

## Bijaya Adhikari

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**From:** Margaret Allan <margaret@matrix-solutions.com>  
**Sent:** February 27, 2018 11:30 AM  
**To:** Bijaya Adhikari  
**Cc:** Lloyd Gruben; Mardy Semmler; Freda Wilson; Joshua Clark  
**Subject:** RE: N3L8-1838 NTPC 2017 AR - add info request  
**Attachments:** 21784-546 tab17 - Table 3 revised to show more metals.pdf

Attached is a revised summary table. The data were included in the report (Appendix D). Please advise if you require hard copies of this page.

Regards,

—Margaret Allan  
780.239.5170

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 *Please consider the environment before printing this email.*

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**From:** Bijaya Adhikari [mailto:adhikarib@inuvwb.ca]  
**Sent:** Monday, February 26, 2018 3:38 PM  
**To:** Joshua Clark  
**Cc:** Margaret Allan; Lloyd Gruben; Mardy Semmler; Freda Wilson  
**Subject:** N3L8-1838 NTPC 2017 AR - add info request

Good Afternoon Joshua,

Please find an attachment regarding the water licence N3L8-1838 NTPC Annual Report 2017 – additional information request.

The original will not follow in the mail.

Sincerely,

Bijaya

*Bijaya Adhikari, PhD  
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**TABLE 3**

**Water Quality Results - Water Characterization**

Northwest Territories Power Corporation  
Aklavik, N.W.T.

Sample Point Sample Date MSI Sample Number		Post-Treatment 16-Aug-17 21784170816001	Post-Treatment 29-Aug-17 21784170829001	Post-Treatment 11-Sep-17 21784170911001	Pre-Treatment 14-Sep-17 21784170914002	Background 14-Sep-17 21784170914001	Site Specific Water Release Criteria*
<b>General and Inorganic Parameters</b>							
pH		<b>9.91</b>	7.6	7.73	7.79	7.81	6 to 9
Lab EC	µS/cm	1100	769	1130	2320	1650	NS
Ca	mg/L	240	99.9	169	388	235	NS
Mg	mg/L	2.5	28.5	52.9	130	44.9	NS
Na	mg/L	4.8	11.4	7	14.6	38.4	NS
K	mg/L	1.1	7.5	3.9	4.9	7.1	NS
Cl	mg/L	17	10	3	5.9	236	NS
SO <sub>4</sub>	mg/L	188	302	500	1160	72.3	NS
F	mg/L	1.28	<0.05	0.27	0.09	0.07	NS
NO <sub>2</sub> -N	mg/L	0.09	<0.02	<0.02	<0.01	<0.01	NS
NO <sub>3</sub> -N	mg/L	0.72	<0.02	<0.02	<0.02	<0.02	NS
NO <sub>2</sub> +NO <sub>3</sub> -N	mg/L	0.81	<0.02	<0.02	<0.02	<0.02	NS
T-Alkalinity	mg/L	665	103	178	470	462	NS
HCO <sub>3</sub>	mg/L	<5	126	218	574	564	NS
Hardness	mg/L	610	367	640	1500	772	NS
TDS	mg/L	747	521	843	1990	911	NS
TSS	mg/L	<b>30</b>	14	<b>20</b>	<b>176</b>	<b>965</b>	15
<b>Total Metals</b>							
Cd	mg/L	0.000714	0.0000085	0.000393	0.000232	0.00359	NS
Cr	mg/L	<0.001	<0.001	<0.001	0.0028	0.0683	NS
Cu	mg/L	0.283	0.05	0.1	0.0071	0.14	NS
Fe	mg/L	7.1	5.1	8.3	6.7	170	NS
Pb	mg/L	<b>0.184</b>	<b>0.0303</b>	<b>0.0673</b>	0.0037	<b>0.101</b>	0.007 <sup>H</sup>
Hg	mg/L	<0.000005	<0.000005	<0.000005	<0.000025	0.00027	NS
Mo	mg/L	0.014	0.002	0.002	0.003	0.004	NS
Ni	mg/L	0.014	0.004	0.016	0.022	0.137	NS
Zn	mg/L	21.5	0.56	<0.03	0.09	0.976	NS
<b>Petroleum Hydrocarbons</b>							
Benzene	mg/L	0.0081	---	<0.0005	<0.0005	<0.0005	0.37
Toluene	mg/L	0.0004	---	<0.0003	<0.0003	<0.0003	0.002
Ethylbenzene	mg/L	<0.0005	---	<0.0005	<0.0005	<0.0005	0.09
Xylenes	mg/L	<0.0005	---	<0.0005	<0.0005	<0.0005	0.03
Total Petroleum Hydrocarbons	mg/L	0.4	---	0.5	1.5	4.4	5
Oil & Grease	mg/L	0.5	---	none†	1.1	<b>18.7</b>	5
<b>Polycyclic Aromatic Hydrocarbons</b>							
Benzo[a]pyrene	µg/L	<0.007	---	<0.007	<0.007	<0.007	0.015

**Notes:**

NS - not specified

--- - not analyzed

<sup>H</sup> - dependent on hardness value

† - laboratory visual determination

\* - *Water Licence N3L8-1838* (Inuvialuit Water Board 2016)

**Italics** - indicates values do not meet applicable guidelines