Amy Dumoulin-Jeromel The Royal Military College of Canada PO Box 17000 Stn. Forces Kingston, ON K7K 7B4



Eva Schulz **Environmental Scientist** UMA Engineering Ltd. 2540 Kensington Road NW Calgary, AB T2N 3S3

Friday August 8, 2003

RE: July 2003 Monthly Report for Water Use License Number: NWB5FRA0209

Dear Eva:

The following results of the Surveillance Network Program (SNP) and/or Water Use License are provided by the Environmental Sciences Group to meet the requirements of the above-noted license for PIN-3 (Lady Franklin Point).

1. SEWAGE EFFLUENT

There is one sewage lagoon in use at PIN-3. The Water Use License and SNP require that samples from treated sewage lagoon effluent at the point of discharge to the receiving water be collected prior to each discharge event. No sewage lagoon samples were collected during the month of July 2003. Photographs of the camp sewage lagoon are provided in Appendix В.

2. WASTE WATER

The SNP requires that all wash water and water collected from the dewatering of contaminated soil areas be analyzed prior to disposal to the environment for the effluent parameters listed below. The following wastewater samples were collected at PIN-3 during the month of July 2003:

Sample Number	Sample Location	GPS Coordinates	Sampling Date
03-07243	DEW Line Sewage Outfall	(none submitted)	6 July 2003
03-07255	West Module Train Holding		8 July 2003
03-07256	Pond north section West Module Train Holding Pond- south section		8 July 2003
03-07259	East Module Train Holding Pond- north section	12409240 E 7598259 N	10 July 2003
03-07260	East Module Train Holding Pond- south section	12409240 E 7598259 N	10 July 2003
03-07261	East Module Train Holding Pond- south section	12409240 E 7598259 N	10 July 2003

These samples were collected to determine if it could be discharged to the surrounding land. A summary of the results for the parameters tested is provided below. Laboratory results and photographs are provided in Appendices A and B, respectively.

LOCATION: DEW LINE SEWAGE OUTFALL

GPS COORDINATES: (NOT PROVIDED)

Parameter	Units	MAC ¹	03-07243 (6 July 2003) 7.21	
рН	pH units	6.0-9.0		
Oil & Grease	-	No visible sheen	None visible	
Total Arsenic	mg/L	0.1	0.004	
Dissolved Cadmium	mg/L	0.01	<0.001	
Total Chromium	mg/L	0.1	<0.005	
Dissolved Cobalt	mg/L	0.05	< 0.003	
Dissolved Copper	mg/L	0.2	0.005	
Dissolved Lead	mg/L	0.05	< 0.010	
Total Mercury	ug/L	0.6	<0.4	
Dissolved Nickel	mg/L	0.2	<0.005	
Total Zinc	mg/L	1.0	0.036	
PCBs	ug/L	50* or 5**	<3.0	
Phenols	ug/L	20	<1.0	

Maximum Average Concentration

^{*}When discharging the water to barren land.

^{**}When discharging the water to vegetated land.

LOCATION: WEST MODULE TRAIN HOLDING POND

GPS COORDINATES: 12409012 E, 7598256 N

GPS COORDINATES: 12 Parameter	Units	MACI	03-07255 (8 July 2003)	03-07256 (8 July 2003)	
рН	pH units	6.0-9.0	7.48	7.25	
Oil & Grease	-	No visible sheen	None visible	None visible	
Total Arsenic	mg/L	0.1	<0.003	<0.003	
Dissolved Cadmium	mg/L	0.01	<0.001	<0.001	
Total Chromium	mg/L	0.1	<0.005	<0.005	
Dissolved Cobalt	mg/L	0.05	<0.003	<0.003	
Dissolved Copper	mg/L	0.2	0.005	<0.005	
Dissolved Lead	mg/L	0.05	< 0.010	<0.010	
Total Mercury	ug/L	0.6	<0.4	<0.4	
Dissolved Nickel	mg/L	0.2	<0.005	<0.005	
Total Zine	mg/L	1.0	0.014	<0.010	
PCBs	ug/L	50* or 5**	<3.0	<3.0	
Phenols	ug/L	20	<1.0	<1.0	

Maximum Average Concentration

LOCATION: EAST MODULE TRAIN HOLDING POND

GPS COORDINATES: 12409240 E, 7598259 N

Parameter	Units	MAC¹	03-07259 (10 Jul 03)	03-07260 ² (10 Jul 03)	03-07261 ² (10 Jul 03)
рН	pH units	6.0-9.0	7.48	7.92	8.01
Oil & Grease	_	No visible sheen	None visible	None visible	None visible
Total Arsenic	mg/L	0.1	<0.003	< 0.003	<0.003
Dissolved Cadmium	mg/L	0.01	<0.001	<0.001	<0.001
Total Chromium	mg/L	0.1	<0.005	< 0.005	<0.005
Dissolved Cobalt	mg/L	0.05	< 0.003	<0.003	<0.003
Dissolved Copper	mg/L	0.2	0.007	0.006	0.008
Dissolved Lead	mg/L	0.05	< 0.010	<0.010	<0.010
Total Mercury	ug/L	0.6	<0.4	<0.4	<0.4
Dissolved Nickel	mg/L	0.2	<0.005	< 0.005	<0.005
Total Zinc	mg/L	1.0	0.025	< 0.010	0.010
PCBs	ug/L	50* or 5**	<3.0	<3.0	<3.0
Phenols	ug/L	20	<1.0	<1.0	<1.0

¹Maximum Average Concentration

^{*}When discharging the water to barren land.

^{**}When discharging the water to vegetated land.

²Samples 03-07260/07261 are a field duplicate pair. They were collected at the same location at the same time as part of ESG's internal QA/QC program.

^{*}When discharging the water to barren land.

^{**}When discharging the water to vegetated land.

3. QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) SAMPLES

The following samples were collected and analyzed as part of the QA/QC program for PIN-3 during the month of July 2003:

Sample Number	Sample Location	GPS Coordinates	Sampling Date
03-07257	Field Blank	(Not applicable)	8 July 2003
03-07258	Travel Blank	(Not applicable)	8 July 2003

Details on the specific types of QA/QC samples are included in the site-specific QA/QC plan that has been submitted to the Nunavut Water Board as required by the Water Use License.

Parameter	Units	Detection Limit	Field Blank 03-07257 (8 Jul 03)	Travel Blank 03-07258 (8 Jul 03)
PH	pH units	-	6.59	5.40
Oil & Grease	mg/L	1.0	<1.0	1.0
Total Arsenic	mg/L	0.003	<0.003	< 0.003
Dissolved Cadmium	mg/L	0.001	<0.001	< 0.001
Total Chromium	mg/L	0.005	<0.005	<0.005
Dissolved Cobalt	mg/L	0.003	<0.003	<0.003
Dissolved Copper	mg/L	0.005	<0.005	<0.005
Dissolved Lead	mg/L	0.010	<0.010	< 0.010
Total Mercury	ug/L	0.4	<0.4	<0.4
Dissolved Nickel	mg/L	0.005	<0.005	< 0.005
Total Zinc	mg/L	0.010	<0.010	<0.010
PCBs	ug/L	3.0	<3.0	<3.0
Phenols	ug/L	1.0	<1.0	<1.0

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

ENVIRONMENTAL SCIENCES GROUP

umone-Jewonel

APPENDIX A LABORATORY RESULTS

Notes:

- 1. Sample 03-07243 was collected from standing water contained within the DEW Line Sewage Outfall on 6 July 2003.
- 2. Samples 03-07255 and 03-07256 were collected from the northern and southern sections of the West Module Train Holding Pond on 8 July 2003.
- 3. Sample 03-07257 is a field blank that was filled on 8 July 2003.
- 4. Sample 03-07258 is a travel blank.
- 5. Samples 03-07259 and 03-07260/61 (a field duplicate pair) were collected from the northern and southern sections of the East Module Train Holding Pond on 10 July 2003.



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Royal Military College, Dupt. Of Cham. and Chem. Pag., PO Hox 17000 Sin. Forces, Kingaton, ON, K7K 7R4 (613) 541-6000 ant 6684 / Fam. (613) 545-8341

Client:

ESG

12 Verite Ave

Dept. of Chem. / Chem. Eng., RMC P.O. Box 17000, Stn. Forces Kingston, Ontario K7K 7B4 (613) 541-6000 ext 6567 Fax: (613) 541-6596

ASG Login No: 9485

Site: Pin-3

Client No: 03-029

Samples Received: 15-Jul-03 Date of analysis: 16-Jul-03 Method No: ASG 037 Date Reported: 16-Jul-07

Page: 1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	На
03-07243*	7.21
03-07255	7.48
03-07256	7.25
03-07257	6.59
03-07258	5.40
03-07259	7,48
03-07260	7.92
03-07261	8.01

^{*} Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pН
03-07243; Duplicate	7.18, 7.23
control	4.01
control target	4.00

The results reported here relate only to t	he items	tested.
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Authorizali	on:		
	Cindy Cowin,	Laboratory	Manager

ASU#	6269		Report ID:	PIN-3W3		
Client:	ASG 9485		Date Submitted:	15-Jul-03		
			Date:	17-Jul-03		
Site:	PIN-3		Matrix:	Water		
	03-029	.,				<u></u>
Preliminary Report o	f Analysis					
SAMPLE	Oil & Grease	*Phenols				
	mg/L	ug/L				
03-07243	3.5	<1.0				<u> </u>
03-07255	<1.0	<1.0		,,		
03-07256	<1.0	<1.0				
03-07257	1.1	<1.0			.,	
**03-07258	1.0	result to follow				<u>l</u> , , <u></u>
03-07259	<1.0	<1.0			<u> </u>	
03-07260	1.5	<1.0				<u></u>
03-07261	2.3	<1.0				ļ
Blank	<1.0	<1.0				
Control	15.6	11.8				
Control Target	15.6	10.0	•			
Date Tested	16-Jul-03	16-Jul-03				
* Samples run in du **Non-conformance						-

FROM: A DUMOULIN-JEROMEL,ESG FAX NO.: 519-354-9634 Aug. 08 2003 11:58AM P9

ASU#	6269	Report ID:	PIN-3W5	
Client:	ASG 9485	Date Submitted:	15-Jul-03	
		Date;	18-Jul-03	
Site:	PIN-3	Matrix:	Water	
	03-029			
eliminary Report o	f Analysis			
SAMPLE	*Phenols			
	ug/L			
03-07258	<1.0		. ,	
Blank	<1.0			
Control	10.6		, , ,	
Control Target	10.0	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Date Tested	18-Jul-03		, , ,	
Samples run in dup	licate and results averag	ed	***	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
				,

PIN-3 W5

Danaman Line

ASU#	6269		Report ID:	PIN-3 W4				
Client:	ASG 9485		Date submitte	ate submitte 15-Jul-03				
			Date tested	17-Jul-03				
Site:	PIN-3		Date	18-Jul-03				
ESG#:	03-029		Matrix	Water				
Preliminary Rep	reliminary Report of Analysis			All result are in mg/L				
Total Metals		11.1						
	Zn	Сг	As					
03-07243	0.036	<0.005	0.004					
03-07255	0.014	< 0.005	<0.003	<u> </u>				
03-07256	<0.010	<0.005	<0.003					
03-07259	0.025	<0.005	< 0.003					
03-07260	<0.010	<0.005	<0,003					
03-07261	0.010	< 0.005	<0.003					
Blank	<0.010	<0.005	< 0.003					
Control	1.24	0.39	1.25					
Control Target	1.20	0.40	1.20					
Dissolved Meta	als							
	Cu	Ni	Co	Cd	Pb			
03-07243	0.005	<0.005	<0.003	<0.001	<0.010			
03-07255	0.005	<0.005	<0.003	< 0.001	<0.010			
03-07256	<0.005	< 0.005	< 0.003	<0.001	<0.010			
03-07259	0.007	<0.005	< 0.003	<0.001	<0.010			
03-07260	0.006	<0.005	< 0.003	<0.001	< 0.010			
03-07261	0.008	<0.005	<0.003	<0.001	< 0.010			
Blank	<0.005	<0,005	< 0.003	<0.001	<0.010			
Control	2.15	2.20	2.06	0.39	2.18			
Control Target	2.20	2,20	2.20	0.40	2.20			

ASU#	6269		Report ID:	PIN-3 W6	
Client:	ASG 9485		Date submitte	15-Jul-03	
**************************************			Date tested	21-Jul-03	
Site:	PIN-3		Date	23-Jul-03	
ESG#:	03-029		Matrix	Water	
Preliminary Report of Analysis		All result are in mg/L			
Total Metals		*** *** *******************************			
	Zn	Сг	As		
03-07257	<0.010	< 0.005	< 0.003		
03-07258	<0.010	<0.005	<0.003		
Blank	<0.010	<0.005	<0.003		
Control	1.28	0,39	1.20		
Control Target	1.20	0.40	1.20	W	
Dissolved Meta	ls				
	Сп	Ni	Co	Cd ·	Pb
03-07257	<0.005	<0.005	< 0.003	<0.001	< 0.010
03-07258	< 0.005	< 0.005	<0.003	<0.001	<0.010
Blank	<0.005	<0.005	<0.003	<0.001	<0.010
Control	2.13	2.25	2.08	0.40	2.22
Control Target	2.20	2,20	2,20	0,40	2.20



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Reyal Milesay College, Dept. Of Chem. and Chem. Hig., EC. Soc. 7555; St., Peters, Edngston, Ch., 8717 784

(814) 541-0075 eat 6884 / The (815) 548-841

Client:

ESG

12 Verite Ave

Dept. of Chem. / Chem. Eng., RMC P.O. Box 17000, Stn. Forces Kingston, Ontario K7K 7B4 (613) 541-6000 ext 6567 Fax: (613) 541-6596

ASG Login No: 9485

Site: Pin-3 ESG No: 03-029 Samples Received: 15-Jul-03

Date of analysis: 02-Aug-03 Method No: ASG 014 & ASG 021

Date Reported: 02-Aug-03 Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS# AMMENDED REPORT

Sample I.D.	Unit	Total Mercury*	Dissolved Mercury
03-07243	µg/L	< 0.4	< 0.1
03-07255*	µg/L	< 0.4	< 0.1
03-07256	µg/L	< 0.4	< 0.1
03-07257	µg/L	< 0.4	< 0.1
03-07258	μg/L	< 0.4	< 0.1
03-07259	µg/L	< 0,4	< 0.1
03-07260	µg/L	< 0.4	< 0.1
03-07261	µg/L	< 0.4	< 0.1
		/	
V-17-2			

LABORATORY QA/QC

Duplicate ; 03-07255	µg/L	< 0.4 ; < 0.4	< 0.1 : < 0.1
Blank	µg/L	< 0.4	< 0.1
Control Target	ha\r	4.0	2.0
Control	hā/r	4.5	2.2

^{*} Averaged result of duplicates.

* Acid digestion performed.

The results reported here relate only to the items tested.

Prepared By:

Nelson Melo; Analyst

[#]Reported at 0.4 ug/L detection limit.



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Royal Military College, Dept. Of Chem. and Chem. Fing. PO. Box 17000 Sea. Footen, Knippion, ON, KPK 7144
(613) 541-6000 ext. 6634 / Ham (613) 545-8541

Client: ESG

12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 9485

Site: Pin-3

Client No: 03-029 Samples Received: 15-Jul-03 Date of analysis: 15-Jul-03

Method No: ASG 006 Date Reported: 18-Jul-03

Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	03-07243	µg/L	< 3.0	< 3.0
<u>W</u>	03-07255	µg/L	< 3.0	< 3.0
W	03-07256	µg/L	< 3.0	< 3.0
W	03-07257	µg/L	< 3.0	< 3.0
W	03-07258	µg/L	< 3.0	< 3.0
W	03-07259	1,000	< 3.0	< 3.0
W	03-07260	µg/L	< 3.0	< 3.0
w	03-07261	µg/L	< 3.0	< 3.0

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0
l	Control Sample	µg/L	< 3.0	19
	Control Sample Target	µg/L	< 3.0	16.0

 $^{^{\}mbox{\tiny NN}}$ S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant

All results corrected for the recovery of the surrogate decachlorobiphenyl

ine results reported he	re relate only	/ to 1	the ite	ms test	ed
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Authorization:

David Kelly, Assistant Director

APPENDIX B PHOTOGRAPHS



Photo 1: Camp Sewage Lagoon. The photo was taken on 30 July 2003 from the southwest corner of the lagoon looking northeast. The wettest area of the lagoon in this photo is the northeast corner.

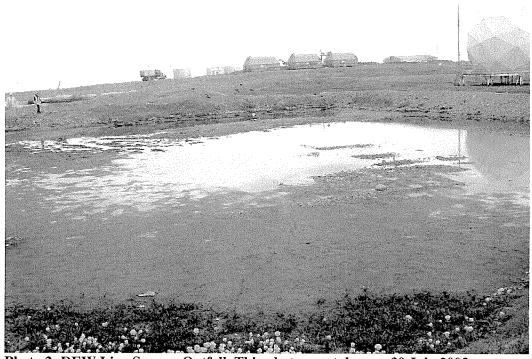


Photo 2: DEW Line Sewage Outfall. This photo was taken on 30 July 2003 once a portion of the dewatering had already been completed. The photo was taken from the southern berm looking north towards the station area. The Station POL Pad and Warehouse are in the background of the photo.

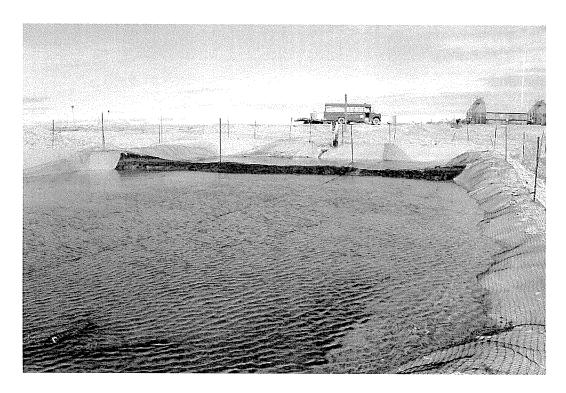


Photo 3 View of the West Module Train Holding Pond at PIN-3 on 8 July 2003. The photo was taken facing south. Samples 03-07255 and 03-07256 were collected from the north and south sections of the holding pond respectively.

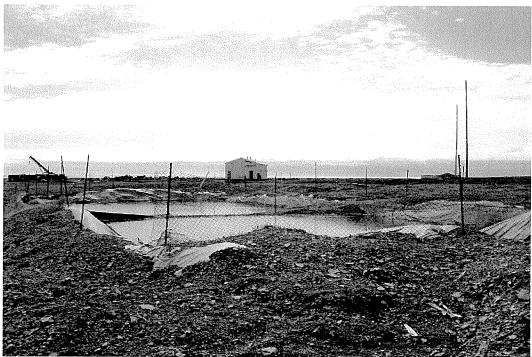


Photo 4: View of the East Module Train Holding Pond at PIN-3 on 10 July 2003. The photo was taken facing south. Samples 03-07259 and 03-07260/07261 were collected from the north and south sections of the holding pond respectively.