

Appendix E. Fish Tissue



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Dave Brown
Agency: The Research Foundation
Receiving Department
Address: 1st and Orange Streets
City: Chico, CA 95929-0920

Lab Number: L-118-04
Other Number:
Date Sampled: 03/18/04
Date Received: 03/19/04
Date Completed: 04/02/04
Index-PCA Code: PO#04388

RE: Cherokee Canal - Mercury

RESULTS OF CHEMICAL ANALYSIS:

See attached spreadsheet for analytical results and QA summary.

METHOD REFERENCE:


Determination of Mercury in Fish Tissue, a Rapid, Automated Technique for Routine Analysis, Varian Instruments Publication AA-60, May 1986.

Cost of Analysis: \$104.00

Analyst: CO


Inorganic Section Leader

4/13/04
Date


Laboratory Director

4/13/04
Date

Sample Identification	Species Code	Percent Moisture	Hg, dry weight concentration, µg/g	Hg, wet weight concentration, µg/g
L-118-04-SKR	SKR	77.1	0.42	0.10
L-118-04-SKR-dup	SKR	77.1	0.43	0.10
Reporting Limit			0.03	0.01

CHEROKEE CANAL
Mercury QA Summary

Project title: Cherokee Canal
 WPCL lab number: L-118-04
 No. of samples received: 5
 No. of samples analyzed for Hg: 1
 Date received: 03/19/04
 Received by: Laurie Smith
 Lab storage location: TSM F3

Results	LCS % rec.	LCSD % rec.	LCS/LCSD RPD
% recovery - 1 st set	89.0%	91.3%	2.50

Method blank analysis results	Analysis result (ppb)	
Analysis results - 1 st set	0.012	0.011

Initial cal. results	ICB (ppb)	ICV (% rec.)
Analysis results - 1 st set	0.020	104%

Cont. cal. results	CCB (ppb)	CCV (% rec.)
Analysis results - 1 st set	0.000	99.7%

Final cal. results	FCB (ppb)	FCV (% rec.)
Analysis results - 1 st set	0.003	98.9%

Sample ID for duplicate	Hg wet wt conc, ppm		RPD
SKR	0.10	0.10	2.33

Chico State

L-11804
3/19/04

~~WATER QUALITY MONITORING PROGRAM~~
FIELD DATA REPORT

DATE: 3/18/04

STANUM: _____

TIME 1045 - 1230

NUMBER: _____

FIELD CREW: Linn, Siskind

STANAME: Cherokee Canal

STATION DESCRIPTION:

started below Hwy 162 bridge, worked upstream ~ 400 m

COUNTY Butte

USGS MAP: _____

LAT. 39° 27' 53'

LONG -121° 44' 41"

Type 7

METHOD	EFFORT	SPECIES	NUMBER	SIZE	PKG #	NOTES
<u>Back E-fisher</u>		<u>SKR</u>	<u>5</u>	<u>200-280</u>	<u>1</u>	
		<u>SACRAMENTO SUCKER</u>				

COMMENTS: caught 1 lg. SKR ~ 350mm, a few smaller SKR, 1 or 2 med. SKR (lost in bucket spill), 4-5 Pikeminnow, 3-4 tule perch, 10-15 sculpin, observed Gambusia, 1 adult bullfrog, tadpoles, crayfish, 1 garter snake

DIRECTIONS TO STATION: _____

SKR
252
265
252
280
200

did not include the 200mm fish in the composite. Used four feet 12

ORGANICS metc
METALS Hy Vazquez
ARCHIVE _____
OTHER _____

REIMBURSEMENT CONTRACTS - PROJECT CHECKLIST

Project Lab # L-11804 Project Title CHEROKEE CANAL Customer CHICAGO STATE Due Date

No. of Samples 5 SKR COMP Sample Type fish for dissection Analysis \$ OP
\$ TRIAZIN
\$ CARBAPAD Extraction Sheet #

GC-F3						
GC-F4						
GC-MS						
Data Processing						
QA Review						
QA Summary Rpt						
Draft Report Sent						
Final Report Sent						

Final Report Sent To:

Agency:

Address:

Faxed to:

Comments

Sample stored TSM E3



DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler Jack Linn 358-0314 **Ph #** L-115-04
Address 205 Nimbus Road **Field Number**
City Rancho Cordova CA 95670 **Lab Storage** TSN F2
Date Required/Reason **Spill Title**
Shipped Via **Suspect**
City **Index-PCA**

Send Results To **Lab Number**
Address **Field Number**
City CA **Lab Storage** TSN F2
Copies To **Spill Title**
Address **Suspect**
City **Index-PCA**

Water Temp: **F or C** **pH:** **DO:** **mg/L Conductivity:** **µmhos/cm**
Trace Elements (Specify Below) **Pesticides (Specify Below)** **Sample Type** **Number of Containers** **Preservation**
Petroleum Fingerprint **Water** **Filtered Water** **Soil** **Tissue** **Glass** **VOA Vial** **Temp** **Acid**

Fish & Wildlife Loss **Date:** **Region:**
 DFG Code Violation:
 Suspected or Potential Problem
 Routine Analysis

Analysis Requested >>>
Sample Identification/Location (Draw map on separate sheet if necessary)
 5 SKR from Chumbe Canal
 See attached field data report

Collection Date 3/18/04 **Time** 10:45
Water Pollution Control Lab (916) 358-2803 **Petroleum Chemistry Lab** (916) 358-2803
 2005 Nimbus Road, CA 95670 1995 Nimbus Road, CA 95670
 Rancho Cordova, CA 95670 Rancho Cordova, CA 95670

Problem Description
Suspect/Incident Location
Comments/Special Instructions

Received By (Signature) Laurie Smith **Print Name** Laurie Smith **Date** 3/19/04
Samples Relinquished By (Signature) **Print Name** **Date**

Pollution Action Kit: Yes No
Glove Size: Large Medium
Hazmat Shipper Requested: Yes No

LAB COPIES: WHITE, CANARY, PINK **SUBMITTER:** GOLDENROD **FG 1000 (Rev. 9/01)**



DEPARTMENT OF FISH AND GAME
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WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Dave Brown
Agency: GEOS - CSU Chico
Address: 101 Orange Street
City: Chico, CA 95929-0205

Lab Number: L-118-04
Other Number:
Date Sampled: 03/18/04
Date Received: 03/19/04
Date Completed: 05/14/04
Index-PCA Code:

RE: Pesticides

RESULTS OF CHEMICAL ANALYSIS:

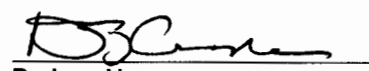
One composite fish sample was extracted and analyzed for organophosphate, triazine and carbamate pesticides. Results of the analyses are attached.

ND = Not Detected

Cost of Analysis: \$ 1,500.00


Analyst

05.18.2004
Date


Reviewed by

5/18/04
Date


Laboratory Director

5/18/04
Date

WPCL Lab#	Reporting Limit	L-118-04	L-118-04	L-118-04
Sample Identification		Method blank	LCS	
Date Collected				3/18/2004
Date Received				3/19/2004
Date Extracted		3/25/2004	3/25/2004	3/25/2004
Date Analyzed		4/9/2004	4/9/2004	4/9/2004
Organophosphate Pesticides	ppb(ng/g)	ppb(ng/g)	% Recovery	ppb(ng/g)
Aspon	10.0	ND	91.3	ND
Azinphos-ethyl	10.0	ND	87.0	ND
Carbophenothion	10.0	ND	86.3	ND
Chlorfenvinphos	10.0	ND	80.5	ND
Chlorpyrifos	10.0	ND	102	ND
Chlorpyrifos methyl	10.0	ND	89.8	ND
Ciodrin(Crotoxyphos)	10.0	ND	90.6	ND
Coumaphos	10.0	ND	107	ND
Demeton-S	10.0	ND	75.0	ND
Diazinon	5.00	ND	103	ND
Dibrom(naled)	10.0	ND	70.0	ND
Dichlofenthion	10.0	ND	89.6	ND
Dichlorvos	10.0	ND	90.3	ND
Dicrotophos	10.0	ND	89.7	ND
Dimethoat	10.0	ND	70.0	ND
Dioxathion	10.0	ND	76.6	ND
Disulfoton	10.0	ND	87.1	ND
Ethion	10.0	ND	77.5	ND
Famphur	10.0	ND	86.3	ND
Fenchlorophos(Ronnel)	10.0	ND	106	ND
Fenitrothion	10.0	ND	91.5	ND
Fensulfothion	10.0	ND	102	ND
Fenthion(Mercaptophos)	10.0	ND	98.4	ND
Fonofos (Dyfonate)	10.0	ND	71.6	ND
Guthion(Azinphos methyl)	10.0	ND	87.0	ND
Leptophos	10.0	ND	99.4	ND
Malathion	10.0	ND	82.7	ND
Methodathion	10.0	ND	81.3	ND
Methyl parathion	10.0	ND	105	ND
Parathion	10.0	ND	91.4	ND
Phorate	10.0	ND	100	ND
Phosdrin(Mevinphos)	10.0	ND	99.6	ND
Phosmet	10.0	ND	97.4	ND
Phosphamidon	10.0	ND	91.1	ND
Propfos(Ethoprop)	10.0	ND	97.6	ND
Sulprofos(Bolstar)	10.0	ND	78.4	ND
Terbufos	10.0	ND	91.5	ND
Tetrachlorvinphos(stirifos)	10.0	ND	100	ND
Thionzin(Thionazin)	10.0	ND	90.7	ND
Tokuthion	10.0	ND	100	ND
Tributylphosphorotrithioite(Merphos)	10.0	ND	110	ND
Trichlorfon	10.0	ND	90.8	ND
Trichloronate	10.0	ND	107	ND
Surrogate (% Recovery)				
Triphenyl phosphate	10.0	97.5	91.6	88.3

WPCL Lab#	Reporting Limit	L-118-04	L-118-04	L-118-04
Sample Identification		Method blank	LCS	
Date Collected				3/18/2004
Date Received				3/19/2004
Atrazine	20.0	ND	89.0	ND
Prometon	20.0	ND	65.1	ND
Prometryn	20.0	ND	68.3	ND
Propazine	20.0	ND	98.9	ND
Secbumeton	20.0	ND	109	ND
Simazine	20.0	ND	93.3	ND
Simetryn	20.0	ND	80.0	ND
Terbutylazine	20.0	ND	90.7	ND
Terbutryn	20.0	ND	63.2	ND

WPCL Lab#	Reporting Limit	L-118-04	L-118-04	L-118-04
Sample Identification		Method blank	LCS	
Date Collected				3/18/2004
Date Received				3/19/2004
Date Extracted		3/25/2004	3/25/2004	3/25/2004
Date Analyzed		4/9/2004	4/9/2004	4/9/2004
Carbamates	ppb(ng/g)	ppb(ng/g)	ppb(ng/g)	ppb(ng/g)
Aminocarb	10.0	ND	102	ND
Barban	25.0	ND	114	ND
Baygon(propoxur)	10.0	ND	98.1	ND
Carbaryl	10.0	ND	88.5	ND
Carbofuran	10.0	ND	91.3	ND
Chlorpropham	10.0	ND	80.9	ND
Diuron	10.0	ND	71.0	ND
Fenuron	10.0	ND	110	ND
Fluometuron	20.0	ND	102	ND
Linuron	10.0	ND	88.7	ND
Methiocarb	10.0	ND	69.8	ND
Methomyl	10.0	ND	101	ND
Monuron	10.0	ND	86.1	ND
Neburon	10.0	ND	76.7	ND
Oxamyl	20.0	ND	103	ND
Propham	10.0	ND	95.8	ND
Siduron	10.0	ND	92.5	ND
Swep	10.0	ND	75.9	ND

Chico State

L-11804
3/19/04

~~TOXIC SUBSTANCES MONITORING PROGRAM~~
FIELD DATA REPORT

DATE: 3/19/04

STANUM: _____

TIME 1045 - 1230

NUMBER: _____

FIELD CREW: Linu, S. Skold

STANAME: Chewater Cond

STATION DESCRIPTION: started below Hwy 162 bridge, worked upstream ~ 400m

COUNTY Butte

USGS MAP: _____ LAT. 39° 27' 53' LONG -121° 44' 41''

Type 7

METHOD	EFFORT	SPECIES	NUMBER	SIZE	PKG #	NOTES
<u>g-trick</u>		<u>SKR</u>	<u>5</u>	<u>200-280</u>	<u>1</u>	
		<u>SACRAMENTO SUCKER</u>				

COMMENTS: caught 1 lg. SKR ~ 350mm, a few smaller SKR, 1 or 2 med. SKR (lost in bucket spill), 4-5 Pikeminnow, 3-4 tule perch, 10-15 sculpin, observed Gambusia, 1 adult bullfrog tadpoles, crayfish, 1 garter snake

DIRECTIONS TO STATION: _____

SKR
252
265
252
280
200

did not include the 200mm fish in the composite, used four feet to

ORGANICS MEKC
METALS by Vasquez
ARCHIVE _____
OTHER _____

REIMBURSEMENT CONTRACTS - PROJECT CHECKLIST

Project Lab # Project Title Customer Due Date
 L-11864 *CHEROKEE CANAL* *CHICAGO STATE*

No. of Samples Sample Type Analysis Extraction Sheet #
 5 SKR COMP. *fish for dissection* \$OP
 \$TRIAZIN
 \$CARBAPAD
 HB.

TASK		Start Date	Completion Date	Initials
Collection Date		3/18/04	3/18/04	
Rec'd WPCL			3/19/04	
Dissected		3/23/04	3/23/04	
Homogenized		3/23/04	3/23/04	
Extraction				
	Sequence#	Sequence#		
	GC-F1			
	GC-F2			
	GC-F3			
	GC-F4			
	GC-MS			
Data Processing				
QA Review				
QA Summary Rpt				
Draft Report Sent				
Final Report Sent				

Final Report Sent To:
 Agency:
 Address:
 Faxed to:

Comments *Sample stored TEM E3*