ANALYTICAL RESULTS

Lab Order: P110211
Project ID: NOV 5, 2014 EFF MONTHLY METALS

Lab ID P110211001 Date Collected 11/5/2014 08:00 Matrix Water
Sample ID E-002 NOVATO EFFLUENT Date Received 11/5/2014 15:30

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Metals by ICPMS Collision Mode, Total	**Prep Method:**		EPA 200.8			**Prep by:**	UK			
	Analytical Method:		EPA 200.8					**Analyzed by:**	LM	
Arsenic	J0.33	ug/L	0.50	0.060	1	11/10/14 00:00	MPR 13196	11/11/14 16:12	MMS 7406	
Cadmium	ND	ug/L	0.10	0.050	1	11/10/14 00:00	MPR 13196	11/11/14 16:12	MMS 7406	1
Chromium	0.60	ug/L	0.50	0.050	1	11/10/14 00:00	MPR 13196	11/11/14 16:12	MMS 7406	
Copper	3.4	ug/L	0.50	0.15	1	11/10/14 00:00	MPR 13196	11/11/14 16:12	MMS 7406	
Iron	0.10	mg/L	0.05	0.0050	1	11/10/14 00:00	MPR 13196	11/11/14 16:12	MMS 7406	
Lead	J0.20	ug/L	0.25	0.030	1	11/10/14 00:00	MPR 13196	11/11/14 16:12	MMS 7406	
Nickel	2.3	ug/L	0.50	0.060	1	11/10/14 00:00	MPR 13196	11/11/14 16:12	MMS 7406	
Selenium	J0.40	ug/L	1.0	0.40	1	11/10/14 00:00	MPR 13196	11/11/14 16:12	MMS 7406	
Silver	ND	ug/L	0.10	0.020	1	11/10/14 00:00	MPR 13196	11/11/14 16:12	MMS 7406	
Zinc	37	ug/L	1.0	0.70	1	11/10/14 00:00	MPR 13196	11/11/14 16:12	MMS 7406	

Q.C. OK - PD - 11/24/2014

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Friday, November 14, 2014

Ken Besnia
Novato Sanitary District
500 Davidson St.
Novato, CA 94945

Re Lab Order: P110211
Project ID: NOV 5, 2014 EFF MONTHLY METALS

Collected By: Ken Besnia
PO/Contract #:

Dear Ken Besnia:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, November 05, 2014. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Enclosures

Project Manager: Todd Albertson

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SAMPLE SUMMARY

Lab Order: P110211
Project ID: NOV 5, 2014 EFF MONTHLY METALS

Lab ID	Sample ID	Matrix	Date Collected	Date Received
P110211001	E-002 NOVATO EFFLUENT	Water	11/05/2014 08:00	11/05/2014 15:30

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NARRATIVE

Lab Order: P110211
Project ID: NOV 5, 2014 EFF MONTHLY METALS

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods (SM) 20th Edition except where noted (SMOL=online edition).

Caltest collects samples in compliance with 40 CFR, EPA Methods, Cal. Title 22, and Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis are not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.

Qualifiers and Compound Notes

1 Analyte(s) reported as 'ND' means not detected at or above the listed Method Detection Limits (MDL).

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QUALITY CONTROL DATA

Lab Order: P110211
Project ID: NOV. 5, 2014 EFF MONTLY METALS

Analysis Description:	Metals by ICPMS Collision Mode, Total	**QC Batch:**	MPR/13196
Analysis Method:	EPA 200.8	**QC Batch Method:**	EPA 200.8

METHOD BLANK: 612574

Parameter	Blank Result	Reporting Limit	MDL	Units	Qualifiers
Arsenic	ND	0.10	0.06	ug/L	
Cadmium	ND	0.10	0.05	ug/L	
Chromium	ND	0.10	0.05	ug/L	
Copper	ND	0.50	0.15	ug/L	
Iron	ND	0.02	0.005	mg/L	
Lead	ND	0.10	0.03	ug/L	
Nickel	ND	0.10	0.06	ug/L	
Selenium	ND	0.50	0.40	ug/L	
Silver	ND	0.10	0.02	ug/L	
Zinc	ND	1.0	0.7	ug/L	

LABORATORY CONTROL SAMPLE: 612575

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% REC Limits	Qualifier
Arsenic	ug/L	20	19	94	85-115	
Cadmium	ug/L	20	19	97	85-115	
Chromium	ug/L	20	19	95	85-115	
Copper	ug/L	20	19	95	85-115	
Iron	mg/L	10	10	100	85-115	
Lead	ug/L	20	20	100	85-115	
Nickel	ug/L	20	19	95	85-115	
Selenium	ug/L	20	18	93	85-115	
Silver	ug/L	20	19	97	85-115	
Zinc	ug/L	20	19	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 612577 612578

Parameter	Units	P110220002 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Arsenic	ug/L	0.79	20	21	20	99	97	70-130	2	20	
Cadmium	ug/L	0	20	19	19	95	93	70-130	2.2	20	
Chromium	ug/L	0.26	20	20	19	97	95	70-130	1.9	20	
Copper	ug/L	7.3	20	26	26	96	93	70-130	2.4	20	
Iron	mg/L	0.28	10	11	10	104	102	70-130	1.9	20	
Lead	ug/L	0.41	20	21	20	101	97	70-130	3.2	20	
Nickel	ug/L	2.8	20	23	22	99	94	70-130	4.8	20	
Selenium	ug/L	0	20	20	20	99	100	70-130	1.5	20	
Silver	ug/L	0	20	19	19	95	93	70-130	2.4	20	
Zinc	ug/L	26	20	46	43	97	84	70-130	6	20	

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QUALITY CONTROL DATA

Lab Order: P110211
Project ID: NOV. 5, 2014 EFF MONTLY METALS

Analysis Description:	Metals by ICPMS Collision Mode, Total	**QC Batch:**	MPR/13196
Analysis Method:	EPA 200.8	**QC Batch Method:**	EPA 200.8

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 612579 612580

Parameter	Units	P110233001 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Arsenic	ug/L	1.6	20	22	22	100	103	70-130	2.7	20	
Cadmium	ug/L	0	20	19	20	96	98	70-130	2.7	20	
Chromium	ug/L	0.63	20	20	20	96	98	70-130	2	20	
Copper	ug/L	3.2	20	22	23	95	97	70-130	2.4	20	
Iron	mg/L	0.12	10	10	11	102	105	70-130	3.5	20	
Lead	ug/L	0.22	20	20	21	99	105	70-130	4.9	20	
Nickel	ug/L	1.9	20	21	22	98	98	70-130	0.5	20	
Selenium	ug/L	0	20	20	20	100	100	70-130	0.8	20	
Silver	ug/L	0.02	20	19	20	96	99	70-130	2.6	20	
Zinc	ug/L	40	20	56	58	81	88	70-130	2.3	20	

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QUALITY CONTROL DATA QUALIFIERS

Lab Order: P110211
Project ID: NOV 5, 2014 EFF MONTHLY METALS

QUALITY CONTROL PARAMETER QUALIFIERS

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

NS - means not spiked and will not have recoveries reported for Analyte Spike Amounts

QC Codes Keys: These descriptors are used to help identify the specific QC samples and clarify the report.

MB - Method Blank

Method Blanks are reported to the same Method Detection Limits (MDLs) or Reporting Limits (RLs) as the analytical samples in the corresponding QC batch.

LCS/LCSD - Laboratory Control Spike / Laboratory Control Spike Duplicate

DUP - Duplicate of Original Sample Matrix

MS/MSD - Matrix Spike / Matrix Spike Duplicate

RPD - Relative Percent Difference

%Recovery - Spike Recovery stated as a percentage

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab Order: P110211
Project ID: NOV. 5, 2014 EFF MONTLY METALS

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
P110211001	E-002 NOVATO EFFLUENT	EPA 200.8	MPR/13196	EPA 200.8	MMS/7406

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Caltest ANALYTICAL LABORATORY

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PAGE 1 OF 1

SAMPLE CHAIN OF CUSTODY

PROJECT NAME / PROJECT NUMBER: November 5, 2014 Eff Monthly Metals

P.O. NUMBER:

LAB ORDER # P1l0211

CLIENT: NOVATO SANITARY DISTRICT

REPORT TO: Ken Besnia

MAILING ADDRESS: 500 Davidson St. Novato, CA

STATE: CA ZIP: 94945

BILLING ADDRESS: 500 Davidson St. Novato, CA 94945

ATTN: Ken Besnia

PHONE NUMBER: 415-892-898 ext. 119

FAX PHONE NUMBER: 415-898-2279

SAMPLER (PRINT & SIGN NAME): Ken Besnia

ANALYSED REQUESTED

TURN-AROUND TIME

[X] STANDARD

[ ] RUSH

DUE DATE:

CALTEST LAB #	DATE SAMPLED	TIME SAMPLED	SAMPLE MATRIX*	CONTAINER TYPE/ AMOUNT**	PRESERVATIVE	SAMPLE IDENTIFICATION / SITE	CLIENT LAB #	COMP. or GRAB	As, Cd, Cr, Cu, Fe, Pb, Ni,	Ag, Se, Zn	REMARKS
											Note: Metals by ICP/MS
											Request: ML (Minimum Level)
	11/5/2014	8:00	FE	PT	HNO3	E-002 Novato Effluent		Comp	X	X	reporting for effluent samples.
											NOTE THAT IRON HAS BEEN ADDED
											TO THE LIST OF METALS

RELINQUISHED BY	DATE/TIME	RECEIVED BY	RELINQUISHED BY	DATE/TIME	RECEIVED BY
	11-5-14 / 1430			11-5-14 / 1530	
	/			/	

FOR LAB USE ONLY

Samples: WC ___ MICRO ___ BIO ___ AA ___ SV ___ VOA ___ pH? Y/N TEMP: 2.4 SEALED: Y/N INTACT: Y/N

BD: BIO ___ WC ___ AA ___

CC: AA ___ SV ___ VOA ___

SIL: HP ___ PT ___ QT ___ VOA ___

W/HNO_3 ___ H_2SO_4 ___ NaOH ___

PIL: HNO_3 ___ H_2SO_4 ___ NaOH ___ HCL ___

COMMENTS:

*MATRIX: AQ = Aqueous Nondrinking Water, Digested Metals; FE = Low R.L.s, Aqueous Nondrinking Water, Digested Metals; DW = Drinking Water; SL = Soil Sludge, Solid ; FP = Free Product

**CONTAINER TYPES: AL = Amber Liter; AHL = 500 ml Amber; PT = Pint (Plastic); QT = Quart (Plastic); HG = Half Gallon (Plastic); SJ = Soil Jar; B4 = 4oz. BACT; BT = Brass Tube; VOA = 40mL VOA; OTC - Other Type Container

R ___ PR ___ M ___ F ___

11/04/14

WHITE - LABORATORY YELLOW - CLIENT COPY TO ACCOMPANY FINAL REPORT PINK - CLIENT COPY AS RECEIPT