Facsimile TRANSMITTAL

FAX NO. 8678682701

RECEIVED

DEC 2 3 2002

ENVIRONMENZIE VALLEY

REVIEW BOARD

to;	CPAWS	
fax #:	873-9593	
re;	Inspection reports - CZN	
date:	May 6, 2002	
pages	(including this cover sheet)	

Please see attached inspection report dated Sept 20, 1999.

My information is that there are 45 additional inspections carried out by DIAND inspectors as follows on this property.

I do not have these addn. inspection reports handy at the moment and so will wait to hear from you as to whether you need copies of any of these before I go looking for them.

#### Marie Adams

Environment and Conservation Env. Analyst

Inspection reports

DIAND inspectors: 1980 (3 visits), 1981 (6 visits), 1982 (9), 1983 (5), 1984 (4), 1985 (3), 1986 (2), 1987 (1), 1988 (1), 1989 (1), 1991 (1), 1992 (1), 1993 (2), 1994 (2), 1995 (3), 1999 (1) = 45

September 20, 1999

Affaires indiennes et du Nord Canada

> NDIAN AND NORTHERN AFFAIRS - CANADA N.W.), REGION

> > SEP 2 0 1999

WATER RESOURCES DIVISION VELLOWKNIFE, NT Your lies - Voire réformen

Our life Notice retriences N3L2-0932

093ダーダ

Mr. Alan Taylor Canadian Zinc Corporation

Suite 1202, 700 West Pender Street Vancouver, B.C. V6C 1G8

Dear Mr. Taylor:

## RE: PRAIRIE CREEK - NORTH WEST TERRITORIES, SITE INSPECTION

Attached are the inspection report, analyses, and accompanying photographs for the inspection conducted on August 17, 1999. Although the inspection was brief, I have listed areas of concern, some of which are still outstanding from the previous inspection. The following require your prompt attention:

- leaking fuel tanks along the mine access road
- mine water discharge from the 2850' portal
- staining on rocks below the settling pond
- storage and accumulation of waste oil
- separation of scrap metal (pulled from Harrison Creek) from surrounding rock

Please provide an update or progress report by October 29, 1999, on the activities and monitoring conducted to date to address the above noted concerns. The report should also include a plan and implementation schedule to address any areas that have yet to be addressed.

Should you have any questions or wish to discuss the inspection or any of the attached material, please do not hesitate to contact me at (867) 669-2768.

Sincerely.

Wayne S. Fuznicki Water Resource Officer/

Inspector under the NWT Waters Act

South Mackenzie Disfrict e-mail: puznickiw@inac.gc.ca

Enclosures

cc: NWT Water Board

DIAND Water Resources Division DIAND District Office (Ft. Simpson)

DIAND South Mackenzie District Office (Yellowknife)

Canadä

Printed on recycled paper - imprimé our papier racyold

### INSPECTION REPORT

A brief aerial inspection of the mine site, formally known as the Cadillac Mine, and an inspection of the fuel storage site, along the Cadillac Mine Access road, was conducted on August 18, 1999. Prior to July 1, 1986, activities relating to water use and waste disposal were authorized subject to restrictions and conditions contained in the Northwest Territories Waters Act (Northern Inland Waters Act), regulations and subject to and in accordance with the conditions specified in Water Licence N3L3-0932. Water Licence N3L3-0932 authorized the use of Prairie Creek water while insuring the pristine quality of the said water is maintained, to ensure the quality of Prairie Creek water entering Nahanni Park is unaltered, and to ensure the long term containment of mine tailings. Although the mine is inactive, and the Water Licence has expired, it does not, however, absolve the Canadian Zinc Corporation from having to comply with the NWT Waters Act and regulations.

Listed below are observation noted during the inspection.

# FUEL STORAGE SITE AND CADILLAC MINE CAMP ALONG ACCESS ROAD

There are two tanks that are yellowish in colour (photographs #3, and #5-#8), and one that is blue with a white horizontal stripe mid-way on the tank (photographs #4, and #9-#12). The blue tank is at the opposite end of the camp of the other two tanks. The tanks are leaking from the bottom valves and from the clean out plates, as seen in photographs #5-8 inclusive. The blue tank is leaking from the seams near the top of the tank where the skid plate is welded to the tank, as seen in photographs #9 - #11, and from the clean-out plate (photograph #11). The extent of contamination caused by the leaking fuel is unknown. However, surface contamination can be seen in photographs #5-#8 for the yellow tanks and photographs #11 and #12 for the blue tank. The amount of fuel that has escaped is unknown, but judging from the amount of saturation and staining present, it appears to be a considerable volume.

It is my understanding, from discussions internally, that a plan is underway to address the leaking fuel tanks. An assessment of the area to determine the extent of contamination should be conducted. All efforts should be implemented to prevent further contamination of the area.

#### CADILLAC MINE SITE

A brief inspection of the Cadillac mine site is shown in photographs #13-#20. Although the mine is currently in an abandonment phase, some exploration activity in the area was evident. Due to the brevity of the visit to the mine site, it was not possible to conduct a thorough inspection. Water samples were collected from three locations, which during the active period of the Licence were monitoring requirements. The three surveillance stations are as follows:

- 932-6 Prairie Creek at the confluence of Galena Creek
- 932-7 Prairie Creek upstream of the airstrip
- Portal discharge previously referred to as the 2850' portal

The portal discharge runs along the left side of the slope when facing the opening. The portal can be seen in the bottom left corner of photograph #19. The analyses of the samples indicate that there is no change in water chemistry since 1995 at sites # 932-6 and 932-7. However, the analyses of the sample collected at the portal indicate that concentrations for most metals are higher than those collected in 1995. The concentrations of total cadmium, total copper, total iron, total lead, and total zinc, are above the 1990 Canadian water quality guidelines for freshwater aquatic life (CWQG-FAL). According to Schedule 1, Part 1, of the 1977 Metal Mining Liquid Effluent Regulations and Guidelines (MMLER), the maximum authorized concentration in a grab sample for the parameter of zinc is 1000  $\mu$ g/L (1.00 mg/L). The concentration of zinc in 1999 measured 9,810 µg/L, almost ten times the maximum allowable listed for the MMLER and over sixteen times above the Licence limits set in the Licence that was effective between July1, 1982 and June 30, 1986. The discharge from the portal needs to be traced to determine its course. The discharge should be prevented from entering the receiving waters by directing the discharge to either a sump, tailings containment facility, or the settling pond, and either contained or treated prior to discharge to within acceptable limits. Listed below are the guidelines for those parameters tested:

Parameter	CWQG- FAL	MMLER	1982-1986 Licence Maximum concentration for any grab sample	1995	1999
Arsenic	50 μg/L	1,000	300 μg/L	1.1	1.3
Cadmium	0.2-1.8 μg/L		30 μg/L	41.6	63.8
Cobalt	none			0.2	<1
Chromium	2-20 μg/L		300 μg/L	<0.2	<3
Copper	2-4 μg/L	600	150 μg/L	23	34.5
Iron	0.3 mg/L			0.02	<0,03
Manganese	попе			4,8	6.1
Nickel	25-150 μg/L	1,000	400 μg/L	16.9	14.7
Lead	1-7 µg/L	400	300 μg/L	21.3	25.4
Zinc	30 μg/L	1,000	600 μg/L	8,380	9,810

The range in concentration levels for the CWQG-FAL indicate that the guidelines change with water hardness.

The increase in concentrations between samples collected in 1995 and 1999, may be attributed to suspended solids, which measured a concentration of 12 mg/L. The data is attached for your review and records.

Tailings pond - As evident in the attached photographs #13, #14, #15, #17 and #18, the tailings pond liner has deteriorated.

There are several ongoing concerns that were raised by Mr. Ken Etherington, in his June 15, 1995 inspection report, which are as follows:

- The stain on the rocks, below the settling pond, thought to be caused by an old
- The storage and accumulation of waste oil (fuel drums) in the fuel storage areas.
- The separation of scrap metal pulled from the drainage of Harrison Creek several years prior to 1995, from the surrounding rock, and maintaining the area to prevent further incidences of metal from being randomly buried, as noted in previous inspection reports.

According to the 1995 inspection report, interest was expressed by San Andreas Resources Corporation, in attempting to locate the source and clean up of the contamination. It was also suggested that the area be monitored. According to photographs #14 - #16, it appears that the staining is present. A sincere interest was also expressed in the disposal and clean-up of a large number of barrels containing waste oil. Efforts were being made at the time to possibly acquire an incinerator. The current state of the waste oil site is unknown. Also unknown is the current state of the scrap metal pulled from Harrison Creek that was to be separated from the surrounding rock. This appears to have been a chronic request.

Please provide an update on the activities conducted to date to address the above noted concerns. If no action has been taken to date, the Inspector is requesting that Canadian Zinc Corporation devise a plan and implementation schedule to address the above concerns.

Company Representative:

Mr. Alan Taylor

Company Representative's Title: President

Inspector:

Wayne S. Puznicki

Inspector's Signature:

Dept. Indian Affairs & Northern Development

4601-52 nd Ave., Box 1500

Yellowknife, NT. X1A 2R3

Tel. (867) 669-2788 Fax: (867) 669-2718 To: YK-PUZNICKI

DIAND

BOX 1500

16 AIRPORT ROAD

YELLOWKNIFE

NT XIA 3T2

Att'u: WAYNE PUZNICKI

LAB# 991771

SAMPLE INFORMATION

Our Lab#: 991771

Your Sample ID: 932-7

Sample Matrix:

PROJECT:

INDIAN AND NORTHERN AFFAIRS CANAEM

SEP 1 6 1999

Collection:

Location: Cadillac Mine Site

Date: 8/18/99

By: Wayne Puznicki

Received Date: 8/19/99

Report Date: 15-Sep-99

Approved By:

SOUTH MACKENZIE DISTRICT YELLOWKNIFE, N.W.T.

- SAMPLE ANALYSIS REPORT -

	SAMI DE ANAL ISIS REPORT.						
	Lab# 991771	Test	Result	Units	DetectionLimit	Analysis Date	Analytical Method
	221111						
		pН	8.34	рН	0.05	8/20/99	010301
9	.171	Conductivity	432	u\$/cm	0.3	8/20/99	02041
		Alkalinity	173	mg/L	0.3	8/20/99	010101
Date: Sept. 10. 1. 11. 11. 11. 11. 11. 11. 11. 11.	Alexandra	Tot-Suspended-Solids	7	mg/L	3	9/13/99	EC10406
	<del>     </del>	NO3-N+NO2-N	0.144	mg/L	800.0	9/02/99	07110
	3 2	Faecal_Coliform	2	CFU/dL	1	8/19/99	036014
		Tot-Califorms	250	CFU/dL	1	8/18/99	036002
j	ገደ[ል]	Tot-Arsenic(water)	L0.2	ug/L	* 0.2	8/27/99	EC33011
332	lusp.	Tot-Cadmium(ICP-MS)	~ L0.3	ug/L	0,3	<b>8/26/9</b> 9-	·· ICP-MS
60	-	Tot-Cobali(ICP-MS)	Ll	ug/L	1.0	3/26/99	ICP-MS
Licence:	Gen Cort. Ann. Rept	Tot-Chromium(ICP-MS)	L3	ug/L	3.0	8/26/99	ICP-MS
<u> 3 8 </u>	[उँ हैं]	Tot-Copper(ICP/MS)	L2	ug∕L	2.0	8/26/99	ICP-MS
		Tot-Iron(AA)	L0.03	mg/L	0.03	8/24/99	ICP-MS
		Tot-Manganese(ICP-MS)	L1	ug/L	1.0	8/26/99	ICP-MS

Dept. Indian Affairs & Northern Development

4601-52 nd Aye., Box 1500

Yellowknife, NT. X1A 2R3

Tel. (867) 669-2788

Fax: (867) 669-2718

To: YK-PUZNICKI

DIAND

BOX 1500

16 AIRPORT ROAD

YELLOWKNIFE

X1A 3T2 NT

Att'n: WAYNE PUZNICKI

LAB# 991771

2 mm ( 2									
	Tot-Nickel(ICP-MS)	1.8	ug/I	1.0	8/26/99	ICP-MS			
	Tot-Lead(ICP-MS)	L1	ug/L	1.0	8/26/99	ICP-MS			
	Tot-Zinc(ICP-MS)	LIO	ug∕L	10.0	8/26/99	ICP-MS			
	Tot-Mercury(water)	L0.01	ug/L	0.01	8/25/99	080314			
	Tot-Cyanide	L0.003	mg/L	0.003	8/30/99	EPA 335,4			

Jept. Indian Affairs & Northern Development

4601-52 nd Ave., Box 1500

Yellowknife, NT. XIA 2R3 Tel. (867) 669-2788

Fax: (867) 669-2718

To: YK-PUZNICKI

DIAND

BOX 1500

16 AIRPORT ROAD

YELLOWKNIFE

NT X1A 3T2

Att'n: WAYNE PUZNICKI

LAB# 991770

SAMPLE INFORMATION

Our Lab#: 991770

Your Sample ID: Portal

Sample Matrix:

PROJECT:

INDIAN AND NORTHERN AFFAIRS CANADA

SEP 1 6 1999

Collection;

Location: Cadillac Mine Site

Date: 8/18/99

By: Wayne Puznicki

Received Date: 8/19/99

Report Date: 15-Sep-99

Approved By: VC

SOUTH MACKENZIE DISTRICT YELLOWKNIFE, N.W.T.

- SAMPLE ANALYSIS REPORT -

BUANABIBIS REPORT.						
<b>Lab#</b> 991770	Test	Result	Units	Detection Limit	Analysis Date	Analytical Method
	рH	7.90	pH	0.05	8/20/99	010301
١١	Conductivity	1110	u\$/cm	0.3	8/20/99	02041
SNP/Lal	Alkalinity	271	mg/L	0.3	8/20/99	010101
Mapa	Tot-Suspended-Solids	12	mg/L	3	<b>9</b> /13/99	EC10406
	NO3-N+NO2-N	0.186	mg/L	0.008	9/02/99	07110
7.	Tot-Arsenic(water)	1.3	ug/L	0.2	8/27/99	EC33011
+-	Tot-Cadmium(ICP-MS)	63.8	ug/L	0.3	8/26/99	ICP-MS
Scriitylfees	Tot-Cobalt(ICP-MS)	Ll	ug/L	a 1.0	8/26/99	ICP-MS
Securi	Tot-Chromium(ICP-MS)	L3	ug/L	3.0	8/26/99	ICP-MS
	Tot-Copper(ICP/MS)	34.5	ug/L	2.0	8/26/99	ICP-MS
. Kepl	Tot-Iron(AA)	L0.03	നള∕ിച	0.03	8/24/99	ICP-MS
Ann,	Tot-Manganese(ICP-MS)	6.1	ug/L	1.0	8/26/99	ICP-MS
	Tot-Nickel(ICP-MS)	14.7	ug/L	1.0	8/26/99	ICP-MS
•	Tot-Lead(ICP-MS)	25.4	ug/L	1.0	8/26/99	ICP-MS
	Tot-Zinc(ICP-MS)	9810.0	пŘ\Г	10.0	8/26/99	ICP-MS

Dept. Indian Affairs & Northern Development

4601-52 nd Ave., Box 1500

Yellowknife, NT. X1A 2R3

Tel. (867) 669-2788

Fax: (867) 669-2718

To: YK-PUZNICKI

DIAND

BOX 1500

16 AIRPORT ROAD

YELLOWKNIFE

NT X1A 3T2

Att'n: WAYNE PUZNICKI

LAB# 991770

 Tot-Mercury(water)
 L0.01
 ug/L
 0.01
 8/25/99
 080314

 Tot-Cyanide
 L0.003
 mg/L
 0.003
 8/26/99
 EPA 335.4

1

4

Lept. Indian Affairs & Northern Development

4601-52 nd Ave., Box 1500 Yellowknife, NT. XIA 2R3

Tel. (867) 669-2788 Fax: (867) 669-2718 To: YK-PUZNICKI

DIAND

BOX 1500

16 AIRPORT ROAD YELLOWKNIFE

NT

X1A 3T2

Į

Att'n: WAYNE PUZNICKI

LAB# 991769

SAMPLE INFORMATION

Our Lab#: 991769

Your Sample ID: Galena Creck 932-6

Sample Matrix:

PROJECT:

INDIAN AND NORTHERN AFFAIRS CANADA

SEP 1 6 1999

Collection:

Location: Cadillac Mine Site

Date: 8/18/99

By: Wayne Puznicki Received Date: 8/19/99

Report Date: 15-Sep-99

Approved By:

SOUTH MACKENZIE DISTRICT YELLOWONFE, N.W.T.

- Sample analysis report -

	_ab# 	Test	Result	Units	Detection Limit	Analysis Date	Analytical Method
,,,	1102						
		р <b>Н</b>	8.31	pH	0.05	8/20/99	010301
d 1	77	Conductivity	436	uS/cm	0.3	8/20/99	02041
3		Alkalinity	175	mg/L	0.3	8/20/99	010101
TOTTECKTE LE	MajarDraw	Tot-Suspended-Solids	3	mg/L	3	9/13/99	EC10406
100		NO3-N+NO2-N	0.151	mg/L	800.0	9/02/99	07110
Gray and a second	Plans	Tot-Arsenic(water)	0.2	ug/L	0.2	8/27/99	EC33011
N.		Tot-Cadmium(ICP-MS)	L0.3	ug/[_	0.3	8/26/99	ICP-MS
Date:	.Fees	Tot-Cobalt(ICP-MS)	L.1	ug/L	* 1.0	8/26/99	ICP-MS
32 E	Secontysfees	Tot-Chromium(ICF-MS)	_ L3	ug/L	3.0	8/26/99	ICP-MS
4kij		Tot-Copper(ICP/MS)	L2	ug/L	2.0	8/26/99	ICP-MS
Lícence: Grn Cor.	Repl	Tot-Iron(AA)	L0.03	mg/L	0.03	8/24/99	ICP-MS
Lies Gen	Ann	Tot-Manganese(ICP-MS)	Li	ug/L	1.0	8/26/99	ICP-MS
		Tot-Nickel(ICP-MS)	1.9	ug/L	1.0	8/26/99	ICP-MS
		Tot-Lead(ICP-MS)	L1	ug/L	1.0	8/26/99	ICP-MS
		Tot-Zinc(ICP-MS)	L10	ug/L	10.0	8/26/99	ICP-MS

Jept. Indian Affairs & Northern Development

4601-52 nd Ave., Box 1500

Yellowknife, NT. X1A 2R3

Tcl. (867) 569-2788

Fax: (867) 669-2718

To: YK-PUZNICKI

DIAND

BOX 1500

16 AIRPORT ROAD

YELLOWKNIFE

NT XIA 3T2

Att'n: WAYNE PUZNICKI

LAB# 991769

Tot-Mercury(water)

L0.01

na\T

0.01

8/25/99

080314

Tot-Cyanide

L0.003

mg/L

0.003

8/26/99

EPA 335.4