BACK RIVER PROJECT

2018 Annual Report for

Water Licence 2BE-GEO1520

Prepared by
Sabina Gold and Silver Corp.

Prepared for
Nunavut Water Board

March 2019

BACK RIVER PROJECT
2018 2BC-BRP1819 Annual Report

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Acronyms

CIRNAC	Crown Indigenous Relations and Northern Affairs Canada
KIA	Kitikmeot Inuit Association
The Licence	Water Licence 2BE-GEO1520
NIRB	Nunavut Impact Review Board
MLA	Marine Laydown Area
NWB	Nunavut Water Board
The Project	Back River Project
Sabina	Sabina Gold & Silver Corp.

Executive Summary - English

Sabina Gold & Silver Corp. (Sabina) has filed its Annual Report on its activities during 2018 under Water Licence No. 2BE-GEO1520 (the Licence) issued by the Nunavut Water Board. As set out in Part B, Item 2 of the Licence, the report includes information with respect to the following topics:

- A summary report of water use and waste disposal;
- A list of unauthorized discharges and a summary of follow-up actions taken;
- Any revisions to plans under this Licence;
- A description of all progressive and or final reclamation work undertaken, if any, including photographic records of site conditions before, during and after completion of operations;
- A report of any artesian flow occurrences;
- Quantities of water used and waste disposed of;
- Any temporary camp locations;
- Any other details on water use or waste disposal requested by the Board.

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ᓴᐲᓇ ᔫᓗᒍᑦ ᐊᓚᒪᓗ ᓴᐃᖅᓄᓂᑦ ᑯᐊᐳᓵᓴᒃᑯᑦ (ᓴᐲᓇᓴᒃᑯᑦ) ᑐᓂᐅᑎᖅᑕᐅᖅᑐᑦ ᐊᖏᕐᒧᒋᒪᖅᓯᐅᑎᒃ ᐅᓂᒃᑲᒥᑦ ᖁᓕᐃᑕᐅᖏᓂᕆᔨᖏᓐᓄᑦ 2018-ᒥᑦ ᒪᑕᒃᓱᒍ ᐃᒪᖏᒧᑦ ᓕᐃᔨᓐᓯ 2BE-GEO1520 (ᓕᐃᔨᓐᓯ) ᑐᓂᓴᐅᕐᖅ ᓄᓇᕗᓴᒥ ᐃᒪᓕᕆᔨᐅᑉᓄᓄᑦ. ᑎᑎᕖᖅᓯᒪᓂᖅᑕᑐᑦ ᐃᓕᑎᓴᐅᕐᖅ B ᑎᑎᖅᑲᖅ 2-ᒥᑦ ᓕᐃᔨᓐᓯᒥᑦ, ᐅᓂᒃᑲᖏᑦ ᐃᓕᐅᕐᑦ ᑐᑭᓯᐅᒪᔨᐱᑦ ᐱᔨᑎᖏᖅᑐᑦ ᐅᑯᓂᖅᑦ ᐱᔨᑕᐅᕐᓂᑦ:

- ᓇᐃᓱᖅᓯᒪᔪᖅ ᐅᓂᒃᑲᖅ ᐃᒪᖏᒃ ᐊᑐᖏᓂᖓᒪᑦ ᐊᒪᒪᓗ ᐊᒃᑕᑯᓗᓂᖓᒪᑦ;
- ᑎᑎᖏᓯᒪᔪᑦ ᐱᔨᓇᖅᑎᑕᐅᓯᒪᓐᓕᕐᑕᑐᑦ ᑯᐃᐱᖏᑎᓂᒃ ᐊᒪᒪᓗ ᓇᐃᓱᖅᓯᒪᔪᖅ ᖁᑦᐅᓕᐊᖏᑦᑕᖏᓂᕆᔨᖅᑐᑦ;
- ᐊᑲᖅᑭᑎᐊᖅᓯᓂᖅᑕᖁᓕᕆᔨᖅᐸᑦ ᐸᖏᓇᐅᑎᓄᑦ ᒪᑕᒃᓱᒍ ᑕᒻᓇ ᓕᐃᔨᓐᓯ;
- ᐅᖏᖅᐅᓕᐊᖅᓯᓂᖅᑐᖅ ᑕᒪᐃᓇᓂᓕᕆᓐᓂᑐᑦ ᐱᐊᑦᑕᐊᓂᐅᔨᓂᒃ ᐊᒪᒪᓗ ᐅᓇᓕᖅᓇᓂᑦ ᑭᖑᑕᖅᐸᒃᑯᑦ ᐅᑎᖅᑎᑎᓚᓂᐅᔨᑦ, ᐱᑕᖅᑲᖅᐸᑦ, ᐃᓕᐅᑦᓗᑎᒃ ᐊᐢᓵᑕᐅᖅᑕᐅᓯᒪᔪᑦ ᐸᐸᑦ ᐊᑐᖅᑕᐅᑦ ᐃᓂᐅᔨᑦ ᓴᖅᓄᓇᓕᓂᑦ ᓯᕐᓂᓕᐊᔪᑦ, ᐊᐅᓪᓚᖅᑎᑎᓂᐅᑎᑦᓗᒍ ᐊᒪᒪᓗ ᑭᖑᓂᐊᔪᑦ ᐱᐊᓂᖅᑎᑦᓗᑕᑦ ᐊᐅᓪᓚᖅᑎᑦᓂᖓᓂᑦ;
- ᐅᓂᒃᑲᖅ ᐃᒪᖏᐅᓯᐦᐃᖏᑦ ᑯᐃᐸᖏᑎᓂᖅᐸᑦ;
- ᖁᖏᓯᐅᓂᕐᑦ ᐃᒪᖏᒃ ᐊᑐᖏᓂᖓᒪᑦ ᐊᒪᒪᓗ ᐊᖏᑕᐊᑦᑕᐅᓯᒪᔪᑦ ᐃᓂᐅᔨᑦ;
- ᐱᑕᖅᑲᖅᐸᑦ ᓄᓇᕗᐊᓯᖓᓕᒫᓂᑕᐅᐱᒋᑕᑐᑦ ᐃᓂᐅᕐᑦ;
- ᓯᓇᑐᐃᓐᓇᐃᑦ ᐊᓯᕐᑎᑦ ᓇᑐᓇᐃᔪᖅᓯᒪᔪᑦ ᐃᒪᖏᒃ ᐊᑐᖏᓂᖓᒪᑦ ᐅᑯᓂᖅᑦ ᐊᖏᑕᐊᑦᑕᐅᓯᒪᔪᑦ ᑐᑭᓯᐅᑦᑕᐅᓯᒪᔪᑦ ᑲᑎᒪᔨᓄᑦ.

1. Introduction

This report to the Nunavut Water Board (NWB) has been prepared to summarize the project activities and monitoring undertaken by Sabina Gold and Silver Corp. (Sabina) during the 2018 program, in accordance with Part B, Item 2 of License 2BE-GEO1520. This license was issued on May 30th, 2015 and will expire on May 29th, 2020. The NWB Annual Report Form can be found in Appendix A of this report.

The George Lake camp was not operational in 2018. Key activities associated with 2BE-GEO1520 in 2018 included the development and operation of a temporary camp in southern Bathurst Inlet at the Marine Laydown Area (MLA). Fresh water was utilized for domestic activities at this camp and was obtained from multiple lakes proximal to the MLA. Water withdrawal details are presented in Sections 2.A and 2.G of this report.

Waste management included the handling of pacto waste and domestic waste in an incinerator, greywater was disposal in a local sump, and backhaul of non-burnable and hazardous materials for off-site disposal.

The MLA camp was used to support development works activities. As such, information in this report is complimented by that presented in Sabina's 2018 Annual Report for Water Licence 2BC-BRP1819.

2. Annual Report per Part B, Item 2

This section of the report has been constructed to address each of the requirements of Part B, Item 2 of the Licence. For ease of comparison, each subheading corresponds directly with the identically alphabetized subheading of Part B, Item 2 of Water Licence 2BE-GEO1520.

A. SUMMARY OF WATER USE AND WASTE DISPOSAL

A total water use of 175 cubic meters (m^3) of water per day is authorized for use under this Licence; 130 m^3 for drilling and 45 m^3 for camp water use. Water may be withdrawn from George Lake and/or lakes proximal to temporary camps and drilling targets. In 2018, only the MLA camp was in operation, and a total of 395 m^3 was withdrawn from a combination of lakes for camp use (Figure 2.A-1). A desalination unit was commissioned on June 20, 2018 at the MLA, after which time it provided camp domestic water via the desalination of ocean water. Details of daily water use are provided in Section 2.G and 2.H below.

Waste generation under this Licence consists of camp greywater, pacto waste, non-hazardous waste and hazardous waste. Greywater is disposed in a sump located at a distance of at least 31 metres above the ordinary high water mark of any water body in a location where direct flow into a waterbody is not possible and no additional impacts are created. At the MLA camp, pacto toilets are used and collected human waste is incinerated in the camp incinerator along with other burnable non-hazardous waste. Any hazardous waste and non-burnable materials are shipped off site for disposal at a licenced facility. Details of 2018 Project waste disposal are found in Section 2.I.

B. UNAUTHORIZED DISCHARGES

No hydrocarbon spills to water or triggering the NWT/NU spill reporting thresholds occurred in 2018.

C. MANAGEMENT PLAN REVISIONS

No management plans applicable to this Licence were revised in 2018. See Sabina's 2018 Annual Report for Water Licence 2BC-BRP1819 for management plans related to development works activities which were revised in 2018.

D. PROGRESSIVE AND FINAL RECLAMATION

No reclamation activities related to this Licence were undertaken in 2018.

E. ARTESIAN FLOWS

No drilling took place under this licence in 2018 and no artesian flows were intercepted.

F. INFORMATION REQUESTS AND RESULTS OF MONITORING PROGRAM

No water was discharged from monitoring station GEO-1 (the George Camp Bulk Fuel Storage Facility) in 2018, although water was discharged for the East Camp Drummed Berm located at the MLA. Prior to discharge, water was tested for the discharge parameters outlined in Part D, Item 9 of the Licence. Results are summarized in Table 2.F-1 and were compared to discharge criteria; no criteria were exceeded. Discharge Locations and quantities are summarized in Table 2.F-2 and full laboratory results are provided in Appendix B. Daily quantities of water used under this Licence are presented in Section 2.G of this report. Wastes generated under this Licence are discussed in Section 2.I of this report. As no drilling took place in 2018 no drill-related water samples were collected.

W:\BackRiver\04_Exploration\BackRiverRegion\GIS_Products\ESRI_MXD\2018 MLA\MLA_WaterLocations.mxd

February 25 2019

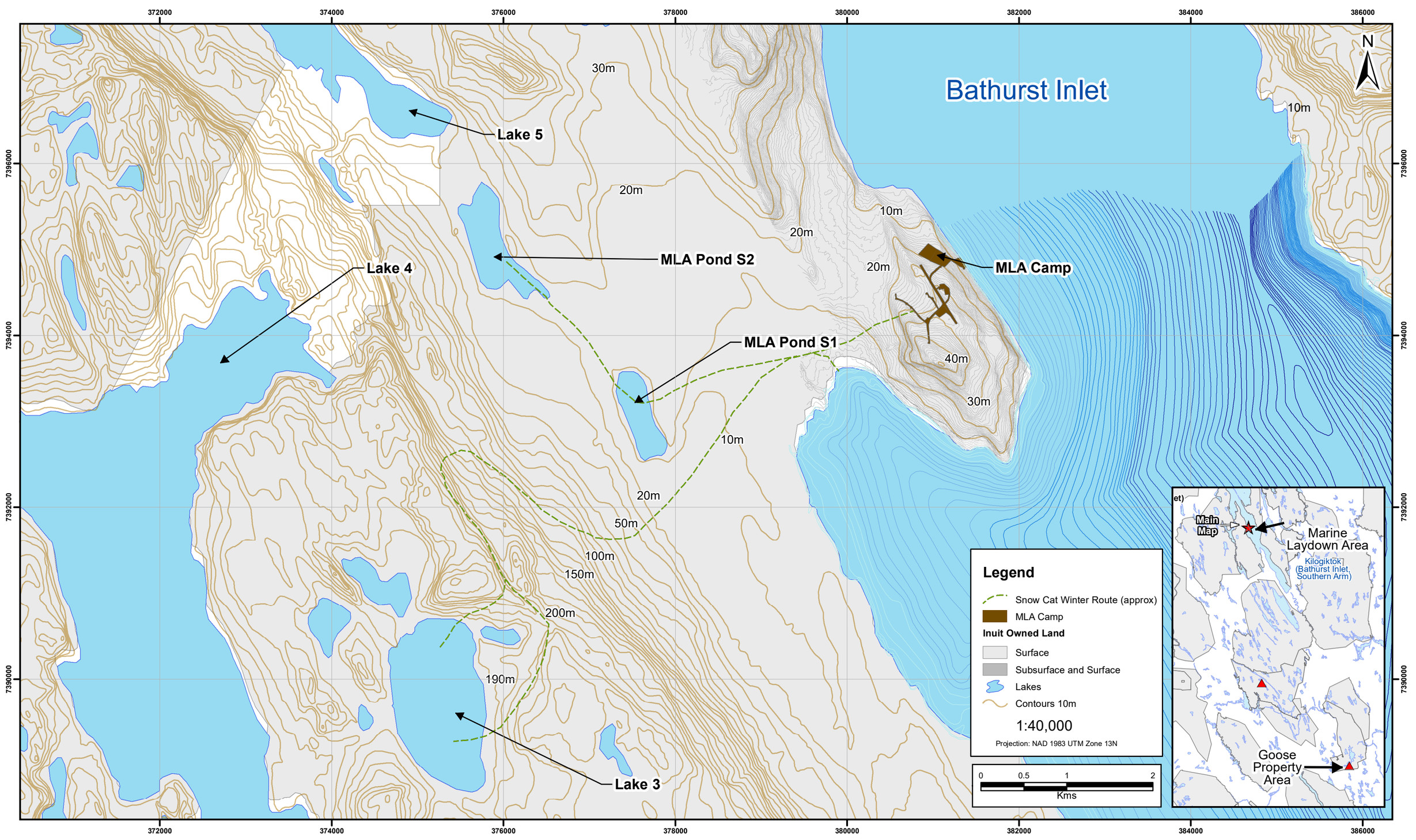

Figure 2A-1 MLA Water Locations

Sabina
GOLD & SILVER CORP.

Table 2.F-1. 2018 Monitoring Station Water Quality Results

	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Oil and Grease (mg/L)	pH
Max. Concentration of Grab Sample*	0.37	0.09	0.002	5	6.0 to 9.0
East Camp Drummed Berm	<0.00050	<0.00050	<0.00045	2	6.79

*Water Licence criteria for monitoring station GEO-1.

Table 2.F-2. 2018 Discharge Locations and Quantities

Berm	Discharge Location	Discharge Quantity (m3)
East Camp Drummed Berm	UTM NAD83 ZONE 13 N; N 7394413 E 381001	4.5

Inspections that occurred during the 2018 program included:

- July 31st to Aug 2nd, CIRNAC Water Resources inspector completed an inspection of the Back River Project under Licence No. 2BE-GOO1520, 2BE-GEO1520, 2BC-BRP1819
- Aug 2 – Kitikmeot Inuit Association (KIA) complete a site visit of the Back River Project
- Aug 14 – Aug 16, NIRB Project Officer completed an inspection of the Back River Project under NIRB Project Certificate No. 007
- Oct 14 – Oct 15, CIRNAC Water Resources inspector completed an inspection of the Back River Project under Licence No. 2BE-GOO1520, 2BE-GEO1520, 2BC-BRP1819

The Inspector required that snow build-up in instaberms be addressed prior to freshet. Sabina confirms that snow build-up in instaberms will be addressed prior to freshet to prevent possible overtopping.

G. QUANTITY OF WATER USE FROM INUIT OWNED LANDS

395 m^3 of water was withdrawn from a combination of three lakes in 2018: Lake 1, Lake 3, and Lake 5 (Figure 2.A-1). All of these lakes are located on Inuit Owned Land. Dates and quantities of water use, by source, are provided in Table 2.G-1. All water used was for camp domestic purposes and daily water use did not exceed the 45 m^3/day authorized. Lake coordinates are provided in Table 2.G-2.

Table 2.G-1. Water Withdrawal Quantities by Date and Source

Date	Source	Quantity (m3)		Date	Source	Quantity (m3)
March 13, 2018	Lake 5	1.8		**May 8, 2018**	Lake 3	5.0
March 15, 2018	Lake 5	1.8		**May 9, 2018**	Lake 3	5.0
March 17, 2018	Lake 5	1.8		**May 11, 2018**	Lake 3	5.0
March 20, 2018	Lake 5	3.4		**May 13, 2018**	Lake 3	5.0
March 22, 2018	Lake 5	3.4		**May 15, 2018**	Lake 3	5.9
March 25, 2018	Lake 5	3.2		**May 17, 2018**	Lake 3	6.1
March 27, 2018	Lake 3	1.1		**May 20, 2018**	Lake 3	12.0
March 30, 2018	Lake 3	2.3		**May 21, 2018**	Lake 3	5.0
April 1, 2018	Lake 3	2.3		**May 23, 2018**	Lake 3	5.0

April 5, 2018	Lake 3	3.2		**May 24, 2018**	Lake 3	5.5
April 8, 2018	Lake 3	3.2		**May 26, 2018**	Lake 3	4.5
April 11, 2018	Lake 3	3.2		**May 27, 2018**	Lake 3	4.5
April 14, 2018	Lake 3	3.4		**May 28, 2018**	Lake 3	9.1
April 16, 2018	Lake 3	3.4		**May 31, 2018**	Lake 3	4.5
April 17, 2018	Lake 3	3.4		**June 1, 2018**	Lake 3	9.1
April 20, 2018	Lake 3	3.4		**June 2, 2018**	Lake 3	4.5
April 23, 2018	Lake 3	3.4		**June 3, 2018**	Lake 3	4.5
April 26, 2018	Lake 3	3.4		**June 4, 2018**	Lake 3	4.5
April 27, 2018	Lake 3	3.2		**June 15, 2018**	Lake 3	6.0
April 28, 2018	Lake 3	3.2		**June 16, 2018**	Lake 3	15.3
April 29, 2018	Lake 3	3.2		**June 17, 2018**	Lake 3	3.2
April 30, 2018	Lake 3	3.2		**June 18, 2018**	Lake 3	3.4
May 1, 2018	Lake 3	3.2		**June 19, 2018**	Lake 3	1.8
May 2, 2018	Lake 3	3.2		**December 19, 2018**	Lake 3	3.0
May 3, 2018	Lake 3	13.6		**December 20, 2018**	Lake 3	9.5
May 4, 2018	Lake 3	10.0		**December 25, 2018**	Lake 3	11.8
May 5, 2018	Lake 3	10.0		**December 30, 2018**	Lake 1	9.1
May 6, 2018	Lake 3	5.0				

Table 2.G-2. Water Source Locations

Source	Location
Lake 1	N 66°39’05.1” W -107°48’23.5”
Lake 3	N 66.602144' W -107.813891'
Lake 5	N 66.664125' W -107.836235'

H. QUANTITY OF WATER USE FROM CROWN LANDS

No water was withdrawn from water sources located on Crown Land in 2018.

I. WASTE DISPOSAL

Waste generated under this Licence includes greywater, pacto waste, non-hazardous waste and hazardous waste. On-site waste disposal locations are provided in Table 2.I-1. MLA camp greywater is discharged to a sump located at a distance of at least 31 metres above the ordinary high water mark of any water body in a location where direct flow into a waterbody is not possible and no additional impacts are created.

At the MLA camp, pacto toilets are used and human waste is collected and disposed of in camp incinerators along with all burnable non-hazardous waste. Burnable non-hazardous waste includes kitchen refuse, paper, recyclable food containers, cardboard and inert wood as per Part D Item 3 of the Licence.

Non-burnable non-hazardous waste includes plastic and metal food containers, fuel drums, other plastic or metal containers, and treated wood as well as incinerator ash. Any of these items which are not

destined for re-use on site are transported off site for recycling or appropriate disposal. Appendix C outlines the quantities and types of waste backhauled in 2018 for all Back River Project sites. Backhauled waste is shipped off site for disposal at a licensed waste disposal facility. No waste was transported to any Nunavut communities for disposal.

Hazardous wastes include old batteries or lubricants. These items are included in the backhaul log provided in Appendix C. Waste oil may be stored on site in secondary containment for future re-use.

Records of all waste backhauled are available on site to the Inspector.

Table 2.I-1. Waste Disposal Locations

Source	Location
MLA Greywater	N 66°38’37” W -107°41’34”
MLA Incinerator	N 66°38’36” W -107°41’33”

J. TEMPORARY CAMP LOCATION(S)

The MLA temporary camp is located at N 66°38’47.8” W -107°41’19.4”.

K. BOARD REQUESTS RE: WATER USE AND WASTE DISPOSAL

Sabina was contacted by the Crown Indigenous Relations and Northern Affairs Canada (CIRNAC) Inspector (the Inspector) in July of 2018 to request information on water use at the MLA due to concerns received related to a water source of cultural and/or archaeological significance (Lake 5 (Fishing Creek), Figure 2.A-1). Sabina confirmed that 15.5 m^3 of water had been withdrawn briefly from Lake 5 in 2018 at camp start-up. This withdrawal was within the water use allowance of the Licence, i.e. a maximum of 45 m^3/day for domestic use from lakes proximal to temporary camps (Licence Part C, Item 1). However, in recognition of the importance of this Lake, Sabina will not make further use of this water source unless discussed with the Bathurst Inlet community or under emergency circumstances. Water use from Lake 5 is included in Table 2.G-1.

No additional sampling or details on water use related to this Licence was requested by the Board or Inspector in 2018.

Appendix A NWB Annual Report Form

NWB Annual Report **Year being reported:** Select

License No: 2BE-GEO1520 **Issued Date:** May 30, 2015
Expiry Date: May 29, 2020

Project Name: GEORGE LAKE, BACK RIVER PROJECT

Licensee: SABINA GOLD AND SILVER CORP

Mailing Address: #1800 - 555 Burrard Street, Box 220, Vancouver, BC, V7X 1M7

Name of Company filing Annual Report (if different from Name of Licensee please clarify relationship between the two entities, if applicable):

SABINA GOLD AND SILVER CORP

General Background Information on the Project (*optional):

Licence Requirements: the licensee must provide the following information in accodance with

Part B Item 2

A summary report of water use and waste disposal activities, including, but not limited to: methods of obtaining water; sewage and greywater management; drill waste management; solid and hazardous waste management.

Water Source(s):	N/A	
Water Quantity:	45	Quantity Allowable Domestic (cu.m/day)
	395 (<45cu.m/day)	Actual Quantity Used Domestic (cu.m/yr)
	130	Quantity Allowable Drilling (cu.m/day)
	0	Total Quantity Used Drilling (cu.m/yr)

Waste Management and/or Disposal

- [x] Solid Waste Disposal
- [x] Sewage
- [x] Drill Waste
- [x] Greywater
- [x] Hazardous
- [ ] Other:

Additional Details:

See Sections 2.A, 2.G, and 2.I of the Annual Report.

A list of unauthorized discharges and a summary of follow-up actions taken.

Spill No.: 0 (as reported to the Spill Hot-line)
Date of Spill: N/A

Date of Notification to an Inspector: N/A

Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

Revisions to the Spill Contingency Plan

N/A - not applicable

Additional Details:

See Section 2.C of Annual Report.

Revisions to the Abandonment and Restoration Plan

N/A - not applicable

Additional Details:

See Section 2.C of Annual Report.

Progressive Reclamation Work Undertaken

Additional Details (i.e., work completed and future works proposed)

See Section 2.D of Annual Report.

Results of the Monitoring Program including:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where sources of water are utilized;

Details attached

Additional Details:

See Section 2.F of the Annual Report.

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where wastes associated with the licence are deposited;

Details attached

Additional Details:

See Section 2.I of the Annual Report.

Results of any additional sampling and/or analysis that was requested by an Inspector

No additional sampling requested by an Inspector or the Board

Additional Details: (date of request, analysis of results, data attached, etc)

Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.

No additional sampling requested by an Inspector or the Board

Additional Details: (Attached or provided below)

Any responses or follow-up actions on inspection/compliance reports

Inspection Report received by the Licensee (Date):

Additional Details: (Dates of Report, Follow-up by the Licensee)

See Section 2.G of the Annual Report

Any additional comments or information for the Board to consider

Date Submitted:	March 20, 2018	
Submitted/Prepared by:	Merle Keefe	
Contact Information:	**Tel:**	
	Fax:	
	email:	mkeefe@sabinagoldsilver.com

Appendix B Water Sampling Results

SABINA GOLD & SILVER CORP.
ATTN: Merle Keefe / Mitchell Kearney
202 - 930 1st Street W
North Vancouver BC V7P 3N4

Date Received: 18-JUL-18
Report Date: 25-JUL-18 13:59 (MT)
Version: FINAL

Client Phone: 778-588-9782

Certificate of Analysis

Lab Work Order #: L2132090

Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers:
Legal Site Desc:

Harman Bhullar
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2132090-1 EAST CAMP DRUMMED BERM							
Sampled By: MK on 17-JUL-18 @ 10:20							
Matrix: WATER							
BTX in water by headspace, GCMS							
BTEX, Styrene and F1 (C6-C10)							
Benzene	<0.00050		0.00050	mg/L	21-JUL-18	21-JUL-18	R4135934
Toluene	<0.00050		0.00050	mg/L	21-JUL-18	21-JUL-18	R4135934
EthylBenzene	<0.00050		0.00050	mg/L	21-JUL-18	21-JUL-18	R4135934
m+p-Xylene	<0.00050		0.00050	mg/L	21-JUL-18	21-JUL-18	R4135934
o-Xylene	<0.00050		0.00050	mg/L	21-JUL-18	21-JUL-18	R4135934
Xylenes	<0.00071		0.00071	mg/L	21-JUL-18	21-JUL-18	R4135934
Surrogate: 1,4-Difluorobenzene (SS)	101.8		70-130	%	21-JUL-18	21-JUL-18	R4135934
Surrogate: 4-Bromofluorobenzene (SS)	95.7		70-130	%	21-JUL-18	21-JUL-18	R4135934
Surrogate: 3,4-Dichlorotoluene (SS)	101.1		70-130	%	21-JUL-18	21-JUL-18	R4135934
Miscellaneous Parameters							
Oil and Grease	2.0		1.0	mg/L		25-JUL-18	R4139946
Phenols (4AAP)	0.0140		0.0010	mg/L		24-JUL-18	R4139130
pH	6.79		0.10	pH units		19-JUL-18	R4133660

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BTXS,F1-ED	Water	BTEX, Styrene and F1 (C6-C10)	EPA 5021/8015&8260 GC-MS & FID
OGG-LLE-GRAV-ED	Water	O&G by Hex/MTBE extraction, gravimetric	APHA 5520 B HEXANE MTBE EXT. GRAVIME
This technique employs a hexane/methyl-tert-butyl ether extraction of water, followed by filtration of the solvent into an evaporation container. The solvent is evaporated in a pre-weighed dish and the oil and grease content is calculated from the weight of material remaining.			
PH-MAN-YL	Water	pH by Manual Meter	APHA 4500-H B
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
PHENOLS-4AAP-WT	Water	Phenol (4AAP)	EPA 9066
An automated method is used to distill the sample. The distillate is then buffered to pH 9.4 which reacts with 4AAP and potassium ferricyanide to form a red complex which is measured colorimetrically.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
YL	ALS ENVIRONMENTAL -YELLOWKNIFE, NORTHWEST TERRITORIES CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: SABINA GOLD & SILVER CORP.
202 - 930 1st Street W
North Vancouver BC V7P 3N4
Contact: Merle Keefe / Mitchell Kearney

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTXS,F1-ED	**Water**							
Batch R4135934								
WG2829122-4 DUP		**L2132090-1**						
Benzene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	21-JUL-18
Toluene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	21-JUL-18
EthylBenzene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	21-JUL-18
m+p-Xylene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	21-JUL-18
o-Xylene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	21-JUL-18
WG2829122-2 LCS								
Benzene			86.2		%		70-130	21-JUL-18
Toluene			88.0		%		70-130	21-JUL-18
EthylBenzene			90.7		%		70-130	21-JUL-18
m+p-Xylene			90.0		%		70-130	21-JUL-18
o-Xylene			91.9		%		70-130	21-JUL-18
WG2829122-1 MB								
Benzene			<0.00050		mg/L		0.0005	21-JUL-18
Toluene			<0.00050		mg/L		0.0005	21-JUL-18
EthylBenzene			<0.00050		mg/L		0.0005	21-JUL-18
m+p-Xylene			<0.00050		mg/L		0.0005	21-JUL-18
o-Xylene			<0.00050		mg/L		0.0005	21-JUL-18
Surrogate: 1,4-Difluorobenzene (SS)			102.9		%		70-130	21-JUL-18
Surrogate: 4-Bromofluorobenzene (SS)			98.1		%		70-130	21-JUL-18
Surrogate: 3,4-Dichlorotoluene (SS)			98.9		%		70-130	21-JUL-18
OGG-LLE-GRAV-ED	**Water**							
Batch R4139946								
WG2831175-2 LCS								
Oil and Grease			88.0		%		70-130	25-JUL-18
WG2831175-1 MB								
Oil and Grease			<1.0		mg/L		1	25-JUL-18
PH-MAN-YL	**Water**							
Batch R4133660								
WG2827889-2 DUP		**L2132090-1**						
pH		6.79	6.79	J	pH units	0.00	0.3	19-JUL-18
WG2827889-1 LCS								
pH			5.99		pH units		5.8-6.2	19-JUL-18
PHENOLS-4AAP-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PHENOLS-4AAP-WT	**Water**							
Batch R4139130								
WG2831059-3 DUP		**L2132090-1**						
Phenols (4AAP)		0.0140	0.0145		mg/L	3.7	20	24-JUL-18
WG2831059-2 LCS								
Phenols (4AAP)			104.3		%		85-115	24-JUL-18
WG2831059-1 MB								
Phenols (4AAP)			<0.0010		mg/L		0.001	24-JUL-18
WG2831059-4 MS		**L2132090-1**						
Phenols (4AAP)			101.3		%		75-125	24-JUL-18

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
pH by Manual Meter							
	1	17-JUL-18 10:20	19-JUL-18 00:00	24	38	hours	EHTR

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2132090 were received on 18-JUL-18 13:00.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS Environmental

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # _____

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Report To		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	Sabina Gold and Silver Corp.	☑ Standard ☐ Other	○ Regular (Standard Turnaround Times - Business Days)
Contact:	Merle Keefe / Mitchell Kearney	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	1800-555 Burrard St., Box 220, Vancouver, BC, V7X 1M7	Email 1: mkearney@sabinagoldsilver.com	◉ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	mkeefe@sabinagoldsilver.com	Email 2: mkeefe@sabinagoldsilver.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	604-240-6619 Fax:	Email 3:	
Invoice To	Same as Report ? ☐ Yes ☑ No	Client / Project Information	Analysis Request
Hardcopy of Invoice with Report?	☑ Yes ☐ No	Job #:	Please indicate below Filtered, Preserved or both (F, P, F/P)
Company:	Sabina Gold and Silver Corp.	PO / AFE:	
Contact:	Accounts Payable	LSD:	
Address:	1800-555 Burrard St., Box 220, Vancouver, BC, V7X 1M7		
Phone:	604-998-4175 Fax:	Quote #:	
Lab Work Order # (lab use only)	L2132090	ALS Contact: Harman Bhullar	Sampler: Mitchell Kearney

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	pH	BTEX	Phenols	Oil & Grease								Number of Containers
	East Camp Drummed Berm	17-07-18	10:20	Water	X	X	X	X								6

L2132090-COFC

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC C… …s Details

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
Mitchell Kearney	17-07-2018	12:00	Tianli Liu	July 18th 2018	13:00	14.6 °C				

GENF 20.00 Front

Appendix C Waste Backhaul Log

Bill Of Lading Number	Customer	Manifest #	Date Received	Waste Stream	UOM	Waste Class	UN #	Waste From Location	Quantity
YK0000001980	Sabina Gold and Silver Corp.	NT13280-2	21/03/2018	BATTERIES LEAD ACID	SK	8	2794	Sabina Gold and Silver Corp.	1.00
									1.00
				NON REGULATED SOLIDS-GENERAL DEBRIS	D	NRS	NRS	Sabina Gold and Silver Corp.	3.00
									3.00
				NON REGULATED SOLIDS-INCINERATOR ASH	D	NRS	NRS	Sabina Gold and Silver Corp.	3.00
									3.00
				NON REGULATED SOLIDS-WHITE GOODS	E	NRS	NRS	Sabina Gold and Silver Corp.	1.00
									1.00
YK0000002015	Sabina Gold and Silver Corp.		06/04/2018	NON REGULATED SOLIDS-INCINERATOR ASH	D	NRS	NRS	Sabina Gold and Silver Corp.	8.00
									8.00
YK0000002210	Sabina Gold and Silver Corp.		26/06/2018	NON REGULATED SOLIDS-INCINERATOR ASH	D	NRS	NRS	Sabina Gold and Silver Corp.	3.00
									3.00
				NON REGULATED SOLIDS-OIL/FUEL FILTERS	D	NRS	NRS	Sabina Gold and Silver Corp.	1.00
									1.00
YK0000002280	Matrix Avaition Solutions Inc.	NT13485-7	31/07/2018	NON REGULATED SOLIDS-INCINERATOR ASH	D	NRS	NRS	Sabina Gold & Silver Corp	5.00
									5.00
				NON REGULATED SOLIDS-OIL/FUEL FILTERS	D	NRS	NRS	Sabina Gold & Silver Corp	1.00
									1.00
				NON REGULATED SOLIDS-OILY DEBRIS	D	NRS	NRS	Sabina Gold & Silver Corp	1.00
									1.00
				NON REGULATED SOLIDS-RAGS AND ABSORBENTS	D	NRS	NRS	Sabina Gold & Silver Corp	2.00
									2.00
				WASTE LEACHATE-OIL	D	NRL	NRL	Sabina Gold & Silver Corp	2.00
									2.00
				WATER CONTAMINATED WITH HYDROCARBONS	D	NRL	NRL	Sabina Gold & Silver Corp	2.00
									2.00
YK0000002351	Sabina Gold and Silver Corp.		22/08/2018	NON REGULATED SOLIDS-SCRAP METAL(DESK)	KG	NRS	NRS	Sabina Gold and Silver Corp.	1.00
									1.00
YK0000002373	Sabina Gold and Silver Corp.		30/08/2018	NON REGULATED SOLIDS-INCINERATOR ASH	D	NRS	NRS	Sabina Gold and Silver Corp.	38.00
									38.00
YK0000002375	Matrix Avaition Solutions Inc.		31/08/2018	NON REGULATED SOLIDS-INCINERATOR ASH	D	NRS	NRS	Sabina Gold & Silver Corp	7.00
									7.00
YK0000002391	Sabina Gold and Silver Corp.	NT15068-9	10/09/2018	NON REGULATED SOLIDS-CALCIUM CHLORIDE	D	NRS	NRS	Sabina Gold and Silver Corp.	12.00
									12.00
				NON REGULATED SOLIDS-INCINERATOR ASH	D	NRS	NRS	Sabina Gold and Silver Corp.	9.00
									9.00
				SOIL CONTAMINATED WITH HYDROCARBONS	D	NRS	NRS	Sabina Gold and Silver Corp.	9.00
									9.00
YK0000002437	Matrix Avaition Solutions Inc.		26/09/2018	NON REGULATED SOLIDS-AMMONIUM NITRATE BAGS	M	NRS	NRS	Sabina Gold & Silver Corp	4.00
									4.00
YK0000002450	Matrix Avaition Solutions Inc.		04/10/2018	NON REGUALTED SOLID - HYDRAULIC HOSES	D	NRS	NRS	Sabina Gold & Silver Corp	1.00
									1.00
				NON REGULATED SOLIDS-OIL/FUEL FILTERS	D	NRS	NRS	Sabina Gold & Silver Corp	2.00
									2.00
YK0000002457	Sabina Gold and Silver Corp.		04/10/2018	NON REGULATED SOLIDS-INCINERATOR ASH	D	NRS	NRS	Sabina Gold and Silver Corp.	4.00
									4.00
YK0000002474	Sabina Gold and Silver Corp.	NT15125-7	15/10/2018	BATTERIES-LEAD ACID	E	8	2794	Sabina Gold and Silver Corp.	18.00
									18.00
				BATTERIES-NICAD	KG	8	2079	Sabina Gold and Silver Corp.	1.00
									1.00
YK0000002523	Sabina Gold and Silver Corp.	NT15154-7	01/11/2018	NON REGULATED SOLIDS-CALCIUM CHLORIDE	D	NRS	NRS	Sabina Gold and Silver Corp.	2.00
									2.00
				NON REGULATED SOLIDS-INCINERATOR ASH	D	NRS	NRS	Sabina Gold and Silver Corp.	10.00
									10.00
				SOIL CONTAMINATED WITH HYDROCARBONS	D	NRS	NRS	Sabina Gold and Silver Corp.	2.00
									2.00