Columbia Analytical Services™ 1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

December 7, 2011 Analytical Report for Service Request No: K1110960

Gordon Willson-Naranjo
Alaska Department of Fish and Game
Division of Habitat
P.O. Box 110024
Juneau, AK 99811

RE: Kensington Gold Mine Whole Fish analysis/22224

Dear Gordon:

Enclosed are the results of the samples submitted to our laboratory on November 09, 2011. For your reference, these analyses have been assigned our service request number K1110960.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3364. You may also contact me via Email at HHolmes@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Howard Holmes
Project Chemist

HH/ln

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition*: Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition*: Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition*: Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Agency	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
DOD ELAP	L11-119
Florida DOH	E87412
Georgia DNR	881
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
ISO 17025	L11-118
Louisiana DEQ	3016
Louisiana DHH	LA080001
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon – DEQ (NELAP)	WA100010
South Carolina DHEC	61002
Texas CEQ	04704427-08-TX
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Alaska Department of Fish & Game	**Service Request No.:**	K1110960
Project:	Kensington Gold Mine-Whole Fish Analysis	**Date Received:**	11/9/11
Sample Matrix:	Fish Tissue		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Laboratory Control Sample (LCS).

Sample Receipt

Three fish tissue samples were received for analysis at Columbia Analytical Services on 11/9/11. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored frozen at -20C upon receipt at the laboratory.

Total Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Aluminum for sample KGM Lower Slate were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for the replicate analysis of Aluminum in sample KGM Lower Slate was outside the CAS control limits (23% RPD versus a control limit of 20%). The samples were homogenized, freeze dried, then ground prior to digestion, however this was not sufficient to achieve a completely uniform distribution of Aluminum in the tissue.

No other anomalies associated with the analysis of these samples were observed.

Approved by Heather A. Holmes Date 12-8-11

Columbia Analytical Services™
An Employee - Owned Company

CHAIN OF CUSTODY

SR#: K1110960

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE 1 OF 1 COC #

PROJECT NAME: Kensington Gold Mine whole Fish analysis
PROJECT NUMBER: 22224
PROJECT MANAGER: Kate Kanouse
COMPANY/ADDRESS: Alaska Dept. Fish and Game
602 West 3rd St.
CITY/STATE/ZIP: Juneau, AK, 99801
E-MAIL ADDRESS: Gordon.wilson-naranjo@alaska.gov
PHONE #: 907-465-6646 FAX# 907-465-4759
SAMPLER'S SIGNATURE: Benjamin Brewster

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐ 8021 ☐ BTEX ☐ ☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐	Hex-Chrom ☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle) NH3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	Total Mercury 1631				REMARKS
KGM upper slate	8/10/11	1200		tissue	1									X					X						
KGM E Fork slate	9/13/11	1200		tissue	1									X					X						
KGM Lower Slate	10/11/11	1200		tissue	1									X					Y						

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.
____ 5 Day
____ Standard (10-15 working days)
____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: (Al) As Sb Ba Be B Ca (Cd) Co (Cr) (Cu) Fe (Pb) Mg Mn Mo (Ni) K (Ag) Na (Se) Sr Tl Sn V (Zn) Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Benjamin Brewster	Signature: [illegible]	Signature:	Signature:
Date/Time: 11/8/11	Date/Time: 11/9/11 0930	Date/Time:	Date/Time:
Printed Name: Benjamin Brewster	Printed Name: [illegible]	Printed Name:	Printed Name:
Firm: ADF&G	Firm: CAS	Firm:	Firm:

PC M.2

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client / Project: Alaska Dept of Fish & Game Service Request K11 109160

Received: 11/9/11 Opened: 11/9/11 By: HO Unloaded: 11/9/11 By: HO

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1, front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? Y (N)

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
3.7	/	310		8768 4878 6205	

7. Packing material used. *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Sleeves* *Other* hard packice
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
15. Was Cl2/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:

*Page 1 of*____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Alaska Department of Fish and Game	**Service Request:**	K1110960
Project:	Kensington Gold Mine Whole Fish analysis/22224	**Date Collected:**	08/10/11
Sample Matrix:	Tissue	**Date Received:**	11/09/11

Solids, Total

Prep Method:	NONE	Units:	PERCENT
Analysis Method:	Freeze Dry	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	Date Analyzed	Result	Result Notes
KGM Upper Slate	K1110960-001	11/10/11	22.5	
KGM E.Fork Slate	K1110960-002	11/10/11	24.9	
KGM Lower Slate	K1110960-003	11/10/11	23.8	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Alaska Department of Fish and Game	**Service Request:**	K1110960
Project:	Kensington Gold Mine Whole Fish analysis/22224	**Date Collected:**	10/11/11
Sample Matrix:	Tissue	**Date Received:**	11/09/11
		Date Extracted:	NA
		Date Analyzed:	11/10/11

Duplicate Summary

Sample Name:	KGM Lower Slate	Units:	PERCENT
Lab Code:	K1110960-003D	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	NA	Freeze Dry	23.8	23.7	23.8	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Alaska Department of Fish and Game	**Service Request:**	K1110960
Project:	Kensington Gold Mine Whole Fish analysis/22224	**Date Collected:**	08/10/11
Sample Matrix:	Animal tissue	**Date Received:**	11/09/11

Mercury, Total

Prep Method:	METHOD	Units:	ng/g = ppb
Analysis Method:	1631E	Basis:	Dry
Test Notes:			

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
KGM Upper Slate	K1110960-001	1.0	20	11/17/11	11/18/11	112	
KGM E.Fork : Slate	K1110960-002	1.0	20	11/17/11	11/18/11	107	
KGM Lower Slate	K1110960-003	1.0	20	11/17/11	11/18/11	67.4	
Method Blank 1	K1110960-MB1	1.0	20	11/17/11	11/18/11	ND	
Method Blank 2	K1110960-MB2	1.0	20	11/17/11	11/18/11	ND	
Method Blank 3	K1110960-MB3	1.0	20	11/17/11	11/18/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Alaska Department of Fish and Game	**Service Request:**	K1110960
Project:	Kensington Gold Mine Whole Fish analysis/22224	**Date Collected:**	NA
Sample Matrix:	Animal tissue	**Date Received:**	NA
		Date Extracted:	11/17/11
		Date Analyzed:	11/18/11

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	Units:	ng/g
Lab Code:	K1110959-003MS, K1110959-003MSD	Basis:	Dry
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Mercury	METHOD	1631E	1.0	247	249	42.3	317	276	111	94	70-130	17	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Alaska Department of Fish and Game	**Service Request:**	K1110960
Project:	Kensington Gold Mine Whole Fish analysis/22224	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	11/18/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	4.87	97	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Alaska Department of Fish and Game	**Service Request:**	K1110960
Project:	Kensington Gold Mine Whole Fish analysis/22224	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	11/18/11

Ongoing Precision and Recovery (OPR) Sample Summary

Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L

Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	4.60	92	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Alaska Department of Fish and Game	**Service Request:**	K1110960
Project:	Kensington Gold Mine Whole Fish analysis/22224	**Date Collected:**	NA
LCS Matrix:	Animal tissue	**Date Received:**	NA
		Date Extracted:	11/17/11
		Date Analyzed:	11/18/11

Quality Control Sample (QCS) Summary
Total Metals

Sample Name:	Quality Control Sample	Units:	ng/L
Lab Code:		Basis:	Dry
Test Notes:			

Source: TORT

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	270	247	91	70-130	

Columbia Analytical Services

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INORGANIC ANALYSIS DATA PACKAGE

Client: Alaska Department of Fish and Game
Project Name: Kensington Gold Mine Whole Fish analysis
Project No.: 22224
Service Request: K1110960

Sample Name:	Lab Code:
KGM Upper Slate	K1110960-001
KGM E.Forke Slate	K1110960-002
KGM Lower Slate	K1110960-003
KGM Lower SlateD	K1110960-003D
KGM Lower SlateS	K1110960-003S
Method Blank	K1110960-MB

Comments:

Approved By: _____ **Date:** 12/6/11

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Alaska Department of Fish and Ga	**Service Request:**	K1110960
Project No.:	22224	**Date Collected:**	08/10/11
Project Name:	Kensington Gold Mine Whole Fish	**Date Received:**	11/09/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: KGM Upper Slate **Lab Code:** K1110960-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum Al	6020A	40.0	100.0	11/16/11	12/02/11	1630		*
Cadmium Cd	6020A	0.02	5.0	11/16/11	12/01/11	0.14		
Chromium Cr	6020A	0.2	5.0	11/16/11	12/01/11	13.5		
Copper Cu	6020A	0.1	5.0	11/16/11	12/01/11	11.3		
Lead Pb	6020A	0.02	5.0	11/16/11	12/02/11	0.20		
Nickel Ni	6020A	0.2	5.0	11/16/11	12/01/11	5.5		
Selenium Se	6020A	1.0	5.0	11/16/11	12/01/11	4.4		
Silver Ag	6020A	0.02	5.0	11/16/11	12/01/11	0.02	U	
Zinc Zn	6020A	0.5	5.0	11/16/11	12/01/11	115		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Alaska Department of Fish and Ga	**Service Request:**	K1110960
Project No.:	22224	**Date Collected:**	09/13/11
Project Name:	Kensington Gold Mine Whole Fish	**Date Received:**	11/09/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: KGM E.Fork Slate **Lab Code:** K1110960-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	2.0	5.0	11/16/11	12/02/11	46.3		*
Cadmium	6020A	0.02	5.0	11/16/11	12/01/11	1.99		
Chromium	6020A	0.2	5.0	11/16/11	12/01/11	1.3		
Copper	6020A	0.1	5.0	11/16/11	12/01/11	14.6		
Lead	6020A	0.02	5.0	11/16/11	12/02/11	0.04		
Nickel	6020A	0.2	5.0	11/16/11	12/01/11	1.1		
Selenium	6020A	1.0	5.0	11/16/11	12/01/11	4.6		
Silver	6020A	0.02	5.0	11/16/11	12/01/11	0.02		
Zinc	6020A	0.5	5.0	11/16/11	12/01/11	133		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Alaska Department of Fish and Ga	**Service Request:**	K1110960
Project No.:	22224	**Date Collected:**	10/11/11
Project Name:	Kensington Gold Mine Whole Fish	**Date Received:**	11/09/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: KGM Lower Slate **Lab Code:** K1110960-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	39.9	100.0	11/16/11	12/02/11	2430		*
Cadmium	6020A	0.02	5.0	11/16/11	12/01/11	0.72		
Chromium	6020A	0.2	5.0	11/16/11	12/01/11	17.3		
Copper	6020A	0.1	5.0	11/16/11	12/01/11	15.5		
Lead	6020A	0.02	5.0	11/16/11	12/02/11	0.50		
Nickel	6020A	0.2	5.0	11/16/11	12/01/11	6.2		
Selenium	6020A	1.0	5.0	11/16/11	12/01/11	3.8		
Silver	6020A	0.02	5.0	11/16/11	12/01/11	0.05		
Zinc	6020A	0.5	5.0	11/16/11	12/01/11	195		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Alaska Department of Fish and Ga	**Service Request:**	K1110960
Project No.:	22224	**Date Collected:**	
Project Name:	Kensington Gold Mine Whole Fish	**Date Received:**	
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: Method Blank **Lab Code:** K1110960-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	2.0	5.0	11/16/11	12/02/11	2.0	U	*
Cadmium	6020A	0.02	5.0	11/16/11	12/01/11	0.02	U	
Chromium	6020A	0.2	5.0	11/16/11	12/01/11	0.2	U	
Copper	6020A	0.1	5.0	11/16/11	12/01/11	0.1	U	
Lead	6020A	0.02	5.0	11/16/11	12/02/11	0.02	U	
Nickel	6020A	0.2	5.0	11/16/11	12/01/11	0.2	U	
Selenium	6020A	1.0	5.0	11/16/11	12/01/11	1.0	U	
Silver	6020A	0.02	5.0	11/16/11	12/01/11	0.02	U	
Zinc	6020A	0.5	5.0	11/16/11	12/01/11	0.5	U	

Comments:

Metals
- 5A -

SPIKE SAMPLE RECOVERY

Client: Alaska Department of Fish and Ga Service Request: K1110960

Project No.: 22224 Units: MG/KG

Project Name: Kensington Gold Mine Whole Fish Basis: DRY

Matrix: TISSUE

Sample Name: KGM Lower SlateS Lab Code: K1110960-003S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Aluminum		4152.4		2428.4		198.0	871		6020A
Cadmium	75 - 125	5.57		0.72		4.95	98		6020A
Chromium	75 - 125	40.3		17.3		19.8	116		6020A
Copper	75 - 125	41.7		15.5		24.8	106		6020A
Lead	75 - 125	40.38		0.50		49.50	81		6020A
Nickel	75 - 125	57.5		6.2		49.5	104		6020A
Selenium	75 - 125	20.5		3.8		16.5	101		6020A
Silver	75 - 125	4.52		0.05		4.95	90		6020A
Zinc	75 - 125	234.8		194.7		49.5	81		6020A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

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DUPLICATES

Client: Alaska Department of Fish and Ga **Service Request:** K1110960

Project No.: 22224 **Units:** MG/KG

Project Name: Kensington Gold Mine Whole Fish **Basis:** DRY

Matrix: TISSUE

Sample Name: KGM Lower SlateD **Lab Code:** K1110960-003D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Aluminum	20	2428.4		3065.4		23.2	*	6020A
Cadmium	20	0.72		0.67		7.2		6020A
Chromium	20	17.3		19.2		10.4		6020A
Copper	20	15.5		17.3		11.0		6020A
Lead	20	0.50		0.55		9.5		6020A
Nickel	20	6.2		7.2		14.9		6020A
Selenium		3.8		3.7		2.7		6020A
Silver		0.05		0.05		0.0		6020A
Zinc	20	194.7		192.5		1.1		6020A

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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LABORATORY CONTROL SAMPLE

Client: Alaska Department of Fish and Ga **Service Request:** K1110960

Project No.: 22224

Project Name: Kensington Gold Mine Whole Fish

Aqueous LCS Source: CAS MIXED **Solid LCS Source:**

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	2000.0	1883.3	94					
Cadmium	50.0	48.8	98					
Chromium	200.0	184.0	92					
Copper	250.0	244.8	98					
Lead	500.0	459.6	92					
Nickel	500.0	464.4	93					
Selenium	167.0	178.9	107					
Silver	50.0	46.7	93					
Zinc	500.0	505.8	101					

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Alaska Department of Fish and Game	**Service Request:**	K1110960
Project:	Kennsington Gold Mine Whole Fish analysis	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	11/16/11
		Date Analyzed:	12/01-02/11

Standard Reference Material Summary
Total Metals

Sample Name:	Standard Reference Material	Units:	mg/Kg (ppm)
Lab Code:	K1110960-SRM1	Basis:	Dry
Test Notes:			

Source: N.R.C.C. Dorm-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Cadmium	PSEP Tissue	6020A	0.29	0.33	114	0.216 - 0.372	
Chromium	PSEP Tissue	6020A	1.89	1.70	90	1.38 - 2.47	
Copper	PSEP Tissue	6020A	15.5	15.7	101	11.9 - 19.4	
Lead	PSEP Tissue	6020A	0.395	0.308	78	0.276 - 0.534	
Nickel	PSEP Tissue	6020A	1.28	1.25	98	0.83 - 1.82	
Zinc	PSEP Tissue	6020A	51.3	52.6	103	38.6 - 65.3	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Alaska Department of Fish and Game	**Service Request:**	K1110960
Project:	Kennsington Gold Mine Whole Fish analysis	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	11/16/11
		Date Analyzed:	12/01-02/11

Standard Reference Material Summary
Total Metals

Sample Name:	Standard Reference Material	Units:	mg/Kg (ppm)
Lab Code:	K1110960-SRM2	Basis:	Dry
Test Notes:			

Source: N.R.C.C. Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Cadmium	PSEP Tissue	6020A	26.7	28.2	106	20.9-32.8	
Chromium	PSEP Tissue	6020A	0.77	0.68	88	0.5-1.1	
Copper	PSEP Tissue	6020A	106	103	97	77-139	
Lead	PSEP Tissue	6020A	0.35	0.29	83	0.18-0.58	
Nickel	PSEP Tissue	6020A	2.5	2.3	92	1.85-3.23	
Selenium	PSEP Tissue	6020A	5.63	6.07	108	3.97-7.56	
Zinc	PSEP Tissue	6020A	180	191	106	139-223	