



**JAN – FEB 2024**  
**Snap Lake Mine**  
**Closure & Reclamation Activities**  
**Summary**

**MARCH 2024**

# Acronyms

- ❖ AEMP – Aquatic Effects Monitoring Program
- ❖ EQC – Effluent Quality Criterion
- ❖ MS Monitoring Station
- ❖ SNP – Surveillance Network Program
- ❖ TDS – Total Dissolved Solids
- ❖ WEMP – Wildlife Effects Monitoring Program
- ❖ WTP – Water Treatment Plant
- ❖ WISP West Influent Storage Pond
- ❖ EISP East Influent Storage Pond
- ❖ MS Monitoring Station



# Outline

1. Mine Update
2. SNP Reports
3. Water Management
4. Monitoring
5. Site Inspections
6. Incidents at the Site
7. Water Licence and Land Use Permit Updates
8. EA Updates
9. SLEMA's Activities



# 1. Mine Update

- On March 1, 2022, De Beers began activities associated with the Closure Phase, as described in the Final Closure and Reclamation Plan and as it was authorized by the corresponding Land Use Permit and Water Licence
- In January and February, Met-Nuna maintained a skeleton crew on site waiting for the weather improvement. The spur road construction to Tibbitt-to-Cotwoyto Winter Road is underway with the aim of opening it in March.
- Majority of site infrastructures had been demolished as of November 30, 2023



## 2. SNP Reports

- Summary of mine closure and reclamation activities in December 2023 and January 2024:
- ✓ From December 2023 to January 2024, De Beers maintained a skeleton site crew to conduct maintenance operations at site.
- ✓ Winter road preparation (spur road)
- ✓ Wildlife monitoring



### 3. Water/ Waste Management at Site

- Fresh water extraction from Snap Lake and sewage collection and treatment are routinely performed at the Site
- In December, De Beers did not discharge effluent water to the underground or Snap Lake; details of the discharges are shown in Table 3.1



# 3.1 Water & Wastewater Management at Site

**Table 3.1: SUMMARY OF MONTHLY QUANTITIES OF WATER AND WASTEWATER MANAGED AT SITE FOR YEAR 2023-2024**

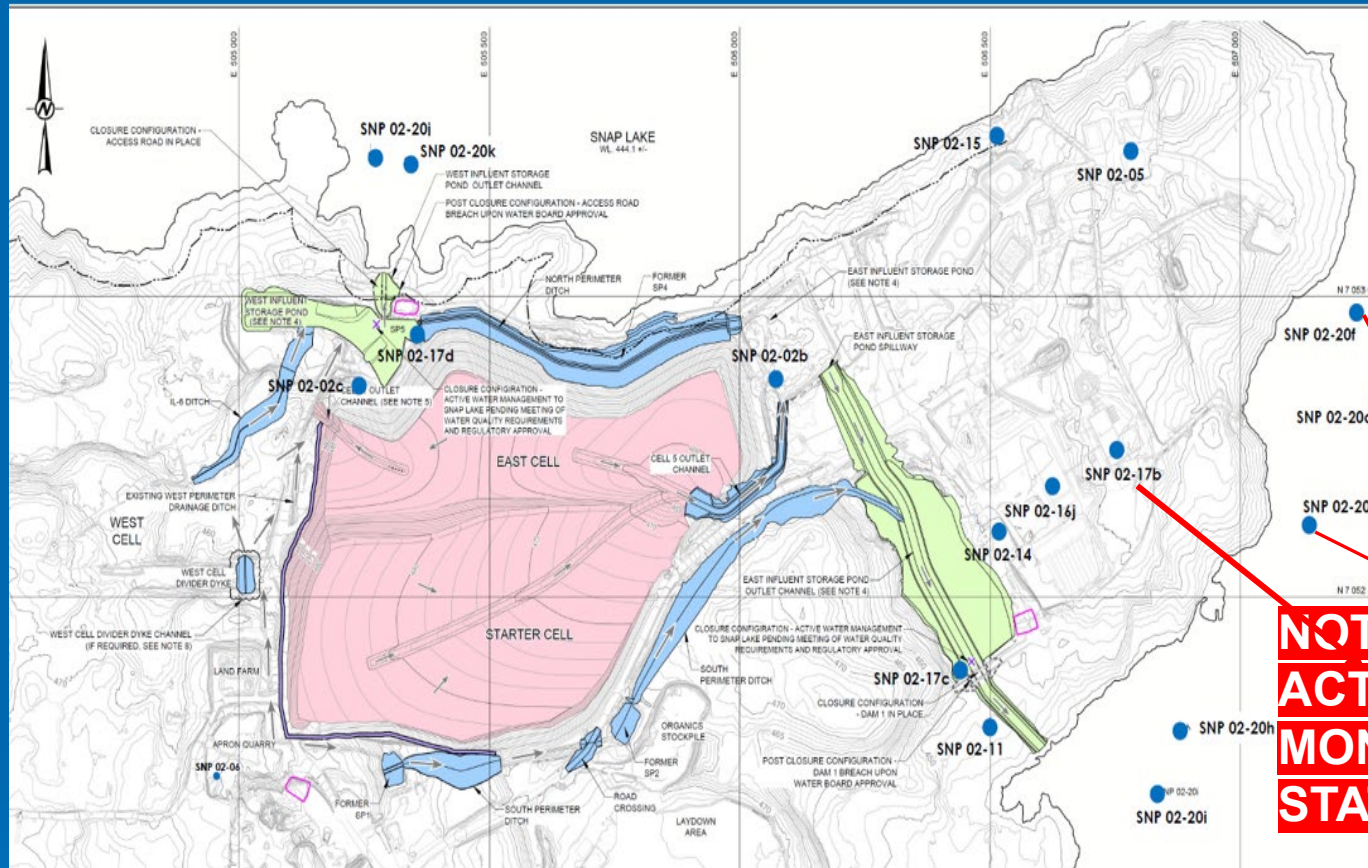
Water/	Feb m3	Mar m3	Apr m3	May m3	Jun m3	Jul m3	Aug m3	Sep m3	Oct m3	Nov m3	Dec m3	Jan m3
Fresh water (Snap L)	504	645	995	395	879	858	607	918	902	630	577	371
Sewage	17	74	200	599	562	632	584	562.8	588	444	168	107
Effluent to Snap Lake	-	-	-	-	-	-	-	32,981	2,409	-	-	-
Water to Under ground				15,704	7,392	15,560	7,703	8,396	5,590	-	-	-
Ww to North Pile	250*	359*	279*	-	-	-	-	-	-	-	-	-

Ww: wastewater

\*liquid wastes discharged to the West Influent Storage Pond (ISP)



# 4. MONITORING STATIONS (MS)



LEGEND	
	NORTH PILE INFLUENT STORAGE PONDS DETAILED DESIGN (SEE NOTE 4)
	NORTH PILE CLOSURE COVER DETAILED DESIGN (SEE NOTE 5)
	NORTH PILE SURFACE WATER MANAGEMENT FOR CLOSURE DESIGN (SEE NOTE 6)
	NORTH PILE PROCESSED KIMBERLITE TOE BERM DETAILED DESIGN (SEE NOTE 7)
	-470- AUGUST 2019 EXISTING GROUND CONTOURS
	50 m SHORELINE OFFSET
	FUTURE CONSTRUCTION
	FLOW DIRECTION
	POTENTIAL EROSION PROTECTION MAINTENANCE STOCKPILE LOCATION
	SNP SAMPLING STATION





# 4. SNP MONITORING

## 2023 SUMMARY OF WATER MONITORING

The following table has been updated to reflect the new configuration.

Monitoring Station	Feb	Mar	Apr	Ma y	Jun	Jul	Aug	Se p	Oct	Nov	Dec	Jan
02-02c West ISP	N	N	N	✓	✓	✓	✓	✓	✓	N	N	N
02-05 Run off Rock Pad	N	N	N	✓	✓	N	N	✓	N	N	N	N
02-06 Runoff Quarry	N	N	N	N	N	N	N	N	N	N	N	N
02-14 WMP	N	N	N	✓	✓	✓	P	N	✓	N	N	N
02-15 Water Intake	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ = Monitoring Completed

N: Not monitored, frozen condition, or no discharge

P: Partially Completed, Insufficient Water for August 15 Sampling



# 4. SNP MONITORING

## 2023 SUMMARY OF WATER MONITORING

Monitoring Station	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
02-16i Sewage Effluent	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
02-17c Discharge from EISP	N	N	N	N	N	N	N	N	N	N	N	N
02-17d Discharge from WISP	N	N	N	N	N	N	N	✓	✓	N	N	N
02-20h 02-20i EISP dc in Snap Lake	N	N	N	N	N	N	N	N	N	N	N	N
02-20j 02-20k WISP dc in Snap Lake	N	N	N	N	N	N	N	✓	N	N	N	N

✓ = Monitoring Completed

N: Not monitored, frozen condition, or no discharge



# 4.1 WATER MONITORING

## TDS IN SNAP LAKE:

The following data correspond to no longer active Monitoring Stations in Snap Lake Monitoring Stations SNP 2-20 d, e, and f

### Monitoring Stations

SNP 2-20d, SNP 2-20e, and SNP 2-20f were in Snap Lake, located at 200 m from the diffuser where the effluent is discharged, on the edge of the mixing zone around the diffuser



# 4.1 WATER MONITORING

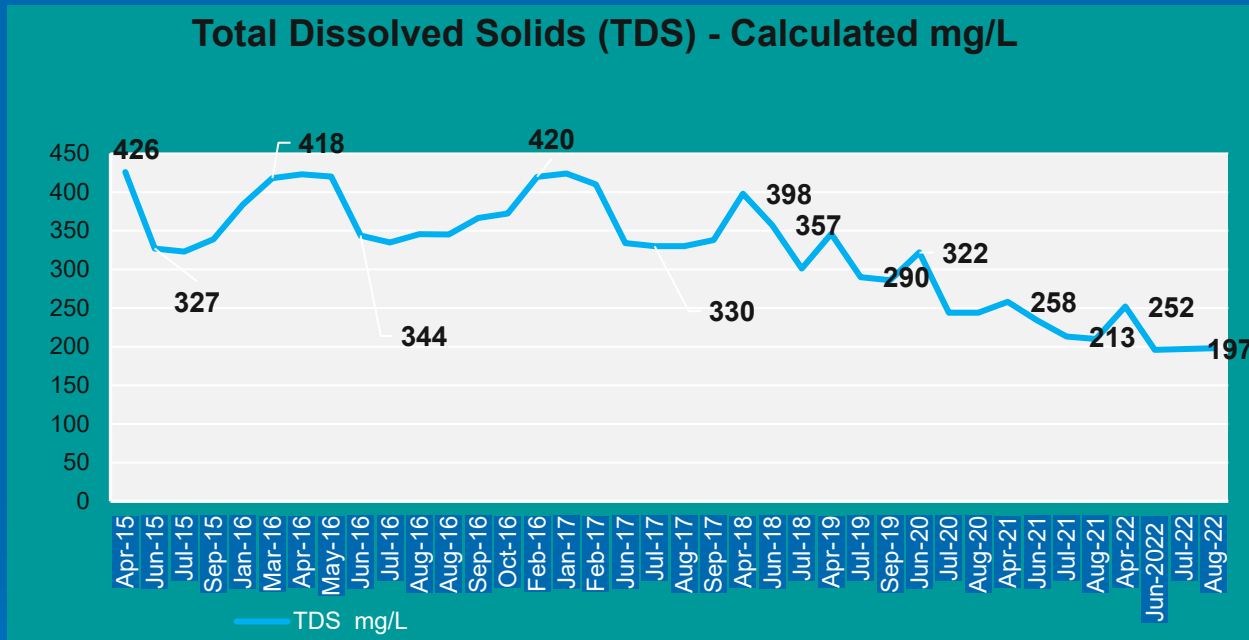
## TDS IN SNAP LAKE:

TDS data from 2015, the year that the Mine entered Care and Maintenance, up to 2022 show a decrease of TDS in Snap Lake as follows:



# 4.1 WATER MONITORING

## TDS RESULTS AT SNP 2-20d



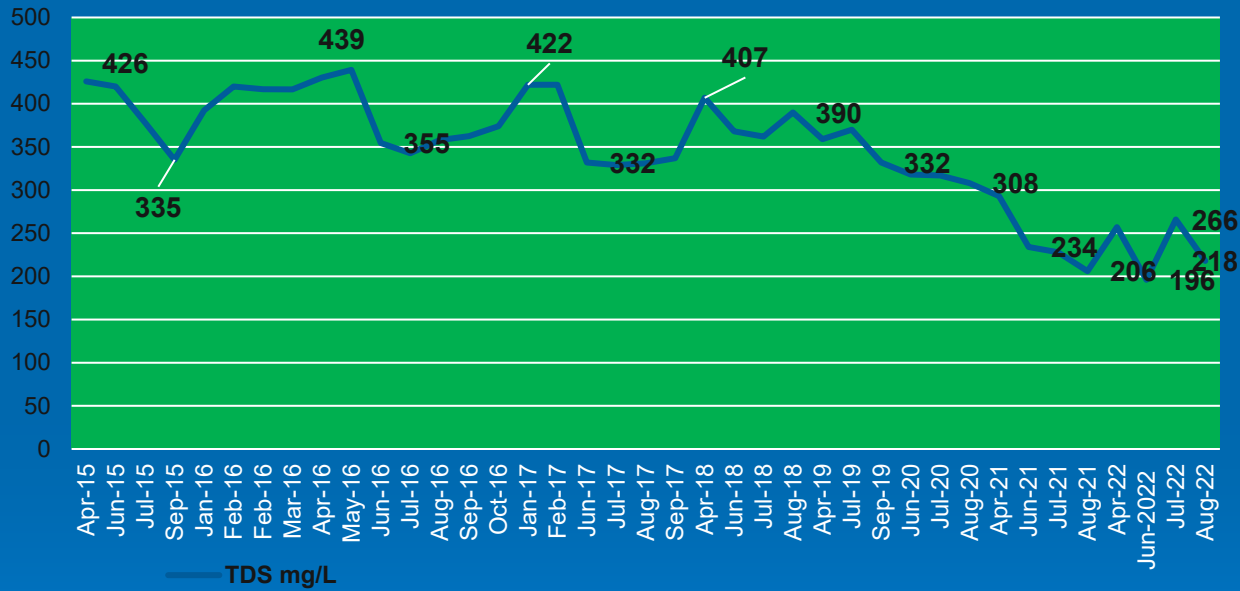
<b>SNP2-20d</b>	<b>Apr-15</b>	<b>Apr-22</b>
<b>TDS mg/L</b>	<b>426</b>	<b>252</b>



# 4.1 WATER MONITORING

## TDS RESULTS AT SNP 2-20e

Total Dissolved Solids - Calculated (TDS) mg/L

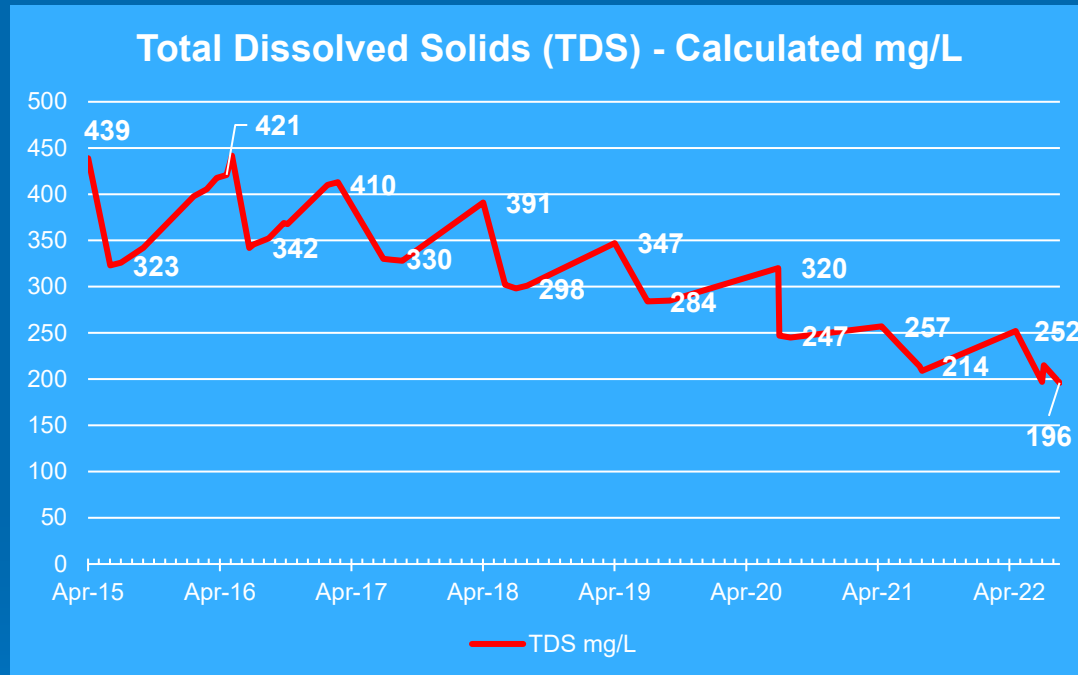


SNP2-20e	Apr-15	Apr-22
TDS mg/L	426	257



# 4.1 WATER MONITORING

## TDS RESULTS AT SNP 2-20f



SNP2-20f	Apr-15	Apr-22
TDS mg/L	439	252



# 4.1 WATER MONITORING

## TDS IN SNAP LAKE:

On September 16, 2023 De Beers began discharging the effluent. The effluent was discharged through the West Influent Storage Pond (WISP) to the Northwest Arm of Snap Lake. The Monitoring Stations to be sampled in Snap Lake, as per MVLWB Water Licence, are SNP 02-20 J and K in the Northwest Arm of Snap Lake. These are two stations located on the edge of the mixing zone 200 meters from the West Influent Storage Pond Discharge location.

**The TDS calc. reported at these two stations were 160mg/L on September 19.** The effluent discharge stopped on October 1. No samples have been collected at this station since September 19.





# 5. Water Licence & LUP Inspection Reports

During this period, the following Inspection was conducted at Snap Lake by Inspector Tom Bradbury, Resource Management Officer III

- Water Licence Inspection on January 22, 2024

The following summary is extracted from the Inspector's Inspection Report. The inspection report can be found [here](#):



# 5. Water Licence & LUP Inspection Reports

The following areas were inspected:

- Refueling Area/Mobile tanks
- Laydown area
- Heavy equipment staging areas
- Winter road construction

The Inspector found no notable concerns.



## 6. INCIDENTS AT SITE

- No incidents at site were reported



# 7. MVLWB Regulatory Updates

- **Aquatic Effects Monitoring Program (AEMP) Design Plan Version 1.4 - Approved**
- On November 17, 2023 the MVLWB approved the AEMP Design Plan Version 1.4 submitted by De Beers as required by the Water Licence MV2019L2-0004.2
- The Board checked the submission for conformity as per its decision on October 16, 2023.



# 7. MVLWB Regulatory Updates

## ➤ Explosives Management Plan 1.2

De Beers submitted Version 1.2 of its Explosives Management Plan on November 28. This Report was requested by the MVLWB for conformity check. The Board met on February 1, 2024 and considered the version 1.2 for the conformity and determined that it was satisfactory, as submitted.

