



TO
A

Gerry Whitley
Administrator, Pollution Control

FROM
DE

Dan Cornett
A/Water Quality Technologist

SUBJECT
OBJET

Curragh Resources Inspection, January 29/30, 1986
Water Quality Sample Results

All effluent licence standards were met at Stations X11, X12, X13 and at the 8" syphon over the Cross Valley Dam.

The 96 LC50 bioassay collected at the 8" syphon was 100% and thus non-toxic.

The following are additional observations:

	Extractable (mg/L)		
	Cd	Ni	Zn
PIT 2	0.16	0.8	99.1
PIT 1	-	-	6.54
PIT 3	-	-	18.3
X 23			10.7
X 1			0.514
Licence Limits	0.02	0.50	0.50

cc: Y.T.W.B.

YUKON TERRITORY WATER BOARD
APR 09 1986

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE/NOTRE RÉFÉRENCE Curragh Res.
YOUR FILE/VOTRE RÉFÉRENCE
DATE 8 April 1986

WATER QUALITY-EXTRACTABLE

D.I.A.N.D

LOCATION_____C.A.M.C._____

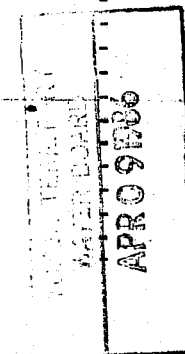
STATION NUMBER	DATE	TIME	FLOW (m3/sec)	TEMP (C)	pH in-situ	pH lab	CONDUCTIVITY (umhos/cm)		COLUR (color units)	TURBIDITY (F.T.U.)	N.F.R. (mg/l)	F.R. (mg/l)	TOTAL	TOTAL
							in-sit	lab					ALKALINITY (mg/l CaCo3)	HARDNESS (mg/l CaCo3)
X-2	29/01/86	0830	-	0.5	7.6	6.7	150	275	-	-	<5	-	-	-
PIT 1	29/01/86	1000	-	0.5	7.3	6.4	355	680	-	-	<5	-	-	-
PIT 3	29/01/86	1130	-	0	7.3	6.4	55	1080	-	-	<5	-	-	-
PIT 2	29/01/86	1200	-	0	7.4	-	2500	-	-	-	-	-	-	-
X-23	29/01/86	1300	-	0	8	7.9	1300	2150	-	-	<5	-	-	-
X-10	29/01/86	1512	-	0	8.3	7.8	65	230	-	-	5	-	-	-
X-14	29/01/86	1605	-	0.5	8.2	7.8	240	485	-	-	<5	-	-	-
X-11	29/01/86	1635	-	3	7.7	7.8	500	930	-	-	7	-	-	-
X-12	29/01/86	1645	-	2	7.9	7.9	380	680	-	-	<5	-	-	-
X-13	29/01/86	1650	-	2	7.8	7.7	485	930	-	-	6	-	-	-
8 INCH SYPHON	29/01/86	1730	-	0	8	8	470	880	-	-	7	-	-	-
X-4	29/01/86	1950	-	0	8.2	8.1	295	530	-	-	<5	-	-	-
X-1	29/01/86	2020	-	0.5	7.2	7.9	120	200	-	-	21	-	-	-
S-6	30/01/86	1050	-	1	6.7	7.7	360	680	-	-	12	-	-	-
X-3	30/01/86	1130	-	0	8.3	7.8	100	180	-	-	<5	-	-	-

WATER QUALITY-TOTAL

D.I.A.N.D

LOCATION_____C.A.M.C._____

STATION NUMBER	DATE	TIME	FLOW (m3/sec)	TEMP (C)	pH in-situ	pH lab	CONDUCTIVITY (umhos/cm)		COLUR (color units)	TURBIDITY (F.T.U.)	N.F.R. (mg/l)	F.R. (mg/l)	TOTAL	TOTAL
							in-sit	lab					ALKALINITY (mg/l CaCo3)	HARDNESS (mg/l CaCo3)
X-2	29/01/86	0830	-	0.5	7.6	6.7	150	275	-	-	<5	-	-	-
PIT 1	29/01/86	1000	-	0.5	7.3	6.4	355	680	-	-	<5	-	-	-
PIT 3	29/01/86	1130	-	0	7.3	6.4	55	1080	-	-	<5	-	-	-
PIT 2	29/01/86	1200	-	0	7.4	-	2500	-	-	-	-	-	-	-
X-23	29/01/86	1300	-	0	8	7.9	1300	2150	-	-	<5	-	-	-
X-10	29/01/86	1512	-	0	8.3	7.8	65	230	-	-	5	-	-	-
X-14	29/01/86	1605	-	0.5	8.2	7.8	240	485	-	-	<5	-	-	-
X-11	29/01/86	1635	-	3	7.7	7.8	500	930	-	-	7	-	-	-
X-12	29/01/86	1645	-	2	7.9	7.9	380	680	-	-	<5	-	-	-
X-13	29/01/86	1650	-	2	7.8	7.7	485	930	-	-	6	-	-	-
8 INCH SYPHON	29/01/86	1730	-	0	8	8	470	880	-	-	7	-	-	-
X-4	29/01/86	1950	-	0	8.2	8.1	295	530	-	-	<5	-	-	-
X-1	29/01/86	2020	-	0.5	7.2	7.9	120	200	-	-	21	-	-	-
S-6	30/01/86	1050	-	1	6.7	7.7	360	680	-	-	12	-	-	-
X-3	30/01/86	1130	-	0	8.3	7.8	100	180	-	-	<5	-	-	-



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TABLE 2 WATER QUALITY-EXTRACTABLE

D.I.A.N.D.

LOCATION _____ C.A.M.C. _____

STATION NUMBER	DATE	TOTAL PO4-P (mg/l)	NO2-N (mg/l)	NO3-N mg/l	NH3-N mg/l	SO4 mg/l	CN mg/l	Cl mg/l	Ag mg/l	Al mg/l	As mg/l	B mg/l	Ba mg/l	Be mg/l	Ca mg/l
X-2	29/01/86	-	-	-	0.005	13	-	-	-	<0.05	0.07	<0.001	0.078	<0.001	41.1
PIT 1	29/01/86	-	-	-	0.0998	190	-	-	-	<0.05	<0.05	<0.001	0.042	<0.001	80.1
PIT 3	29/01/86	-	-	-	0.96	370	-	-	-	0.09	0.05	0.021	0.022	<0.001	123
PIT 2	29/01/86	-	-	-	-	-	-	-	-	<0.3	<0.3	<0.005	0.07	<0.005	581
X-23	29/01/86	-	-	-	0.94	900	-	-	-	0.06	<0.05	0.011	0.086	<0.001	377
X-10	29/01/86	-	-	-	0.006	11	-	-	-	<0.05	0.06	<0.001	0.059	<0.001	34.3
X-14	29/01/86	-	-	-	0.041	100	-	-	-	<0.05	<0.05	<0.001	0.066	<0.001	66.6
X-11	29/01/86	-	-	-	0.131	260	-	-	-	<0.05	<0.05	<0.001	0.078	<0.001	126
X-12	29/01/86	-	-	-	0.058	160	-	-	-	<0.05	<0.05	<0.001	0.113	<0.001	87.6
X-13	29/01/86	-	-	-	0.18	260	-	-	-	<0.05	<0.05	<0.001	0.082	<0.001	123
8 INCH SYPHON	29/01/86	-	-	-	0.069	250	-	-	-	<0.05	<0.05	<0.001	0.013	<0.001	125
X-4	29/01/86	-	-	-	0.127	120	-	-	-	<0.05	<0.05	<0.001	0.047	<0.001	69.9
X-1	29/01/86	-	-	-	0.01	17	-	-	-	0.1	<0.05	<0.001	0.245	<0.001	31.2
S-6	30/01/86	-	-	-	0.54	150	-	-	-	<0.05	<0.05	<0.001	0.033	<0.001	73.9
X-3	30/01/86	-	-	-	0.011	9	-	-	-	<0.05	<0.05	<0.001	0.042	<0.001	27.6

TABLE 2 WATER QUALITY-TOTAL

D.I.A.N.D.

LOCATION _____ C.A.M.C. _____

STATION NUMBER	DATE	TOTAL PO4-P (mg/l)	NO2-N (mg/l)	NO3-N mg/l	NH3-N mg/l	SO4 mg/l	CN mg/l	Cl mg/l	Ag mg/l	Al mg/l	As mg/l	B mg/l	Ba mg/l	Be mg/l	Ca mg/l
X-2	29/01/86	-	-	-	0.005	13	-	-	-	<0.05	<0.05	<0.001	0.082	<0.001	41.1
PIT 1	29/01/86	-	-	-	0.0998	190	-	-	-	<0.05	<0.05	0.007	0.045	<0.001	80.9
PIT 3	29/01/86	-	-	-	0.96	370	-	-	-	0.24	<0.05	0.021	0.032	<0.001	125
PIT 2	29/01/86	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.01	0.08	<0.01	694
X-23	29/01/86	-	-	-	0.94	900	-	-	-	0.14	<0.05	<0.001	0.089	<0.001	388
X-10	29/01/86	-	-	-	0.006	11	-	-	-	<0.05	<0.05	<0.001	0.06	<0.001	35.5
X-14	29/01/86	-	-	-	0.041	100	-	-	-	0.07	<0.05	<0.001	0.068	<0.001	67
X-11	29/01/86	-	-	-	0.131	260	-	-	-	0.05	<0.05	<0.001	0.08	<0.001	127
X-12	29/01/86	-	-	-	0.058	160	-	-	-	0.07	<0.05	<0.001	0.119	<0.001	89.6
X-13	29/01/86	-	-	-	0.18	260	-	-	-	<0.05	<0.05	<0.001	0.086	<0.001	124
8 INCH SYPHON	29/01/86	-	-	-	0.069	250	-	-	-	<0.05	<0.05	<0.001	0.047	<0.001	126
X-4	29/01/86	-	-	-	0.127	120	-	-	-	<0.05	<0.05	<0.001	0.056	<0.001	70.6
X-1	29/01/86	-	-	-	0.01	17	-	-	-	0.25	<0.05	<0.001	0.41	<0.001	31.8
S-6	30/01/86	-	-	-	0.54	150	-	-	-	<0.05	<0.05	<0.001	0.037	<0.001	74.5
X-3	30/01/86	-	-	-	0.011	9	-	-	-	<0.05	<0.05	<0.001	0.044	<0.001	27.9

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TABLE 3 WATER QUALITY-EXTRACTABLE

D.I.A.N.D.

LOCATION__C.A.M.C._____

STATION NUMBER	DATE	Cd mg/l	Co mg/l	Cr mg/l	Cu mg/l	Fe mg/l	Hg mg/l	K mg/l	Mg mg/l	Mn mg/l	Mo mg/l	Na mg/l	Ni mg/l	Pb mg/l	Sb mg/l
X-2	29/01/86	<0.002	<0.005	<0.005	<0.005	0.102	-	-	8.3	0.094	<0.005	3.4	<0.02	<0.02	<0.05
PIT 1	29/01/86	0.007	0.012	<0.005	<0.005	0.129	-	-	32.1	0.51	<0.005	10.5	0.06	<0.02	<0.05
PIT 3	29/01/86	0.015	0.104	<0.005	<0.005	0.855	-	-	61.5	2.08	<0.005	9.2	0.32	<0.02	<0.05
PIT 2	29/01/86	0.16	0.42	<0.03	<0.03	0.08	-	-	308	10.8	<0.03	121	0.8	<0.1	<0.3
X-23	29/01/86	0.005	0.056	<0.005	<0.005	0.226	-	-	102	10	<0.005	34.3	0.13	0.02	<0.05
X-10	29/01/86	<0.002	<0.005	<0.005	<0.005	0.068	-	-	6.9	0.014	<0.005	2.4	<0.02	<0.02	<0.05
X-14	29/01/86	<0.002	<0.005	<0.005	<0.005	0.12	-	-	12.5	0.629	<0.005	18.7	<0.02	<0.02	<0.05
X-11	29/01/86	<0.002	<0.005	<0.005	<0.005	0.089	-	-	20.7	1.84	0.006	51.1	<0.02	<0.02	<0.05
X-12	29/01/86	<0.002	<0.005	<0.005	<0.005	0.024	-	-	24.6	0.469	<0.005	25.8	<0.02	<0.02	<0.05
X-13	29/01/86	<0.002	<0.005	<0.005	<0.005	0.321	-	-	21.5	2.19	<0.005	48.4	<0.02	<0.02	<0.05
8 INCH SYPHON	29/01/86	<0.002	<0.005	<0.005	<0.005	0.097	-	-	22.3	0.471	<0.005	48.2	<0.02	<0.02	<0.05
X-4	29/01/86	<0.002	<0.005	<0.005	<0.005	0.238	-	-	13.4	1.57	<0.005	23.4	<0.02	<0.02	<0.05
X-1	29/01/86	<0.002	0.014	<0.005	0.005	1.77	-	-	5.4	0.81	<0.005	2	<0.02	0.18	<0.05
S-6	30/01/86	<0.002	0.035	<0.005	<0.005	3.44	-	-	13.4	6.58	0.006	53.5	<0.02	<0.02	<0.05
X-3	30/01/86	<0.002	<0.005	<0.005	<0.005	0.13	-	-	4.7	0.034	<0.005	2	<0.02	<0.02	<0.05

TABLE 3 WATER QUALITY-TOTAL

D.I.A.N.D.

LOCATION__C.A.M.C._____

STATION NUMBER	DATE	Cd mg/l	Co mg/l	Cr mg/l	Cu mg/l	Fe mg/l	Hg mg/l	K mg/l	Mg mg/l	Mn mg/l	Mo mg/l	Na mg/l	Ni mg/l	Pb mg/l	Sb mg/l
X-2	29/01/86	<0.002	<0.005	<0.005	0.006	0.587	-	-	8.6	0.116	<0.005	3.7	<0.02	<0.02	<0.05
PIT 1	29/01/86	0.006	0.011	<0.005	<0.005	0.183	-	-	33.4	0.586	<0.005	11.6	0.05	<0.02	<0.05
PIT 3	29/01/86	0.015	0.114	<0.005	<0.005	1.02	-	-	64.3	2.35	<0.005	10.6	0.33	<0.02	<0.05
PIT 2	29/01/86	0.2	0.54	<0.05	<0.05	0.2	-	-	359	14.2	<0.05	145	0.9	<0.2	<0.5
X-23	29/01/86	0.005	0.063	<0.005	<0.005	0.258	-	-	103	11.4	<0.005	34.8	0.13	<0.02	<0.05
X-10	29/01/86	<0.002	<0.005	<0.005	<0.005	0.076	-	-	7.2	0.042	<0.005	2.6	<0.02	<0.02	<0.05
X-14	29/01/86	<0.002	<0.005	<0.005	<0.005	0.129	-	-	12.7	0.717	<0.005	19.5	<0.02	<0.02	<0.05
X-11	29/01/86	<0.002	<0.005	<0.005	<0.005	0.09	-	-	21.1	2.07	<0.005	54.3	<0.02	<0.02	<0.05
X-12	29/01/86	<0.002	<0.005	<0.005	0.643	0.528	-	-	25.5	0.534	<0.005	28.4	<0.02	<0.02	<0.05
X-13	29/01/86	<0.002	<0.005	<0.005	<0.005	0.331	-	-	22.1	2.49	0.008	52.1	<0.02	<0.02	<0.05
8 INCH SYPHON	29/01/86	<0.002	<0.005	<0.005	<0.005	0.102	-	-	22.9	1.93	<0.005	49.2	<0.02	<0.02	<0.05
X-4	29/01/86	<0.002	0.008	<0.005	<0.005	0.24	-	-	13.6	2.1	<0.005	23.9	<0.02	0.02	<0.05
X-1	29/01/86	<0.002	0.043	<0.005	0.014	3.75	-	-	5.4	0.123	<0.005	2.1	<0.02	0.26	<0.05
S-6	30/01/86	<0.002	0.04	<0.005	<0.005	3.48	-	-	13.6	8.66	0.005	55.6	<0.02	<0.02	<0.05
X-3	30/01/86	<0.002	<0.005	<0.005	<0.005	0.139	-	-	4.8	0.035	<0.005	2	<0.02	<0.02	<0.05

TABLE 4 WATER QUALITY-EXTRACTABLE

D.I.A.N.D.

LOCATION _____C.A.M.C._____

STATION NUMBER	DATE	Se mg/l	Si mg/l	Sn mg/l	Sr mg/l	Ti mg/l	V mg/l	Zn mg/l
X-2	29/01/86	<0.05	0.5	<0.01	0.181	<0.002	<0.005	0.027
PIT 1	29/01/86	<0.05	0.5	<0.01	0.432	<0.002	<0.005	6.54
PIT 3	29/01/86	<0.05	0.3	<0.01	0.509	<0.002	<0.005	18.3
PIT 2	29/01/86	<0.3	1	<0.05	4	<0.01	<0.03	99.1
X-23	29/01/86	<0.05	0.6	<0.01	1.66	<0.002	<0.005	10.7
X-10	29/01/86	<0.05	0.4	<0.01	0.162	<0.002	<0.005	0.011
X-14	29/01/86	<0.05	0.3	<0.01	0.24	<0.002	<0.005	0.02
X-11	29/01/86	<0.05	0.4	<0.01	0.398	<0.002	<0.005	<0.002
X-12	29/01/86	<0.05	0.3	<0.01	0.313	<0.002	<0.005	0.009
X-13	29/01/86	<0.05	0.3	<0.01	0.377	<0.002	<0.005	0.014
8 INCH SYPHON	29/01/86	0.05	0.3	<0.01	0.105	<0.002	<0.005	0.017
X-4	29/01/86	<0.05	0.3	<0.01	0.206	<0.002	<0.005	0.137
X-1	29/01/86	<0.05	0.3	<0.01	0.113	<0.002	<0.005	0.514
S-6	30/01/86	<0.05	0.5	<0.01	0.196	<0.002	<0.005	0.101
X-3	30/01/86	<0.05	0.3	<0.01	0.141	<0.002	<0.005	0.009

TABLE 4 WATER QUALITY-TOTAL

D.I.A.N.D.

LOCATION _____C.A.M.C._____

STATION NUMBER	DATE	Se mg/l	Si mg/l	Sn mg/l	Sr mg/l	Ti mg/l	V mg/l	Zn mg/l
X-2	29/01/86	<0.05	5.5	<0.01	0.191	<0.002	<0.005	0.041
PIT 1	29/01/86	<0.05	5.7	<0.01	0.464	<0.002	<0.005	7.03
PIT 3	29/01/86	<0.05	4.8	<0.01	0.54	0.004	<0.005	19.7
PIT 2	29/01/86	<0.5	24	<0.1	4.68	<0.02	<0.05	121
X-23	29/01/86	<0.05	8.3	<0.01	1.7	<0.002	<0.005	11.7
X-10	29/01/86	<0.05	5.2	<0.01	0.167	<0.002	<0.005	0.036
X-14	29/01/86	<0.05	5.2	<0.01	0.246	<0.002	<0.005	0.03
X-11	29/01/86	<0.05	5.3	<0.01	0.409	<0.002	<0.005	0.003
X-12	29/01/86	<0.05	4.3	<0.01	0.329	<0.002	<0.005	0.019
X-13	29/01/86	<0.05	5.5	<0.01	0.397	<0.002	<0.005	0.012
8 INCH SYPHON	29/01/86	<0.05	5.2	<0.01	0.385	<0.002	<0.005	0.084
X-4	29/01/86	<0.05	5.5	<0.01	0.248	<0.002	<0.005	0.172
X-1	29/01/86	<0.05	5.4	<0.01	0.157	0.008	<0.005	0.876
S-6	30/01/86	<0.05	7.1	<0.01	0.224	<0.002	<0.005	0.119
3	30/01/86	<0.05	4.9	<0.01	0.147	<0.002	<0.005	0.009

