contamina | tion D | roara | m Station Info | rme | tion And | Trace Me | atal Date | | ····· | т т | 1 | - | | | 1 | | | <u>.</u> | | - 1 | | _ | | | | | ГТ | $\overline{}$ | _ | $\overline{}$ | T |
|------------------|---------|-----------------------------|------------|-----------|------------------------------------|-----------|----------|-----------|--------------------|-------------|--|--------------------------|------------|--------------|--------------|--------------|--------------|---------------|--------------|-----------|--------------|--------------|---------------|---------------|--------------|--------------|---------------|---------------|--------------------|---------------|---------------|--------------------|--------------|
| | rear a | Coastai Fish Contamina | 1011 F | logia | III Station IIII | 11111 | luon And | 11ace Wil | | 1 | | | +- | _ | _ | _ | | | | _ | | ╗ | E | E | Ē | E | E | E | E | E | ᇎ | EE | |
| O ec | STATION | STATION NAME | on Locativ | SIES E | PECIES | SKIN PREP | ATITUDE | ONGITUDE | COLLECTION DATE | YEAR Access | Special Treatment | N (Number per sample) | | ength (1) mm | ength (2) mm | ength (3) mm | ength (4) mm | .ength (5) mm | ength (6) mm | th (7) mm | ength (8) mm | ength (9) mm | ength (10) mm | ength (11) mm | ength (12) m | ength (13) m | ength (14) mm | ength (15) mm | ength (16) mm | ength (17) mm | ength (18) mm | th (20) mm | 3 |
| i i i | [A] | STAT | Station | SPECIF | SP SP | \X | | Š | 얼절 | 18 | 1 Sec. 1 | N (Nur | | 5 | 5 | <u> </u> | 5 | 5 | | fengt. | 5 | | 9 | 9 | 틝 | 5 | 5 | eng | 틸 | 9 | | | Ne f |
| 99-1058-t | 1010 | | | TPS | Top Smelt | | 41 44.50 | 124 10.97 | 8/31/99 | _ | | 5 | 3 | 27 | 343 | 345 | 362 | 372 | | | | | | | | | | | | I | T | T | 246 |
| 99-1059-t | 1010 | Crescent City | | WHS | White Surfperch | s | 41 44.50 | 124 10.97 | 8/31/99 | _2 | | 5 | 2 | 33 | 234 | 236 | 251 | 286 | | _ | \dashv | \perp | | | | | | | \perp | \bot | 1 | | 140 |
| 99-1064-t | 1020 | Trinidad | | BLR | Black Rockfish | N | 41 03.40 | 124 08.84 | 9/1/99 | 2 | <u> </u> | 3 | 4 | 36 | 479 | 487 | | | | | _ | \dashv | -4 | _ | _ | _ | _ | | \dashv | 4 | 4 | ╀ | 918 |
| 99-1077-t | 1020 | Trinkdad | | DC | Dungeness Crab | | 41 03.40 | 124 08.84 | 9/14/99 | 2 | | 3 | 1 | 52 | 155 | 171 | | | | | | | | | | | | | | 1 | | 1 | 392 |
| 99-1061-1 | 1020 | Trinidad | | RCM | California Mussel California | | 41 03.40 | 124 08.84 | 9/1/99 | 2 | | 45 | | 91 | 91 | 90 | 89 | 88 | 87 | 85 | 85 | 81 | 80 | 80 | 78 | 77 | 73 | 71 | | ightharpoons | \perp | I | |
| 99-1062-t | 1020 | Trinidad | | RCM | Mussel | 1 | 41 03.40 | 124 08.84 | 9/1/99 | 2 | | 45 | | 80 | 73 | 72 | 72 | 70 | 68 | 66 | 65 | 65 | 64 | 64 | 62 | 62 | 61 | 60 | | | | | |
| 99-1080-t | | Humboldt Bay/Del Norte Pier | | RRC | Red Rock Crab | | 40 47.42 | 124 11.37 | 9/14/99 | 2 | | 5 | 1 | 09 | 119 | 132 | 133 | 135 | | | | | I | | | | | | \Box | I | I | I | 173 |
| 99-1078-t | 1030 | Humboldt Bay/Del Norte Pier | | SHS | Shiner Surfperch | s | 40 47.42 | 124 11.37 | 9/14/99 | , | | 4 | ١, | 29 | 131 | 141 | 144 | 1 | | | | - 1 | - | ١ | - 1 | | - 1 | | | | 1 | | 24.9 |
| 99-1081-1 | 1030 | | - | | Pile Surfperch | | 40 46.47 | 124 11.90 | 9/16/99 | | † | 3 | | | 372 | 382 | | | | | 7 | | 7 | 7 | 7 | \neg | \dashv | | \Box | + | + | + | 410 |
| 99-1083-1 | 1040 | | | RRC | Red Rock Crab | | 40 46.47 | 124 11.90 | 9/15/99 | 2 | | 5 | + | | 112 | 129 | 139 | 143 | | | | | | 丁 | | | | | | 工 | 工 | I | 146 |
| 99-1084-t | 1050 | Humboldt Bay/North Jetty | · | RCM | California Mussel | | 40 46.11 | 124 14.77 | 9/15/99 | 2 | | 45 | | 50 | 53 | 55 | 58 | 58 | 58 | 60 | 62 | 64 | 68 | 68 | 71 | 74 | 74 | 78 | \perp | \perp | \perp | \perp | |
| 99-1085-t | 1050 | Humboldt Bay/North Jetty | . | RCM | California Mussel | | 40 46.11 | 124 14.77 | 9/15/99 | 2 | | 45 | 1 | 62 | 61 | 72 | 52 | 56 | 62 | 62 | 60 | 52 | 62 | 63 | 59 | 72 | 62 | 64 | | | | 1 | |
| 99-1088-1 | 1050 | | | RRC | Red Rock Crab | | 40 46.11 | 124 14.77 | 9/16/99 | 2 | | 3 | 1 | 25 | 135 | 135 | | | | | | | | | | | | | | 工 | 1 | I | 162 |
| 99-1132-1 | 1060 | | | RRC | Red Rock Crab | | 34 54.86 | 123 42.55 | 9/21/99 | 2 | | 5 | 1 | 16 | 116 | 120 | 125 | 135 | | | | | \Box | \Box | | | | | \Box | \Box | I | I | 187 |
| 99-1136-t | 1070 | Spud Point Breakwater | | RRC | Red Rock Crab | _ | 38 19.64 | 123 03.43 | 9/22/99 | 2 | | 5 | 1 | 06 | 116 | 126 | 132 | 140 | | | - | | -4 | \dashv | _ | _ | _ | | \dashv | 4 | 4- | 丰 | 149 |
| 99-1137-1 | 1070 | Spud Point Breakwater | | SHS | Shiner Surfperch | s | 38 19.64 | 123 03.43 | 9/22/99 | 2 | | 11 | | 94 | 102 | 113 | 117 | 118 | 120 | 121 | 122 | 125 | 132 | 135 | | | | | | \perp | | L | 12 |
| 99-1135-t | 1070 | Spud Point Breakwater | | WHS | White Surfperch | s | 38 19.64 | 123 03.43 | 9/22/99 | 2 | | 10 | | 92 | 98 | 98 | 101 | 105 | 106 | 107 | 110 | 110 | 112 | | | | | | \Box | \perp | \bot | $oxed{\Box}$ | 10 |
| 99-1138-1 | 1080 | Saft Point State Park | | RCM | California Mussel California | L | 38 35.38 | 123 20.62 | 9/22/99 | 2 | ļ | 45 | \perp | 46 | 46 | 48 | 49 | · 49 | 50 | 51 | 52 | 53 | 53 | 55 | 63 | 65 | 66 | 74 | 4 | 4 | 1 | \downarrow | |
| 99-1139-t | 1080 | Saft Point State Park | | RCM | Mussel | | 38 35.38 | 123 20.62 | 9/22/99 | 2 | | 45 | | 64 | 55 | 56 | 62 | 60 | 60 | 61 | 52 | 55 | 64 | 69 | 75 | 65 | 62 | 62 | \perp | 丄 | \perp | 丄 | |
| 99-1140-t | 1090 | Bodega Harbor | | RCM | California Mussel | | 38 19.15 | 123 03.27 | 9/23/99 | 2 | | 45 | | B1 | 66 | 84 | 85 | 76 | 81 | 78 | 65 | 64 | 66 | 65 | 65 | 65 | 70 | 60 | | \perp | \perp | $oldsymbol{\perp}$ | |
| 99-1141-1 | 1000 | Bodega Harbor | | RCM | California Mussel | | 38 19.15 | 123 03.27 | 9/23/99 | 2 | | 45 | | 90 | 87 | 89 | 67 | 72 | 66 | 68 | 69 | 70 | 64 | 77 | 66 | 71 | 63 | 87 | 1 | | | | |
| 99-1142-1 | | Bodega Harbor | | RRC | | Г | 38 19.15 | 123 03.27 | 9/23/99 | - | | 5 | 1 | 13 | 115 | 120 | 129 | 135 | | | | | | | | | | | | \perp | 1 | | 162 |
| 00-0649-t | 1 | Marin Coast | | снѕ | Chinook Salmon | N | 37 45.18 | 122 58.48 | 5/10/00 | 2 | | 5 | 6 | 71 | 671 | 704 | 715 | 809 | | | \perp | | \perp | | | | | | $oldsymbol{\perp}$ | \perp | \perp | | Not |
| 00-0712-t | 2100 | San Francisco Coastline | | CHS | Chinook Salmon | N | 37 23.86 | 122 37.31 | 5/23/00 | 2 | | 3 | 6 | 49 | 661 | 686 | | | | | | | | | | | | | | | | | Not |
| 00-0657-t-Comp1 | | Devils Slide | | DC | Dungeness Crab Ctaw | | 37 35.15 | 122 31.38 | 5/9/00 | Г | | 5 | 1 | 55 | 158 | 159 | 166 | 171 | | | | | | | | | | | П | | T | Т | 408 |
| 00-0657-t-Comp2 | | Devits Slide | | DC | Dungeness Crab Hepato | | 37 35.15 | 122 31.38 | 5/9/00 | 2 | | 5 | 1 | 55 | 158 | 159 | 166 | 171 | | | | | | | | | | | | T | T | | 408 |
| | | | | | Dungeness Crab | Г | 27 20 04 | 122 20 70 | 4/18/00 | , | | 5 | Τ, | 58 | 163 | 163 | 164 | 178 | | | | | П | | | | | | | Т | T | Т | 462.96 |
| 00-0457-t-Comp1 | 2200 | Pacifica Pier | - | DC | Claw Dungeness Crab | - | 37 38.01 | 122 29.79 | 4/18/00 | Ľ | - | | + | 30 | 100 | 100 | 104 | 170 | | _ | \dashv | \dashv | -+ | \dashv | -+ | \neg | \dashv | | \dashv | + | + | + | 402.90 |
| 00-0457-t-Comp2 | 2200 | Pacifica Pier | | DC | Hepato Red Rock Crab- | L | 37 38.01 | 122 29.79 | 4/18/00 | 2 | | 5 | 1 | 58 | 163 | 163 | 164 | 178 | | - | \dashv | \dashv | \dashv | -+ | - | | \dashv | | \dashv | + | + | +- | 462.96 |
| 00-0611-t-Comp1- | 2200 | Pacifica Pier | | RRC | Claw - Red Rock Crab- | L | 37 38.00 | 122 29.86 | 5/3/00 | 2 | ļ | 5 | <u>Y 1</u> | 11 | 121 | 125 | 141 | 151 | | | | | \dashv | - | - | | | _ | \dashv | + | + | + | 203.66 |
| 00-0611-t-Comp2 | 2200 | Pacifica Pier | | RRC | Hepato. | | 37 38.00 | 122 29.86 | 5/3/00 | 2 | | 5 | <u>y 1</u> | 11 | 121 | 125 | 141 | 151 | | | | \perp | \perp | | | | | | \perp | \perp | \perp | $oldsymbol{\perp}$ | 203.66 |
| 00-0775-t | 2200 | Pacifica Pier | | WHS | White Surfperch | s | 37 38.00 | 122 29.86 | 6/13/00 | 2 | | 6 | 1 | 50 | 150 | 150 | 150 | 151 | 152 | [| | _ | 4 | _[| _[| _ | [| | 4 | 1 | 1 | Į. | 115.86 |
| 00-0458-t | 2201 | Pacifica Pier | | WSP | Walleye Surfperch | s | 37 38.00 | 122 29.86 | 4/18/00 | 2 | | 7 | _ 1 | 51 | 145 | 142 | 142 | 138 | 136 | 134 | ·] | _ [| _ | | _ 1 | _ | | | | _1 | | | 46 |
| 00-0664-t | - | Princeton Jetty | | | Pile Surfperch | • | 37 28.75 | 122 27.28 | 5/10/00 | 2 | Γ. | 3 | 2 | 54 | 300 | 340 | | | | | | | | | | | | | I | 工 | I | I | 301.08 |
| 00-0661-t | 2250 | Princeton Jetty | | RBS | Rainbow Surfperch | s | 37 28.75 | 122 27.28 | 5/11/00 | 2 | | 9 | 2 | 01 | 211 | 218 | 221 | 221 | 225 | 226 | 230 | 239 | 246 | _ | | | _] | | | | | | 156 |
| 00-0609-t-Comp1 | | Princeton Jetty | | | Red Rock Crab- Claw | | 37 28.75 | 122 27.28 | 5/3/00 | | | 5 | 1 | 11 | 114 | 115 | 116 | 147 | | \neg | \exists | \top | | T | \neg | | | | T | T | T | T | 244.56 |
| | | | \vdash | | Red Rock Crab- Hepato | T | 37 28.75 | | 5/3/00 | Г | | 5 | 1 | 7 | 114 | 115 | 116 | 147 | | | | \neg | 十 | | | T | | | T | T | T | T | 244.56 |
| 00-0609-t-Comp2 | 2250 | Princeton Jetty | | LKKC | пераю | ┖. | 31 20.15 | 122 21.28 | 3/3/00 | | L | | | • • • | 1141 | 110 | 1 10 | 147 | | | | | | | | 1 | | | | | | | 244.30 |

note craft class

| | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|------------------------|--|--------------|--------------|--------------|--------------|--------------|-----------------|--------------|---------------|---------------------|---------------|--------------------|-----------------|---------------|---------------|---------------|--|-----------------|----------|-----------|------------|-------------------------------|--------------------|-----------------------|----------|------------------|-----------------------|---------------------|---------|-----------------|-----------|-------------------------------|-----------------|--------------------|----------|
| | | | | | | | | | \Box | \perp | П | \perp | \bot | | \Box | \perp | | | | I | | | | $oldsymbol{\perp}$ | | Ţ: | | \perp | | Ţ | П | | I | | \Box | |
| • | ō | Velght (2) g | Veight (3) g | Veight (4) g | Neight (5) g | Velght (6) g | Velght (7) g | Weight (8) g | Weight (9) g | Weight (11) g | Neight (12) g | Neight (13) g | Weight (15) g | Weight (16) g | Weight (17) g | Weight (18) g | Weight (20) a | otal Weight g | Ag_w µg/g | 4 | As_w µg/g | 0/0rl ≫ 7c | AC_Cd_Cd | A A | g/fin w ng/g | B/Bri w | 4 | | Pb_w ug/g | B/Bri w | V | ug/g | TM CA Data | Hg CA Data Set | % Moisture MLML | ANALYSES |
| | Sample (D | Veigt | Veigt | Veigi | Velg | Veigi | Welgi | Veigi | Velgi | Veig | Şeg | Veig | Veig | Veig | Veig | Welg | Veig Seig | otat | ا ال | 5 | § 8 | 5 3 8 8 | 8 8 | 5 8 5 0 | N O | | 40 B | ð | n 2 3 | 2 8 | 8 | Zn_w ug/g | . 0 | # 3 # 12 # | W W | ANA |
| | 99-1058-t | 270 | 284 | 316 | 333 | | | | | I | | | | | | 1 | | | | 0.4 | 182 | 0.00300 | | | | 0.107 | | I | | 0.249 | | | | 1 1 | 74.81 | М |
| | 99-1059-t | 143 | 151 | + | 254 | | | | \perp | 1 | | \perp | 1 | Ц | _ | 1 | _ | | $\sqcup \bot$ | 0.5 | _ | -0.002 | | \perp | | 0.134 | Ш | ┸ | $\bot \bot$ | 0.244 | \sqcup | | | 1 1 | 76.87 | м |
| B1. 1001 | 99-1064-t | . 1490 | 1680 | \vdash | | 1 | _ | \rightarrow | - - | 4_ | \sqcup | + | \bot | $\vdash \vdash$ | + | + | + | ╁ | - | 0.4 | 166 | -0.002 | ╀ | + | ┝╌┼╌ | 0.231) | $\vdash \vdash$ | 4- | ╁┼ | 0.438 | ₩ | | ╂ | 1 1 | 78.77 | М |
| . BC | 99-1077-1 | 447 | 537 | Ц | | | L. | | | \bot | $\sqcup \downarrow$ | \bot | 1 | Ш | 4 | \perp | \perp | | Ш | 9. | 95 | 0.220 | \sqcup | 1 | oxdot | 0.208 | | Ļ | | 0.814 | Ц | _ | $oldsymbol{oldsymbol{\perp}}$ | 1 1 | 79.39 | м |
| • | 99-1061-t | | | \square | | \Box | | | | | Ц | \perp | ┸ | Ш | \perp | 1 | | 298.68 | Ц | 1. | 46 | 1.31 | $\sqcup \! \! \! \! \! \perp$ | _ | Ш | 0.0216 | Ш | \perp | | 0.670 | Ц | \perp | ╙ | 1 1 | 80.21 | м |
| | 99-1062-1 | | | | | | | | | | | | $oldsymbol{\perp}$ | | | | | 369.35 | | | | | | L | | <u> </u> | | | | | | | | | | |
| | 99-1080-t CVA | 1 179 | 231 | 237 | 244 | L | Щ | | _ | 1 | Ц | \bot | _ | \sqcup | 4 | 4 | \bot | <u> </u> | \sqcup | 13 | 3.4 | 0.282 | ├- | 4 | \vdash | 0.0828 | $\vdash \vdash$ | ┸ | $\sqcup \bot$ | 0.519 | \sqcup | | ↓_ | 1 1 | 80.05 | м |
| | 99-1078-t | 27 | . 41 | 46 | | | | | | | | - | | $ \ $ | . I. | | | | | 0.9 | 34 | 0.0424 | | | | 0.0907 | | L | 1.1 | 0.441 | | \perp | | 1 1 | 72.84 | м. |
| | 99-1081-1 | 574 | 695 | | | | | | \Box | I | | \perp | | Ш | \Box | I | \perp | | | _ | 550 | 0.00507 | | | 4 | 0.167 | Ш | \perp | | 0.283 | \Box | | | 1 1 | 77.84 | М |
| | 99-1083-t /rn | 1 165 | 187 | 233 | 285 | <u> </u> | Ш | | + | 4_ | \sqcup | + | +- | | - | + | + | <u> </u> | ⊢- | 8. | 04 | 0.353 | \vdash | ╀ | - | 0.103 | | ╄ | ++ | 0.790 | ╁╌╁ | + | ┿ | 1 1 | 81.19 | М |
| | 99-1084-t | | | Щ | | _ | L, | \perp | 4 | ↓_ | | \downarrow | _ | \coprod | 4 | \downarrow | 1 | 266 | | 1. | 40 | 0.940 | \sqcup | \perp | \sqcup | 0.0212 | Ц. | _ | - - | 0.707 | \sqcup | | _ | 1 1 | 78.98 | М |
| | 99-1085-t | | | | | | | | | | Ц | \perp | \perp | Ш | | \perp | ┸ | 237 | | | \perp | | Ш | | | | | \perp | | | Ц | \bot | $oxed{oxed}$ | | | ப |
| | 99-1088-t / 1//\lambda | 4 221 | | _ | | | Щ | | \perp | 1_ | Ц | 4 | \bot | \sqcup | 4 | 4 | \bot | <u> </u> | ⊢ | 5. | | 0.678 | $\vdash \vdash$ | \perp | - - | 0.130 | \vdash | 4_ | $\vdash \vdash$ | 0.688 | \vdash | \bot | - | 1 1 | 80.88 | M |
| DC | 99-1132-1 | 205 | | - | 305 | ▙ | _ | \dashv | + | +- | \vdash | + | ╀ | \vdash | + | + | + | ├ | \vdash | 7. | | 0.139 | ╟┼╌ | + | ┝ | 0.239 | \vdash | +- | ╁┼ | 0.612 | ╁ | - - | + | 1 1 | 78.32 79.59 | M |
| _ | 99-1136-t tt | 175 | 219 | 243 | 287 | ╁ | \vdash | - | | ┼╌ | ╁┼ | + | +- | Н | \dashv | + | ╁╴ | + | H | 1- | \neg | | \vdash | + | H | 1 | \vdash | 十 | ++ | 1 | \vdash | - - | + | ' ' | | |
| A-2 | 99-1137-t | 12 | _ | - | 22 | | 25 | | 26 2 | _ | \vdash | - - | + | \vdash | + | - | + | - | \vdash | 0.7 | _ | 0.0256 | ├- | ₩. | \vdash | 0.0844 | $\vdash \vdash$ | ╀ | ╁╌┼╴ | 0.377 | $\vdash \vdash$ | + | + | 1 1 | 72.15 | |
| 2 | 99-1135-1 | 10 | 11 | 12 | 12 | 13 | 14 | 16 | 16 1 | 6 | \vdash | + | ╁ | H | ╅ | + | + | ╁╌╌ | H | 0.2 | 196 | 0.00876 | ╁┼ | +- | \vdash | 0.0280 | \vdash | + | \vdash | 0.231 | H | +- | ╁ | 1 1 | 75.86 | <u>~</u> |
| | 99-1138-1 | 7- | | ⊢ | <u> </u> | | | - | + | ┼ | H | + | ╀ | H | + | + | + | 126 | ╂╌╂╴ | ╁ | ╌ | + | ╂╌╂╴ | ╁╌ | $\vdash\vdash$ | ╁ | $\vdash \vdash$ | ╫ | ++ | + | \vdash | | ╁ | + | - | H |
| | 99-1139-1 Mus | 501 | | \sqcup | | | | | + | 4- | $oxed{oxed}$ | + | +- | \vdash | \dashv | 4 | 1 | 177 | $\vdash \vdash$ | 1. | 72 | 1.24 | \vdash | - | $\vdash \vdash$ | 0.0381 | | ╀ | \vdash | 0.663 | H | | + | 1 1 | 84.24 | M UC |
| | 99-1140-t | | L | L | <u> </u> | | _ | | _ | 1 | \sqcup | \perp | 4 | \sqcup | 4 | 4 | 1 | 361 | | ┿ | - | | $\vdash \vdash$ | 4 | $oxed{oxed}$ | ↓ | \vdash | ╄ | ++ | ┼ | ╁╌┼ | \bot | ╀ | | ↓ | Н |
| | 99-1141-t V^ | | | | | | L | Ш | \perp | 1_ | Ш | ┸ | ┸ | Ш | \perp | 1 | ┸ | 266 | | _ | 16 | 1.26 | \sqcup | _ | $\sqcup \!\!\! \perp$ | 0.0203 | $\sqcup \bot$ | ┸ | \perp | 0.796 | Ц | _ | 1 | 1 1 | 80.84 | м |
| 大 子 | 99-1142-t AM | 1 209 | 241 | 297 | 309 | _ | L | - | _ _ | 4 | \sqcup | 4 | + | \sqcup | 4 | 4 | \perp | ļ | \vdash | 3. | 86 | 0.0993 | \vdash | \perp | | 0.291 | > | + | Н | 0.721 | \vdash | + | ┼ | 1 1 | 79.23 | м . |
| | 00-0649-t | Available | _ | Щ | | <u> </u> | | \Box | | 1_ | Ш | \perp | \perp | Ц | _ | 1 | 1 | | Ŀ | 0.3 | 302 | -0.002 | \sqcup | - | \sqcup | 0.0689 | | \downarrow | \sqcup | 0.262 | \sqcup | \bot | lacksquare | 4 4. | 73.30 | м |
| | 00-0712-t | Available | | L | <u>.</u> | | L. | | | | Ш | ᆚ | \perp | Ш | \bot | | ┸ | | Ц | 0.2 | 244 | -0.002 | Ц. | $oldsymbol{\perp}$ | | 0.0620 | | L | | 0.236 | Ц | _ | ـــــ | 4 4 | 73.18 | м |
| , , | 00-0657-t-Comp1 | 445 | 498 | 585 | 619 | | | | | | Ш | | | | | | L | | Ш | 12 | 2.3 | 0.297 | Ш | | Ш | 0.402 | 4/ | /u | | 0.799 | Ш | | | 4 4 | 80.31 | м |
| 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 00-0657-t-Comp2 | 445 | 498 | 585 | 619 | | | | | | | | | | | | | | Ш | 10 | 0.6 | 9.06 | | | | 0.234 | A | 710 | 10 | 1.67 | | | | 4 4 | 78.93 | М |
| cyell s | 00-0457-t-Comp1 | 483 | 531 | 533 | 675 | | | | | | | | | | \perp | 1 | | l | | 1: | 5.3 | 0.431 | | | | 0.439 | | 16 | 10 | 0.716 | Ш | | | 4 4 | 79.37 | м |
| 1 | 00-0457-t-Comp2 | 483 | 531 | 533 | 675 | | | | T | | | | | | | | 1 | | | 9. | 67 | 2.00 | | | | 0.141 | 1 | 10 | Jy : | , 1.04 | Ш | \perp | | 4 4 | 89.26 | MCV |
| | 00-0611-t-Comp1 | 261 | 289 | 328 | 464 | | | | Т | T | П | | | П | | | | | | 12 | 2.0 | 0.724 | | | | 0.164 | c | 1 | | 1.10 | | | <u> </u> | 4 4 | 76.56 | м |
| | 00-0611-t-Comp2 | 261 | T | 328 | 464 | | | | \neg | T | П | Т | Т | П | T | | Г | | | 8 | 34 | 33.6 | ΙГ | | | 0.0868 | 'n | $\prod_{i \in I} f_i$ | | 1.98 | | | | 4 4 | 75.33 | м |
| | 00-0775-t | 124 | _ | _ | | 191 | - | H | + | †- | Н | -†- | + | \Box | \dashv | + | + | - | | _ | 708 | -0.002 | \vdash | | \vdash | 0.0679 | 1 | 1 | 11 | 0.270 | H | \top | T | 4 4 | 77.51 | м |
| | | | | П | | T | ~ | | 1 | 1 | \sqcap | \top | T | П | \top | \top | T | | П | 0.3 | ,,, | 0.00853 | | | | 0.0849 | | | П | 0.382 | П | T | | 4 4 | 78.67 | м |
| | 00-0458-t 00-0664-t | 415 | | - | 39 | 38 | 32 | \vdash | \dashv | +- | - | + | + | ╁┤ | + | + | + | + | \vdash | _ | 08 | -0.002 | \vdash | + | \vdash | 0.0849 | $\vdash \vdash$ | + | | 0.382 | 十 | + | \dagger | 4 4 | 76.70 | |
| | | | П | | | 1 | | | _ | † | \sqcap | 十 | \top | \sqcap | 十 | \dagger | \top | 1 | \Box | \top | | 0.00238 | \sqcap | 1 | | 0.0698 | | T | $\uparrow \uparrow$ | T | 1 | \top | T | 4 4 | | |
| | 00-0661-t | 180 | | | | | 255 | 275 | 218 | \dagger | H | + | + | H | + | + | \dagger | | 11 | \neg | 955 | 1 - | \sqcap | \top | | 1 | <u> </u> | 1 | †† | 0.229 | H | + | 1 | 7 | 76.18 | M |
| ; | 00-0609-t-Comp1 | 288 | T | 315 | 446 | T | - | $\vdash \vdash$ | + | +- | ╁┼ | + | ╁ | H | + | + | + | t | + | 9. | | 0.134 | $\vdash \vdash$ | | \vdash | 0.139 | - | | | 0.773 | H | + | +- | 4 4 | 79.71 | |
| (40 p | 00-0609-t-Comp2 | 288 | 289 | 315 | 446 | 1 | L | ᆜ | | | | ㅗ | | ш | | | | | | 1.9. | 08 | 15.9 | ᄔ | | | 0.125 | ∤ | <u> </u> | | 1.70 | | | Ь. | 4 4 | 78.63 | М |

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|--|-----------------|---------|---------------|------------|-----------------|------------------|---------------|---------------------------------------|----------------|-------------|-----------|---------------------|-------------|----------------------|--------------------------|---------|---------------|---------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|---|----------------|--------------|
| Concess 2200 Prostons, Altry Very (Wilse Sulphum) 27 287 5 297 20 | CI | STATION | NOMBEK | | STATION NAME | Station Location | SPECIES | SPECIES NAME | SKIN PREP | LATITUDE | LONGITUDE | COLLECTION DATE: | YEAR Access | Special Treatment | N (Number per sample) | >25% | Length (1) mm | 8 | Length (3) mm | € | Length (5) mm | Length (6) mm | Length (7) mm | Length (8) mm | Length (9) mm | Length (10) mm | Length (11) mm | Length (12) mm | Length (13) mm | Length (14) mm | Length (15) mm | Length (16) mm | Length (17) mm | Length (19) mm | Length (20) mm | Weight (1) g |
| 10.00563 2000 Servit Misson Coasel 58.0 Bits Revision 18.3 72.07 12.2 30.74 5.9000 2 4 5.0 5 25 25 25 25 25 25 25 | +06 54-t | | | Jetty | | | wo | White Croaker | N | 37 28.75 | 122 27.28 | | 2 | | | _ | | | - | | | | | [| [| -1 | [| | | | Ш | \sqcup | | 4_ | Ш | 110.59 |
| December 1,000 Series Borden Cottest 1,000 1 | -0663-t | 22 | 0 Princeton | Jetty | | | _ | | | | | | 2 | | 6 | _ | | _ | | | | 232 | | _ | _ | | _ | | | | | \perp | _ | 4_ | Ш | 100 |
| Control Cont | -0659t | 23 | O San Mate | Coast | | | | | } | | | | 2 | | 5 | _ | _ | _ | | | 266 | - | _ | _ | | | - | | | | | | - | 4 | | 210.02 |
| Composed 2200 Sin Marker Count Prim Roddom N 37 29 70 122 30 74 59900 2 4 259 312 346 558 14 13 12 15 14 15 15 14 15 15 15 | 1-0713-t | | | | | | _ | | - | | | _ | 2 | | 4 | _ | _ | _ | _ | - | | \dashv | - | | | | - | | | | _ | $\vdash \vdash$ | - | 4- | Н | 285.37 |
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| GO 07114 2000 Sun Mateo Coasst Sprictim Spric | 1-0660-t | 23 | 00 San Mater | Coast | ٠ ا | | RTR | | N | 37 29.70 | 122 30.74 | 5/9/00 | 2 | | 4 | | 298 | 312 | 346 | 358 | | | | | | | | | | | | Ш | | | | 300.62 |
| 09-14724 3010 Sartia Cruz Wharf Yr. Crosser 1 35 57.52 122 0.05 107 450 2 5 165 175 150 150 205 | | 1 | | | | | ere | | Ι., | 27 20 70 | 122 20 74 | 5/12/00 | ٦ | | 13 | | 140 | 130 | 130 | 125 | 135 | 134 | 133 | 132 | 126 | 125 | 115 | 114 | 100 | | | | 1 | | | 44,75 |
| 99-10904 3000 Sarfa Barbana akty DI Diamond Turbot S 34 24 56 119 41 08 91-909 2 5 194 195 199 214 256 1 199-1199 214 256 2 1 199-1199 214 256 1 1 | 1-0/11-1 | 23 | JU San Mater | Coast | | | · SF | | " | 31 29.10 | 122 30.14 | 3/22/00 | ۲ | | - " | + | 140 | 130 | 133 | - | | 154 | ,,,,, | 132 | | ** | 113 | 117 | 103 | | | H | + | ╅╴ | Н | 44.73 |
| September Sept | l-1272-t | 30 | 10 Santa Cru | z Wharf | | | YC | Croaker | N | 36 57.52 | 122 00.96 | 10/14/99 | 2 | | 5 | 4 | 165 | 175 | 180 | 190 | 205 | | | | | _ | _ | \dashv | | | _ | \vdash | | 4_ | Ш | 46 |
| Set 1504 3040 Sarria Barbara Jeffy | 1000.1 | 30 | 10 Santa Bar | hara letty | | | וח | Diamond Turbot | l s | 34 24 56 | 119 41.08 | 9/16/99 | 2 | | 5 | İ | 194 | 195 | 198 | 214 | 256 | | | | | | | - 1 | | | | | - 1 | | 1 | 88.5 |
| 0.007534 3000 Caphola Wharf 886 Barred Sufriperth N 35 56.08 121 57.22 65000 2 4 1.69 1.65 1.67 1.66 | | + | | | | | OPE | Opal Eve | ┿ | | 119 41.08 | 10/18/99 | 2 | | 5 | \top | 135 | 136 | 139 | 152 | 152 | | | | | \neg | 寸 | \neg | | | | \Box | \top | 7 | П | 36.1 |
| Write Crossbers Write Cros | | 1 | 1. | | | | | | Г | | | | П | | | 1 | | T | | $\neg \neg$ | | | | | | 7 | | | | | | \sqcap | \top | T | П | |
| 100-07534-Comp01 3050 Capitola Wharf W.C off N 36 50.08 211 57 22 6500 2 5 236 237 238 240 256 | -0752-t | 30 | 50 Capitola V | Vharf | | | BRS | | 1 N | 36 58.08 | 121 57.22 | 6/5/00 | 2 | | 4 | + | 146 | 165 | 167 | 169 | <u> </u> | | - | - | \dashv | | \dashv | - | \dashv | \dashv | \vdash | \vdash | + | +- | \vdash | 43.8 |
| 100-07534-Comp22 3050 Capitola Wharf Wick Off N 36 50.08 121 57.22 6.9500 2 5 220 236 250 254 263 | -0753-t-Comp | 1 30 | 50 Capitola V | Vharf | | | wo | on | s | 36 58.08 | 121 57.22 | 6/5/00 | 2 | | 5 | 1 | 235 | 237 | 238 | 240 | 258 | - | | _ | | | | _ | | - | | \dashv | + | +- | \sqcup | 134 |
| 99-10774 3050 Capitota Wharf YC Croaker N 30 58.08 12 15 7.22 82.4996 2 5 185 204 204 215 235 | I-0753-t-Comp | 2 30 | 50 Capitola V | Vharf | | | wo | off | N | 36 58.08 | 121 57.22 | 6/5/00 | 2 | | 5 | | 220 | 236 | 250 | 254 | 263 | _ | | | | | \perp | | | | | Ш | | | | 130 |
| DO-0517-1 3000 Cayuzos Pier WC White Croaker N 35 28.78 20 24 48 5000 2 5 283 291 292 293 287 | 4007.1 | | Controlo V | · | | | > | | Γ., | 36 58 08 | 121 57 22 | 8/2 <i>4/</i> 99 | , | | 5 | | 185 | 204 | 204 | 215 | 235 | | | - 1 | | | ı | - 1 | | 1 | | | | 1 | l | 75.1 |
| 100-0618-1 3070 Permo Pier Wc White Croaker N 35 8.13 120 38.84 5.4000 2 3 3 266 230 228 | | | | | \dashv | | | | - | - | | | - | | 5 | | | $\overline{}$ | | $\overline{}$ | | \exists | T | | | 7 | | _ | | | | | 1 | 1- | П | 267 |
| 39-1246-1 3120 Monterry Bay Bus Black Surfpenh N 36 37.90 121 55.12 101/399 2 5 5 256 310 311 311 332 | | | | | | | | | N | + | | | 2 | | - | | _ | | | | | | | | | | | 一 | | | | \sqcap | _ | 1- | П | 202 |
| Sep 12484 3120 Monterey Bay Bow Bow Rockflish N 6 37.90 121 55.12 10/1309 2 5 286 301 311 313 332 | | _ | | | | | | · · · · · · · · · · · · · · · · · · · | N | | | | - | | 5 | _ | | | | 283 | 290 | | | | | | | \neg | | | | \Box | | | П | 390 |
| September September Surface | | _ | | | | | | | | | 121 55.12 | 10/13/99 | 2 | | 5 | T | 296 | 310 | 311 | 311 | 332 | | | | | | | ╗ | | | | \Box | | $oldsymbol{ol}}}}}}}}}}}}}} $ | П | 397 |
| 99-10894 3140 Goleta Pier C Corbina 99-10894 3140 Goleta Pier C Corbina 99-10894 3140 Goleta Pier N 34 24.99 119 49.73 9/1499 2 5 201 185 181 165 162 99-11904 3170 Pajaro River Beach BRS Barred Surfperch N 36 51.27 121 48.39 3/1499 2 5 175 175 171 169 164 99-11904 3170 Pajaro River Beach BRS Barred Surfperch N 36 51.27 121 48.39 3/1490 2 5 150 184 195 199 198 99-10294 3180 Salinas River Beach BRS Barred Surfperch N 36 7.64 121 47.69 8/2599 2 3 197 165 208 09-10294 3180 Salinas River Beach WC White Croaker N 36 67.64 121 47.69 3/1300 2 5 199 208 235 236 239 09-10294 3200 Eikhorn Slough LS Leopard Shark N 36 48.67 121 46.96 5/1900 2 5 199 208 235 236 239 09-0675-1 3200 Eikhorn Slough LS Leopard Shark N 36 48.67 121 46.96 5/1900 2 5 1040 1160 1210 1270 1220 09-10294 3200 Eikhorn Slough Shark Beach WC White Croaker N 36 40.45 119 14.40 10/1999 2 5 183 183 183 185 1220 240 09-10294 3200 Eikhorn Slough Shark N 36 48.67 121 46.96 5/2600 2 10 133 134 134 135 135 136 140 140 145 146 09-10294 3200 Eikhorn Slough Shark Shark N 36 48.67 121 46.96 5/2600 2 10 133 134 134 135 135 136 140 140 145 146 09-10294 3200 Eikhorn Slough Shark Shark N 36 48.67 121 46.96 5/2600 2 10 133 134 134 135 135 136 140 140 145 146 09-10294 3200 Eikhorn Slough Shark Shark N 36 48.67 121 46.96 5/2600 2 10 133 134 134 135 135 136 140 140 145 146 09-10294 3200 Eikhorn Slough Shark Shark N 36 48.67 121 46.96 5/2600 2 10 133 134 134 135 135 136 140 140 145 146 09-10294 3200 Eikhorn Slough Shark Shark N 36 48.67 121 46.96 5/2600 2 10 133 134 134 135 135 136 140 140 145 146 09-10294 3200 Eikhorn Slough Shark Shark N 36 48.67 121 46.96 5/2600 2 10 133 134 134 135 135 136 140 140 145 146 09-10294 3200 Eikhorn Slough Shark Shark N 36 48.67 121 46.96 5/2600 2 10 133 134 134 135 135 136 140 140 145 146 09-10294 3200 Eikhorn Slough Shark Shark N 36 48.67 121 46.96 5/2600 2 10 133 134 134 135 135 136 140 140 145 146 09-10294 3200 Eikhorn Slough Shark Shark N 36 48.67 121 47.89 31.80 120 1210 1210 1270 1220 1220 1220 1220 | | | _ | | | | BUF | Blue Rockfish | N | 36 37.90 | 121 55.12 | 10/13/99 | 2 | | 5 | \perp | 284 | 304 | 317 | 326 | 340 | | | | | \Box | | \Box | | | | \Box | | | | 397 |
| 99-1090-1 3140 Goleta Pier CC Corbina N 34 24.99 119 49.73 9/14/99 2 5 201 185 181 185 182 9 194 184 185 187 1 | -0354-t | 31 | 30 Moss Lan | ding Beach | | | WC | | N | 36 81.92 | 121 80,11 | 3/14/00 | 2 | | 5 | \perp | 231 | 237 | 251 | 254 | 276 | | | _ | \dashv | _ | _ | _ | | Ш | | \sqcup | 4 | 4_ | Ш | 115 |
| 99-1090-1 3140 Goleta Pier | 9-1089-t | 31 | 40 Goleta Pie | er | | | α | Corbina | N | 34 24.99 | 119 49.73 | 9/14/99 | 2 | | 5 | \perp | 201 | 185 | 181 | 165 | 162 | | | | | _ | _ | _ | | | _ | Ц | \perp | \downarrow | Ц | 64.7 |
| 00-053-4 3170 Pajaro River Beach WC White Croaker N 36 50.75 121 48.96 3/14/00 2 5 211 224 226 227 238 99-1029-1 3180 Salinas River Beach BRS Barred Surtperch N 36 47.64 121 47.89 8/25/99 2 3 197 165 208 90-1029-1 3180 Salinas River Beach WC White Croaker N 36 47.64 121 47.89 3/13/00 2 5 199 208 235 236 239 90-100-100-100-100-100-100-100-100-100-1 | -1090-t | 31 | 40 Goleta Pie | er | | | YC | | N | 34 24.99 | 119 49.73 | 9/14/99 | 2 | | 5 | \perp | 175 | 175 | 171 | 169 | 164 | | | | _ | _ | _ | | | | | Н | _ | 1 | Ш | 63.9 |
| 00-033-1 3170 Pajaro River Beach WC White Croaker N 36 50.75 121 48.96 3/14/00 2 5 211 224 226 227 238 | L1190-t | 31 | 70 Palaro Riv | er Beach | | | BRS | Barred Surfperch | N | 36 51.27 | 121 48.73 | 9/30/99 | 2 | | 5 | | 150 | 184 | 195 | 195 | 198 | | | | i | _ | | | | | | | | | | 45.6 |
| 99-1029-t 3180 Salinas River Beach BRS Barred Surfperch N 36 47.64 121 47.89 8/25/99 2 3 197 165 208 | | _ | | | | | wo | White Croaker | N | 36 50.75 | 121 48.96 | 3/14/00 | 2 | | 5 | \perp | 211 | 224 | 226 | 227 | 238 | , | | | | \Box | | | | | | | \perp | \perp | | 87.4 |
| 00-0333-4 3180 Salinas River Beach | | 31 | 80 Salinas Ri | iver Beach | | | BRS | Barred Surfperch | N | 36 47.64 | 121 47.89 | 8/25/99 | 2 | | 3 | | 197 | 165 | 208 | | | | | | | | | | | | | | \perp | \perp | | 122 |
| 00-0725-t 3200 Etknom Slough SHS Shiner Surfperch S 36 48.67 121 46.96 5/26/00 2 10 133 134 134 135 135 136 140 140 145 146 | | 31 | 80 Salinas R | iver Beach | | | wo | White Croaker | N | 36 47.64 | 121 47.89 | 3/13/00 | 2 | | 5 | \perp | 199 | 208 | 235 | 236 | 239 | | | | _ | | _ | | | | L | | | 4_ | Ш | 66.7 |
| 99-1465-t 4020 Hollywood South Beach Speckled N 34 01.45 119 14.4 10/19/99 2 15 95 95 96 97 97 97 98 101 101 102 105 105 105 105 105 105 105 105 105 105 |)-0675-t | 32 | 00 Elkhorn S | lough | | | LS | Leopard Shark | N | 36 48.67 | 121 46.96 | 5/19/00 | 2 | | 5 | 1 | 040 | 1160 | 1210 | 1270 | 1280 | | | | _ | | _ | ļ | | | | \sqcup | _ | - - | \perp | 296 |
| 99-1465-t 4020 Hollywood South Beach Speckled N 34 01.45 119 14.4 10/19/99 2 15 95 95 96 97 97 97 98 101 101 102 105 105 105 105 105 105 105 105 105 105 | | 32 | no Elkhore S | lourah | | | SH | Shiner Surfperch | s | 36 48.67 | 121 46.96 | 5/26/00 | 2 | - | 10 | - | 133 | 134 | 134 | 135 | 135 | 136 | 140 | 140 | 145 | 146 | Į | | | | | | | | | 25.35 |
| 99-1465-t 4020 Hollywood South Beach SSD Sanddab N 34 01.45 119 14.4 10/19/99 2 15 95 95 96 97 97 97 98 101 101 102 105 105 105 105 105 105 105 105 105 105 | | | | | | | | | | | | | 2 | | | - | _ | | | - | - | | | | | | J | | | | | | | | П | 59 |
| 99-1097-4 4030 Channel Island Harbor RBS Surfperch S 34 09.53 119 13.41 9/15/99 2 7 101 110 112 113 113 115 99-1098-4 4030 Channel Island Harbor STR Spotted Turbot S 34 09.53 119 13.41 9/15/99 2 3 245 245 230 99-1092-4 4040 Ventura Pier BRS Barred Surfperch N 34 16.55 119 17.47 9/15/99 2 5 111 115 121 122 124 99-1091-4 4040 Ventura Pier CC Corvina N 34 16.55 119 17.47 9/15/99 2 5 165 176 177 192 194 00-0373-1 4040 Ventura Pier WC Off N 34 16.21 119 17.28 3/22/00 2 5 177 176 166 163 162 | | 1 | | | | | | Speckled | N | 34 01 45 | 119 14 4 | 10/19/99 | 2 | | 15 | T | 95 | 95 | 95 | 96 | 97 | 97 | 97 | 98 | 101 | 101 | 102 | 105 | 105 | 105 | 105 | ļΤ | T | T | П | 4 |
| 99-1098-t 4030 Channel Island Harbor STR Spotted Turbot S 34 09.53 119 13.41 9/15/99 2 3 245 245 230 99-1092-t 4040 Ventura Pier BRS Barred Surfperoh N 34 16.55 119 17.47 9/15/99 2 5 111 115 121 122 124 99-1091-t 4040 Ventura Pier CC Corvina N 34 16.55 119 17.47 9/15/99 2 5 165 176 177 192 194 00-0373-t 4040 Ventura Pier Wc Off. N 34 16.21 119 17.28 3/22/00 2 5 177 176 176 163 162 White Croaker-Write Croa | | | | | | | | Rainbow | T | | | | 2 | | | 1 | | \neg | * | | | | • | | | | \exists | | | | | П | \top | T | | 18 |
| 99-1092-t 4040 Ventura Pier BRS Barred Surfperoh N 34 16.55 119 17.47 9/15/99 2 5 111 115 121 122 124 99-1091-t 4040 Ventura Pier Cc Corvina N 34 16.55 119 17.47 9/15/99 2 5 165 176 177 192 194 00-0373-t 4040 Ventura Pier Wc off N 34 16.21 119 17.28 3/22/00 2 5 177 176 176 163 162 White Croaker- Wc off N 34 16.21 119 17.28 3/22/00 2 5 177 176 176 163 162 | | - | _+ | | | <u> </u> | | | + | | | | 2 | | - | - | | $\overline{}$ | | | | | | | | \neg | \neg | | | | | 口 | 1 | | П | 237 |
| 99-1091-t 4040 Ventura Pier CC Corvina N 34 16.55 119 17.47 9/15/99 2 5 165 176 177 192 194 00-0373-t 4040 Ventura Pier WC off N 34 16.21 119 17.28 3/22/00 2 5 177 176 163 162 White Croaker White | | 1 | | | | | | | 1 | | | | | | 5 | \top | | | | 122 | 124 | | | | 1 | | | | | | | П | T | T | П | 17.3 |
| 00-0373-t 4040 Ventura Pier WC off N 34 16.21 119 17.28 3/22/00 2 5 177 176 176 163 162 White Croaker- White Cr | | 1 | T | | | | | California | 1 | | | | | | 5 | \top | 1 | | | | | | | | | | | | | | | \prod | T | T | П | 38.6 |
| White Croaker- | | | | | | | - | White Croaker- | Τ_ | 1 | | | | | 5 | | | | $\neg \uparrow$ | | 162 | | | | | | | | | | L | | | \prod | | 50.2 |
| | | | | | | | | White Croaker- | Τ | | | | Г | | 5 | T | 164 | | $\neg \neg$ | 180 | 181 | | | | | | | | | | | | | \prod | | 12,3 |
| 99-1462-t 4050 Port Hueneme BRS Barred Surfperch N 34 08.29 119 12.09 10/19/99 2 5 136 135 134 132 128 | | 1 | 1 | | | | 1 | | 1 | 1 | - | <u> </u> | 2 | | _ 5 | | \neg | | | 132 | | | | | | | | | · | | | | Ι | floor | | 37.2 |
| 99-1463-t 4050 Port Hueneme SSD Sanddab S 34 08.29 119 12.09 10/19/99 2 10 115 116 116 117 117 118 119 120 121 122 | | 1 | | | | | 1 | Speckled | T | † · | | | 2 | | 10 | | 115 | 116 | 116 | 117 | 117 | 118 | 119 | 120 | 121 | 122 | | | | | | | floor | | | 12.01 |

Weight (20) g Weight (2) g Weight (4) g Velght (7) g Veight (8) g Hg OA Data 8.84 Moisture MLML SANALYSES Weight (3) g Ag_w µg/g Cu_w ug/g Ag .Q P. ð, 123 124 141 172 1.33 0.00218 0.244 0.281 4 00-0654-1 00-0663-0 120 121 125 153 178 0.725 0.00491 0.0636 0.263 75.43 M 4 79.53 M 00-0659t 239 241 255 304 0.479 -0.002 0.0665 0.328 4 00-0713-0 466 592 659 1.18 0.00209 0.491 0.314 79.09 M 0.670 0.00412 0.313. 0.301 4 79.39 M 00-0714-t Available 0.255 0.393 -0.002 0.255 00-0660-4 460 670 808 35 32 31 27 24 18 17 14 0.382 0.00460 0.0372 00-0711-t 34 34 0.345 77.01 M 0.147 89 0.837 0.00544 99-1272-1 78 204 0.366 3.43 0.0433 101 137 202 -0.002 0.339 90 0.0701 42 44 60 79 4.90 -0.002 0.291 3 77.09 M 99-1458-t 73 76 1.36 -0.002 0.0321 0.384 3 00-0752-t 66 78.71 154 160 195 0.668 0.00345 0.0843 0.316 77.64 M 00-0753-t-Comp1 135 140 142 189 200 0.800 -0.002 0.0899 77.57 00-0753-t-Comp2 0.00679 91 110 153 0.772 0.0892 0.351 76.58 99-1027-t 285 285 293 1.35 0.00232 0.0356 0.291 3 78.94 M 210 00-0617-t 0.00209 0.218 3 00-0616-t 126 122 0.748 0.292 79.27 450 472 0.866 -0.002 0.0584 0.244 3 78.83 99-1246-t 441 473 0.119 408 429 456 482 0.907 0.00300 0.294 3 78.67 M 99-1248-t 0.0756 77.49 M 505 542 552 659 0.490 -0.002 0.482 3 99-1247-t 0.310 3 0.844 0.00344 0.297 79.53 00-0354-t 134 139 167 215 1.15 0.0250 99-1089-1 51 46 39 37 -0,002 0.333 78.78 M 0.722 0.0319 77.51 M 64 59 55 -0.002 0.283 99-1090-t 0.494 0.00220 0.0727 0.238 77.96 M 99-1190-t 102 110 115 99 106 124 131 0.871 0.0230 0.172 0.297 4 79.11 M 00-0353-t 0.0792 155 0.648 -0.002 0.273 77.95 99-1029-t 63 0.845 0.237 0.00640 0.303 4 78.66 78 127 128 142 00-0333-1 5.81 0.0148 1.09 0.389 4 75.39 M 00-0675-0 372 415 423 454 0.981 0.0398 0.0719 0.374 35 36 42 00-0725-1 28 29 31 34 0.0246 70 127 157 1.16 -0.002 0.422 76.61 M 64 1 99-1464-t 9 11 11 0.450 -0.015 0.267 99-1465-1 0.0598 0.524 -0.002 -0.015 28 37 0.241 99-1097-6 27 29 30 0.332 194 191 5.00 0.00250 0.0418 1 77.89 99-1098-t -0.002 0.0243 99-1092-t 19 20 24 0.690 0.497 78.51 44 53 0.388 -0.002 -0.015 0.391 78.88 99-1091-t 41 58 0.0746 0.00615 0.305 47 50 39 0.401 77.65 00-0373-t 0.0296 00-0375-t 21 21 0.546 0.00668 0.306 75.51 20 0.702 -0.002 -0.015 0.368 77.85 31 29 27 21 99-1462-1 0.0635 77.61 99-1463-t

| | | | | cation | | | p. | J | , | <u>s</u> | 988 | | r per | T | E | шш | E | mm | E | E | E | E | E | (10) mm | Ē | E (S) | E G | E G | mm (s | S) mm | E | E E | E E | |
|------------------|----------|----------------------|-----------------|------------------|-------------|--|------------|----------|-----------|------------|-------------|----------------------|------------------------|--------------------|------------|---------------|------------|---------------|-----------------|-----------------|---------------|---------------|----------------|-------------------|-------------------------|--|----------------|-------------------------|----------------|----------------|-------------|----------------|--------------|--------------|
| Sample ID | STATION | | STATION NAME | Station Location | SPECIES | SPECIES | SKIN PREP | LATITUDE | LONGITUDE | COLLECTION | YEAR Access | Special Treatment | N (Number p sample) | >25% | Length (1) | Length (2) mm | Length (3) | Length (4) mm | Length (5) | Length (6) r | Length (7) mm | Length (8) mm | Length (9) mn | Length (10 | rength (11) mr | Length (12) | Length (13) mm | Length (14) mm | Length (15) mn | Length (16) mm | Length (17) | Length (18) mm | Length (20) | Weight (1) g |
| 99-1095-t | | Ventura Marina Jetty | • | | | Rainbow Surfperch | s | 34 14.93 | 119 16.37 | 9/15/99 | 2 | | 4 | \perp | 185 | 187 | 190 | 197 | | \perp | | | \perp | \perp | \perp | 1 | 1 | | | | \perp | | | 131 |
| 99-1096-t | 4060 | Ventura Marina Jetty | | | RBS | Rainbow Surfperch | s | 34 14.93 | 119 16.37 | 9/15/99 | _2 | | 15 | 4 | 112 | 115 | 116 | 116 | 118 | 120 | 121 | 122 | 23 1 | 24 1 | 26 1 | 27 1 | 29 | 133 | 133 | _ | 4 | _ | ↓. | 24 |
| 99-1093-t-Comp1 | 4060 | Ventura Marina Jetty | | | wc | White Croaker- on White Croaker- | s | 34 14.93 | 119 16.37 | 9/15/99 | 2 | | 10 | 4 | 156 | 169 | 174 | 175 | 178 | 179 | 180 | 185 | 191 1 | 95 | 1 | 4 | 4 | 4 | _ | \dashv | 4 | \perp | ╄ | 50 |
| 99-1093-t-Comp2 | | Ventura Marina Jetty | | | wc | off | _ | 34 14.93 | 119 16.37 | 9/15/99 | 2 | | 10 | \perp | 156 | 169 | 174 | 175 | 178 | 179 | 180 | - | | 95 | 1 | 1 | | 1 | | 4 | 4 | \perp | \downarrow | 50 |
| 99-1094-t | 4060 | | | | | White Surfperch | | 34 14.95 | 119 16.37 | 9/15/99 | 2 | | 15 | + | 109 | 113 | 113 | 115 | 115 | 117 | 118 | 119 | 19 1 | 19 1 | 20 1 | 22 1 | 28 | 128 | 135 | \dashv | + | - | + | 14 |
| 99-1759-t | 4080 | Santa Cruz Island | | | BUR | Blue Rockfish | 2 | 34 02.03 | 119 23.22 | 11/2/99 | _2 | | .5 | - | 283 | 298 | 333 | 349 | 368 | | | \dashv | \dashv | | ╌ | + | + | \dashv | - | - | + | + | ┦ | 411 |
| 99-1760-t | 4080 | Santa Cruz Island | | | RTR | Rosethorn Rockfish | N | 34 02.03 | 119 23.22 | 11/2/99 | 2 | | 5 | \downarrow | 209 | 222 | 224 | 227 | 238 | | _ | _ | _ | ` | 1 | 1 | 1 | 4 | _ | 4 | 4 | 1 | 1 | 167 |
| 99-1257-t | 4090 | Belmont Pier | | | | Queenfish | s | | 118 04.65 | 10/12/99 | _2 | | 5 | -4 | 148 | 149 | 152 | 154 | 162 | | | | + | + | 4 | + | + | 4 | 4 | \dashv | - | - | 4- | 27.1 |
| 99-1256-t | 4090 | Belmont Pier | | | | Spotted Turbot | _ | 33 45.26 | 118 08.74 | 10/12/99 | _2 | <u> </u> | 5 | 4 | 211 | 228 | 243 | 248 | 260 | _ | - | 4 | - | | + | + | + | | | + | + | + | + | 104 |
| 99-1255-t | 4090 | Belmont Pier | | | | White Croaker | | 33 45.26 | 118 08.74 | 10/12/99 | _2 | | 5 | 4 | 192 | 214 | 220 | 226 | 255 | _ | _ | 4 | 4- | | + | + | + | | | -+ | + | + | + | 69.6 |
| 99-2527-t | 4100 | Catalina Island | | | , | Halfmoon | N | 33 22.89 | 118 21.47 | 12/15/99 | _2 | Ļ | 5 | 4 | 248 | 274 | 280 | 288 | 296 | _ | _ | _ | + | + | + | + | + | - | _ | + | 4 | + | + | 197 |
| 99-2525-t | 4100 | Catalina Island | | | | Kelp bass | N | 33 22.89 | 118 21.47 | 12/15/99 | _2 | | 5 | + | 305 | 305 | 305 | 314 | 357 | - | - | \dashv | - | + | + | + | - | - | | + | + | ╀ | + | 275 |
| 99-2526-t | 4100 | Catalina Island | | | OPE | Opaleye | N | 33 22.89 | 118 21.47 | 12/15/99 | _2 | | _5 | | 278 | 286 | 297 | 308 | 320 | - | | | + | - | 4- | 4 | + | 4 | 4 | \dashv | 4 | | + | 289 |
| 99-1758-1 | 4110 | Santa Monica Pier | | | BRS | Barred Surfperch | | | 118 29.91 | 11/1/99 | 2 | | 10 | \perp | 131 | 132 | 133 | 140 | 142 | 143 | 146 | 152 | 54 1 | 57 | \perp | \perp | \perp | 4 | | \downarrow | | \perp | | 24 |
| 99-1989-t | 4110 | Santa Monica Pier | | | QUF | Queenfish | s | 33 59.91 | 118 29.54 | 11/9/99 | 2 | | 5 | ᆚ | 159 | 168 | 169 | 170 | 174 | _ | _ | 4 | _ | _ | ┸ | 4 | 4 | -4 | _ | 4 | 4 | | ↓_ | 32.4 |
| 99-1991-1 | 4120 | Venice Pier | | | QUF | Queenfish | s | 33 58.79 | 118 28.41 | 11/9/99 | 2 | | 5 | | 169 | 173 | 174 | 176 | 186 | | _ | \dashv | | _ _ | \perp | 1 | 4 | _ | _ | _ | 4 | 1 | ↓_ | 38.3 |
| 99-1990-t | 4120 | Venice Pler | | | wc | White Croaker | N | 33 58.79 | 118 28.41 | 11/9/99 | _2 | | 5 | | 184 | 157 | 156 | 152 | 142 | | | | _ | _ _ | 1 | 4 | \perp | 4 | _1 | _ | 1 | _ | _ | 77.9 |
| 99-1992-1 | 4120 | Venice Pier | | | WSP | Watleye Surfperch | s | 33 58.79 | 118 28.41 | 11/9/99 | 2 | | 5 | \perp | 140 | 142 | 145 | 146 | 153 | | | \perp | | | \perp | | \perp | \perp | | \perp | \perp | \perp | | 32.8 |
| | | | | | | Yellowfin | N | | 118 06.74 | 10/20/99 | , | | اءا | | 231 | 235 | 260 | 290 | 299 | - 1 | - 1 | - 1 | | | | - | | | - 1 | - 1 | | - | | 126 |
| 99-1466-1 | 4140 | San Gabriel | ——— <u></u> | - | YC | Croaker White Croaker- | _ <u>N</u> | 33 44.90 | 118 00.74 | 10/20/99 | - | | - 3 | \dashv | 2311 | 230 | -200 | 290 | 299 | | - | \dashv | + | \dashv | + | + | + | \dashv | \dashv | + | + | + | ╁ | 120 |
| 99-1253-t-Comp 1 | 8010 | Seal Beach | | | wc | off | N | 33 44.08 | 118 06.64 | 10/12/99 | 2 | | 4 | \perp | 132 | 135 | 141 | 157 | | | | 4 | _ | _ _ | 1 | 4 | 4 | - | _ | \downarrow | 4 | \bot | ┺ | 20.2 |
| 99-1253-t-Comp-2 | 8010 | Seal Beach | , | | wc | | s | 33 44.08 | 118 06.64 | 10/12/99 | 2 | | 4 | \perp | 130 | 133 | 138 | 142 | | | | \perp | \perp | | 1 | 1 | _ | 1 | | | | ┵ | \perp | 18.8 |
| | | | | | YC | Yellowfin Croaker | ١., | 33 44.08 | 118 06.64 | 10/12/99 | ١, | | 5 | | 232 | 236 | 259 | 268 | 284 | . 1 | | - 1 | - 1 | 1 | 1 | | 1 | | 1 | ı | ı | | | 136 |
| 99-1250-t | | Seal Beach | | | | Barred Surfperch | Г | 33 39.86 | 118 01.34 | 10/20/99 | Ť, | | 10 | \top | 133 | 134 | 134 | 135 | 136 | 138 | 138 | 140 | 144 1 | 44 | T | T | 1 | T | | | 1 | | 1 | 32 |
| 99-1467-1 | - | Huntington Beach | | | | Shiner Surfperch | Г | 33 39.86 | 118 01.34 | 10/20/99 | 7 | | 10 | T | 109 | 111 | 112 | 113 | | $\neg \neg$ | | 118 | | 21 | 1 | T | 1 | 7 | | T | 1 | T | T | 12 |
| 99-1468-t | 8030 | Huntington Beach | | | SHS | Stiller Surperon | ۱ | 33 39.00 | 11001.34 | IW2W33 | ╁╧ | | " | \dashv | | | -,,,_ | | ,,,, | | | | ''' | - | + | \top | + | 7 | 一 | 7 | 1 | _ | 十 | |
| 99-1994-1 | 8040 | Newport Beach | | | BRS | Barred Surfperch | N | 33 36.10 | 117 55.20 | 11/11/99 | 2 | | 10 | | 143 | 146 | 149 | 152 | 153 | 156 | 158 | 159 | 160 1 | 62 | + | | + | + | \dashv | \dashv | + | + | ╀ | 42 |
| 99-1995-t | 8040 | Newport Beach | | | SHS | Shiner Surfperch | s | 33 36.10 | 117 55.20 | 11/11/99 | 2 | L | 10 | _ | 110 | 115 | 116 | 116 | 117 | 117 | 118 | 119 | 119 1 | 21 | \bot | 1 | _ | 4 | _ | 4 | 4 | \perp | ┸ | 14 |
| 99-1993-t | 8040 | Newport Beach | | | wc | White Croaker | N | 33 36.10 | 117 55.20 | 11/11/99 | _2 | <u> </u> | 5 | _ | 172 | 173 | 175 | 176 | 179 | | | _ | _ | _ _ | 4 | _ | 4 | 4 | \dashv | \dashv | 4 | \bot | 4 | 53.5 |
| 99-1998-t | 8050 | Newport Beach Pier | - 1 | | BRS | Валгеd Surfperch | N | 33 36.29 | 117 55.73 | 11/11/99 | 2 | | 10 | | 146 | 147 | 147 | 148 | 148 | 149 | 152 | 152 | 153 1 | 53 | | | | | | | | | L | 45.67 |
| 99-1996 | - | Newport Beach Pier | | | wc | White Croaker | N | 33 36.29 | 117 55.73 | 11/11/99 | 2 | | 5 | | 169 | 174 | 179 | 181 | 183 | | | | | $\Box \mathbb{L}$ | \perp | Ŀ | | $oldsymbol{\perp}$ | | | \perp | | | 43.2 |
| 00-0449-1 | | Balboa Pier | | | BRS | Barred Surfperch | N | 33 35.89 | 117 54.13 | 4/6/00 | 2 | | 3 | Y | 179 | 170 | 264 | | | Ŀ | _ [| T | | | | | | $_{ m I}$ | | | | | | 76.8 |
| 00-0449-t | | Balboa Pier | | Ι | DT | Diamond Turbot | s | | 117.54.13 | 4/6/00 | +- | | 4 | | 246 | 242 | 234 | 222 | | | | | | ╧ | | floor | \Box | \Box | | \Box | I | I | Ι | 176 |
| 99-1268-t | + | Newport Jetty | | l | | Black Surfperch | | 33 35.84 | 117 52.82 | 10/14/99 | 2 | Γ | 5 | | 120 | 127 | 129 | 130 | 139 | | | \Box | \Box | \Box | $oldsymbol{\mathbb{T}}$ | $oldsymbol{oldsymbol{oldsymbol{\square}}}$ | \Box | $oldsymbol{\mathbb{T}}$ | | \Box | | \perp | I | 23 |
| | 1 | | | l | | | | | 447.55.55 | 40// 150 | _ | | | | | 25 | | 404 | 400 | 103 | 103 | 100 | 107 1 | 08 | T | | Т | T | 1 | T | T | T | | 10 |
| 99-1269-t | | Newport Jetty | | <u> </u> | SHS | Shiner Surfperch | - | 33 35.84 | 117 52.82 | 10/14/99 | - | | 10 5 | + | 97 183 | 98 194 | 99 202 | 101 227 | 102 | 103 | 103 | 100 | 107 1 | - | + | + | + | -+ | \dashv | + | + | + | +- | 65.1 |
| 99-1266-t | | Newport Jetty | | ├ | | Spotted Turbot | s | | 117 52.82 | | ╁╌ | - | f | \dashv | \neg | | | | | | | \top | + | \perp | + | _ | _ | \dashv | \dashv | 十 | 十 | + | T | |
| 99-1265-1 | 8080 | Newport Bay | | <u> </u> | _ | Shiner Surfperch | s | | 117 54.04 | 10/13/99 | | | 13 | + | 97 | 98 | 99 | 101 | | 102 | 103 | 103 | 104 1 | 105 1 | 25 1 | 05 1 | 06 | -+ | | \dashv | + | +- | + | 10 |
| 99-1264-t | 8080 | Newport Bay | | _ - | STR | Spotted Turbot | s | 33 36.48 | 117 54.04 | 10/13/99 | 2 | | 5 | -+ | 206 | 208 | 209 | 210 | 234 | $\vdash \vdash$ | \dashv | -+ | + | + | + | + | + | + | \dashv | \dashv | + | + | + | 99.6 |
| 99-1263-t | 8080 | Newport Bay | | <u> </u> | | | N | 33 36.48 | 117 54.04 | 10/13/99 | + | <u>_</u> | 4 | \sqcup | 252 | 259 | 300 | | | | | _ | \perp | _ | 4 | _ | 4 | 4 | _ | 4 | 4 | \bot | \bot | 149 |
| 99-1215-t | 8100 | Emma Oil Platform | · | <u> </u> | | Black Surfperch | | 33 39.75 | 118 02.71 | 10/5/99 | + | ! | 4 | \dashv | 267 | 284 | 290 | 298 | $\vdash \vdash$ | \vdash | | \dashv | - | | + | + | - | | | \dashv | 4 | - - | + | 439 |
| 99-1214-1 | 8100 | Emma Oil Platform | | <u>L</u> | KB | Kelp Bass | N | 33 39.75 | 118 02.71 | 10/5/99 | 2 | <u></u> | 5 | $oldsymbol{\perp}$ | 325 | 326 | 334 | 336 | 338 | | | L | | L | _L | L | | _ | J | | | | | 445 |

Zn_QA TM QA Data Set # Hg QA Data S Neight (4) g Neight (7) g Velght (8) g Veight (3) g Velght (5) g Weight (8) g Veight (9) g Veight (2) g Ag_w µg/g Ag_QA Cd_w µg/g
Cd_OA
Cr_OA
Cr_OA
Cr_OA
Cr_OA A8_W µg/g Pb_w µg/g Se_OA Zn_w µg/g N w µg/g As_QA 99-1095-t 138 164 0.936 0.00483 0.0229 0.340 2 76.82 M Mounto of 31 31 32 33 33 38 39 39 39 40 46 0.814 0.0150 -0.015 0.406 2 99-1096-t 28 75.98 81 99-1093-t-Comp 63 66 66Í 72 89 0.828 -0.002 0.0401 0.446 75.82 99-1093-t-Comp2 63 66 72 81 89 1.24 0.0444 0.0268 0.891 56 61 68.44 14 16 16 17 17 18 18 18 21 21 21 22 25 33 0.563 -0.002 -0.015 0.318 1 78.16 M 591 597 437 876 0.762 0.00428 0.116 0.659 2 77.34 M 05 1 - 2 700/f. 99-1760+ 174 182 185 210 1.87 -0.002 0.411 0.453 77.18 31 32 32 0.481 -0.002 0.0372 0.227 2 72.83 M 29 114 180 194 217 3.82 0.0481 99-1256-t -0.002 0.444 2 78.98 M \$9-12554 \$9-25274 \$9-25254 \$9-25264 115 133 0.0581 115 208 0.768 -0.002 0.320 2 76.76 M 274 279 2.90 0.0463 2 261 378 0.00344 0.272 76.52 290 319 493 1.03 -0.002 0.207 0.376 2 2 77.44 M 281 317 380 524 550 7.94 0.00573 0.0574 0.182 2 79.72 M 99-1758-t 37 42 48 62 66 68 0.948 -0.002 0.0357 0.395 76.82 33 42 72.63 M 45 0.852 0.00871 0.0753 0.369 2 2 39 45 52 99-1989-1 2 2 99-1991-t 39 45 50 63 0.394 -0.002 0.0916 0.274 76.51 M 2 78.33 M .39 36 2 32 20 0.758 -0.002 0.0457 0.391 99-1990-1 39 39 0.749 -0.002 0.0263 0.296 76.32 M 99-1992-t 0.0687 0.385 2 99-1466-t 205 245 252 0.478 -0.002 74.57 -0.015 2 0.359 99-1253-t-Comp 26 43 44 0.641 -0.002 78.92 M 0.517 -0.002 -0.015 0.342 2 77.77 M 99-1253-t-Comp-27 41 45 2 0.0728 0.309 76.95 M 99-1250-t 180 208 219 0.367 -0.002 -0.002 0.0315 0.285 2 78.25 M 99-1467-t 37 39 42 43 51 0.903 W 2 17 18 20 22 0.00619 -0.015 0.367 74.99 M 99-1468-1 0.787 0.333 2 56 56 0.601 -0.002 0.0317 77.53 M 99-1994-1 47 50 60 2 1.13 0.00717 -0.015 0.404 18 20 20 74.48 99-1995-0 54 58 58 63 0.778 -0.002 0.0223 0.311 2 77.65 M 99-1993-t 50 0.276 46 47 47 48 49 53 55 56 0.577 -0.002 0.0298 77.28 99-1998-t 53 57 61 0.668 -0.002 0.0316 0.331 2 77.11 M 99-1996 50 0.0483 0.374 78.53 M 53 303 0.911 0.004 00-0449-t 0.0646 0.589 2 80.72 M 170 3.09 0.00203 166 122 00-0453-t 2 0.774 -0.002 0.0223 0.331 78.81 99-1268-t 31 33 36 44 14 14 0.906 0.00532 -0.015 0.344 76.92 M 11 12 12 14 99-1269-1 11 2 119 143 3.67 -0.002 0.0459 0.319 76.08 M 99-1266-t 143 2 99-1265-t 11 11 12 12 12 12 12 12 16 16 16 0.969 0.00793 0.0420 0.495 73.45 M 1.77 -0.015 0.865 2 77.06 M 118 139 149 -0.002 105 0.585 -0.002 0.104 0.439 2 77.69 99-1263-t 183 261 337 2 1.32 -0.002 0.0545 0.257 73.78 M 508 511 599 99-1215-1 2 2 0.777 -0.002 0.0941 0.349 497 507 507 574 99-1214-1

12 C u.C

| | Sample ID | STATION | STATION | Station Location | SPECI | SPECIES | SKIN PREP | LATITUDE | LONGITUDE | COLLECTION | YEAR Access | Special Treatment | N (Number per sample) >25% | Length (1) mm | Length (2) mm | Length (3) mm | Length (4) mm | | Length (6) mm | Length (7) mm | Length (8) mm | Length (9) mm | Length (10) mm | Length (11) mm | Length (12) mm | Length (13) mm | Length (14) mm | Length (15) mm | Length (16) mm | Length (17) mm | Length (19) mm | Length (20) mm | Weight (1) g |
|-------------|---------------|---------|---------------------------|------------------|-------|-------------------------|-----------|----------|-------------------|------------|-------------|--|--|---------------|---------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|----------------|--------------|
| 99-1217-1 | | | Emma Oil Platform | | | Opaleye | | 33 39.75 | 118 02.71 | 10/5/99 | | L | 5 | 311 | 331 | 334 | 341 | 380 | | | | | | -+ | - | \dashv | + | 4 | 4 | + | | _ | 557 |
| 99-1260-t | | 8110 | Anaheim Bay | | BLS | Black Surfperch | N | 33 43.73 | 118 04.65 | 10/13/99 | 2 | ļ <u>.</u> | 5 | 148 | 154 | 156 | 157 | 162 | | | - | \dashv | - | - | | + | - | - | 4 | | 1 | 4 | 65.5 |
| 99-1262-1 | | 8110 | Anaheim Bay | | SHS | Shiner Surfperch | s | 33 43.73 | 118 04.65 | 10/13/99 | 2 | | 10 | 106 | 110 | 110 | 110 | 112 | 113 | 114 | 115 | 118 | 120 | \downarrow | | \downarrow | | \downarrow | | | | | 12.69 |
| 99-1259-t | | 8110 | Anaheim Bay | | YC | Yellowfin Croaker | _ | 33 43.73 | 118 04.65 | | - | | 4 | 242 | 295 | 299 | _ | | | | | \perp | _ _ | \perp | \perp | | | \perp | | | | | 155 |
| 00-0672-t | | 8130 | Esther Oil Platform | | BLS | Black Surfperch | N | 33 43.16 | 118 06.81 | 5/17/00 | - | · | 5 | 260 | 262 | 270 | 286 | 290 | _ | _ | | | _ | | 4 | 4 | | 4 | 4 | ┸ | Ш | _ | 378 |
| 00-0673-t | | 8130 | Esther Oil Platform | | КВ | Kelp Bass | N | 33 43.16 | 118 06.81 | 5/17/00 | 2 | | 5 | 312 | 316 | 324 | | 356 | _ | | | | | _ | | _ | | 4 | \perp | | L | 4 | 342 |
| 99-1495-1 | | 9030 | Oceanside Pier | | DT | Diamond Turbot | s | 33 11.80 | 117 23.51 | 10/26/99 | 2 | | 5 | 231 | 233 | 236 | 237 | 254 | | | | | | | | | | _ | 丄 | \perp | | | 154 |
| 99-1497-t-C | tamo | 9030 | Oceanside Pier | | wc | White Croaker- off | N | 33 11.80 | 117 23.51 | 10/26/99 | 2 | | 5 | 176 | 176 | 181 | 182 | 183 | | 5 | € | | 17 | Į, | | | | | | | П | | 18 |
| | | | | | | White Croaker- | | | | | | | | | | | | | (| 7] | 7 | | | ा | T | Т | Τ | П | \top | Т | | П | |
| 99-1497-1-C | опр2 | | Oceanside Pier | | wc | | | 33 11.80 | 117 23.51 | 10/26/99 | _ | | 5 | 169 | 171 | 173 | | 181 | | | _ | + | \dashv | + | + | + | + | + | + | + | + | + | 29.7 |
| 00-0670-t | | 9040 | La Jolla Kelpbed | _ | КВ | Ketp Bass | N | 32 50.13 | 117 17.26 | 5/16/00 | 2 | | 4 | 306 | 309 | 330 | 314 | -+ | \dashv | \dashv | | -+ | \dashv | + | -+ | + | + | \dashv | + | + | H | \dashv | 188 |
| 99-1794-t | | 9050 | Mission Bay Jetty (South) | | BRS | Barred Surfperch | N | 32 45.14 | 117 15.07 | 11/3/99 | 2 | | 5 | 122 | 130 | 135 | 139 | 139 | | \dashv | _ | \perp | _ | 4 | \dashv | \downarrow | _ | 4 | 4 | \perp | \perp | 4 | 24.7 |
| 99-1499-1 | - 1 | anen | Ocean Beach Pier | | cc | California Corbina | N | 32 45.08 | 117 15.63 | 12/27/99 | 2 | | 3 | 235 | 255 | 185 | | | | - 1 | - 1 | | | - 1 | | - 1 | - 1 | | | 1 | | - 1 | 91.4 |
| 33-1433-1 | $\neg \dashv$ | | Occur beauti is | | | White Croaker- | m | | | | | | | | | | | | | | | | 一 | 1 | | \top | | 7 | \dashv | \top | П | ╛ | |
| 99-1498-t-C | omp1 | 9060 | Ocean Beach Pier | - | wc | on White Croaker- | s | 32 45.08 | 117 15.63 | 10/27/99 | _2 | | 5 | 125 | 125 | 128 | 131 | 147 | -1 | > 1 | 4 | 1 7 | | + | + | + | + | + | + | | | -+ | 19 |
| 99-1498-t-C | отр2 | 9060 | Ocean Beach Pier | | wc | off | N | 32 45.08 | 117 15 <u>.63</u> | 10/27/99 | 2 | | 5 | 123 | 124 | 125 | 127 | 139 | _1 | | _ | _ | | 1 | _ | \perp | _ | 4 | 4 | ┸ | \sqcup | 4 | 18.3 |
| 00-0667-t | | 9070 | Point Loma Kelpbed | <u> </u> | CSH | California Sheephead | N | 32 39.63 | 117 14.58 | 5/16/00 | 2 | | 3 Y | 237 | 241 | 330 | | | | | _ | | \perp | \perp | _ | \perp | | \perp | ┵ | ┸ | Ш | 4 | 232 |
| 00-0668-t | | 9070 | Point Loma Kelpbed | | QBR | Quillback Rockfish | N | 32 39.63 | 117 14.58 | 5/16/00 | 2 | | 4 | 310 | 320 | 347 | 351 | | | | _ | | | | \bot | | \perp | | 1 | | Ш | | 439 |
| 99-1792-t | | 9090 | 5th Ave Marina Pier | | DT | Diamond Turbot | s | 32 42.21 | 117 10.12 | 11/2/99 | 2 | | 5 | 205 | 219 | 219 | 236 | 239 | | | | | | _ | | \perp | _ | 4 | ᆚ | | 1_1 | _ | 119 |
| 99-1791-1 | | 9090 | 5th Ave Marina Pier | | SSB | Spotted Sand Bass | N | 32 42.21 | 117 10.12 | 11/2/99 | 2 | | 5 | 309 | 309 | 315 | 335 | 335 | | | \perp | | | | | | | | | \perp | | | 362 |
| 00-0450-t | | 9100 | Imperial Beach Pier | | BRS | Barred Surfperch | N | 32 34.48 | 117 07.55 | 4/4/00 | 2 | | 10 | 134 | 137 | 137 | 138 | 139 | 142 | 144 | 145 | 149 | 149 | \perp | _ | | | | \perp | | Ц | \perp | 48.64 |
| 00-0409-t | | 9100 | Chuta Vista | | SHS | Shiner Surfperch | s | 32 37.46 | 117 06.42 | 3/28/00 | 2 | | 10 | 162 | 159 | 147 | 147 | 146 | 146 | 145 | 144 | 141 | 140 | \perp | _ | \perp | _ | 1 | \perp | \perp | Ц | \perp | 64 |
| | | | | | 000 | Spotted Sand Bass | ۱, | 32 37.46 | 117 06.42 | 3/28/00 | 2 | | 5 | 305 | 305 | 310 | 310 | 320 | | | | | | | | | | | | | | | 344 |
| 00-0411-1 | | 9100 | Chuta Vista | _ | 228 | Walleye | ├" | JZ 31.40 | 117 00.42 | 3720/00 | <u> </u> | | | - 323 | - 322 | - 5.5 | 9,0 | 320 | \dashv | \dashv | + | -+ | \dashv | \top | \top | \top | \dashv | \dashv | + | + | Н | \dashv | |
| 00-0414-t | | 9100 | Imperial Beach Pier | | WSP | Surfperch | s | 32 34.48 | 117 07.55 | 4/4/00 | 2 | | 3 | 180 | 167 | 155 | | \vdash | - | | | -+ | + | \dashv | + | + | + | + | + | + | H | + | 97.3 |
| 00-0407-t | | 9110 | Aqua Hedionda Lagoon | | SHS | Shiner Surfperch | s | 33 08.36 | 117 19.39 | 3/29/00 | 2 | | 10 | 132 | 133 | 133 | 135 | 136 | 139 | 139 | 141 | 142 | 146 | 4 | \dashv | \dashv | 4 | 4 | \downarrow | \bot | \sqcup | 4 | 26.23 |
| 00-0406-t |] | 9110 | Aqua Hedionda Lagoon | | | Spotted Sand Bass | - | 33 08.36 | 117 19.39 | 3/29/00 | + | | 5 | 321 | 342 | 342 | 356 | | | | \downarrow | \bot | \perp | \downarrow | \perp | \perp | _ | 4 | \perp | \perp | Ц | \perp | 384 |
| 00-0451-t | I | 9120 | Crystal Pier | İ | QUF | Queenfish | s | 32 46.73 | 117 15.20 | 4/5/00 | 2 | L | 5 | 146 | 152 | 164 | 166 | 166 | | | | L | L | | | | 丄 | | 丄 | 丄 | لــــــــــــــــــــــــــــــــــــــ | ᆚ | 31.1 |

ANALYSES

M- Arsenic, Cadmium, Mercury and Selenium

O- Organics

PAH- Ph and Organic

| | Sample ID | Weight (2) g | Weight (3) | Weight (4) | Weight (5) g | Weight (6) g | Weight (7) g | Weight (8) g | Weight (9) g | Weight (10) g | Weight (12) g | | | Weight (15) g | Weight (17) a | Weight (18) g | Weight (19) g | Weight (20) g | Total Weight g | Ag_w µg/g | | Ab_w µg/g | | 8 | Cr_OA | Cu_w µg/g | Q O | Hg_w µg/g | Hg_QA | B/8n w N | Pb_w µg/g | | | | 2 3 | Zn_CA TM CA Data Set # | | % Moisture MLML | ANALYSES |
|----------------|-----------------|--------------|------------|------------|--------------|--------------|--------------|--|--------------|---------------|---------------|----------|----------|---------------|---------------|---------------|---------------|---------------|----------------|---------------------|--------|-----------|---------|----------|--------|-----------------|---------|-----------|----------|------------|-----------------|----------|-------|---------|---------|--|-----|--------------------|----------|
| 15 | 99-1214-1 | 497 | 507 | - | 574 | | | | | \bot | 1 | \sqcup | 4 | | | - | | -4- | | == | | 1777 | 0.002. | | | | - | 0.0941 | ***** | | ĿЦ | | 0.349 | 4 | 9.74 | 1 | 2 2 | 76:47 | · M· |
| bl sp | 99-1217-1 | 574 | _ | _ | 1020 | | | _ | | _ | +- | ┦┤ | - | + | ╀ | | \dashv | + | | - | | 2.16 | -0.002 | ++ | | Н | _ | 0.0874 | - 1, | 1/20 | \vdash | _ | 0.409 | - | - | 4 | 2 2 | 76.31 | М |
| hl sp | 99-1260-1 | 70 | 73 | 78 | 80 | \dashv | | | | + | ╀ | + | + | + | ╀ | H | \dashv | + | | \vdash | 10 | 1.323 | -0.002 | ╌┤ | + | Н | + | -0.015 | -1 | V Ø | Н | \dashv | 0.248 | + | + | + | 2 2 | 77.20 | M |
| aek. | 99-1262-1 | 14 | 14 | 14 | 15 | 15 | 18 | 22 | 22 | 24 | \perp | Н | 4 | 1 | 1 | Н | 4 | 4 | | \dashv | 4 | 1.09 | -0.002 | \sqcup | + | \vdash | + | -0.015 | _/(| 143 | \perp | \dashv | 0.314 | + | + | | 2 2 | 74.65 | м |
| | 99-1259-t | 314 | 340 | 413 | | | 1 | | _ | | | | | 1_ | | | _L | | - | | 0 | .811 | -0.002 | | | | | 0.107 | | ┸ | | | 0.300 | 1 | 丄 | | 2 2 | 77.10 | М |
| | 00-0672-t | 406 | 415 | 517 | 569 | | | | | | | | \Box | | | | | | | | 0 | .595 | -0.002 | | | | | 0.0831 | | \perp | | | 0.195 | \perp | | \perp | 3 3 | 77.23 | М |
| | 00-0673-t | 386 | 497 | 542 | 729 | | | | | | ᆚ | Ш | | 1 | \perp | \perp | 4 | 4 | | | 0 | 103. | -0.002 | 1-1 | | \sqcup | \perp | 0.102 | | ᆚ_ | | _ | 0.322 | 4 | ユ | : | 3 3 | 76.62 | М |
| AT | 99-1495-1 | 157 | 165 | 178 | 249 | | | | _ | \perp | | | | | | Ш | \perp | \perp | - | | ./ 1 | 4.53 | -0.002 | Ш | | Ц | _ | 0.0527 | | ᆚ | Ц | | 0.362 | \perp | \perp | | 3 | 78.24 | м |
| 10 | 99-1497-t-Comp1 | 40 | 41 | 43 | 45 | 1 | 01 | Υ, | Į | | | | J | | J |]] | - 1 | | | | ا | 365 | -0.002 | | - 1 | | | -0.015 | ļ, | 0/0 | 1 1 | | 0.230 | 1 | | 1 | 3 3 | 79.71 | м |
| , we | 99-1497-t-Comp2 | 32 | | I | 64 | | 3.1 | <u>, </u> | 1 | | 1 | П | + | \top | T | П | 7 | 1 | | | T | 0.449 | -0.002 | T | | П | T | -0.015 | J | 11 | П | | 0.300 | 1 | \top | | 3 3 | 79.71 | M |
| <i>~ 100</i> € | 00-0670-t | - 198 | | 291 | | | ~~ | | | 1 | 十 | \Box | \top | 1 | \top | | 寸 | 十 | | | _ | 1.08 | -0.002 | \Box | \neg | \sqcap | _ | 0.0925 | | -T- | П | \neg | 0.370 | 十 | 十 | \top | 3 3 | 78.08 | м |
| | 99-1794-1 | 32 | | T | 46 | | | | 7 | \top | T | П | 1 | | T | П | T | | _ | | | 1.49 | 0.00525 | | | П | 1 | 0.0376 | | 1 | П | | 0.258 | 1 | T | | 3 3 | 78,24 | П |
| | | | | | | | | | • | | \top | | \top | | 1 | П | T | T | | \Box | | | T | П | | П | Т | | | Т | П | | | T | T | | | | |
| | 99-1499-1 | 156 | | | | | 25 | , | \dashv | + | + | Н | + | ╁ | ╁ | Н | \dashv | + | | \dashv | | 1.77 | 0.00300 | + | + | Н | _ | 0.0442 | + | 11:1 | Н | | 0.296 | + | + | +- | 3 3 | 78.63 | П |
| 140 | 99-1498-t-Comp1 | 19 | 20 | 22 | 32 | | - | _ | | -+- | + | + | + | +- | +- | \vdash | -+ | 4 | -, | \dashv | +0 | .714 | 0.00282 | H | +- | \vdash | + | -0.015 | | 11 | Н | \dashv | 0.275 | + | + | + | 3 3 | 78.41 | м |
| < 05 | 99-1498-t-Comp2 | 20 | 22 | 23 | 29 | | 54 | <i>Z</i> ; | _4 | 5/ | 10 | - | 4 | 1 | 16 | |) - | é | <i>j</i> | \vdash | | .509 | 0.00254 | | 4- | Н | 4 | 0.0280 | \dashv | + | Н | 4 | 0.262 | 4 | + | +-: | 3 3 | .79.54 | М |
| ~ | 00-0667-t | 244 | 768 | 3 | | | | | | | | | Ĺ | | | | \perp | | | $\perp \! \! \perp$ | | 1.60 | -0.002 | Ш | | Ш | | 0.184 | \perp | 丄 | Ш | _ | 0.216 | \perp | 丄 | | 3 3 | 77.47 | м |
| A-8 | 00-0668-1 | 617 | 657 | 666 | | | ı. | | | | | | | | | Ш | \perp | | | | 0 | 0.720 | -0.002 | Ш | | | \perp | 0.130 | | \perp | Ц | | 0.185 | \perp | \perp | | 3 3 | 78.59 | м |
| 97 | 99-1792-1 | 138 | 144 | 185 | 194 | | | | | | | | | | | | | | | | ć | 3.93 > | -0.002 | Ш | | | _ . | -0.015 | 4 | | Ш | | 0.369 | \perp | \perp | | 3 3 | 74.95 | м |
| 97 | 99-1791-1 | 386 | 387 | 469 | 470 | | | | | | | | | | | | | | | | 0 | 0.602 | -0.002 | | | | | 0,202 | | | | | 0.371 | | | | 3 3 | 79.13 | м |
| | 00-0450-t | 46 | | | | 38 | 36 | 36 | 36 | 29 | Г | П | 1 | T | T | П | ٦ | T | | | | .798 | -0.002 | П | | | Ī, | 0.0323 | T | \top | П | | 0.247 | 1 | | | 3 3 | 78.63 | M |
| C 0 4 | 00-0409-1 | 59 | | | | 40 | 40 | | | \neg | T | П | 1 | T | T | П | 十 | \top | | | 十 | .908 | 0.0130 | \sqcap | | П | \neg | -0.015 | 7 | . - | П | \neg | 0.352 | \top | \top | \top | 3 3 | 77.43 | П |
| 59p) | 00-0409-1 | - 38 | | | | _~ | ٦ | | ~ | - | 十 | П | \top | + | 1 | П | 7 | \top | | | \top | | | П | 十 | | 寸 | | Ť | 1 | П | | | 7 | \top | 1 | 1 | | П |
| • | 00-0411-t | 353 | 370 | 391 | 417 | | | \vdash | | + | + | H | + | + | + | H | + | + | • | $\vdash \vdash$ | \top |).394 | -0.002 | ╁┤ | + | $\vdash \vdash$ | \neg | 0.124 | \dashv | + | ┼┤ | | 0.354 | + | + | + | 3 3 | 78.05 | П |
| | 00-0414-t | 72 | 52 | 2 | \vdash | \vdash | | | | -+ | + | H | \dashv | + | + | \vdash | \dashv | + | - | \vdash | + | 0.603 | -0.002 | ┨ | + | $\vdash \vdash$ | + | 0.0579 | 1 | + | Н | \dashv | 0.205 | + | + | + | 3 3 | 78.08 | M |
| 990 | 00-0407-t | 27 | 31 | 32 | 32 | 36 | 37 | 38 | 41 | 44 | + | \vdash | + | + | + | \vdash | \dashv | 4 | | H | - 0 |).934 | 0.00483 | +-1 | - | H | + | -0.015 | | <u> 46</u> | $\vdash \vdash$ | | 0.280 | + | + | +- | 3 3 | 75.09 | M |
| <i>V</i> ~ | 00-0406-t | 565 | | 617 | 620 | | | | | _ | \perp | \perp | \perp | + | 4 | \vdash | _ | 4 | | \sqcup | | 0.328 | -0.002 | \sqcup | - | \vdash | - | 0.0685 | \perp | 4 | \vdash | | 0.269 | 4 | - | | 3 | 77.18 | _ |
| | 00-0451-t | 36 | 38 | 40 | 47 | | | | | | | Ш | | | | | | | | LL | |).764 | -0.002 | | L | 1_1 | L | 0.0381 | | Щ | <u>i</u> | | 0.295 | | 丄 | نب | 3 3 | 74.77 | M |

ANALYSES

M- Arsenic, Cadmi

O- Organics

PAH- Ph and Orga

we of my very small; not game sigh, side it side it explain.

printed 2x

Appendix B

Mercury Batch Numbers and Associated Samples

| М | ercury Batch N | lumb | ers and Associated Sa | ample | es. |
|-------|------------------|-------------------|-----------------------------|--------------|--------------------|
| ** | | | | | |
| a Set | , | | STATION NAME | SPECIES CODE | PECIES NAME |
| Data | ا ا | ER SI | N O | ES | ES . |
| ð | Sample ID | STATION NUMBER | Ă. | ü | Ğ |
| Ŧ | | N. ST | STS | ξ | <u> </u> |
| 1 | 00-0373-t | 4040 | Ventura Pier | wc | White Croaker-off |
| 1 | 00-0375-t | 4040 | Ventura Pier | wc | White Croaker-on |
| 1 | 99-1058-t | 1010 | Crescent City | TPS | Top Smelt |
| 1 | 99-1059-t | 1010 | Crescent City | WHS | White Surfperch |
| .1 | 99-1061-1 | 1020 | Trinidad | RCM | California Mussel |
| 1 | 99-1064-t | 1020 | Trinidad | BLR | Black Rockfish |
| 1 | 99-1077-t | 1020 | Trinidad | DC | Dungeness Crab |
| 1 | 99-1078-t | 1030 | Humboldt Bay/Del Norte Pier | SHS | Shiner Surfperch |
| 1 | 99-1080-t | 1030 | Humboldt Bay/Del Norte Pier | RRC | Red Rock Crab |
| 1 | 99-1081-t | 1040 | Elk River | PSP | Plie Surfperch |
| 1 | 99-1083-t | 1040 | Elk River | RRC | Red Rock Crab |
| ٦ | 99-1084-t | 1050 | Humboldt Bay/North Jetty | RCM | California Mussel |
| 1 | 99-1088-t | 1050 | Humboldt Bay/North Jetty | RRC | Red Rock Crab |
| 1 | 99-1091-t | 4040 | Ventura Pier | CC | California Corvina |
| 1 | 99-1092-t | 4040 | Ventura Pier | BRS | Barred Surfperch |
| 1 | 99-1093-t-Comp1 | 4060 | Ventura Marina Jetty | wc | White Croaker-on |
| 1 | 99-1093-t-Comp2 | 4060 | Ventura Marina Jetty | wc | White Croaker-off |
| 1 | 99-1094-t | 4060 | Ventura Marina Jetty | WHS | White Surfperch |
| 1 | 99-1097-t | 4030 | Channel Island Harbor | RBS | Rainbow Surfperch |
| 1 | 99-1098-t | 4030 | Channel Island Harbor | STR | Spotted Turbot |
| 1 | 99-1132-t | 1060 | Point Arena | RRC | Red Rock Crab |
| 1 | 99-1135-t | 1070 | Spud Point Breakwater | WHS | White Surfperch |
| 1 | 99-1136-t | 1070 | Spud Point Breakwater | RRC | Red Rock Crab |
| 1 | 99-1137-t | 1070 | Spud Point Breakwater | SHS | Shiner Surfperch |
| 1 | 99-1139-t | 1080 | Salt Point State Park | RCM | California Mussel |
| 1 | 99-1141-t | 1090 | Bodega Harbor | RCM | California Mussel |
| 1 | 99-1142-t | 1090 | Bodega Harbor | RRC | Red Rock Crab |
| 1 | 99-1462-t | 4050 | Port Hueneme | BRS | Barred Surfperch |
| 1 | 99-1463-t | 4050 | Port Hueneme | SSD | Speckled Sanddab |
| 1 | 99-1464-t | 4020 | Hollywood South Beach | FS | Fantail Sole |
| 1. | 99-1465-t | 4020 | Hollywood South Beach | SSD | Speckled Sanddab |
| 2 | 00-0449-t | 8060 | Balboa Pier | BRS | Barred Surfperch |
| 2 | 00-0453-t | 8060 | Balboa Pier | DT | Diamond Turbot |
| 2 | 99-1095-t | 4060 | Ventura Marina Jetty | RBS | Rainbow Surfperch |
| 2 | 99-1096-t | 4060 | Ventura Marina Jetty | RBS | Rainbow Surfperch |
| 2 | 99-1214-t | 8100 | Emma Oil Platform | КВ | Kelp Bass |
| 2 | 99-1215-1 | 8100 | Emma Oil Platform | BLS | Black Surfperch |
| 2 | 99-1217-t | 8100 | Emma Oil Platform | OPE | Opaleye |
| 2 | 99-1250-t | 8010 | Seal Beach | YC | Yellowfin Croaker |
| 2 | 99-1253-t-Comp 1 | 8010 | Seal Beach | wc | White Croaker-off |
| 2 | 99-1253-t-Comp-2 | 8010 | Seal Beach | wc | White Croaker-on |
| 2 | 99-1255-t | 4090 | Belmont Pier | wc | White Croaker |
| 2 | 99-1256-t | 4090 | Belmont Pier | STR | Spotted Turbot |
| 2 | 99-1257-t | 4090 | Belmont Pier | QUF | Queenfish |
| 2 | 99-1259-t | 8110 | Anaheim Bay | YC | Yellowfin Croaker |

| r | , | | | , | · · · · · · · · · · · · · · · · · · · |
|---|-----------------|--------|----------------------|------|---------------------------------------|
| 2 | 99-1260-1 | 8110 | Anaheim Bay | BLS | Black Surfperch |
| 2 | 99-1262-t | 8110 | Anaheim Bay | SHS | Shiner Surfperch |
| 2 | 99-1263-1 | 8080 | Newport Bay | YC | Yellowfin Croaker |
| 2 | 99-1264-1 | 8080 | Newport Bay | STR | Spotted Turbot |
| 2 | 99-1265-t | 8080 | Newport Bay | SHS | Shiner Surfperch |
| 2 | 99-1266-t | 8070 | Newport Jetty | STR | Spotted Turbot |
| 2 | 99-1268-t | 8070 | Newport Jetty | BLS | Black Surfperch |
| 2 | 99-1269-t | 8070 | Newport Jetty | SHS | Shiner Surfperch |
| -2 | 99-1466-t | 4140 | San Gabriel | YC | Yellowfin Croaker |
| 2 | 99-1467-t | 8030 | Huntington Beach | BRS | Barred Surfperch |
| 2 | 99-1468-t | 8030 | Huntington Beach | SHS | Shiner Surfperch |
| 2 | 99-1758-t | 4110 | Santa Monica Pier | BRS | Barred Surfperch |
| 2 | 99-1759-t | 4080 | Santa Cruz Island | BUR | Blue Rockfish |
| 2 | 99-1760-t | 4080 | Santa Cruz Island | RTR | Rosethorn Rockfish |
| 2 | 99-1989-t | 4110 | Santa Monica Pier | QUF | Queenfish |
| 2 | 99-1990-t | 4120 | Venice Pier | wc | White Croaker |
| 2 | 99-1991-t | 4120 | Venice Pier | QUF | Queenfish |
| 2 | 99-1992-t | 4120 | Venice Pier | WSP | Walleye Surfperch |
| 2 | 99-1993-t | 8040 | Newport Beach | wc | White Croaker |
| 2 | 99-1994-t | 8040 | Newport Beach | BRS | Barred Surfperch |
| 2 | 99-1995-t | 8040 | Newport Beach | SHS | Shiner Surfperch |
| 2 | 99-1996 | 8050 | Newport Beach Pier | wc | White Croaker |
| 2 | 99-1998-t | 8050 | Newport Beach Pier | BRS | Barred Surfperch |
| 2 | 99-2525-t | 4100 | Catalina Island | KB | Kelp bass |
| 2 | 99-2526-t | 4100 · | Catalina Island | OPE | Opaleye |
| 2 | 99-2527-t | 4100 | Catalina Island | HFM~ | Halfmoon |
| 3 | 00-0354-t | 3130 | Moss Landing Beach | wc | White Croaker |
| 3 | 00-0406-t | 9110 | Aqua Hedionda Lagoon | SSB | Spotted Sand Bass |
| 3 | 00-0407-t | 9110 | Aqua Hedionda Lagoon | SHS | Shiner Surfperch |
| 3 | 00-0409-t | 9100 | Chula Vista | SHS | Shiner Surfperch |
| 3 | 00-0411-t | 9100 | Chula Vista | SSB | Spotted Sand Bass |
| 3 | 00-0414-t | 9100 | Imperial Beach Pier | WSP | Walleye Surfperch |
| 3 | 00-0450-t | 9100 | Imperial Beach Pier | BRS | Barred Surfperch |
| 3 | 00-0451-t | 9120 | Crystal Pier | QUF | Queenfish |
| 3 | 00-0616-t | 3070 | Pismo Pier | wc | White Croaker |
| 3 | 00-0617-t | 3060 | Cayucos Pier | wc | White Croaker |
| 3 | 00-0667-t | 9070 | Point Loma Kelpbed | сѕн | California Sheephead |
| 3 | 00-0668-t | 9070 | Point Loma Kelpbed | QBR | Quillback Rockfish |
| 3 | 00-0670-t | 9040 | La Jolia Kelpbed | КВ | Kelp Bass |
| 3 | 00-0672-t | 8130 | Esther Oil Platform | BLS | Black Surfperch |
| 3 | 00-0673-t | 8130 | Esther Oil Platform | КВ | Kelp Bass |
| 3 | 00-0752-t | 3050 | Capitola Wharf | BRS | Barred Surfperch |
| 3 | 00-0753-t-Comp1 | 3050 | Capitola Wharf | wc | White Croaker-on |
| 3 | 00-0753-t-Comp2 | 3050 | Capitola Wharf | wc | White Croaker-off |
| 3 | 99-1027-t | 3050 | Capitola Wharf | YĊ | Yellowfin Croaker |
| 3 | 99-1099-t | 3040 | Santa Barbara Jetty | DT | Diamond Turbot |
| 3 | 99-1246-t | 3120 | Monterey Bay | BLS | Black Surfperch |
| 3 | 99-1247-1 | 3120 | Monterey Bay | BUR | Blue Rockfish |
| 3 | 99-1248-t | 3120 | Monterey Bay | BRR | Brown Rockfish |
| 3 | 99-1272-t | 3010 | Santa Cruz Wharf | YC | Yellowfin Croaker |
| ـــــــــــــــــــــــــــــــــــــــ | <u> </u> | | <u> </u> | | Larry , transcription of the second |

| | | , | | | |
|---|-----------------|------|---------------------------|-----|-----------------------|
| 3 | 99-1458-t | 3040 | Santa Barbara Jetty | OPE | Opal Eye |
| 3 | 99-1495-t | 9030 | Oceanside Pier | DΤ | Diamond Turbot |
| 3 | 99-1497-t-Comp1 | 9030 | Oceanside Pier | wc | White Croaker-off |
| 3 | 99-1497-t-Comp2 | 9030 | Oceanside Pier | wc | White Croaker-on |
| 3 | 99-1498-t-Comp1 | 9060 | Ocean Beach Pier | wc | White Croaker-on |
| 3 | 99-1498-t-Comp2 | 9060 | Ocean Beach Pier | wc | White Croaker-off |
| з | 99-1499-t | 9060 | Ocean Beach Pier | CC | California Corbina |
| 3 | 99-1791-t | 9090 | 5th Ave Marina Pier | SSB | Spotted Sand Bass |
| 3 | 99-1792-t | 9090 | 5th Ave Marina Pier | DT | Diamond Turbot |
| 3 | 99-1794-t | 9050 | Mission Bay Jetty (South) | BRS | Barred Surfperch |
| 4 | 00-0333-1 | 3180 | Salinas River Beach | wc | White Croaker |
| 4 | 00-0353-t | 3170 | Pajaro River Beach | wc | White Croaker |
| 4 | 00-0457-t-Comp1 | 2200 | Pacifica Pier | DC | Dungeness Crab-Claw |
| 4 | 00-0457-t-Comp2 | 2200 | Pacifica Pier | DC | Dungeness Crab-Hepato |
| 4 | 00-0458-t | 2200 | Pacifica Pier | WSP | Walleye Surfperch |
| 4 | 00-0609-t-Comp1 | 2250 | Princeton Jetty | RRC | Red Rock Crab-Claw |
| 4 | 00-0609-t-Comp2 | 2250 | Princeton Jetty | RRC | Red Rock Crab-Hepato |
| 4 | 00-0611-t-Comp1 | 2200 | Pacifica Pier | RRC | Red Rock Crab-Claw |
| 4 | 00-0611-t-Comp2 | 2200 | Pacifica Pier | RRC | Red Rock Crab-Hepato |
| 4 | 00-0649-t | 2050 | Marin Coast | CHS | Chinook Salmon |
| 4 | 00-0654-t | 2250 | Princeton Jetty | wc | White Croaker |
| 4 | 00-0657-t-Comp1 | 2150 | Devils Slide | DC | Dungeness Crab-Claw |
| 4 | 00-0657-t-Comp2 | 2150 | Devils Slide | DC | Dungeness Crab-Hepato |
| 4 | 00-0659t | 2300 | San Mateo Coast | BLR | Biack Rockfish |
| 4 | 00-0660-t | 2300 | San Mateo Coast | RTR | Rosethorn Rockfish |
| 4 | 00-0661-t | 2250 | Princeton Jetty | RBS | Rainbow Surfperch |
| 4 | 00-0663-t | 2250 | Princeton Jetty | WHS | White Surfperch |
| 4 | 00-0664-t | 2250 | Princeton Jetty | PSP | Pile Surfperch |
| 4 | 00-0675-t | 3200 | Elkhorn Slough | LS | Leopard Shark |
| 4 | 00-0711-t | 2300 | San Mateo Coast | SFS | Spotfin Surfperch |
| 4 | 00-0712-t | 2100 | San Francisco Coastline | CHS | Chinook Salmon |
| 4 | 00-0713-t | 2300 | San Mateo Coast | BRR | Brown Rockfish |
| 4 | 00-0714-1 | 2300 | San Mateo Coast | LC | Lingcod |
| 4 | 00-0725-t | 3200 | Elkhorn Slough | SHS | Shiner Surfperch |
| 4 | 00-0775-t | 2200 | Pacifica Pier | WHS | White Surfperch |
| 4 | 99-1029-t | 3180 | Salinas River Beach | BRS | Barred Surfperch |
| 4 | 99-1089-t | 3140 | Goleta Pier | cc | California Corbina |
| 4 | 99-1090-t | 3140 | Goleta Pier | YC | Yellowfin Croaker |
| 4 | 99-1190-t | 3170 | Pajaro River Beach | BRS | Barred Surfperch |

Appendix C

Trace Metal Batch Numbers and Associated Samples

| Tra | ice Metal Batch | Num | bers and Associated Sa | mple | S |
|------------|------------------|------------|-----------------------------|---------------|------------------------|
| Set# | | | | | |
| | , | | MAN | PECIES CODE | PECIES NAME |
| A Da | ē □ | NON BER | NO NO | SH | ES |
| Hg OA Data | Sample ID | STATION | STATION NAME | E S | PEC |
| 1 | 00-0373-t | | Ventura Pier | wc | υ White Croaker-off |
| 1 | 00-0375-t | | Ventura Pier | wc | White Croaker-on |
| 1 | 99-1058-t | | Crescent City | | Top Smelt |
| 1 | 99-1059-t | | Crescent City | | White Surfperch |
| 1 | 99-1061-t | | Trinidad | | California Mussel |
| 1 | 99-1064-t | | Trinidad | | Black Rockfish |
| 1 | 99-1077-t | | Trinidad | | Dungeness Crab |
| 1 | 99-1078-t | | Humboldt Bay/Del Norte Pier | | Shiner Surfperch |
| 1 | 99-1080-t | | Humboldt Bay/Del Norte Pier | | Red Rock Crab |
| 1 | 99-1081-t | | Elk River | PSP | Pile Surfperch |
| 1 | 99-1083-t | 1040 | Elk River | RRC | Red Rock Crab |
| 1 | 99-1084-t | 1050 | Humboldt Bay/North Jetty | RCM | California Mussel |
| 1 | 99-1088-t | 1050 | Humboldt Bay/North Jetty | RRC | Red Rock Crab |
| 1 | 99-1091-t | 4040 | Ventura Pier | CC | California Corvina |
| 1 | 99-1092-t | 4040 | Ventura Pier | BRS | Barred Surfperch |
| 1 | 99-1093-t-Comp1 | 4060 | Ventura Marina Jetty | wc | White Croaker-on |
| 1 | 99-1093-t-Comp2 | 4060 | Ventura Marina Jetty | wc | White Croaker-off |
| 1 | 99-1094-t | 4060 | Ventura Marina Jetty | WHS | White Surfperch |
| 1 | 99-1097-t | 4030 | Channel Island Harbor | RBS | Rainbow Surfperch |
| 1 | 99-1098-t | 4030 | Channel Island Harbor | STR | Spotted Turbot |
| 1 | 99-1132-t | 1060 | Point Arena | RRC | Red Rock Crab |
| 1 | 99-1135-t | 1070 | Spud Point Breakwater | WHS | White Surfperch |
| 1 | 99-1136-t | 1070 | Spud Point Breakwater | RRC | Red Rock Crab |
| 1 | 99-1137-t | 1070 | Spud Point Breakwater | SHS | Shiner Surfperch |
| 1 | 99-1139-t | 1080 | Salt Point State Park | RCM | California Mussel |
| 1 | 99-1141-t | 1090 | Bodega Harbor | RCM | California Mussel |
| 1 | 99-1142-t | 1090 | Bodega Harbor | RRC | Red Rock Crab |
| 1 | 99-1462-t | 4050 | Port Hueneme | | Barred Surfperch |
| 1 | 99-1463-t | 4050 | Port Hueneme | SSD | Speckled Sanddab |
| 1 | 99-1464-t | 4020 | Hollywood South Beach | | Fantail Sole |
| 1 | 99-1465-t | 4020 | Hollywood South Beach | | Speckled Sanddab |
| 2 | 00-0449-t | 8060 | Balboa Pler | | Barred Surfperch |
| 2 | 00-0453-1 | 8060 | Balboa Pier | | Diamond Turbot |
| 2 | 99-1095-t | 4060 | Ventura Marina Jetty | | Rainbow Surfperch |
| 2 | 99-1096-t | | Ventura Marina Jetty | $\overline{}$ | Rainbow Surfperch |
| 2 | 99-1214-t | | Emma Oil Platform | | Kelp Bass |
| 2 | 99-1215-t | | Emma Oil Platform | \vdash | Black Surfperch |
| 2 | 99-1217-t | | Emma Oil Platform | | Opaleye |
| 2 | 99-1250-t | | Seal Beach | | Yellowfin Croaker |
| 2 | 99-1253-t-Comp 1 | | Seal Beach | —— | White Croaker-off |
| 2 | 99-1253-t-Comp-2 | | Seal Beach | | White Croaker-on |
| 2 | 99-1255-t | | Belmont Pier | 1 | White Croaker |
| 2 | 99-1256-t | 4090 | Belmont Pier | STR | Spotted Turbot |

| | | | , | | |
|---|-----------------|-------------|----------------------|--|----------------------|
| 2 | 99-1257-t | 4090 | Belmont Pier | QUF | Queenfish |
| 2 | 99-1259-t | 8110 | Anaheim Bay | YC | Yellowfin Croaker |
| 2 | 99-1260-t | 8110 | Anaheim Bay | BLS | Black Surfperch |
| 2 | 99-1262-t | 8110 | Anaheim Bay | SHS | Shiner Surfperch |
| 2 | 99-1263-t | 8080 | Newport Bay | YC | Yellowfin Croaker |
| 2 | 99-1264-t | 8080 | Newport Bay | STR | Spotted Turbot |
| 2 | 99-1265-t | 8080 | Newport Bay | SHS | Shiner Surfperch |
| 2 | 99-1266-t | 8070 | Newport Jetty | STR | Spotted Turbot |
| 2 | 99-1268-t | 8070 | Newport Jetty | BLS | Black Surfperch |
| 2 | 99-1269-t | | Newport Jetty | SHS | Shiner Surfperch |
| 2 | 99-1466-t | 4140 | San Gabriel | YC | Yellowfin Croaker |
| 2 | 99-1467-t | 8030 | Huntington Beach | BRS | Barred Surfperch |
| 2 | 199-1468-t | | Huntington Beach | SHS | Shiner Surfperch |
| 2 | 99-1758-t | | Santa Monica Pier | | Barred Surfperch |
| 2 | 99-1759-t | | Santa Cruz Island | | Blue Rockfish |
| 2 | 99-1760-t | | Santa Cruz Island | | Rosethorn Rockfish |
| 2 | 199-1989-t | | Santa Monica Pier | | Queenfish |
| 2 | 99-1990-1 | | Venice Pier | | White Croaker |
| 2 | 99-1991-t | | Venice Pier | | Queenfish |
| 2 | 99-1992-t | | Venice Pier | | Walleye Surfperch |
| 2 | 99-1993-t | | Newport Beach | | White Croaker |
| 2 | 99-1994-t | | Newport Beach | | Barred Surfperch |
| 2 | 99-1995-t | | Newport Beach | | Shiner Surfperch |
| 2 | 99-1996 | | Newport Beach Pier | | White Croaker |
| 2 | 99-1998-t | | Newport Beach Pier | | Barred Surfperch |
| 2 | 99-2525-t | | Catalina Island | | Kelp bass |
| 2 | 99-2526-t | | Catalina Island | OPE | Opaleye |
| 2 | 99-2527-t | | Catalina Island | | Halfmoon |
| 3 | 00-0354-t | | Moss Landing Beach | | White Croaker |
| 3 | 00-0406-t | | Aqua Hedionda Lagoon | SSB | Spotted Sand Bass |
| 3 | 00-0407-t | | Aqua Hedionda Lagoon | | Shiner Surfperch |
| 3 | 00-0409-t | | Chula Vista | | Shiner Surfperch |
| 3 | 00-0411-t | | Chula Vista | | Spotted Sand Bass |
| 3 | 00-0414-t | | Imperial Beach Pier | | Walleye Surfperch |
| 3 | 00-0450-t | | Imperial Beach Pier | | Barred Surfperch |
| 3 | 00-0451-t | | Crystal Pier | | Queenfish |
| 3 | 00-0616-t | | Pismo Pier | | White Croaker |
| 3 | 00-0617-t | | Cayucos Pier | | White Croaker |
| 3 | 00-0667-t | | Point Loma Kelpbed | | California Sheephead |
| 3 | 00-0688-1 | | Point Lorna Kelpbed | | Quiliback Rockfish |
| 3 | | | La Jolia Kelpbed | | Kelp Bass |
| | 00-0670-t | | Esther Oil Platform | | Black Surfperch |
| 3 | 00-0672-t | | | | Kelp Bass |
| 3 | 00-0673-t | | Esther Oil Platform | \vdash | Barred Surfperch |
| 3 | 00-0752-t | T | Capitola Wharf | T- | |
| 3 | 00-0753-t-Comp1 | | Capitola Wharf | $\overline{}$ | White Croaker-on |
| 3 | 00-0753-t-Comp2 | | Capitola Wharf | | White Croaker-off |
| 3 | 99-1027-t | | Capitola Wharf | | Yellowfin Croaker |
| 3 | 99-1099-t | 3040 | Santa Barbara Jetty | L DI | Diamond Turbot |

| | | | | | |
|---|-----------------|------|---------------------------|-----|-----------------------|
| 3 | 99-1246-t | 3120 | Monterey Bay | BLS | Black Surfperch |
| 3 | 99-1247-t | 3120 | Monterey Bay | BUR | Blue Rockfish . |
| 3 | 99-1248-t | 3120 | Monterey Bay | BRR | Brown Rockfish |
| 3 | 99-1272-t | 3010 | Santa Cruz Wharf | YC | Yellowfin Croaker |
| 3 | 99-1458-t | 3040 | Santa Barbara Jetty | OPE | Opal Eye |
| 3 | 99-1495-t | 9030 | Oceanside Pier | DT | Diamond Turbot |
| 3 | 99-1497-t-Comp1 | 9030 | Oceanside Pier | wc | White Croaker-off |
| 3 | 99-1497-t-Comp2 | 9030 | Oceanside Pier | wc | White Croaker-on |
| 3 | 99-1498-t-Comp1 | 9060 | Ocean Beach Pier | wc | White Croaker-on |
| 3 | 99-1498-t-Comp2 | 9060 | Ocean Beach Pier | wc | White Croaker-off |
| 3 | 99-1499-t | 9060 | Ocean Beach Pier | CC | California Corbina |
| 3 | 99-1791-t | 9090 | 5th Ave Marina Pler | SSB | Spotted Sand Bass |
| 3 | 99-1792-t | 9090 | 5th Ave Marina Pier | DΤ | Diamond Turbot |
| 3 | 99-1794-t | 9050 | Mission Bay Jetty (South) | BRS | Barred Surfperch |
| 4 | 00-0333-t | 3180 | Salinas River Beach | wc | White Croaker |
| 4 | 00-0353-t | 3170 | Pajaro River Beach | wc | White Croaker |
| 4 | 00-0457-t-Comp1 | 2200 | Pacifica Pier | DC | Dungeness Crab-Claw |
| 4 | 00-0457-t-Comp2 | 2200 | Pacifica Pier | DC | Dungeness Crab-Hepato |
| 4 | 00-0458-t | 2200 | Pacifica Pier | WSP | Walleye Surfperch |
| 4 | 00-0609-t-Comp1 | 2250 | Princeton Jetty | RRC | Red Rock Crab-Claw |
| 4 | 00-0609-t-Comp2 | | Princeton Jetty | RRC | Red Rock Crab-Hepato |
| 4 | 00-0611-t-Comp1 | | Pacifica Pier | RRC | Red Rock Crab-Claw |
| 4 | 00-0611-t-Comp2 | 2200 | Pacifica Pier | RRC | Red Rock Crab-Hepato |
| 4 | 00-0649-t | 2050 | Marin Coast | CHS | Chinook Salmon |
| 4 | 00-0654-t | 2250 | Princeton Jetty | wc | White Croaker |
| 4 | 00-0657-t-Comp1 | 2150 | Devils Slide | DC | Dungeness Crab-Claw |
| 4 | 00-0657-t-Comp2 | 2150 | Devils Slide | DC | Dungeness Crab-Hepato |
| 4 | 00-0659t | 2300 | San Mateo Coast | BLR | Black Rockfish . |
| 4 | 00-0660-t | 2300 | San Mateo Coast | RTR | Rosethorn Rockfish |
| 4 | 00-0661-t | 2250 | Princeton Jetty | RBS | Rainbow Surfperch |
| 4 | 00-0663-t | 2250 | Princeton Jetty | WHS | White Surfperch |
| 4 | 00-0664-t | 2250 | Princeton Jetty | PSP | Pile Surfperch |
| 4 | 00-0675-t | | Elkhorn Slough | LS | Leopard Shark |
| 4 | 00-0711-t | 2300 | San Mateo Coast | SFS | Spotfin Surfperch |
| 4 | 00-0712-t | | San Francisco Coastline | снѕ | Chinook Salmon |
| 4 | 00-0713-t | 2300 | San Mateo Coast | BRR | Brown Rockfish |
| 4 | 00-0714-t | 2300 | San Mateo Coast | LC | Lingcod |
| 4 | 00-0725-t | | Elkhorn Slough | SHS | Shiner Surfperch |
| 4 | 00-0775-t | 2200 | Pacifica Pier | WHS | White Surfperch |
| 4 | 99-1029-t | 3180 | Salinas River Beach | BRS | Barred Surfperch |
| 4 | 99-1089-t | 3140 | Goleta Pier | CC | California Corbina |
| 4 | 99-1090-t | 3140 | Goleta Pier | YC | Yellowfin Croaker |
| 4 | 99-1190-t | 3170 | Pajaro River Beach | BRS | Barred Surfperch |
| | | | | | |