xc wcs 1/10/92

Cyprus Thompson Creek

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November 6, 1991

RECEIVED
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IDAHO OPERATIONS OFFICE

Mr. Don Gibbons
US EPA
Idaho Operations
422 West Washington Street
Boise, Idaho 83702

Re: Water Quality

Dear Mr. Gibbons:

On October 24, 1991, Mr. Mike Moore of Analytical Laboratories (ALI) notified Cyprus Thompson Creek (CTC) that on 9/16/91 CTC discharge point 002 exceeded the EPA mercury effluent limitation. In talking with ALI it was noted that high mercury levels were also found along Thompson Creek, above and below the mine discharge, as well as in the pit water being pumped to Pat Hughes Creek. CTC requested that ALI bring the backlog of above station samples up to date as soon as possible. The backlog has been caught up through 10/9/91 (analysis enclosed). CTC immediately diverted the pit water back into the tailings system in case the source of the mercury for 002 was the pit water. Mr. Joe Wallace of the EPA, was notified by CTC on the afternoon of 10/24/91.

Upon receiving and reviewing a portion of the back logged analysis, all water stations from 9/9/91 through 10/1/91 contained mercury. At one point, on 9/12/91, the control station, TC2 above CTC discharge point had 0.001 ppm mercury while TC1 below the CTC discharge was less than detectable. On that date, both the pit discharge and discharge point 002 had detectable levels of mercury in them. On 10/9/91 all stations were again less than detectable on mercury. CTC cannot explain the problem but it appears that the high levels may be due to laboratory error.

In the past, CTC has felt that ALI has had problems running mercury and started to take duplicate samples on the 002 discharge in early 1990. Very seldom did the two lab results agree. CTC will again initiate the duplicate sampling on discharge point 002.

If I can be of further assistance, please feel free to contact me.

Sincerely,

Bert Doughty

Bert Doughty
Supervisor, Environmental Affairs

CYPRUS

WATER QUALITY DATA

STATION: 002

DATE	06/06/91	06/13/91	06/20/91	06/26/91	07/03/91	07/11/91	07/16/91	07/22/91
Ph	7.07	7.29	8.1	8.35	8.22	7.95	7.72	7.52
Conductivity	450	455	440	450	500	600	600	550
Turbidity	6.8	2	1.5	6	5	2	2	0.28
TSS	14	5	5	12	5	3	45	1
Arsenic	<0.005	0.007	0.006	0.006	0.005	0.007	0.006	<0.005
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005
Copper	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Lead	<0.10	<0.05	<0.05	<0.05	<0.002	<0.002	<0.002	<0.002
Mercury	0.0002	<0.0005	<0.0005	<0.0005	<0.0002	0.0005	<0.0002	0.0002
Zinc	0.012	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	0.006

STATION: 002

DATE	07/29/91	08/06/91	08/12/91	08/19/91	08/26/91	09/03/91	09/09/91	09/16/91
Ph	7.54	7.51	7.08	7.3	8.22	6.99	7.21	7.77
Conductivity	600	550	550	550	500	600	600	700
Turbidity	3.3	0.22	0.46	0.52	5	0.08	0.62	0.18
TSS	7	2	1	2	5	<1.0	<1.0	<1.0
Arsenic	<0.005	<0.005	<0.005	0.005	0.005	<0.005	<0.005	<0.005
Cadmium	<0.005	<0.005	0.009	<0.005	<0.005	<0.005	<0.005	<0.005
Copper	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Lead	<0.002	<0.002	<0.002	<0.05	<0.002	<0.002	0.002	<0.002
Mercury	0.0006	0.0002	0.0002	0.0003	<0.0002	0.0005	0.0004	0.0148
Zinc	0.005	0.005	<0.005	0.005	<0.005	<0.005	<0.005	0.008

STATION: 002

DATE	09/24/91	10/01/91	10/09/91	10/15/91
Ph	7.28	8.15	7.79	8.4
Conductivity	600	700	650	550
Turbidity	0.66	0.76	0.48	1.6
TSS	1	<1.0	4	4
Arsenic	<0.005	<0.005	0.008	0.012
Cadmium	<0.005	0.009	<0.005	<0.005
Copper	<0.01	<0.01	<0.01	<0.01
Lead	0.004	0.003	0.006	0.002
Mercury	0.0004	0.0003	<0.0002	<0.0002
Zinc	0.007	0.005	0.006	0.006

WATER QUALITY DATA

STATION: PIT

DATE	06/06/91	06/13/91	06/20/91	06/22/91	06/27/91	07/11/91	07/15/91	07/29/91
Ph	7.65	6.82	7.23	7.34	7.19	7.06	7.56	7.07
Conductivity	550	750	725	800	725	700	750	700
Turbidity	3.5	---	4.6	1.4	---	3.9	2.5	3.2
TSS	---	---	---	---	---	---	---	---
Arsenic	0.328	0.057	0.051	0.01	0.041	<0.005	0.087	0.103
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Copper	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.10	<0.05	<0.05	<0.05	<0.10	<0.10	<0.10	<0.002
Mercury	<0.0005	<0.0005	<0.0005	0.0007	<0.0005	0.0005	<0.0005	<0.0005
Zinc	0.007	0.01	<0.005	0.005	0.011	<0.005	<0.005	<0.005

STATION: PIT

DATE	08/05/91	08/12/91	08/19/91	08/26/91	09/03/91	09/09/91	09/16/91	09/24/91
Ph	7.1	6.5	7.33	8.35	6.63		6.94	6.84
Conductivity	700	700	700	450	750		850	750
Turbidity	3.6	5.8	1.5	6	7.8		0.6	0.3
TSS	---	---	---	---	---		---	---
Arsenic	0.068	0.088	0.153	0.034	0.034		0.028	0.024
Cadmium	0.005	<0.005	0.007	<0.005	<0.005		<0.005	0.008
Copper	<0.01	<0.01	<0.01	<0.01	0.02		<0.01	<0.01
Lead	<0.10	<0.10	<0.10	<0.10	<0.10		<0.10	<0.10
Mercury	<0.0005	<0.0005	0.0007	<0.0005	<0.0005		0.042	0.002
Zinc	0.005	0.011	0.011	0.008	0.008		<0.005	<0.005

STATION: PIT

DATE	10/01/91	10/09/91
Ph	6.87	7.72
Conductivity	700	650
Turbidity	0.52	---
TSS	---	---
Arsenic	0.027	0.053
Cadmium	0.009	<0.005
Copper	<0.01	<0.01
Lead	<0.10	<0.10
Mercury	0.002	<0.0005
Zinc	<0.005	0.006

WATER QUALITY DATA

STATION: TC1 - BELOW PAT HUGHES

DATE	06/06/91	07/03/91	08/05/91	09/03/91	09/09/91	09/16/91	09/24/91	10/01/91
Ph	7.78	7.2	7.41	7.11	7.1	7.05	6.99	7.01
Conductivity	100	85	180	140	120	130	120	125
Turbidity	2.2	1.5	0.36	1.1	___	0.44	0.52	0.41
TSS	---				___	___	___	___
Arsenic	<0.005				<0.005	<0.005	<0.005	<0.005
Cadmium	<0.005				<0.005	<0.005	<0.005	<0.005
Copper	<0.01				<0.01	<0.01	0.01	<0.01
Lead	<0.10				<0.10	<0.10	<0.10	<0.10
Mercury	<0.0005				0.0018	0.0016	<0.0005	0.0026
Zinc	<0.005				<0.005	<0.005	<0.005	<0.005

STATION: TC1 - BELOW PAT HUGHES

DATE	10/09/91	10/15/91
Ph	7.56	
Conductivity	150	
Turbidity	0.35	
TSS	---	
Arsenic	<0.005	
Cadmium	<0.005	
Copper	0.01	
Lead	<0.10	
Mercury	<0.0005	
Zinc	<0.005	

WATER QUALITY DATA

STATION: TC2 - ABOVE PAT HUGHES

DATE	06/06/91	06/13/91	06/20/91	06/27/91	07/03/91	07/11/91	07/15/91	07/22/91
Ph	6.51	6.06	7.69	7.75	7.1	8	7.19	7.46
Conductivity	60	55	60	65	80	80	100	100
Turbidity	2.2	2.1	1.3	0.72	2.2	0.81	0.36	0.22
TSS	---	---	---	---	---	---	---	---
Arsenic	<0.005	<0.005	<0.005	<0.005	<0.005	0.082	<0.005	<0.005
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Copper	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Lead	<0.10	<0.05	<0.05	<0.05	<0.002	<0.002	<0.002	<0.002
Mercury	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0009	<0.0005	<0.0005
Zinc	0.012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

STATION: TC2

DATE	07/29/91	08/05/91	08/12/91	08/19/91	08/26/91	09/03/91	09/09/91	09/16/91
Ph	7.06	7.32	6.94	7.14	6.7	7.11	7.1	7.56
Conductivity	100	140	140	100	110	110	110	110
Turbidity	1.1	0.64	0.35	0.82	0.82	0.5	---	0.46
TSS	---	---	---	---	---	---	---	---
Arsenic	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Copper	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.002	<0.10	<0.10	<0.10	<0.002	<0.002	<0.002	<0.002
Mercury	<0.0005	<0.0005	0.0009	<0.0005	0.0015	0.0009	0.0038	0.0007
Zinc	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005

STATION: TC2

DATE	09/24/91	10/01/91	10/09/91
Ph	7.49	7.01	7.55
Conductivity	100	110	110
Turbidity	0.52	0.51	0.32
TSS	---	---	---
Arsenic	<0.005	<0.005	<0.005
Cadmium	0.008	0.011	<0.005
Copper	<0.01	0.01	<0.01
Lead	<0.002	<0.10	<0.10
Mercury	0.001	0.0011	<0.0005
Zinc	<0.005	<0.005	<0.005