SACRAMENTO MUNICIPAL UTILITY DISTRICT
UPPER AMERICAN RIVER PROJECT
FERC Project No. 2101

Slab Creek Reservoir
Fish Tissue Bioaccumulation Study Report

Performed by:
FISH AND WILDLIFE WATER POLLUTION CONTROL LABORATORY
CALIFORNIA DEPARTMENT OF FISH AND GAME
OFFICE OF SPILL PREVENTION AND RESPONSE
2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670

Sample Collection

Twelve Sacramento Sucker, 4 brown trout and 13 Sacramento Pike Minnow were collected on July 10, 2007, from Slab Creek Reservoir using gill nets set overnight in various areas of the reservoir. The nets were set and sampled from a 17-ft. John boat. Additional gill net sets, in the fall of 2007, failed to collect any more brown trout, but a rainbow trout was collected using a gill net overnight on October 23, 2007 from the upper end of the reservoir (near the influence). All fish were initially preserved in wet ice for transport, and then transferred to an ultra-cold freezer.

The fish were received at the CDFG Fish and Wildlife Water Pollution Control Laboratory on July 13, 2007, and assigned a log number (L-368-07). The additional trout was received at the WPCL on October 24, 2007, which was given the same log number ((L-368-07). All fish were placed in a freezer at -20ºF.

The fish were assigned laboratory identification numbers and a sample identification code based on the fish fork length, total length, and species.

Sample Dissection and Homogenization

Samples 1-12 were thawed on December 6, 2007. Skin was removed from an area above the lateral line and a 9-13 gram "plug" of tissue was removed and placed in a pre-cleaned snap cap plastic vial. Samples 13-30 were thawed on December 7, 2007, and prepared using the same method. The snap cap vials containing the fish tissue were re-frozen.

Sample Analysis

Samples 1-10 were removed from the freezer on January 11, 2008 and sub-samples were weighed for % moisture analysis and mercury analysis. Samples 1-10 were digested and analyzed by cold vapor mercury analysis using Perkin-Elmer FIMS instrumentation on January 16, 2008.

Samples 11-30 were removed from the freezer on January 17, 2008, and weighed for % moisture analysis and mercury analysis. Samples 11-30 were digested and analyzed by cold vapor mercury analysis using Perkin-Elmer FIMS instrumentation on January 24, 2008.

All mercury results were reported on both a dry and wet weight basis with percent moisture.

Quality Control Analysis

Certified reference material DORM-2, matrix spike, matrix spike duplicate, sample duplicate, laboratory control spike samples and method blank were digested and analyzed with both sets of samples. All QC results passed the acceptance criteria and are reported with the sample results.

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Mercury Results
Slab Creek Reservoir Fish Project

Ca. Dept. of Fish and Game-WPCL
Laboratory #: L-638-07

Laboratory Number	Sample Identification	Species	QA Batch	Percent Moisture	Hg, Dry Weight (µg/g)	RL for Dry Wt. (µg/g)	MDL for Dry Wt. (µg/g)		Hg, Wet Weight (µg/g)	RL for Wet Wt. (µg/g)	MDL for Wet Wt. (µg/g)
L-368-07- 01	385 FL 408 TL	SKR	011608-Se	79.3	0.95	0.12	0.03		0.20	0.02	0.01
L-368-07- 02	443 FL 465 TL	SKR	011608-Se	80.9	1.40	0.13	0.04		0.27	0.02	0.01
L-368-07- 03	444 FL 465 TL	SKR	011608-Se	81.1	2.04	0.13	0.04		0.38	0.02	0.01
L-368-07- 04	497 FL 522 TL	SKR	011608-Se	79.5	0.88	0.12	0.04		0.18	0.03	0.01
L-368-07- 05	455 FL 475 TL	SKR	011608-Se	81.0	1.19	0.13	0.04		0.23	0.02	0.01
L-368-07- 06	436 FL 452 TL	SKR	011608-Se	80.4	1.42	0.12	0.04		0.28	0.02	0.01
L-368-07- 07	439 FL 457 TL	SKR	011608-Se	80.5	1.65	0.12	0.04		0.32	0.02	0.01
L-368-07- 08	433 FL 455 TL	SKR	011608-Se	81.8	2.15	0.14	0.04		0.39	0.03	0.01
L-368-07- 09	476 FL 500 TL	SKR	011608-Se	81.2	1.76	0.13	0.04		0.33	0.02	0.01
L-368-07- 10	472 FL 497 TL	SKR	011608-Se	79.9	2.26	0.12	0.04		0.45	0.02	0.01
L-368-07- 11	480 FL 498 TL	SKR	012408-Se	80.0	1.80	0.11	0.03		0.36	0.02	0.01
L-368-07- 12	465 FL 492 TL	SKR	012408-Se	78.2	1.48	0.11	0.03		0.32	0.02	0.01
L-368-07- 13	422 FL 440 TL	BNT	012408-Se	75.8	1.08	0.10	0.03		0.26	0.02	0.01
L-368-07- 14	350 FL 367 TL	BNT	012408-Se	76.8	0.33	0.11	0.03		0.08	0.02	0.01
L-368-07- 15	355 FL --- TL	BNT	012408-Se	76.5	0.42	0.10	0.03		0.10	0.02	0.01
L-368-07- 16	360 FL 380 TL	BNT	012408-Se	75.6	0.29	0.10	0.03		0.07	0.02	0.01
L-368-07- 17	385 FL 423 TL	SPM	012408-Se	79.1	0.87	0.12	0.04		0.18	0.02	0.01
L-368-07- 18	383 FL 420 TL	SPM	012408-Se	81.3	1.37	0.12	0.04		0.26	0.02	0.01
L-368-07- 19	378 FL 416 TL	SPM	012408-Se	78.6	0.86	0.12	0.03		0.18	0.02	0.01
L-368-07- 20	445 FL 483 TL	SPM	012408-Se	79.4	2.00	0.12	0.04		0.41	0.02	0.01
L-368-07- 21	408 FL 446 TL	SPM	012408-Se	80.2	1.15	0.12	0.04		0.23	0.02	0.01
L-368-07- 22	433 FL 473 TL	SPM	012408-Se	80.5	1.23	0.12	0.04		0.24	0.02	0.01
L-368-07- 23	390 FL 425 TL	SPM	012408-Se	81.7	1.06	0.13	0.04		0.19	0.02	0.01
L-368-07- 24	420 FL 452 TL	SPM	012408-Se	81.2	2.52	0.12	0.04		0.47	0.02	0.01
L-368-07- 25	405 FL 432 TL	SPM	012408-Se	80.4	2.56	0.12	0.04		0.50	0.02	0.01
L-368-07- 26	378 FL 418 TL	SPM	012408-Se	79.4	0.89	0.12	0.04		0.18	0.02	0.01
L-368-07- 27	585 FL 630 TL	SPM	012408-Se	74.7	3.48	0.09	0.03		0.88	0.02	0.01
L-368-07- 28	555 FL 590 TL	SPM	012408-Se	78.3	6.78	0.11	0.03		1.47	0.02	0.01
L-368-07- 29	495 FL 530 TL	SPM	012408-Se	79.6	4.43	0.12	0.04		0.90	0.02	0.01
L-368-07- 30	373 FL 394 TL	RT	012408-Se	76.5	0.27	0.10	0.03		0.06	0.02	0.01