

Sent by email: sjoseph@mvlwb.com and permits@mvlwb.com

September 20th, 2022

Mackenzie Valley Land and Water Board

7th Floor, 4922- 48th Street
Box 2130
Yellowknife, NT X1A 2P6

Re: Water License MV2015L2-0003 - Surveillance Network Program (SNP) Monthly Reporting – August 2022

Dear Mr. Sean Joseph,

The following is the monthly SNP report for North American Tungsten Corporation Ltd.'s (NATCL) Cantung Mine as per Water Licence MV2015L2-0003.

Water Quality Monitoring and Discussion

Table 1. Water quality samples collected during the month as required by Water Licence MV2015L2-0003.

SNP ID	Site Coordinates (UTM)	Sample Location	Samples Collected	Rationale
S4-5	542519 E, 6869094 N	Flat River downstream (landfill bridge crossing)	Yes	
S4-6	540699 E, 6870572 N	TP5 Inflow to WWTF	No	Only when WWTF operating
S4-13	541326 E, 6869967 N	"E" Zone discharge from mine	Yes	
S4-20	541342 E, 6870330 N	Drain culvert from pond below TP3	Yes	
S4-27-4	541253 E, 6870401 N	Groundwater monitoring well MW-5	Yes	
S4-27-7	541055 E, 6870529 N	Groundwater monitoring well BH-43	Yes	
S4-27-8	541150 E, 6870457 N	Groundwater monitoring well BH-44	Yes	
S4-27-9	540482 E, 6871000 N	Groundwater monitoring well BH-53	Yes	
S4-27-10	540991 E, 6870580 N	Groundwater monitoring well BH-42	Yes	
S4-27-11	541215 E, 6869955 N	TP5-07-MW01	Yes	
S4-27-12	541357 E, 6870091 N	TP3-07-MW01	Yes	

S4-27-13	541326 E, 6869967 N	TP3-07-MW02	Yes	
S4-27-14	541256 E, 6869942 N	Groundwater well southeast of TP5	Yes	
S4-27-15	541600 E, 6869880 N	Groundwater well southeast of airstrip	Yes	
S4-27-16	540502 E, 6871064 N	Groundwater well east of TP1 and 2	Yes	
S4-27-17	539968 E, 6871380 N	Groundwater well upstream of project	Yes	
S4-27-18	540646 E, 6870369 N	Groundwater monitoring well up-gradient of TSF7	No	Removed from SNP until 6 months prior to construction of TSF 6
S4-27-19	540523 E, 6870788 N	Groundwater monitoring well down-gradient of TSF7	No	
S4-27-20	543765 E, 6868047 N	Groundwater monitoring well up-gradient of TSF6	No	
S4-27-21	543414 E, 6868150 N	Groundwater monitoring well down-gradient of north end of TSF6	No	
S4-27-22	543593 E, 6867899 N	Groundwater monitoring well down-gradient of middle of TSF6	No	
S4-27-23	544032 E, 6867627 N	Groundwater monitoring well down-gradient of south end of TSF6	No	
S4-28-1	541224 E, 6870386 N	Mill tails filtrate	Yes	
S4-28-2	541118 E, 6870491 N	Mill tails filtrate	Yes	
S4-29	538180 E, 6873871 N	Flat River upstream	Yes	
S4-30	540162 E, 6870912 N	Mill tails filtrate	No	Only when mill is operating
S4-32	540123 E, 6871229 N	Sardine Creek	Yes	
S4-33	547271 E, 6864181 N	Flat River downstream (far field site)	No	
S4-33R	543488 E, 6867874 N	Flat River downstream (alternate site for S4-33)	Yes	
S4-34	540070 E, 6871022 N	Seepage down-gradient from fuel berm	No	No visible discharge
S4-36	541243 E, 6870350 N	Seepage between TP3 and Flat River	No	No visible discharge
S4-37	540997 E, 6870555 N	Seepage between TP4 and Flat River	No	No visible discharge
S4-38	540343 E, 6871176 N	Seepage between TP2 and Flat River	No	No visible discharge
S4-39	540407 E, 6871100 N	Seepage between TP4 and Flat River	No	No visible discharge
S4-40	540858 E, 6870816 N	Surface water point on Flat River between TP2 & TP4	Yes	
S4-41	541804 E, 6869690 N	Surface water point on Flat River downstream of TP3	Yes	
S4-42	540169 E, 6870899 N	Mine water pump in mill	Yes	

S4-43	540699 E, 6870572 N	Effluent from the Wastewater Treatment Facility (WWTF)	No	Only when WWTF operating
S4-44	541477 E, 6870223 N	Surface water point on Flat River approximately 200 m downstream of drainage channel from Stinky Pond	No	Removed from SNP until 3 months prior to discharge of effluent from WWTF.
S4-49	543343 E, 6868099 N	Flat River; West of the north end of TSF6	No	Removed from SNP until 6 months prior to construction of TSF 6
S4-50	544026 E, 6867532 N	Flat River; immediately downstream of TSF6	No	
S5-2	540519 E, 6870986 N	Old Lagoon Outflow	Yes	

All discharges and stations with effluent quality criteria (EQCs) monitored under the SNP met criteria described under WL MV2015L2-0003. Field and lab duplicates reported an acceptable level of precision.

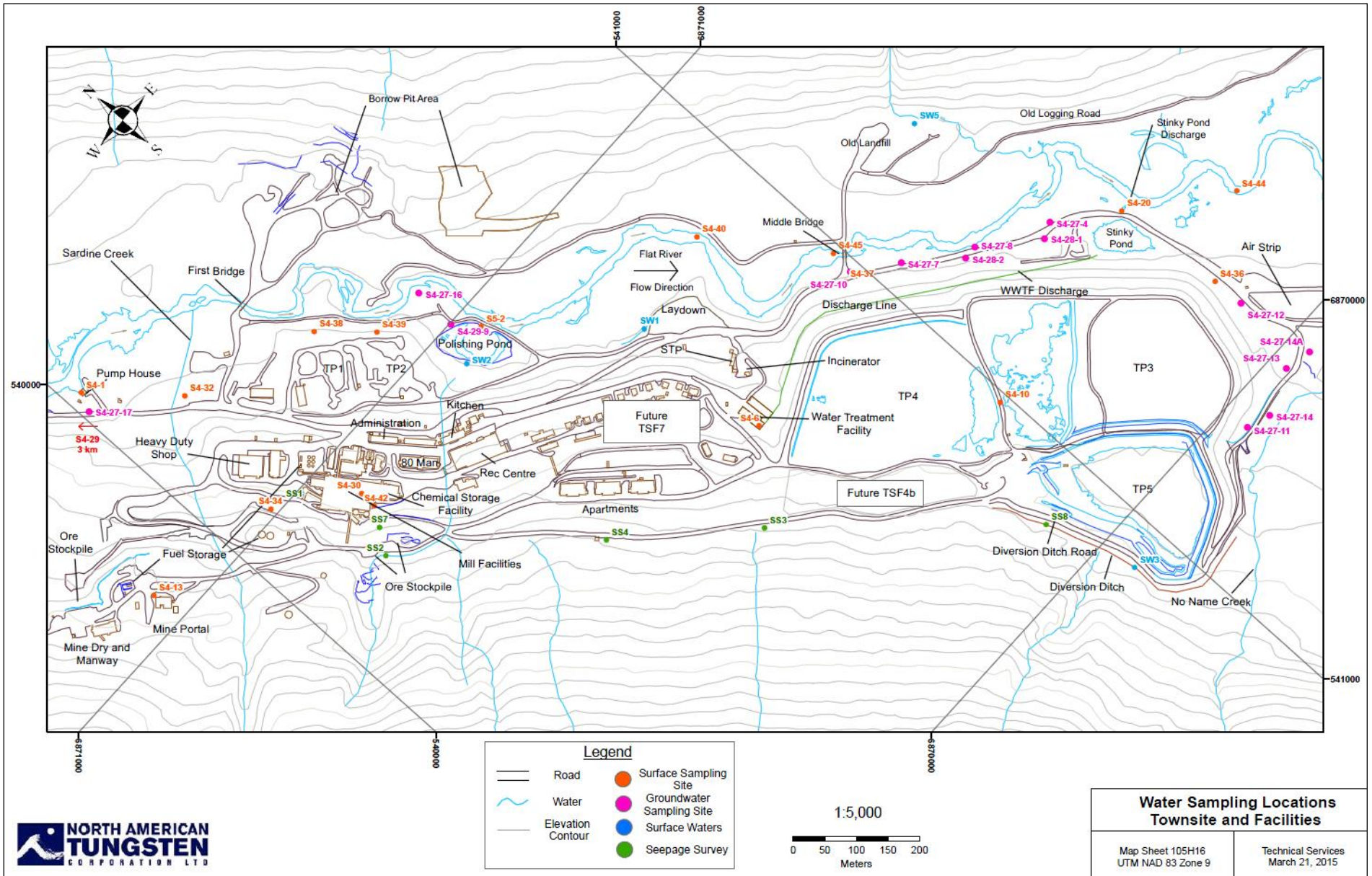


Figure 1. Water sampling locations (North).

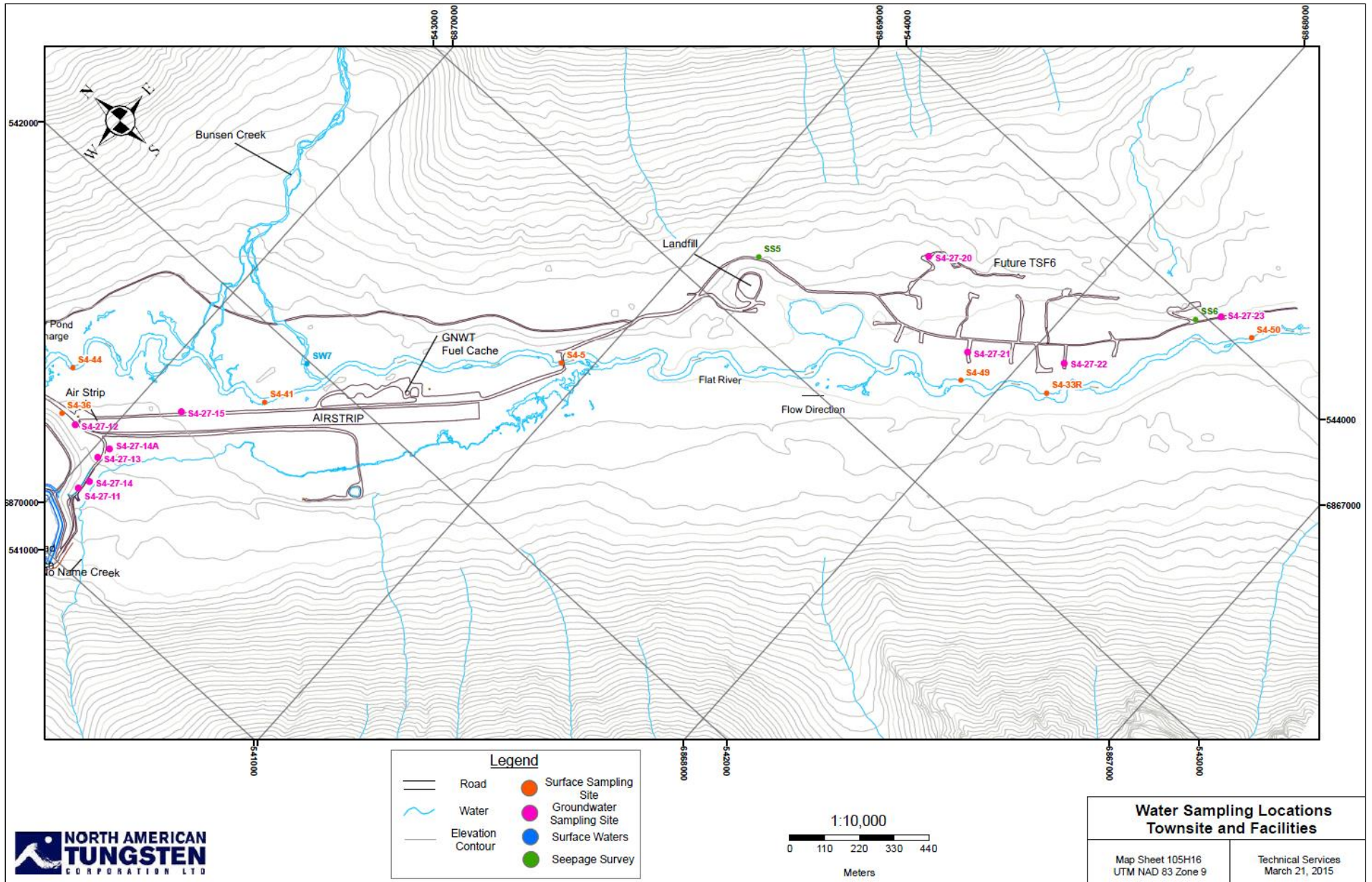


Figure 2. Water sampling locations (South).

Water Usage and Discharge

Table 2. Weekly freshwater consumption in 2022.

Fresh Water Consumption (S4-1) 2022 (m ³)													
Week	January	February	March	April	May	June	July	August	September	October	November	December	
1	757	457	463	185	619	371	169	489					
2	674	653	648	673	626	556	590	550					
3	659	660	653	673	636	594	575	560					
4	618	666	651	672	534	594	551	556					
5	179	187	465	650	272	393	577	315					
6							82						
Total	2,886	2,623	2,880	2,852	2,687	2,508	2,543	2,469	0	0	0	0	21,448

A Seametrics Model WMP104, (2") flow meter was installed for care and maintenance in November, 2015 to measure freshwater usage. The flow meter was installed and is operated as per the manufacturer's instructions. Calibration of the flow meter is completed prior to leaving the manufacturer and does not require field calibration. The measuring probe within the meter does require minimal cleaning due to organic build-up.

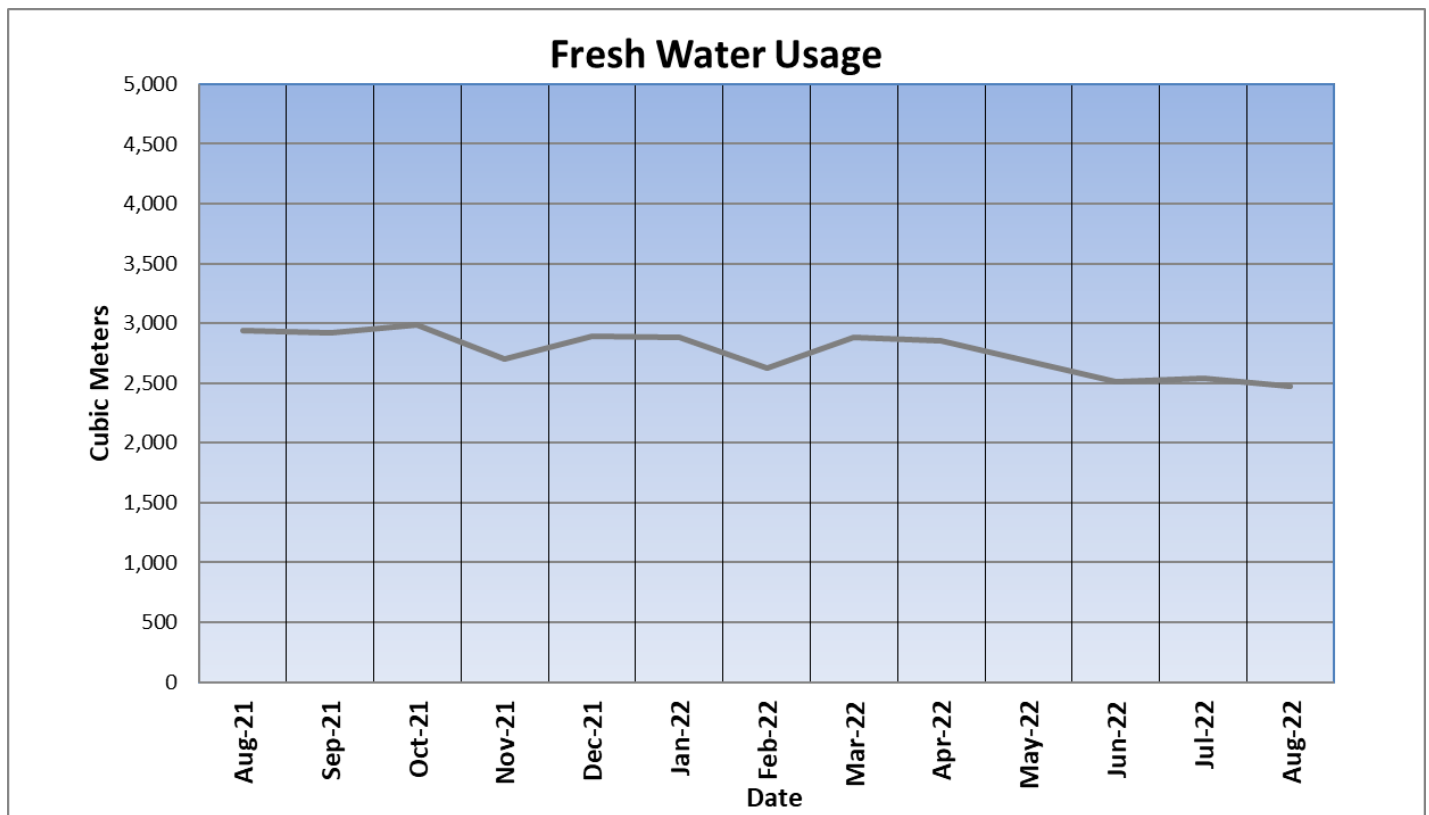


Figure 3. Freshwater consumption trend for preceding 12 months.

Table 3. Weekly velocity and discharge from Stinky Pond culvert.

Velocity and Flow from Stinky Pond Culvert 2022																										
Week	January		February		March		April		May		June		July		August		September		October		November		December			
	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)	Velocity (m/s)	Flow (m ³)		
1	1.10	3,050	1.10	3,050	1.20	3,328	1.10	3,050	1.30	2,752	1.40	53,395	0.20	17,382	1.60	15,371										
2	1.40	4,875	1.10	3,831	1.10	3,050	0.80	1,216	1.20	2,540	0.20	19,700	0.30	22,964	0.50	11,608										
3	1.10	3,050	0.80	2,786	1.10	2,328	1.20	2,540	0.60	2,089	0.20	18,713	0.20	14,810	1.70	17,012										
4	1.40	3,882	1.20	5,088	1.00	2,117	1.00	2,117	1.40	18,706	0.20	19,700	1.60	13,804	1.80	17,293										
5	1.10	3,050							1.40	11,277					1.80	17,293										
Total		17,907		14,755		10,823		8,923		37,364		111,508		68,961		78,577		0		0		0		0.00		348,818
Average Velocity	1.22		1.05		1.10		1.03		1.18		0.50															

The Global Flow FP101 portable flow meter requires very little maintenance and calibration. The calibration factors are both preset and provided in the manufacturer’s manual. These are verified regularly to ensure accurate data is being collected.

Ore Milled

Due to the suspension of all mining and milling activities, there has been no ore milled in 2022 to date.

Waste Rock Lithology

Due to the suspension of all underground activities, there are no recent waste rock samples to report.

Weekly Waste Rock ARD

Due to the suspension of all underground activities, there are no recent waste rock samples to report.

Mill Tails ARD

Due to the suspension of all milling activities, there are no mill tailings assay results to report.

Tailings Management

Water elevations in TP4 and TP5 are visually monitored daily during tailings storage facility (TSF) inspections.

Table 4. 2022 weekly waste discharged to TCA

Waste to TCA 2022																											
Week	January		February		March		April		May		June		July		August		September		October		November		December				
	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)	Sewage (m ³)	Tailings (m ³)			
1	1,033		559		600		249		483		367		178		509												
2	929		807		853		928		852		641		647		544												
3	843		842		857		985		959		627		631		562												
4	747		881		860		959		698		627		535		547												
5	215		243		602		927		535		385		603		340												
6												87															
Total	3,767	0	3,332	0	3,772	0	4,048	0	3,527	0	2,647	0	2,681	0	2,503	0	0	0	0	0	0	0	0	0	0	0	26,278

A Sparling Model 8712 C/U/H (4') flow meter was installed in 2005 to measure total effluent discharged from the sewage treatment plant. The flow meter was installed and is operated as per the manufacturer's instructions. Calibration of the flow meter is completed prior to leaving the manufacturer and does not require field calibration.

WWTF

The wastewater treatment facility (WWTF) was de-commissioned and winterized on November 12th, 2015, as per the care and maintenance plan. No discharge has occurred to date.

Flat River Hydrology

NATCL replaced outdated equipment in spring 2021 but have experienced setbacks as the equipment at S4-45 was damaged by debris during the spring freshet.

Data at nearby station S4-5, located at the "Lower Bridge", is reported here, while future reports will include updated hydrology data from S4-45 once possible.

Table 5. Flat River Discharge at SNP Station S4-5.

Discharge from S4-5 2022 (m ³)													
Week	January	February	March	April	May	June	July	August	September	October	November	December	
1	2,247,077	1,238,686	634,788	291,913	876,339	3,194,803	2,978,001	5,162,707					
2	1,171,348	1,015,748	871,425	765,837	932,788	11,991,591	9,618,538	7,262,877					
3	1,053,613	892,759	868,076	1,737,451	1,306,519	9,349,624	8,099,646	5,697,989					
4	879,303	1,009,233	761,445	803,406	2,282,952	10,591,942	5,343,847	3,812,941					
5	360,034	263,289	540,132	753,110	1,236,452	7,611,509	5,735,880	1,280,855					
6							1,082,736						
Total	5,711,375	4,419,715	3,675,866	4,351,717	6,635,050	42,739,469	32,858,649	23,217,370	0	0	0	0	123,609,211

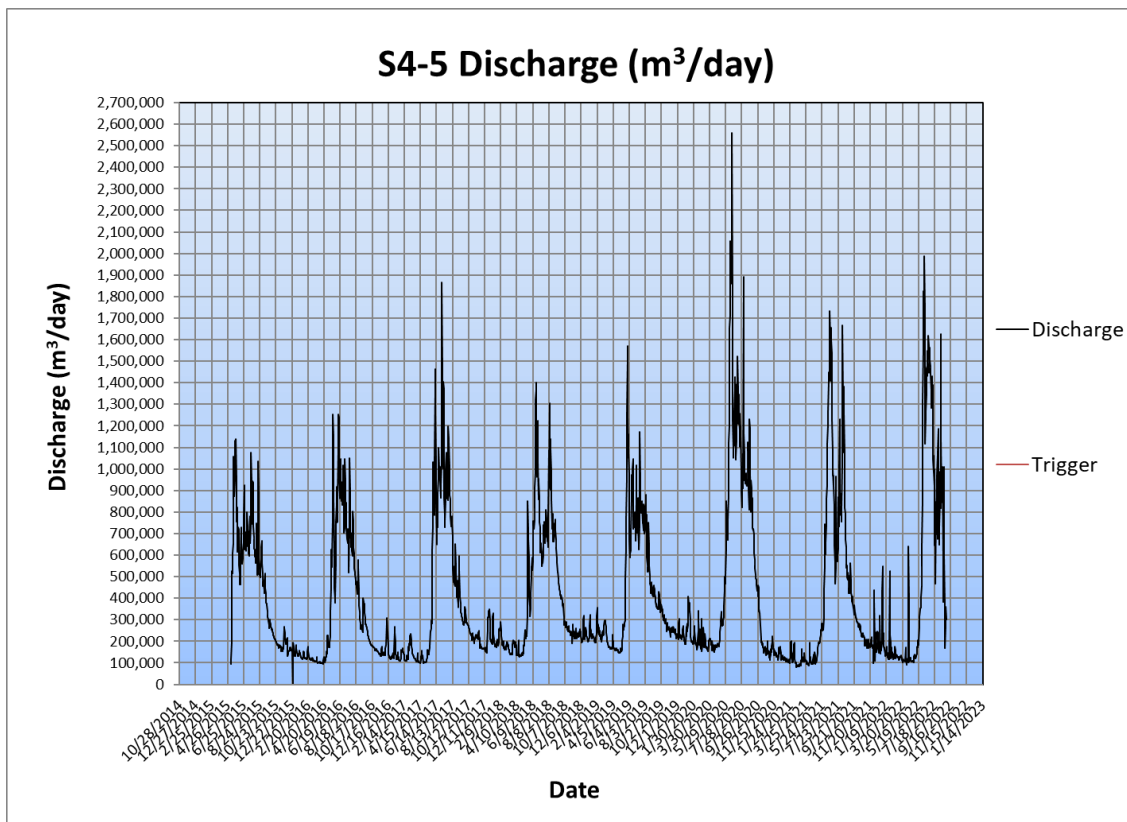


Figure 4. Discharge from Flat River SNP station S4-5.

Unauthorized Discharges

There were no unauthorized discharges for the reporting period.

Table 6. Fuel tank inspections.

Fuel Tank Inspections - August 2022							
ID	EC ID Number	Location	Product	Visual Inspection	Leaks (Y/N)	Initials	Date
Tank 1a	EC-00016134	Main Fuel Tank	Diesel fuel	Y	N	JM	Sept 1 /22
Tank 1b	EC-00016134	Main Fuel Tank Temp. (Not in Service)	Diesel fuel				
Tank 2	EC-00016148	Enviro Tank (Warehouse)	Diesel fuel	Y	N	JM	Sept 1 /22
Tank 3	EC-00020812	Enviro Tank (Portal)	Diesel fuel	Y	N	JM	Sept 1 /22
Tank 4	EC-00016153	Single Wall Tank (Warehouse)	Gasoline	Y	N	JM	Sept 1 /22
Tank 5	EC-00019830	Main Generator Day Tank	Diesel fuel	Y	N	JM	Sept 1 /22
Tank 6	EC-00026319	Incinerator Fuel Tank	Diesel fuel	Y	N	JM	Sept 1 /22
Tank 7	EC-00026321	Incinerator Waste Oil Tank	Diesel fuel	Y	N	JM	Sept 1 /22
Tank 8	EC-00026322	Kitchen Boiler Tank - Temp. (Not in Service)	Diesel fuel				
Tank 9	EC-00033237	Landfill Incinerator Tank - Temp. (Not in Service)	Diesel fuel				
Tank 10	N/A	Fire Station Heater	Diesel fuel	Y	N	JM	Sept 1 /22
Tank 11	N/A	Carpenter/Electrical Shop Heater - Temp. (Not in	Diesel fuel				
Tank 12	N/A	Pumphouse Generator	Diesel fuel	Y	N	JM	Sept 1 /22
Fuel Line	N/A	Main fuel line from Tank1a to Tank 6	Diesel fuel	Y	N	JM	Sept 1 /22

Table 7. Propane tank inspections.

Propane Tank Inspections - August 2022							
ID	EC ID Number	Location	Volume %	Visual Inspection	Leaks (Y/N)	Initials	Date
Tank 1	N/A	Kitchen Tank	23	Y	N	JM	Sept 1/22
Tank 2	N/A	Dorm A & C Tank (Removed)					
Tank 3	N/A	Crusher Mill Tank	7	Y	N	JM	Sept 1/22
Tank 4	N/A	Vent Fans - North Tank	3	Y	N	JM	Sept 1/22
Tank 5	N/A	Vent Fans - Centre Tank	2	Y	N	JM	Sept 1/22
Tank 6	N/A	Vent Fans - South Tank	24	Y	N	JM	Sept 1/22
Tank 7	N/A	Mine Dry	66	Y	N	JM	Sept 1/22
Tank 8	N/A	WWTP - North Tank	0	Y	N	JM	Sept 1/22
Tank 9	N/A	WWTP - South Tank	0	Y	N	JM	Sept 1/22
Tank 10	N/A	Bottle Fill Dispenser	46	Y	N	JM	Sept 1/22
Tank 11	N/A	Portable Tank - Behind Administration	72	Y	N	JM	Sept 1/22

General Site Activities

- General care and maintenance of surface equipment, core infrastructure, storage areas, site surveillance, etc.
- Road maintenance and ditching.
- All underground activity ceased since November 1, 2015.
- Sedimentation fences and haybales placed in drainage ditches for sedimentation control.
- Secondary containment pumped out to remove water; suspected contaminated areas were pumped into 1000 liter totes and transported to Hazardous Material Storage.
- Both Environmental Coordinators were on site together from August 18 – August 24, for additional training and orientation for new Environmental Coordinator.

Monitoring Programs

- Water samples were collected as per the Water License and the Tailing Containment Area Monitoring Plan (TCAMP) for the Cantung Mine Site.
- Field barrel water samples were also collected as per the Tailing Containment Area Monitoring Plan (TCAMP) for the Cantung Mine Site.
- Drinking water samples were collected as per the NWT Drinking Water Sampling and Testing Requirements.

- Waste oil samples were collected as per the NWT Used Oil and Waste Fuel Management Regulations.
- Hydrology management plan activities continued.
- Hydrogeology water levels continued.
- TCAMP activities continued to monitor performance of cover system. This includes TCAMP water levels.
- TCAMP gas data has not been monitored because the piece of equipment is not operating.
- Continuous weather data collection from meteorological station.
- Tailings Storage Facilities (TSF) inspections.
- Flow and height data readings.
- Geotechnical, dam stability readings including slope indicators (SI) and vibrating wires (VW).

Waste Management

- Daily waste tracking to the landfill, incinerator, and burn bin continued. See tracking sheets in Appendix B.

Construction

- No construction activities.

Reclamation

- No reclamation activities.

Submissions to the MVLWB

- June 2022 SNP Monthly Report

Submissions to GNWT

- August 2022 Wildlife Report

Submission to Environment and Climate Change Canada

- None

If you require any further information, please contact the Environmental Department (enviro@natcl.ca).

Prepared by,

North American Tungsten Corporation Ltd.

Environmental Department

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LKFN - Chief G. Antoine, Dean Holman
Metis 52

Appendices

- A. TSF Inspection
- B. Monthly Waste Log
- C. Water Quality (WQ) Data
- D. Meteorological (MET) Data
- E. SI and VW Plots