FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: December 4, 1996
Date Received: November 27, 1996
Project: Metro Self Monitor, PO #M55365
Date Samples Extracted: December 3, 1996
Date Extracts Analyzed: December 3, 1996

RESULTS FROM THE ANALYSIS OF THE PROCESS WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, AND ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	Chromium	Copper	Nickel	Zinc
M55365	1.1	2.0	1.6	0.3
Method Blank	<0.05	<0.05	<0.05	<0.05

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 74338 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	1.1	1.3	17	0-20
Copper	mg/L (ppm)	2.0	2.0	0	0-20
Nickel	mg/L (ppm)	1.6	1.7	6	0-20
Zinc	mg/L (ppm)	0.3	0.3	0	0-20

Laboratory Code: 74338 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	1.1	97	100	80-120	3
Copper	mg/L (ppm)	5	2.0	95	101	80-120	6
Nickel	mg/L (ppm)	10	1.6	93	98	80-120	5
Zinc	mg/L (ppm)	5	0.3	92	98	80-120	6

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	98	98	80-120	0
Copper	mg/L (ppm)	5	99	100	80-120	1
Nickel	mg/L (ppm)	10	98	98	80-120	0
Zinc	mg/L (ppm)	5	99	98	80-120	1

AN & BRUYA, INC.
Avenue West
A 98119-2029
-8282

RNJ
11-27-86
2:40

SAMPLE CHAIN OF CUSTODY

ort To: Alaskan Copper Works
628 Halleck ST
Zip Seattle WA 98134
(206) 382-8775

Contact Gerald Thompson

Date 11/27/86

PROJECT NAME		PURCHASE ORDER #
7238	METRO SELF Monitor	M 55365

S (signature)

PROJECT LOCATION: 3200 6th Ave S.

SAMPLE DISPOSAL INFORMATION
- [ ] Dispose after 30 days
- [x] Return Samples
- [ ] Call for Instructions

Sample #	Date/Time Sampled	Type of Sample	# of Jars	Lab Sample #	Analyses Requested
M 55365	11/27/86 12:35	H_2O	1	74338	Cr Cu Ni Zn

URE	PRINT NAME	COMPANY	Date	Time
d by:	Gerald Thompson	ACW	11/27/86	1:20
	Kurt Johnson	FB&I	11/27/96	1:21
d by:				
y:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

December 4, 1996

INVOICE # 96ACU1204-2
DUPLICATE COPY

Accounts Payable
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

RE: Project Metro Self Monitor, PO #M55365: Results of testing requested by Gerry Thompson, Project Manager for material submitted on November 27, 1996.

1 process water sample analyzed for Chromium, Copper, Nickel, and Zinc using Method 6010 @ $65 per sample	$ 65.00
Amount Due	$ 65.00

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TEL: (206) 285-8282
FAX: (206) 283-5044

December 4, 1996

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on November 27, 1996 from your Metro Self Monitor, PO #M55365 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson
Chemist

keh
Enclosures
ACU1204R.DOC