



Curragh
Resources
Inc.

file

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020425

August 26th, 1987

Mr. R.A. Steers,
Yukon Territory Water Board,
Suite 200 - 4114 Fourth Avenue,
Whitehorse, Yukon,
Y1A 4N7

Dear Mr. Steers:

I enclose the water sample data for July and the results for a bioassay taken on July 28th.

On July 13th, the pipe weir W6 at X12 was replaced with a V-notch weir.

In early July, spiggoting was started from the top of the old tailings dam. This material covered the seep at X6 so no sample could be taken.

At month end, ammonia and lead in the final decant at X5 were both abnormally high. The bioassay shows that the discharge was still non-toxic. Lime additions to mill tailings have been increased to precipitate lead and destroy ammonia. Many of the lead assays for the month are abnormally high. Since sample sites such as X3 are not normally affected by process problems, I am presently looking into the possibility of contamination.

All other analyses were within normal ranges.

DE Wright

David E. Wright
Chief Assayer
DEW/nn

CURRAGH RESOURCES

2-41-100-077-87007

96-h STATIC LC50 BIOASSAY RESULTS OF

X5

28/7/87 De.
 SAMPLE TAKEN: UNKNOWN
 SAMPLE RECEIVED: Aug 5, 1987
 TEST STARTED: Aug 6, 1987
 SAMPLE pH 7.8
 SAMPLE D.O. 8.5 mg/l
 SAMPLE CONDUCTANCE 600 umho/cm

THE 96-h LC50 FOR THIS SAMPLE WAS >100 %v/v

	INIT pH	FINAL pH	INIT DO mg/l	FINAL DO mg/l	TEST CONC %v/v	PERCENT SURVIVAL			
						24h	48h	72h	96h
SAMPLE	7.8	7.9	9.6	9.6	100.0	100	100	100	100
CONTROL	6.1	6.3	9.6	9.6		100	100	100	100

TEST CONDITIONS

Bioassays conducted according to STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTE WATER, 15th edition, 1980 APHA - AWWA - WPCF.

Number of test fish 10 Test temperature (C) 15.0
 Test volume (liters) 4.0 Test solution pH not adjusted

TEST FISH

Juvenile Rainbow Trout (*Salmo gairdneri*)
 Acclimated to temperature 15.0 +/- 1 C.
 Weight 0.25 +/- 0.03 g Length 3.2 +/- 0.1 cm

Duplicate reference toxicant (sodium pentachlorophenate) bioassays were conducted in order to test the tolerance of the fish stock. These tests gave 96-h LC50 values of 85.9 ug/l (81.9, 89.7) and 91.2 ug/l (80.0, 100.0)

DILUTION WATER (Vancouver dechlorinated tap water)

Alkalinity (mg CaCO3/l) 3.0
 EDTA hardness (mg CaCO3/l) 5.0
 Total suspended solids (mg/l) <1.0
 Residual chlorine (mg/l) 0.002
 Conductance (umho/cm) 15

Other parameters available on request.

96-h LC50 is the 96-h lethal concentration for 50% mortality. Synonyms are TLm96 and 96-h TL50 (median tolerance limit). The 95% confidence limits are in parentheses. Values were calculated by computer following C.E. Stephens "Methods for Calculating an LC50" (ASTM STP 634, 1977).

ANALYST

B.C. RESEARCH

Sample Period July 1987

WATER ANALYSIS - MONTHLY MEAN

Sample Point	X1	X2	X3	X4	X5	X6	X7	X9	X10	X11	X12	X13	X14	X22	X23
pH	7.27	7.83	7.93	8.10	8.12		6.99	9.75	8.21	7.86	8.08	7.96	8.00	7.36	7.50
Temp °C	12	7	10	15	13		2	18	9	4	3	3	10	8	5
Suspended Solids mg/L	89	4	2	4	1		266	183,000	<1	4	1	2	1	19	2
Flows m3/min								20.44		1.12	0.65	7.23		4.30	
Ammonia mg/L	2.85	0.40	0.25	1.17	1.07		1.63	1.08	0.31	0.79	0.33	0.51	0.50	2.64	0.78
Copper mg/L	0.03	<0.01	<0.01	0.01	0.01		<0.01	0.39	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Lead mg/L	0.34	0.04	0.02	0.31	0.16		0.23	0.11	0.02	0.02	0.02	0.02	0.06	0.11	0.03
Zinc mg/L	24.70	0.03	<0.01	0.22	0.14		27.95	0.05	0.02	0.02	<0.01	0.02	0.06	17.41	28.2
Cyanide mg/L	0.07	<0.01	<0.01	0.04	0.01		0.02	0.18	<0.01		<0.01		0.03	0.01	<0.01
Manganese mg/L	5.19	0.03	0.01	1.29	1.21		4.98	0.01	0.02	4.05	0.93	3.61	0.62	1.19	11.63
Sodium mg/L	53.8	1.7	1.2	95.8	85.3		20.5	155.7	1.5	78.5	36.3	65.6	25.0	18.7	36.2
Sulfate mg/L	767	8	6	338	359		783	177	6	581	282	542	123	329	1425

1987 08/28 10:30
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