



Community SNP Sampling Training Program

Behchoko

November 4, 2010

Introduction

- ½ day field component ✓
- ½ day classroom component
- Participants & Partners:
 - SAO, Lands Officer, Water & Works
 - WLWB, EC, GNWT-MACA, INAC, Ecology North



Train Tlicho Communities:

- To comply with Water License requirements & build community capacity
 - Waste water sampling
 - Data management
 - Reporting
 - Analysis



Water Quality Projects/Activities

BEHCHOKO WATER LICENSE



Box 32, Wekweètì, NT X0E 1W0
Tel: 867-713-2500 Fax: 867-713-2502

#1-4905 48th Street,
Yellowknife, NT X1A 3S3
Tel: 867-669-9592 Fax: 867-669-9593

Pursuant to the *Mackenzie Valley Resource Management Act* and Regulations, the Wek'èezhii Land and Water Board, hereinafter referred to as the Board, hereby grants to:

Hamlet of Rae-Edzo (Tłjchò Community Government of Behchokò)
(Licensee)

of Box 68, Behchokò NT X0E 0Y0
(Mailing Address)

Hereinafter called the Licensee, the right to alter, divert or otherwise use water subject to the restrictions and conditions contained in the *Northwest Territories Waters Act* and Regulations made thereunder and subject to and in accordance with the conditions specified in this Licence.

Licence Number:	<u>MV2003L3-0010</u>
Licence Type:	<u>B</u>
Water Management Area:	<u>Northwest Territories 01</u>
Location:	<u>62°50' N and 116°03'W</u>
Purpose:	<u>To use water and dispose of waste and associated uses</u>
Description:	<u>For Municipal Purposes</u>
Quantity of water <u>not to be exceeded</u> :	<u>300,000 cubic metres per year</u>
Effective Date of Licence:	<u>December 1, 2004</u>
Expiry Date of Licence:	<u>November 30, 2014</u>

This Licence issued and recorded at Yellowknife includes and is subject to the annexed conditions.

Wek'èezhii Land and Water Board

A handwritten signature in black ink, appearing to read "Brett Wheler".

Witness – Mr. Brett Wheler

A handwritten signature in black ink, appearing to read "Violet Camsell-Blondin".

Chair – Ms. Violet Camsell-Blondin

PART A: Scope & Definitions

- Use water and dispose of waste for municipal undertakings
- Drinking water
- Solid waste disposal
- Sewage waste disposal



Rae Water Supply Facility

PART B: General Conditions

- Submit Annual Report to the Board by March 31st
- Post signs (60 days): SNP, Water Supply & Waste Disposal Facility signs (60 days)
- Report Spills to Spill Line
– 867-920-8130



SNP & Facility Signs

PART C: Water Use

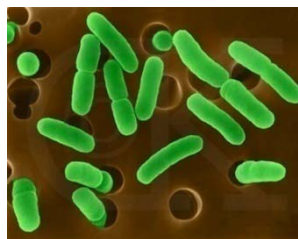
- Edzo = West Channel
- Rae = Marion Lake
- Use less than 300,000 m³/year
- Intake hose with mesh screen that doesn't entrain fish



Marion Lake

PART D: Waste Disposal

- Effluent Quality Criteria (EQC) for SNP stations
- 1m freeboard @ Sewage WDF dykes (0.5m @ Edzo Sludge Cell)
- Advise Inspector 10 days before decant of sewage



PARAMETER	EQC
Suspended Solids	120 mg/L
Oil & Grease	5 mg/L
BOD ₅	80 mg/L
Faecal Coliforms	2 x 10 ⁴ CFU/100ml

SNP 0041-R2

PARAMETER	EQC
Suspended Solids	35 mg/L
Oil & Grease	5 mg/L
BOD ₅	30 mg/L
Faecal Coliforms	1 x 10 ³ CFU/100ml

SNP 0041-E6

PART D: Waste Disposal

- Submit Water Quality Study for Rae lagoon effluent discharge system
- Submit Groundwater Monitoring proposal below sewage WDF in Edzo
 - (for Board approval within 3 months of WL)
- Submit as-builts for Solid WDF landfarm, expanded Solid WDF, Sewage WDF (Rae
 - (upon completion)
- Submit Hazardous Waste Management Plan for Solid WDF
 - (for Board **approval** within 6 months of WL)

PART D: Waste Disposal

- Do not burn solid/liquid wastes
 - except paper products, paperboard packaging, and untreated wood waste



Whati incinerator

PART E: Closure and Reclamation

- Submit Closure & Reclamation Plan
 - To Board **for approval** 6 months before closing sewage or solid waste facility (now due)
- Progressive reclamation of areas abandoned before closure



Rae Solid Waste Facility

PART F: Modifications

- Notify Board of proposed modifications 60 days in advance
- The Board has 60 days to respond (yes/no/more time needed)
- Notify Board within 90 days of completions



Wekweeti Solid Waste Disposal Facility

PART G: Operation & Maintenance

- Submit O&M Plan for Sewage and Solid Waste Disposal Facilities
 - To Board **for approval** within 60 days of this WL (draft has been reviewed, final draft now due)
- SNP Manual – Required part of O&M Plan, but separate document.



Rae Solid Waste Disposal Facility
Expansion

PART H: Contingency Planning

- Submit Spill Contingency Plan to Board **within 6 months** of WL
- Report spills to spill line, inspector (within 24 hours), and report to Board (within 30 days)



PART I: Construction

- Submit to Board for approval design drawings stamped by engineer 90 before construction of water/waste structures
- Submit as-builts stamped by engineer within 90 days of completion



Edzo Sewage Sludge Cell



BEHCHOKO WATER LICENSE SURVEILLANCE NETWORK PROGRAM (SNP)

Location of Stations: Edzo

1.

SNP 0041-E1: Edzo raw water facility

2.



SNP 0041-E2: Edzo sewage outflow ditches

3.

SNP 0041-E6: Sewage discharge, before GSL

4.



SNP 0041-E7: Edzo Sludge Cell

Location of Stations: Rae

1.



SNP 0041-R1: Rae raw water facility

2.



SNP 0041-R2: Sewage outflow at culvert crossing Rae Access road

3.



SNP 0041-R8: Runoff from solid waste disposal facility

1. Be Safe

a) Vaccinations



- Hepatitis A&B
- Tetanus

b) Gloves



c) Hand Sanitizer



d) Field Gear



2. Be Prepared

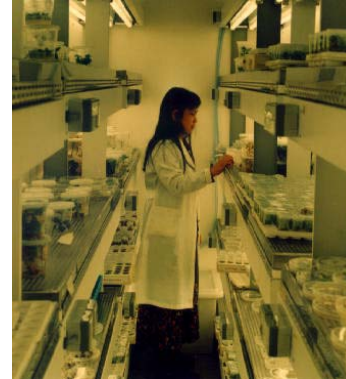
a) Order Bottles w/ Taiga



- Taiga Lab:
867-669-2788

Order 3 days in advance.

b) Lab Analysis



- Same Day
- After Hours:
867-444-8378

c) Bottle Transport



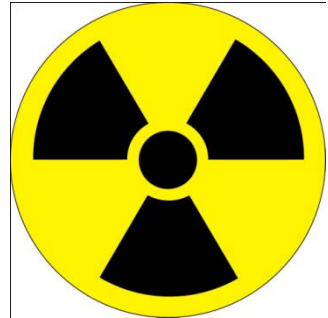
- Arrange with Behchoko Courier, David Wilson:
867-445-9222 * 867-392-6347

3. Know the Locations



SNP 0041-E1: Edzo raw water facility

Once every 5 years



Total Ra-226, U, Pb-210, Po

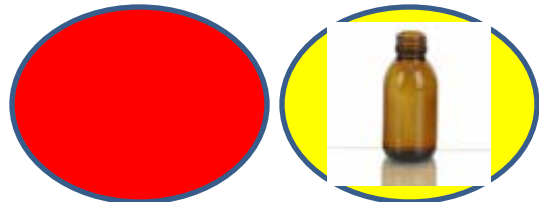
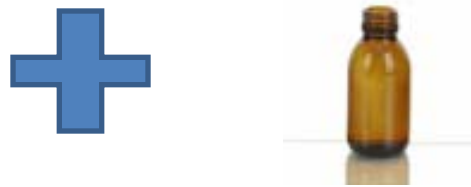
SNP 0041-E2:
Edzo sewage junction outflow ditches



Once a month from
June – October

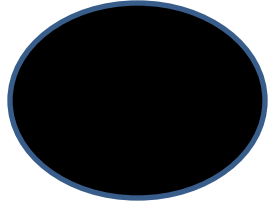
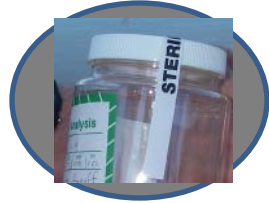


Once between
June - October

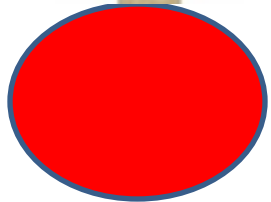


SNP 0041-E6: Sewage discharge downstream of junction, before GSL (usually dry – may not get sample)

Once a month from June – October



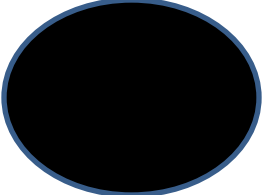
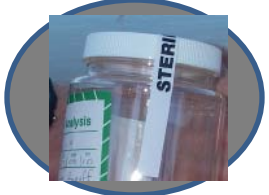
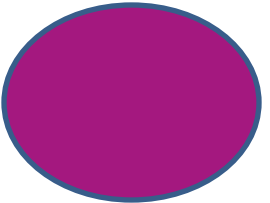
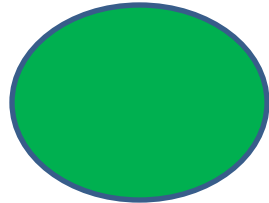
Once between June - October



SNP 0041-E7: Edzo Sludge Cell



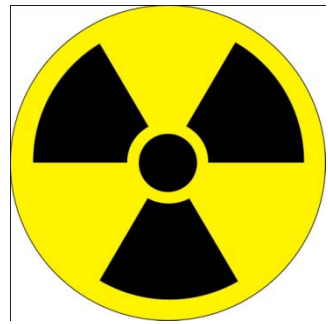
Once a month from June – October



SNP 0041-R1:
Rae raw water
facility



Once every 5 years

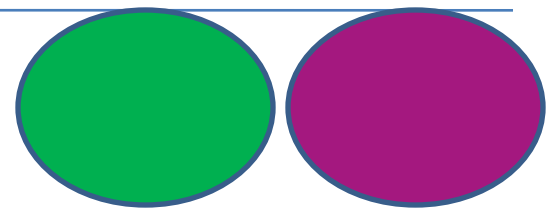


Total Ra-226, U, Pb-210, Po

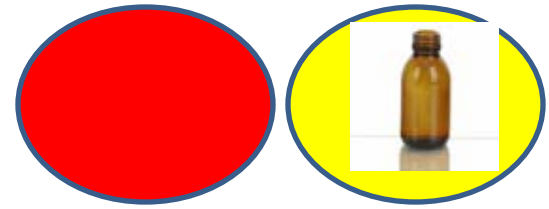
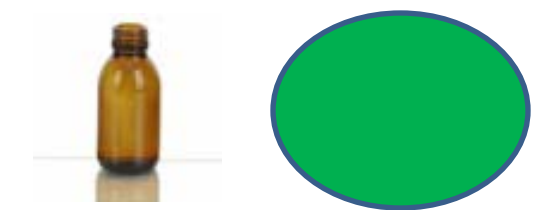
SNP 0041-R2: Outflow from Rae
sewage disposal facility at culvert
crossing Rae Access road



Every week starting
2 weeks before decant



Once between
June - October

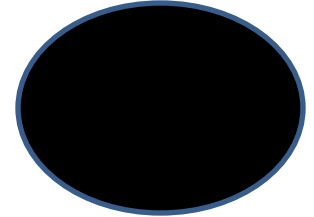
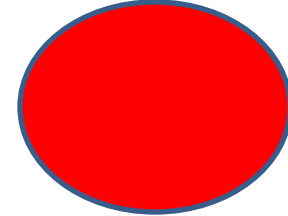
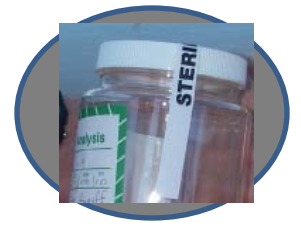
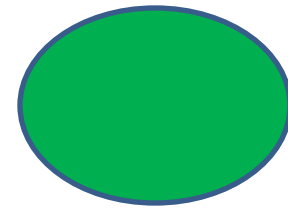


SNP 0041-R8: Runoff from solid waste disposal facility



May require multiple samples, such as those collected in October.

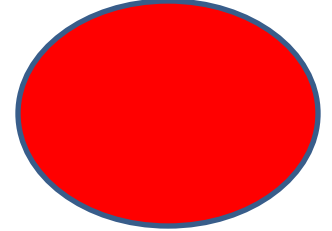
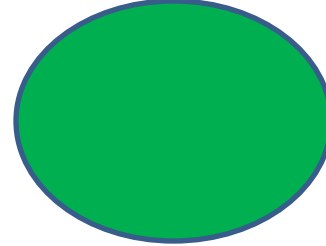
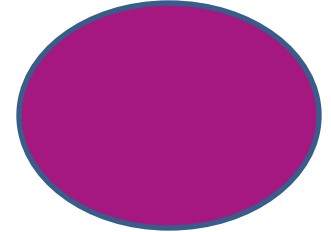
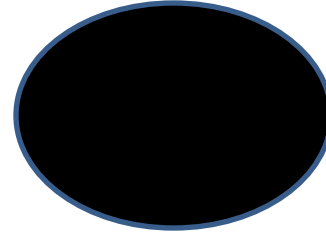
Once a month from June – October



4. Know the Procedures

- Rinse X 3
- Fill to top

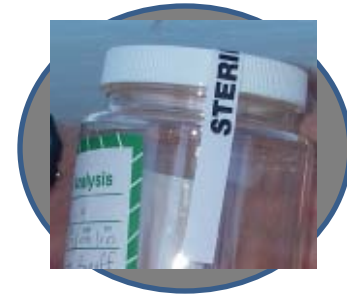
3 X



Phenols

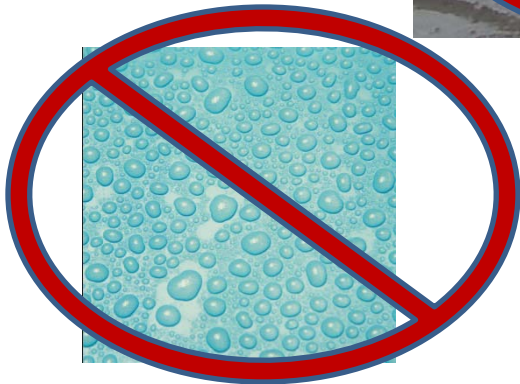
4. Know the Procedures

- Do Not Rinse
- Fill to top
- Record the time



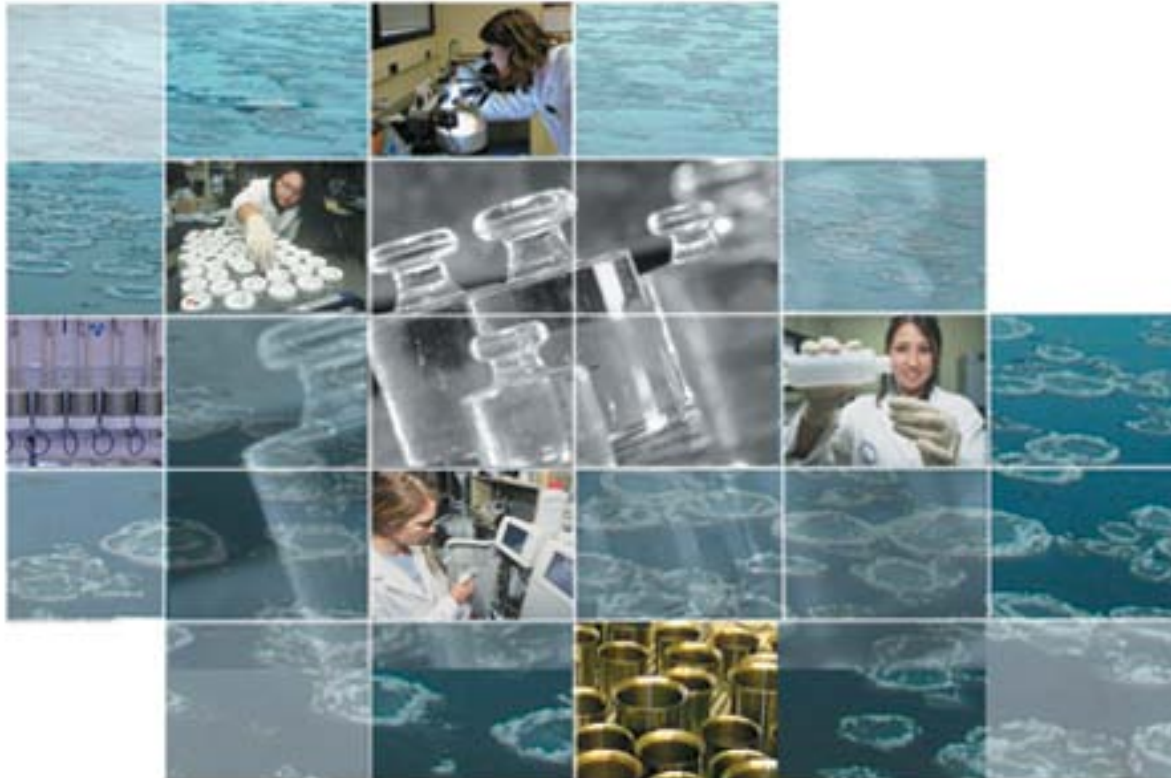
4. Know the Procedures

- Do not rinse
- Fill to top
- No air bubbles



Sampling & Analysis

Send to Taiga Lab, Yellowknife for analysis



Taiga Environmental Laboratory

A Northern Resource for Northern Business

The Taiga Lab will send you your results back in ~7-14 days.

Questions?