METRO

Municipality of Metropolitan Seattle
Industrial Waste • 130 Nickerson St., Suite 200 • Seattle, WA 98109-1658 • (206) 689-3000

April 22, 1994

James C. Brown
Alaskan Copper Works
Box 3546
Seattle, Washington 98124

The Industrial Waste Section of Metro has collected sample(s) of the wastewater from your discharge for Total Toxic Organic (TTO) analysis. The purpose of this letter is to notify you of these analytical results with a determination of whether or not your discharge is in compliance with the TTO standard.

TOTAL TOXIC ORGANIC ANALYSIS FOR:

STATION: A4010
SITE DESCRIPTION: 6TH AVE SOUTH

Sampling Date	Total Toxic Organic (ppm)	Comment(s)
4-5-94	~~0.1111~~ 0.11 CT	In compliance

NOTE: TTO is based on the sum of the concentrations of priority pollutants that exceed 10 ppb.

If you have any questions, please call me at 689-3009.

Sincerely,

Christie J True

Christie True
Industrial Waste Investigator
Environmental Programs

Enclosure(s)

METRO

Municipality of Metropolitan Seattle
Industrial Waste • 130 Nickerson St., Suite 200 • Seattle, WA 98109-1658 • (206) 689–3000

April 22, 1994

James C. Brown
Alaskan Copper Works
Box 3546
SEATTLE, Washington 98124

Metro's recent sampling indicates that the wastewater from Alaskan Copper Works meets discharge limits. Metro appreciates your compliance.

Sincerely,

Christie True
Industrial Waste Investigator
Environmental Programs
689-3009

Enclosure(s)

Alaskan Copper Works
6TH AVE SOUTH

SAMPLE#	L3389-2
SITE#	A4010
DATE	05-APR-94
SAMPLE CODE	Composite
DISCHARGE RATE	1873
TIME SPAN	12
TIME UNIT	Hour
SAMPLE START TIME	1220

PARAMETERS	CONCENTRATION (mg/l)	LOAD (lbs/day)	STATUS
Arsenic, Total, ICP	ND	NA	OK
Cadmium, Total, ICP	ND	NA	OK
Chromium, Total, ICP	1.4	0.0219	OK
Copper, Total, ICP	.853	0.0133	OK
Lead, Total, ICP	ND	NA	OK
Mercury, Total, CVAA	-	-	NA
Nickel, Total, ICP	1.22	0.0191	OK
Silver, Total, ICP	ND	NA	OK
Zinc, Total, ICP	.0966	0.0015	OK
CYANIDE	-	-	NA
PH-FIELD	-	-	NA

Category: A433
NA = Not Applicable, ND = Not Detected, - = Not Sampled
pH is in standard units, discharge rate = gallons/day

Alaskan Copper Works
6TH AVE SOUTH

SAMPLE#	L3389-1
SITE#	A4010
DATE	05-APR-94
SAMPLE CODE	Grab
DISCHARGE RATE	-
TIME SPAN	-
TIME UNIT	-
SAMPLE START TIME	1215

PARAMETERS	CONCENTRATION (mg/l)	LOAD (lbs/day)	STATUS
Arsenic, Total, ICP	ND	NA	OK
Cadmium, Total, ICP	ND	NA	OK
Chromium, Total, ICP	.97	NA	OK
Copper, Total, ICP	.655	NA	OK
Lead, Total, ICP	ND	NA	OK
Mercury, Total, CVAA	-	-	NA
Nickel, Total, ICP	.89	NA	OK
Silver, Total, ICP	ND	NA	OK
Zinc, Total, ICP	.0492	NA	OK
CYANIDE	-	-	NA
PH-FIELD	11	NA	OK

Category: A433
NA = Not Applicable, ND = Not Detected, - = Not Sampled
pH is in standard units, discharge rate = gallons/day

Alaskan Copper Works
6TH AVE SOUTH

SAMPLE#	L3389-3
SITE#	A4010
DATE	05-APR-94
SAMPLE CODE	Composite
DISCHARGE RATE	-
TIME SPAN	2.5
TIME UNIT	Hour
SAMPLE START TIME	1215

PARAMETERS	CONCENTRATION (mg/l)	LOAD (lbs/day)	STATUS
Arsenic, Total, ICP	-	-	NA
Cadmium, Total, ICP	-	-	NA
Chromium, Total, ICP	-	-	NA
Copper, Total, ICP	-	-	NA
Lead, Total, ICP	-	-	NA
Mercury, Total, CVAA	-	-	NA
Nickel, Total, ICP	-	-	NA
Silver, Total, ICP	-	-	NA
Zinc, Total, ICP	-	-	NA
CYANIDE	.013	NA	OK
PH-FIELD	-	-	NA

Category: A433
NA = Not Applicable, ND = Not Detected, - = Not Sampled
pH is in standard units, discharge rate = gallons/day

ANALYSIS HARD COPY REPORT

List ID: ORBNA-L Entryserial: 10806

Work Group: WG10446 - BL94

Sample Number: L3389-2
Matrix : IW WTR Locator : A4010 (ALASKAN COPPER WORKS/6TH AVE SOUTH) Site : SURCHARGE (Those companies that are in the surcha)
Project : B40120 (IW COMPLIANCE MONITORING) Acct : B40120 (IW COMPLIANCE MONITORING)

Parameter	Value	Units	Valq	Rdl	Mdl	Parm Code	Range1	Textvalue
N-Nitrosodimethylamine		ug/L	<MDL	6	4	EPA 625		
Phenol	21.9	ug/L		6	4	EPA 625		
Bis(2-Chloroethyl)Ether		ug/L	<MDL	1	.6	EPA 625		
2-Chlorophenol		ug/L	<MDL	4	2	EPA 625		
1,3-Dichlorobenzene		ug/L	<MDL	1	.6	EPA 625		
1,4-Dichlorobenzene		ug/L	<MDL	1	.6	EPA 625		
1,2-Dichlorobenzene		ug/L	<MDL	1	.6	EPA 625		
Bis(2-Chloroisopropyl)Ether		ug/L	<MDL	4	2	EPA 625		
N-Nitrosodi-N-Propylamine		ug/L	<MDL	2	1	EPA 625		
Hexachloroethane		ug/L	<MDL	2	1	EPA 625		
Nitrobenzene		ug/L	<MDL	2	1	EPA 625		
Isophorone	3.99	ug/L		2	1	EPA 625		
2-Nitrophenol		ug/L	<MDL	2	1	EPA 625		
2,4-Dimethylphenol		ug/L	<MDL	2	1	EPA 625		
Bis(2-Chloroethoxy)Methane		ug/L	<MDL	2	1	EPA 625		
2,4-Dichlorophenol		ug/L	<MDL	2	1	EPA 625		
1,2,4-Trichlorobenzene		ug/L	<MDL	1	.6	EPA 625		
Naphthalene		ug/L	<MDL	3	1.6	EPA 625		
Hexachlorobutadiene		ug/L	<MDL	2	1	EPA 625		
4-Chloro-3-Methylphenol		ug/L	<MDL	4	2	EPA 625		
Hexachlorocyclopentadiene		ug/L	<MDL	2	1	EPA 625		
2,4,6-Trichlorophenol		ug/L	<MDL	8	4	EPA 625		
2-Chloronaphthalene		ug/L	<MDL	1	.6	EPA 625		
Acenaphthylene		ug/L	<MDL	1	.6	EPA 625		
Dimethyl Phthalate		ug/L	<MDL	.6	.4	EPA 625		
2,6-Dinitrotoluene		ug/L	<MDL	.8	.4	EPA 625		
Acenaphthene		ug/L	<MDL	.8	.4	EPA 625		
2,4-Dinitrophenol	8.85	ug/L		4	2	EPA 625		
4-Nitrophenol		ug/L	<MDL	4	2	EPA 625		
2,4-Dinitrotoluene		ug/L	<MDL	.8	.4	EPA 625		
Fluorene		ug/L	<MDL	1	.6	EPA 625		
Diethyl Phthalate		ug/L	<MDL	2	1	EPA 625		
4-Chlorophenyl Phenyl Ether		ug/L	<MDL	1	.6	EPA 625		
4,6-Dinitro-O-Cresol		ug/L	<MDL	4	2	EPA 625		
N-Nitrosodiphenylamine		ug/L	<MDL	2	1	EPA 625		COM: *Detected as Diphenylamine.
1,2-Diphenylhydrazine		ug/L	<MDL	4	2	EPA 625		COM: *Detected as Azobenzene.
4-Bromophenyl Phenyl Ether		ug/L	<MDL	.6	.4	EPA 625		
Hexachlorobenzene		ug/L	<MDL	1	.6	EPA 625		
Pentachlorophenol		ug/L	<MDL	2	1	EPA 625		
Phenanthrene		ug/L	<MDL	1	.6	EPA 625		
Anthracene		ug/L	<MDL	1	.6	EPA 625		

AKC-0013285

List ID: ORBNA-L Entryserial: 10806

Work Group: WG10446 - BL94

Parameter	Value	Units	Valq	Rdl	Mdl	Parm Code	Range1	Textvalue
Di-N-Butyl Phthalate		ug/L	<MDL	2	1	EPA 625		
Fluoranthene		ug/L	<MDL	1.2	.6	EPA 625		
Benzidine		ug/L	<MDL	48	24	EPA 625		
Pyrene		ug/L	<MDL	1	.6	EPA 625		
Benzyl Butyl Phthalate		ug/L	<MDL	1	.6	EPA 625		
Benzo(a)anthracene		ug/L	<MDL	1	.6	EPA 625		
Chrysene		ug/L	<MDL	1	.6	EPA 625		
3,3'-Dichlorobenzidine		ug/L	<MDL	2	1	EPA 625		
Bis(2-Ethylhexyl)Phthalate	89.2	ug/L		1	.6	EPA 625		
Di-N-Octyl Phthalate		ug/L	<MDL	1	.6	EPA 625		
Benzo(b)fluoranthene		ug/L	<MDL	3	1.6	EPA 625		
Benzo(k)fluoranthene		ug/L	<MDL	3	1.6	EPA 625		
Benzo(a)pyrene		ug/L	<MDL	2	1	EPA 625		
Indeno(1,2,3-Cd)Pyrene		ug/L	<MDL	2	1	EPA 625		
Dibenzo(a,h)anthracene		ug/L	<MDL	3	1.6	EPA 625		
Benzo(g,h,i)perylene		ug/L	<MDL	2	1	EPA 625		
Aniline		ug/L	<MDL	4	2	EPA 625		
Benzyl Alcohol	1.9	ug/L	<RDL	2	1	EPA 625		
2-Methylphenol		ug/L	<MDL	2	1	EPA 625		
4-Methylphenol		ug/L	<MDL	2	1	EPA 625		
Benzoic Acid	52.6	ug/L		6	4	EPA 625		
4-Chloroaniline		ug/L	<MDL	4	2	EPA 625		
2-Methylnaphthalene		ug/L	<MDL	3	1.6	EPA 625		
2,4,5-Trichlorophenol		ug/L	<MDL	8	4	EPA 625		
2-Nitroaniline		ug/L	<MDL	6	4	EPA 625		
3-Nitroaniline		ug/L	<MDL	6	4	EPA 625		
Dibenzofuran		ug/L	<MDL	2	1	EPA 625		
4-Nitroaniline		ug/L	<MDL	6	4	EPA 625		
Carbazole		ug/L	<MDL	2	1	EPA 625		
Coprostanol		ug/L	<MDL	6	4	EPA 625		
Amount Analyzed	500	ml				EPA 625		
Standard Amount	1000	ml				EPA 625		
Dilution Factor	1					EPA 625		
Date Analyzed						EPA 625		940413 12:58:00
Operator ID						EPA 625		RR
Porthandler File						EPA 625		/usr/users/seed2/METRO/files/gcms/l3389-2.bb
Instrument ID						EPA 625		4500B

AKC-0013286

ANALYSIS HARD COPY REPORT

List ID: TICORBNA-L Entryserial: 10806

Work Group: WG10446 - BL94

Sample Number: L3389-2
Matrix : IW WTR Locator : A4010 (ALASKAN COPPER WORKS/6TH AVE SOUTH) Site : SURCHARGE (Those companies that are in the surcha)
Project : B40120 (IW COMPLIANCE MONITORING) Acct : B40120 (IW COMPLIANCE MONITORING)

Parameter	Value	Units	Valq	Rdl	Mdl	Parm Code	Range1	Textvalue
14-PENTADECENOIC ACID	10	ug/L	J2			EPA 625		CAS#:17351-34-7 Scan#: 1727
17-PENTATRIACONTENE	8	ug/L	J3			EPA 625		CAS#: 6971-40-0 Scan#: 2203
ETHANOL, 2-BUTOXY-	920	ug/L	J2			EPA 625		CAS#: 111-76-2 Scan#: 362
ETHANOL, 2-(2-BUTOXYETHOXY)-	78	ug/L	J2			EPA 625		CAS#: 112-34-5 Scan#: 752
HEXADECANOIC ACID	19	ug/L	J2			EPA 625		CAS#: 57-10-3 Scan#: 1578
ETHANOL, 2-[2-(2-ETHOXYETHOXY)	17	ug/L	J2			EPA 625		CAS#: 112-50-5 Scan#: 486
DODECANOIC ACID	14	ug/L	J2			EPA 625		CAS#: 143-07-7 Scan#: 1195
4-HEPTENOIC ACID, 2-(METHYLSUL	11	ug/L	J3			EPA 625		CAS#:67428-09-5 Scan#: 1817
TETRADECANOIC ACID	11	ug/L	J2			EPA 625		CAS#: 544-63-8 Scan#: 1394

AKC-0013287

VOA 0.0

ANALYSIS HARD COPY REPORT

List ID: ORVOAGCMS-L Entryserial: 10651

Work Group: WG10380 - VML185

Sample Number: L3389-3
Matrix : IW WTR Locator : A4010 (ALASKAN COPPER WORKS/6TH AVE SOUTH) Site : SURCHARGE (Those companies that are in the surcha)
Project : B40120 (IW COMPLIANCE MONITORING) Acct : B40120 (IW COMPLIANCE MONITORING)

Parameter	Value	Units	Valq	Rdl	Mdl	Parm Code	Range1	Textvalue
Chloromethane		ug/L	<MDL	10	5	EPA 624		
Vinyl Chloride		ug/L	<MDL	10	5	EPA 624		
Bromomethane		ug/L	<MDL	10	5	EPA 624		
Chloroethane		ug/L	<MDL	10	5	EPA 624		
Trichlorofluoromethane		ug/L	<MDL	10	5	EPA 624		
Acrolein		ug/L	<MDL	50	25	EPA 624		
1,1-Dichloroethylene		ug/L	<MDL	10	5	EPA 624		
Methylene Chloride		ug/L	<MDL	50	25	EPA 624		
Acrylonitrile		ug/L	<MDL	50	25	EPA 624		
Trans-1,2-Dichloroethylene		ug/L	<MDL	10	5	EPA 624		
1,1-Dichloroethane		ug/L	<MDL	10	5	EPA 624		
Chloroform		ug/L	<MDL	10	5	EPA 624		
1,1,1-Trichloroethane		ug/L	<MDL	10	5	EPA 624		
Carbon Tetrachloride		ug/L	<MDL	10	5	EPA 624		
Benzene		ug/L	<MDL	10	5	EPA 624		
1,2-Dichloroethane		ug/L	<MDL	10	5	EPA 624		
1,1,2-Trichloroethylene		ug/L	<MDL	10	5	EPA 624		
1,2-Dichloropropane		ug/L	<MDL	10	5	EPA 624		
Bromodichloromethane		ug/L	<MDL	10	5	EPA 624		
2-Chloroethylvinyl ether		ug/L	<MDL	10	5	EPA 624		
Trans-1,3-Dichloropropene		ug/L	<MDL	10	5	EPA 624		
Toluene		ug/L	<MDL	10	5	EPA 624		
cis-1,3-Dichloropropene		ug/L	<MDL	10	5	EPA 624		
1,1,2-Trichloroethane		ug/L	<MDL	10	5	EPA 624		
Tetrachloroethylene		ug/L	<MDL	10	5	EPA 624		
Chlorodibromomethane		ug/L	<MDL	10	5	EPA 624		
Chlorobenzene		ug/L	<MDL	10	5	EPA 624		
Ethylbenzene		ug/L	<MDL	10	5	EPA 624		
Bromoform		ug/L	<MDL	10	5	EPA 624		
1,1,2,2-Tetrachloroethane		ug/L	<MDL	10	5	EPA 624		
Acetone	66	ug/L		50	25	EPA 624		
Carbon Disulfide		ug/L	<MDL	10	5	EPA 624		
Vinyl Acetate		ug/L	<MDL	50	25	EPA 624		
2-Butanone (MEK)		ug/L	<MDL	50	25	EPA 624		
4-Methyl-2-Pentanone (MIBK)		ug/L	<MDL	50	25	EPA 624		
2-Hexanone		ug/L	<MDL	50	25	EPA 624		
Total Xylenes		ug/L	<MDL	10	5	EPA 624		
Styrene		ug/L	<MDL	10	5	EPA 624		
Amount Analyzed	5	ml				EPA 624		
Standard Amount	5	ml				EPA 624		
Dilution Factor	5					EPA 624		

AKC-0013288

ANALYSIS HARD COPY REPORT

List ID: ORVOAGCMS-L Entryserial: 10651

Work Group: WG10380 - VML185

Parameter	Value	Units	Valq	Rdl	Mdl	Parm Code	Range1	Textvalue
Date Analyzed						EPA 624		940406 17:58:00
Operator ID						EPA 624		SJD
Porthandler File						EPA 624		/usr/users/seed2/METRO/files/gcms/l3389-3.cc
Instrument ID						EPA 624		4500C

AKC-0013289

ANALYSIS HARD COPY REPORT

List ID: TICORVOAGCMS-L Entryserial: 10651

Work Group: WG10380 - VML185

Parameter	Value	Units	Valq	Rdl	Mdl	Parm Code	Range1	Textvalue
Sample Number: L3389-3								
Matrix : IW WTR Locator : A4010 (ALASKAN COPPER WORKS/6TH AVE SOUTH) Site : SURCHARGE (Those companies that are in the surcha)								
Project : B40120 (IW COMPLIANCE MONITORING) Acct : B40120 (IW COMPLIANCE MONITORING)								
NO TIC'S DETECTED			NF			EPA 624		

AKC-0013290