### NEW GOLD RAINY RIVER MINE APPENDIX K EXCEEDANCE LETTERS SUBMITTED TO MECP AND REGULATORY REPORTING TABLE

### NEW GOLD RAINY RIVER MINE APPENDIX K.1 EXCEEDANCE LETTERS SUBMITTED TO MECP



May 13, 2020

Matt Hoffmeister & Jason Tittlemier Senior Environmental Officers Ministry of the Environment, Conservation and Parks 808 Robertson St. Kenora, ON P9N 1X9

Dear Mr. Hoffmeister and Mr. Tittlemier,

#### SUBJECT: NORTH STATION AMBIENT AIR QUALITY EXCEEDANCES OF 24-HOUR TOTAL SUSPENDED PARTICULATE-MONITORING LIMITS - SAC REFERENCE #8876-BPJS8Z

During preparation of the 2020 first quarter Ambient Air Quality Monitoring Report, it was noted that on February 27, 2020, the total suspended particulates (TSP) concentration and iron concentration at Gallinger Ambient Air Quality Monitoring Station had exceeded Ministry approved limits of 120 ug/m<sup>3</sup> and 4 ug/m<sup>3</sup> respectively. On February 27, 2020 the TSP and iron concentration at Gallinger Ambient Air Quality Monitoring Station was 220 ug/m<sup>3</sup> and 5.90 ug/m<sup>3</sup> respectively.

On May 12, 2020, New Gold notified the Spills Action Centre (SAC), Reference #8876-BPJS8Z, of the exceedance of the Ministry approved limits for Total Suspended Particulate and Iron concentrations at the Gallinger Ambient Air Quality Monitoring Station. The delay between the date of occurrence and when we became aware of the exceedance, and hence reporting, is due to the wait time for lab results and staffing issues within the last few months. The following letter report accompanies a copy of the Notification of Exceedance form (NOE) as per ECA #0412-A2LR4V.

Gallinger Road Ambient Air Quality Monitoring Station is located approximately 4.5 km due east of the primary crusher on the Rainy River Mine Site. Gallinger Road itself passes by the Ambient Air Quality Monitoring Station in a north-south direction at approximately 50 meters east.

TSP samples were collected during a 24-hr period on February 27, 2020 as per Rainy River Project Ambient Air Quality Monitoring Plan, accepted by MECP on November 9th, 2016. During this 24-hour period, predominant wind direction varied from west to northeast with an average wind speed of 5 km/hr. With these wind directions, it is unlikely that the source of the dust would be from the crusher which is situated to the west of the air monitoring station and suggests that the source was related to the road dust.

New Gold will continue to maintain Gallinger Road, applying water or calcium chloride under non-freezing conditions. New Gold will also continue to suggest that no New Gold traffic on Gallinger Road by mine personnel, but as this is a public road, New Gold has no authority on people driving personal cars. New Gold is exploring other potential mitigation in order to divert traffic from this road.

Once you have had the opportunity to review this document, please contact me at (343) 353 4667 with any questions or concerns.

Regards,

M. Wilson

Matthew Wilson Environmental Specialist

cc. Sylvie St.Jean (sylvie.st.jean@newgold.com)

New Gold Inc. Rainy River Mine 5967 HWY 11/71, P.O. Box 5 Emo, ON POW 1E0



May 13, 2020

Matt Hoffmeister & Jason Tittlemier Senior Environmental Officers Ministry of the Environment, Conservation and Parks 808 Robertson St. Kenora, ON P9N 1X9

Dear Mr. Hoffmeister and Mr. Tittlemier,

#### SUBJECT: SOUTH STATION AMBIENT AIR QUALITY EXCEEDANCES OF 24-HOUR TOTAL SUSPENDED PARTICULATE-MONITORING LIMITS - SAC REFERENCE #8876-BPJS8Z

During preparation of the 2020 first quarter Ambient Air Quality Monitoring Report, it was noted that on February 27, 2020, the total suspended particulates (TSP) concentration and Iron concentration at Tait Ambient Air Quality Monitoring station had exceeded Ministry approved limits of 120 ug/m<sup>3</sup> and 4 ug/m<sup>3</sup> respectively. On February 27, 2020 the TSP and iron concentration at Tait Ambient Air Quality Monitoring Station was 287 ug/m<sup>3</sup> and 6.44 ug/m<sup>3</sup> respectively.

On May 12th, 2020, New Gold notified the Spills Action Centre (SAC), Reference #8876-BPJS8Z, of the exceedance of the Ministry approved limits for Total Suspended Particulate Matter and Iron concentrations at the Tait Ambient Air Quality Monitoring Station. The delay between the date of occurrence and when we became aware of the exceedance, and hence reporting, is due to the wait time for lab results and staffing issues within the last few months. The following letter report accompanies a copy of the Notification of Exceedance form (NOE) as per ECA #0412-A2LR4V.

Tait Road Ambient Air Quality Monitoring Station is located approximately 1.7 km due south of the mine site on the Rainy River Mine Site. Tait Road itself passes by the Ambient Air Quality Monitoring Station in a north-south direction at approximately 50 meters east.

TSP samples were collected during a 24-hr period on February 27, 2020 as per Rainy River Project Ambient Air Quality Monitoring Plan, accepted by MECP on November 9th, 2016. During this 24-hour period, predominant wind direction varied from west to northeast with an average wind speed of 5 km/hr. With these wind directions, it is unlikely that the source of the dust would be from the mine site which is situated to the North of the ambient air monitoring station and suggests that the source was related to the road dust from Highway 600.

New Gold will continue to maintain Highway 600, applying water or calcium chloride on dry days. New Gold is exploring other potential mitigation in order to divert traffic from this road.

Once you have had the opportunity to review this document, please contact me at (343) 353 4667 with any questions or concerns.

Regards,

M. Wilson

Matthew Wilson Environmental Specialist

cc. Sylvie St.Jean (sylvie.st.jean@newgold.com)

New Gold Inc. Rainy River Mine 5967 HWY 11/71, P.O. Box 5 Emo, ON POW 1E0



May 26, 2020

Matt Hoffmeister & Jason Tittlemier Senior Environmental Officers Ministry of the Environment, Conservation and Parks 808 Robertson St. Kenora, ON P9N 1X9

Dear Mr. Hoffmeister and Mr. Tittlemier,

#### SUBJECT: INVALIDATED DATA FOR THE NORTH AND SOUTH STATION AMBIENT AIR QUALITY EXCEEDANCES - SAC REFERENCE #8876-BPJS8Z

It was noted that on February 27, 2020, the Total Suspended Particulates (TSP) concentration and iron concentration exceedances at Gallinger Ambient Air Quality Monitoring Station and Tait Ambient Air Quality Monitoring Station were invalidated. As described in the Rainy River Q1 Ambient Air Quality Monitoring Report, the data for this samples was invalidated. The data for both stations was invalid because of the flow calculation exceeded the theoretical flow limit described in the Operations Manual for Air Quality Monitoring in Ontario. The operations manual theoretical total volume limit is 1794 m<sup>3</sup>. On February 27, 2020, the Gallinger and Tait Ambient Air Quality Monitoring Stations had a total volume of 1829.65 m<sup>3</sup> and 2095.44 m<sup>3</sup> respectively.

On May 12, 2020, New Gold notified the Spills Action Centre (SAC), Reference #8876-BPJS8Z, of the exceedance of the Ministry approved limits for Total Suspended Particulate and iron concentrations at the Gallinger Ambient Air Quality Monitoring Station and Tait Ambient Air Quality Monitoring Station.

After reviewing the sampling notes for both monitoring stations, no error was seen in the operation of the equipment or sampling procedure. The lab results were also reviewed. No QAQC issues were found with the analyses. The error in setting the equipment to a higher cubic feet per minute resulted in the exceeded theoretical flow limit. Figure 1 and Figure 2 are photos of the filters from the February 27, 2020 samples. Figure 3 and Figure 4 are photos of samples taken February 3, 2020 both of which had very similar flows to February 27 samples. By comparing these photos there is a visual difference between the amount of dust collected on the February 27, 2020 and the dust collected on February 3, 2020. Therefore, the data was invalidated but we still believe the February 27, 2020 samples were exceedances.



Figure 1: Photo of the North Station TSP Filter sampled on February 27, 2020



Figure 2: Photo of the South Station TSP Filter sampled on February 27, 2020



Figure 3: Photo of the North Station TSP Filter sampled on February 3, 2020

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Figure 4: Photo of the South Station TSP Filter sampled on February 3, 2020

New Gold will continue to apply the mitigation measures as described in the previous letter sent on May 13, 2020, and is actively working on improving our sampling and maintenance procedures of ambient air quality monitoring equipment to allow for faster reaction time on errors. In addition, New Gold will be providing more training for New Gold employees on equipment maintenance and calibration.

Once you have had the opportunity to review this document, please contact me at (343) 353 4667 with any questions or concerns.



Regards,

M. Wilsog

Matthew Wilson Environmental Specialist

cc. Sylvie St.Jean (sylvie.st.jean@newgold.com)



April 15, 2020

Matt Hoffmeister Senior Environmental Officer Ministry of the Environment, Conservation and Parks 808 Robertson St. Kenora, ON P9N 1X9 Via email; <u>matt.hoffmeister@ontario.ca</u>

Dear Mr. Hoffmeister,

#### SUBJECT: OPEN PIT EFFLUENT SPILL – SAC REFERENCE # 4400-BNHQXJ

Further to the notification to the Spills Action Center (SAC) Reference # 4400-BNHQXJ: On April 9, 2020, at 0800 hours, open pit effluent was sighted flowing out of a ruptured pipeline at zone 15U N5409024.6416 E424059.2277. This pipeline connects Sump 4 to the Tailings Management Area. Site services were contacted and the pump moving the water from Sump 4 was shut off at 0834 hours. It was estimated approximately 75 m<sup>3</sup> of open pit effluent was released to the environment. This estimate was calculated from the rate at which the pump was running, the size of the line, and the size of the puncture.

The spill originated from a gouge that was made in the pipe during its realignment. A 2" trash pump was put in place to pump the pooled effluent on the south side of the pipeline road to Sump 1 nearby. After the flow was stopped, no effluent was observed entering the Pinewood River however it could not be confirmed if any flowed there during the incident.



Figure 1 Location of where spill occurred (Southeast of Sump 1)

The pipeline was pressurized and inspected at 2030 hours on April 8, 2020 and no leaks were identified. Due to mechanical problems, the pump did not start pumping water to the Tailings

New Gold Inc. Rainy River Mine 5967 HWY 11/71, P.O. Box 5 Emo, ON P0W 1E0



Management Area until 2230 hours on April 8, 2020. An operator arrived at Sump 1 just after 0700 hours on April 9, 2020 to begin their shift and saw the leak begin at 0800. Site Services was contacted and the pumping ceased.



Figure 2 Size of gouge in pipe where leak occurred.



Figure 3 Spray from pipeline leak into trees and pooling effluent south of pipeline access road.



An acute toxicity and discharge sample were collected from the source Sump 4 as well as a surface water sample collected from the impact site. These were rushed to ALS Laboratories in Thunder Bay on the weekend of April 11, 2020 for analyses. Due to staffing restrictions from Covid-19, the laboratory does not have the capability to rush the required analyses, so no results are available at this time.

The mitigation measures implemented were a realignment of the pipeline to the north with the construction of a containment ditch between Sump 4 and West Mine Rock Stockpile ditching. The pipeline will be moved within this ditch and continue to travel this ditch to Sediment Pond 2.



Figure 4 Yellow shows the old alignment of the pipeline. Green and orange is the realigned route of the pipeline with green being the newly constructed containment ditch.

Notification was made to the Ministry of the Environment, Conservation and Parks, Environment Canada and the Spills Action Centre (SAC) (Reference # 4400-BNHQXJ) as defined in Ontario Regulation 675/98, condition 12(3) of Environmental Compliance Approval No. 7004-BC7KQ5 and in the New Gold internal Environmental Standard Operating Procedure (ENV-SOP-0002).

Once you have had the opportunity to review this document, please feel free to contact Sylvie St. Jean at <u>sylvie.st.jean@newgold.com</u> or (807) 707-3497.

Regards,

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Garnet Cornell Environmental Specialist

Dated: <u>Apr,15/20</u>
Spill Reporting Department Manager
Carolyn Winte for SST
Environmental Manager
CY I
Cinel
General Manager



cc. Sylvie St.Jean (<u>sylvie.st.jean@newgold.com</u>) Tony Lord (<u>tony.lord@newgold.com</u>) Jason Tittlemier (<u>jason.tittlemier@newgold.com</u>) Melissa Hagmann (<u>melissa.hagmann@canada.ca</u>)

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May 19, 2020

Matt Hoffmeister Senior Environmental Officer Ministry of the Environment, Conservation and Parks 808 Robertson St. Kenora, ON P9N 1X9 Via email; <u>matt.hoffmeister@ontario.ca</u>

Dear Mr. Hoffmeister,

#### SUBJECT: WATER DISCHARGE PIPELINE LEAK – SAC REFERENCE # 1682-BPLJZ3

Further to the notification to the Spills Action Center (SAC) Reference # 1682-BPLJZ3: On May 13, 2020, at approximately 09:00, a New Gold employee notified the Environment Department that they had seen water leaking from the Water Discharge Pipeline on the morning of Saturday, May 9, 2020 along new Highway 600. The leak was determined to be as a result of a failed pressure gauge located at approximately Zone 15U 419552.49 E 5407824.45 N. The Water Discharge Pipeline was actively discharging to EDL1 located on the Pinewood River downstream of McCallum Creek at the former Pinewood Pumphouse. Site services were contacted, and the pump was shut off at 10:45 to change the failed pressure gauge was removed, causing a spray into the air. It was estimated approximately 5.9 m<sup>3</sup> of treated effluent was released to the environment. This estimate was calculated from the rate at which the failed pressure gauge was leaking at the time of report for the time period of Saturday morning to Wednesday morning (4 days) and an estimate of the volume sprayed for 15 minutes while the line depressurized.

The leak originated from a failed pressure gauge. The location of the leak was accessible by road however the location and slow rate of the leak may not have raised alarm during a pipeline inspection as the wet area was located on the far side of the pipeline away from the road. A discharge sample was collected at the end of pipeline on May 13, 2020 at 09:45. An acute toxicity sample was not collected on May 13, 2020 however the results from a May 6, 2020 acute toxicity sample taken at the end of pipe for EDL1 were non-acutely lethal for both Rainbow Trout and *Daphnia magna*.

The mitigation measures implemented include a daily inspection of the Water Discharge Pipeline by UTV during day shift while the pipeline is active. The pipeline will be kept clear of brush and shrubs to ensure leaks can be visually detected. A weekly drone flight of an approximately 2.5 km section of the pipeline that cannot be accessed by UTV will be arranged weather permitting while the pipeline is active.

Notification was made to the Ministry of the Environment, Conservation and Parks, Environment Canada and the Spills Action Centre (SAC) (Reference # 1682-BPLJZ3) as defined in Ontario Regulation 675/98, condition 12(3) of Environmental Compliance Approval No. 7004-BC7KQ5 and in the New Gold internal Environmental Standard Operating Procedure for reporting of spills (ENV-SOP-0002).

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Figure 1 Location of the leak on the Water Discharge Pipeline along new Highway 600



Figure 2 Failed pressure gauge leaking

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Figure 3 Spray from pipeline during depressurization to replace failed pressure gauge, note it was also raining at the time of pressure gauge replacement

Once you have had the opportunity to review this document, please feel free to contact Sylvie St. Jean at <u>sylvie.st.jean@newgold.com</u> or (807) 707-3497.

Regards,

amanda Javoh

Amanda Jacobs, EP Environmental Specialist

cc. Sylvie St.Jean (sylvie.st.jean@newgold.com)	
Tony Lord (tony.lord@newgold.com)	
Melissa Hagmann (melissa.hagmann@canada.c	<u>a)</u>

Dated: 19-May-2020
Seflie Ami
Environmental Manager
Sinet
General Manager



June 4, 2020

Matt Hoffmeister Senior Environmental Officer Ministry of the Environment, Conservation and Parks 808 Robertson St. Kenora, ON P9N 1X9 Via Email; matt.hoffmeister@ontario.ca

Neal Bennett Mineral Exploration and Development Consultant Ministry of Energy, Northern Development and Mines Suite B002, 435 James Street South Thunder Bay, ON P7E 6S7 Via Email: neal.bennett@ontario.ca

#### SUBJECT: Notice of Tailings deposition exceedance

Dear Messrs. Hoffmeister and Bennett,

This letter is following our notification of a tailings slurry exceedance that occurred at Rainy River Mine (RRM) on June 3<sup>rd</sup>, 2020. At that location, the dam elevation is at 371.5masl. However, as sections of the dam are still at 369 masl, the maximum slurry elevation is set at 369masl.

On June 3<sub>rd</sub>, the tailings line was inspected around 6:30 am by the Mill Manager and the Mill Superintendent. At that time, the extent of the tailings was below 369 masl. Later that morning the Tailings Engineer performed his daily inspection and noticed the exceedance as shown in Figures 1, 2 and 3. This was communicated to the Environmental Manager around 12:30 pm who required that tailings deposition be halted immediately. Appropriate regulatory agencies were then notified. The average tailings slurry exceedance was 0.08 masl with a maximum of 0.12masl at one location.

A plan was then put in place to re-route the tailings, using the redundant tailings line, to another location as shown in yellow on Figure 4. At that location, the normal tailings slurry operating level is 371.1masl with a current slurry level of approximately 366.6masl. The line extending from the primary tailings' deposition, currently positioned on the TMA dams will be extended to this location within 10 days and the redundant tailings line will be shut down. A minimum of two (2) daily inspections will continue to be performed along all tailings pipelines. Any problems will be immediately rectified, and appropriate Agencies notified.



Figure 1 - Aerial View of Incident



FIGURE 2 – Pipeline Looking South-West



FIGURE 3 - Standing on 371.5 Looking North



Figure 4 - Alternate Discharge Location



Once you have had the opportunity to review this document, please feel free to contact me at (807-707-3497) with any questions or concerns.

Regards,

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Sylvie St-Jean Environment Manager

cc. Eric Vinet (<u>eric.vinet@newgold.com</u>) Carolyn Winik (<u>Carolyn.Winik@newgold.com</u>)



2020-06-18

Matt Hoffmeister Senior Environment Officer, Kenora Area Ministry of the Environment and Climate Change 808 Robertson Street Kenora, ON P9N 1X9 Via email; Matt.Hoffmeister@ontario.ca

Dear Mr. Hoffmeister,

#### RE: WMP Reclaim Line Valve Failure – SAC Reference #0811-BQESLB

At 1100 on June 9<sup>th</sup>, 2020, it was brought to the attention of the New Gold Environmental Department that a valve was leaking on the Water Management Pond (WMP) reclaim pipeline. Once the leaking valve was located, a call was made to Site Services Department and after estimating the discharge rate of the leak, the valve was isolated and the line drained. A sample was collected that included all discharge parameters including acute toxicity of the water drained from the pipe into the Water Discharge Pond (WDP) via the WMP spill way. Laboratory results are still pending regarding this incident and will be provided when finalized. Please note acute toxicity testing did not show any mortality or stress in test subjects. Draft results for all parameters show two discharge criteria for this sample exceeded ECA limits, un-ionized ammonia at 0.339 mg/L and copper at 0.0689 mg/L.

This incident was reported to Spills Action Center as a release to environment, as at that time the incident was treated as if it was an external spill to fish bearing waterways. Upon further investigation it appears unlikely the spilled water ever left the mine footprint. In Photo 1 below, the dotted orange line shows the edge of a compacted rock pad. The solid orange line shows a small sump built for the booster station. The red dot shows the location of the failed valve.



Photo 1: Map depicting failed valve location (red dot).

New Gold Inc., Rainy River Mine 5967 Highway 11/71, P.O. Box 5 Emo, ON POW 1E0

In Photo 2 the same location with the same drawings are shown with the topographic background selected. This image is not updated so the entire compacted gravel pad is not shown, nor the booster station sump. The purpose of the image below is to illustrate that the water likely stayed within the mine footprint and either reported to the spillway or the booster station sump.



Photo 2: Incident location with Topography.

An estimated 152.5  $m^3$  of mine effluent is assumed to be spilled with this event. The failed valve is located in an isolated location without regular access and can only be seen at a distance. The line was also not in service at the time of the incident. The amount of spilled effluent was estimated by performing a "bucket test" on the leaking valve (filling a vessel with a known volume and recording the amount of time it takes to fill) and assuming the leak started after the valve was last known to be in working order, which was 3.5 days prior.



Photo 3: Failed Valve on WMP reclaim line.

The pipeline on which the valve failed is used to supply the Mill with water for processing ore from either the WMP or Tailings Management Area (TMA). Approximately 3.5 days before the valve malfunctioned, work was performed on the source pump in Cell 2 and the pipeline was left pressurized with the valve closed. The reason the line was left pressurized was so the water source could be changed remotely without affecting the Mill's process.

Two steps will be taken to prevent recurrence of this issue in this area. Firstly, the location of this valve has no access and is difficult to observe during routine drive by inspections, access will be created. Secondly, the need for a valve in this location has been assessed and deemed unnecessary and will be removed during the next Mill shut down.

Once you have had the opportunity to review this document, please contact the undersigned at (807) 271-3190 with any questions or concerns or Sylvie St-Jean at (807) 707-3497.

Regards,

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Environmental Specialist -Wildlife

New Gold Inc. Rainy River Mine 5967 Highway 11/71, P.O. Box 5, Emo Ontario, Canada, POW 1E0 M +1.807.271.3190

Dated: June 18, 2020.
<u>OS</u>
Spill Reporting Department Manager
Stuitones
Environmental Manager
Sint
General Manager

New Gold Inc., Rainy River Mine 5967 Highway 11/71, P.O. Box 5 Emo, ON POW 1E0

June 16, 2020

Matt Hoffmeister Senior Environmental Officer Ministry of the Environment, Conservation and Parks 808 Robertson St. Kenora, ON P9N 1X9 Via email; matt.hoffmeister@ontario.ca

Dear Mr. Hoffmeister,

#### RE: TOTAL SUSPENDED SOLIDS SPILL - SAC REFERENCE # 3010-BQEP3S

Further to the notification to the Spills Action Center (SAC) Reference #3010-BQEP3S; on June 9, 2020 at 07:15 hours, turbid water was sighted flowing through a culvert under Roen Road from the Marr Diversion. <u>This is the preliminary report as we are awaiting clarification on certified lab results. Final report to follow.</u>



Figure 1. Plan view of Marr Site, Marr Diversion and West Creek Diversion showing location of where the turbid water was spotted flowing under Roen Road.

The water flowing through the culvert appeared to be sediment-laden water originating from Marr Diversion upstream the culvert. Upon discovery of the turbid water, a total suspended solids sampled was collected and Site

New Gold Inc. Rainy River Mine 5967 HWY 11/71, P.O. Box 5 Emo, ON P0W 1E0

Services was contacted to begin pumping a sump that manages the Marr Diversion water in case of an emergency. Further environmental staff arrived at the incident site at 08:30 and collected a total suspended solids sample and a turbidity sample. The turbidity sample was analyzed with an infield turbidity reader and was 855.1 NTU.



Figure 2. Highly turbid water entering the riffle into West Creek Diversion. Turbidity at time of photo was 855.1 NTU.

Site Services was able to activate the pump within the Marr Diversion sump and started to redirect water to the South Dam seepage collection system at 08:45. This seepage collection system is pumped back into the Tailings Management Area.

Further monitoring occurred within West Creek Diversion, the receiver and Marr Diversion throughout the entirety of the incident. SAC was notified on June 9, 2020 at 12:55 once the incident was confirmed by field staff.

The below table and figure show the certified laboratory total suspended solids results as well as the in-field turbidity readings and onsite laboratory total suspended solids readings.

Date	Time	Location	Total Suspended Solids (mg/L)	Turbidity (NTU)	Onsite Total Suspended Solids (mg/L)	Field Turbidity (NTU)
June 9, 2020	07:15	Marr Diversion	132	257	-	164.3
June 9, 2020	08:00	West Creek Diversion	11.0	29.0	-	27.8
June 9, 2020	08:30	Marr Diversion	598	1980	-	855.1
June 9, 2020	09:40	Marr Diversion	31.5	175	-	144.0
June 9, 2020	10:00	West Creek Diversion	30.0	73.4	-	65.2
June 9, 2020	14:50	Marr Diversion	7.0	52.0	-	52.6
June 9, 2020	15:10	West Creek Diversion	17.0	67.7	-	56.7
June 10, 2020	07:30	Marr Diversion	6.0	38.9	-	34.1
June 10, 2020	12:30	Marr Diversion	4.0	35.7	-	33.2
June 10, 2020	12:55	Marr Diversion	4.5	35.1	35.0	33.4
June 11, 2020	07:55	Marr Diversion	3.0	23.7	10.0	20.6
June 11, 2020	08:15	West Creek Diversion	2.5	7.55	-	4.3

 Table 1. All turbidity and total suspended solids sample results within the Marr Diversion and West Creek

 Diversion during the entirety of the event.

\*Awaiting clarification from the certified lab for total suspended solids results due to discrepancies with onsite laboratory and in-field observations.

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Figure 3. The two different area's where turbidity and total suspended solids samples were collected while the incident was occurring.

Once the emergency pump was activated at the end of Marr Diversion, there was an immediate decrease in turbidity and total suspended solids as shown with the June 9, 2020 sample taken at 09:40.

The source of the highly turbid water was the Marr Diversion. With the significant amount of rainfall from June 7, 2020 to June 9, 2020 combined with a poorly vegetated plateau and slopes of the diversion, it led to highly turbid water navigating approximately 330m of vegetated ground and making its way to West Creek Diversion.

Date	Rainfall (mm)	Maximum Rainfall Intensity (mm/hr)
June 7, 2020	16.90	7.60 (09:00 – 10:00)
June 8, 2020	18.70	5.40 (22:00 – 23:00)
June 9, 2020	13.80	11.50 (06:00 – 07:00)
Total	49.40	

Table 2. Total rainfall and maximum rainfall intensities leading up to the June 9, 2020 incident.

The incident was reported to have lasted 48 hours with in-field turbidity readings and onsite laboratory total suspended solids analysis. A notification on June 11, 2020 at 15:37 informed SAC that the incident had ceased as of June 11, 2020 at 7:55. The certified laboratories results show that the event actually had ceased on June 9, 2020 at 14:50 making it only last just over 9 hours. We are awaiting clarification from the certified lab on these results.

To prevent future total suspended solids exceedances from this system, the Marr Diversion is scheduled to

be hydroseeded the end of June to allow vegetation establishment throughout end of spring and throughout summer. The emergency pump will continue to be stationed at the downstream sump of Marr Diversion for any future incidents.

Notification was made to the Ministry of the Environment, Conservation and Parks as well as to the Spills. Action Centre (SAC) (Reference #3010-BQEP3S) as defined in Ontario Regulation 675/98, condition 11(4) of Environmental Compliance Approval No. 7004-BC7KQ5 and in the New Gold Internal Environmental Standard Operating Procedure (ENV-SOP-0002).

Once you have had the opportunity to review this document, please contact me at (807) 482-0931 with any questions or concerns.

Regards,

Cotall

Garnet Cornell Environmental Specialist New Gold Inc. Rainy River Mine 5967 Highway 11/71, P.O. Box 5, Emo Ontario, Canada, P0W 1E0 M: +1.807.482.0931

cc. Sylvie St.Jean (sylvie.st.jean@newgold.com)

Dated:
Spill Reporting Department Manager
Environmental Manager
General Manager

June 18, 2020

Matt Hoffmeister Senior Environmental Officer Ministry of the Environment, Conservation and Parks 808 Robertson St. Kenora, ON P9N 1X9 Via email; <u>matt.hoffmeister@ontario.ca</u>

Dear Mr. Hoffmeister,

#### RE: FINAL REPORT: TOTAL SUSPENDED SOLIDS SPILL - SAC REFERENCE # 3010-BQEP3S:

Further to the notification to the Spills Action Center (SAC) Reference #3010-BQEP3S; on June 9, 2020 at 07:15 hours, turbid water was sighted flowing through a culvert under Roen Road from the Marr Diversion.



Figure 1. Plan view of Marr Site, Marr Diversion and West Creek Diversion showing location of where the turbid water was spotted flowing under Roen Road.

New Gold Inc. Rainy River Mine 5967 HWY 11/71, P.O. Box 5 Emo, ON P0W 1E0

### newg the Rainy River

The water flowing through the culvert appeared to be sediment-laden water originating from Marr Diversion upstream the culvert. Upon discovery of the turbid water, a total suspended solids (TSS) sample was collected, and Site Services was contacted to begin pumping a sump that manages the Marr Diversion water in case of an emergency. Further environmental staff arrived at the incident site at 08:30 and collected a TSS sample and a turbidity sample. The turbidity sample was analyzed with an infield turbidity reader and was 855.1 NTU.





Figure 2 Time progression of the TSS exceedance into from Marr Diversion into West Creek Diversion.

RRM's site services was able to activate the pump within the Marr Diversion sump and started to redirect water to the South Dam seepage collection system at 08:45. This seepage collection system is pumped back into the Tailings Management Area.

During the event, further monitoring occurred within West Creek Diversion, the receiver, and Marr Diversion throughout the entirety of the incident. Additional monitoring also occurred within the Clark and Teeple Diversion systems to better understand the natural systems management of the high-intensity rainfall. SAC was notified on June 9, 2020 at 12:55 once the incident was confirmed by field staff. The below table and figure show the certified laboratory total suspended solids and turbidity results as well as the in-field turbidity readings and onsite laboratory TSS readings. It is important to note that the measured TSS at West Creek Diversion and highway 600, which is our last compliance point before the water leaves our system and enters Loslo remnant creek, and subsequently the Pinewood River was not over 30 TSS. Turbidity (NTU), associated with the silt originating from the native unvegetated Marr Ditch, however, was higher. The TSS samples were ran twice by ALS, to confirm those results. The turbidity readings at highway 600 suggests that RRM staff were successful in capturing the large silt plume created at or around 08:30. This event also reinforces the hypothesis that turbidity is a better indicator for impacts for systems such as the Marr Ditch.

Date	Time	Location	ALS Total Suspended Solids (mg/L)	ALS Turbidity (NTU)	Onsite Total Suspended Solids (mg/L)	Field Turbidity (NTU)
June 9, 2020	07:15	Marr Diversion	132	257	-	164.3
June 9, 2020	08:00	West Creek Diversion @ 600	11.0	29.0	_	27.8
June 9, 2020	08:15	Teeple Outlet	9.0	15.1	-	13.0
June 9, 2020	08:15	West Creek Diversion @ Haul Rd 8	-	-	-	54.6
June 9, 2020	08:25	West Creek Diversion @ Georgeson Rd	-	-	-	117.2
June 9, 2020	08:30	Clark Creek Diversion	2.0	4.39	-	2.2
June 9, 2020	08:30	Marr Diversion	598	1980	-	855.1
June 9, 2020	08:45	Upstream of Marr Diversion and West Creek Diversion Confluence	-	-	-	38.9
June 9, 2020	08:50	West Creek @ Roen Rd	-	-	. –	2.2
June 9, 2020	09:40	Marr Diversion	31.5	175	-	144.0
June 9, 2020	10:00	West Creek Diversion @ 600	30.0	73.4	-	65.2
June 9, 2020	14:50	Marr Diversion	7.0	52.0		52.6
June 9, 2020	15:10	West Creek Diversion @	17.0	67.7	-	56.7

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June 10, 2020	07:30	Marr Diversion	6.0	38.9	-	34.1
June 10, 2020	12:30	Marr Diversion	4.0	35.7	-	33.2
June 10, 2020	12:55	Marr Diversion	4.5	35.1	35.0	33.4
June 11, 2020	07:55	Marr Diversion	3.0	23.7	10.0	20.6
June 11, 2020	08:15	West Creek Diversion @ 600	2.5	7.55	-	4.3

 Table 1. All turbidity and total suspended solids sample results within the Marr Diversion, Teeple Outlet,

 Clark Creek Diversion and West Creek Diversion during the entirety of the event.



Figure 3. All areas where turbidity and total suspended solids samples were collected while the incident was occurring.

Once the emergency pump was activated at the end of Marr Diversion, there was an immediate decrease in turbidity and total suspended solids as shown with the June 9, 2020 sample taken at 09:40.

The source of the highly turbid water was the Marr Diversion. With the significant amount of rainfall from June 7, 2020 to June 9, 2020 combined with a poorly vegetated plateau and slopes of the diversion, it led to highly turbid water navigating approximately 330m of vegetated ground and making its way to West Creek Diversion.

Date	Rainfall (mm)	Maximum Rainfall Intensity (mm/hr)
June 7, 2020	16.90	7.60 (09:00 – 10:00)
June 8, 2020	18.70	5.40 (22:00 - 23:00)
June 9, 2020	13.80	11.50 (06:00 - 07:00)
Total	49.40	

Table 2. Total rainfall and maximum rainfall intensities leading up to the June 9, 2020 incident.

Also noted during the event was an increase is water that appeared to be bypassing the emergency Marr Diversion sump and plugged culvert and continuing to flow into the West Creek Diversion. It was hypothesized that the high-intensity rainfall flushed all fines from within the crushed rock



road and allowed unimpeded passage of the turbid water to the West Creek Diversion.

The incident was reported to have lasted 48 hours with in-field turbidity readings and onsite laboratory total suspended solids analysis. A notification on June 11, 2020 at 15:37 informed SAC that the incident had ceased as of June 11, 2020 at 7:55. The certified laboratories results show that the event actually had ceased on June 9, 2020 at 14:50 making it only last just over 9 hours.

To prevent future total suspended solids exceedances from this system, the Marr Diversion is scheduled to be hydroseeded the end of June to allow vegetation establishment throughout end of spring and throughout summer. The emergency pump will continue to be stationed at the downstream sump of Marr Diversion for any future incidents. Additionally, the roadbed wall directly downstream of the emergency sump was grouted to prevent future bypasses of the culvert.

Notification was made to the Ministry of the Environment, Conservation and Parks as well as to the Spills Action Centre (SAC) (Reference #3010-BQEP3S) as defined in Ontario Regulation 675/98, condition 11(4) of Environmental Compliance Approval No. 7004-BC7KQ5 and in the New Gold Internal Environmental Standard Operating Procedure (ENV-SOP-0002).

Once you have had the opportunity to review this document, please contact me at (807) 482-0931 with any questions or concerns.

Regards,

Cotall

Garnet Cornell Environmental Specialist New Gold Inc. Rainy River Mine 5967 Highway 11/71, P.O. Box 5, Emo Ontario, Canada, P0W 1E0 M: +1.807.482.0931

cc. Sylvie St.Jean (sylvie.st.jean@newgold.com)

Dated:
Spill Reporting Department Manager
Shin Mu
Environmental Manager
Sind
General Manager

2020-07-24

Matt Hoffmeister Senior Environment Officer, Kenora Area Ministry of the Environment and Climate Change 808 Robertson Street Kenora, ON P9N 1X9 Via email; Matt.Hoffmeister@ontario.ca

Dear Mr. Hoffmeister,

#### RE: Sediment Pond 1 Discharge Line Leak – SAC Reference #5034-BRLL96

At 1515 on July 16<sup>th</sup>, 2020, the Sediment Pond 1 discharge line was found to be leaking. A call was made to Site Services Department and the leaking valve was removed and replaced with a hardline connection. A sample was collected that included all discharge parameters including acute toxicity. At the time of sampling, fish were observed in the West Creek Diversion and showed no signs of stress.

Laboratory results are still pending regarding this incident and will be provided when finalized. Please note acute toxicity test passed with only minor (10% death 10% stress in daphnia) effect. Draft results for all parameters show the only exceeding analyte to be zinc at 0.211 mg/L which is over the monthly average of 0.174 mg/L. A downstream impact sample was collected in the West Creek Diversion and zinc levels were found to be 0.0035 mg/L which is nearly the laboratory detection limit of 0.0030 mg/L. These findings support the theory that impact to the environment would have been minimal.



Photo 1: Map depicting spill location (red dot).

An estimated 162  $m^3$  of mine effluent is assumed to be spilled with this event. The discharge line was not in service at the time of the incident and no pumping associated with this infrastructure was occurring. The amount of spilled effluent was estimated by performing a "bucket test" on the leaking discharge pipe (filling a vessel with a known

New Gold Inc., Rainy River Mine 5967 Highway 11/71, P.O. Box 5 Emo, ON POW 1E0

volume and recording the amount of time it takes to fill) and assuming the entire pipeline emptied when the wye valve failed.



Photo 2: Leak draining out of discharge pipeline.

The last time this pipeline was used, Marr ditch was being pumped to a seepage collection ditch then pumped from a seepage collection pond to Cell 2 of the Tailings Management Area. The seepage collection ditch flows though a galvanized culvert into the pond. Galvanized culvert are believed to have caused past spikes in zinc on site, especially in non-flowing conditions such as a pond.

The wye valve was removed and replaced with a solid line by 2100 hours the same day. This type of wye valve will no longer be used on site and a different style of wye will be reinstalled should there be a need to discharge Sediment Pond 1 in the future.

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Photo 3: Wye valve replaced.

Once you have had the opportunity to review this document, please contact the undersigned at (807) 271-3190 with any questions or concerns or Sylvie St-Jean at (807) 707-3497.

Regards,

Norther Bus of

Environmental Specialist -Wildlife

New Gold Inc. Rainy River Mine 5967 Highway 11/71, P.O. Box 5, Emo Ontario, Canada, POW 1E0 M +1.807.271.3190

Dated: 20200724 at all for Sylvie St. Jean

Spill Reporting Department Manager

A all For Sylvie St. Jea

Environmental Manager

General Manager

New Gold Inc., Rainy River Mine 5967 Highway 11/71, P.O. Box 5 Emo, ON POW 1E0

2020-10-19

Matt Hoffmeister Senior Environment Officer, Kenora Area Ministry of the Environment and Climate Change 808 Robertson Street Kenora, ON P9N 1X9 Via email; Matt.Hoffmeister@ontario.ca

Dear Mr. Hoffmeister,

#### RE: WMP Reclaim Line Valve Gasket Failure – SAC Reference #6504-BU8JU8

At 1355 on October 8th, 2020, it was brought to the attention of the New Gold Environmental Department that a valve gasket was leaking on the Water Management Pond (WMP) reclaim pipeline. This was reported directly to the Mill manager who directed that the WMP pump be shut down and the section of line isolated. The line was allowed to drain so it could depressurize, and repairs made. A sample was collected that included all discharge parameters including acute toxicity. Laboratory results are still pending regarding this incident. As the line was charged with water from the WMP, which is sampled weekly, all past results were examined and are below discharge criteria monthly average. Sample results will be provided once available.



Photo 1: Map depicting failed valve gasket location (red dot).

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Photo 2: Leaking gasket at time (1500) of sampling.

An estimated 134 m<sup>3</sup> of mine effluent is assumed to be spilled with this event. This number is an estimate as it is unknown how long the event occurred, therefore a calculation of the volume of the isolated portion of line was used. The gasket was last seen in working order at noon of the same day. This event occurred over 2,000 meters away from fish bearing water and confirmed with inspections of water leaving the unplanned discharge site The water would have had to travel over land through a forest to reach a ditch that reports to Loslo Creek, which would be the receiver (Photo 3). A culvert under Old Highway 600 (Photo 4) along the route the water would have to take was checked twice and found to be dry at 1600, the day of the event and at 1100 the following day. There was not rain event between observations.

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Photo 3 Spill location in relation to fish habitat (Loslo Creek)



Photo 4: Culvert Under Old Highway 600.

Upon investigation into this event some deficiencies were noted. The main issue being, when the valve was replaced last, an incorrect style of gasket was used which was not intended for this application. Another deficiency identified was a lack of pressure monitoring instrumentation on this line. This has been addressed with a pressure feedback loop that will allow for monitoring 24/7 by Mill operations.

Once you have had the opportunity to review this document, please contact the undersigned at (807) 271-3190 with any questions or concerns or Sylvie St-Jean at (807) 707-3497.

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Regards,

Walter Bers of

Environmental Specialist -Wildlife

New Gold Inc. Rainy River Mine 5967 Highway 11/71, P.O. Box 5, Emo Ontario, Canada, POW 1E0 M +1.807.271.3190

Dated:
J3Z
Spill Reporting Department Manager
Environmental Manager
General Manager

New Gold Inc., Rainy River Mine 5967 Highway 11/71, P.O. Box 5 Emo, ON POW 1E0



October 19, 2020

Matt Hoffmeister & Jason Tittlemier Senior Environmental Officers Ministry of the Environment, Conservation and Parks 808 Robertson St. Kenora, ON P9N 1X9

Dear Mr. Hoffmeister and Mr. Tittlemier,

### SUBJECT: TSS EXCEEDANCES ON THE WEST CREEK DIVERSION- SAC REFERENCE # 0254-BUBRLZ

After a large rain event on the morning of October 12<sup>th</sup>, turbidity readings were completed along the West Creek Diversion (WCD). At 10:55 October 12<sup>th</sup>, the NTU reading at our SW25 Station was 283 NTU (Figure 1).



Fig. 1: SW25 sampling station at 10:55am

Further investigation was completed to find the source of the plume. Around 14:00 the sediment release was identified at the concrete plant laydown south of Roen Rd seen in Fig. 2 below. This laydown is currently being reclaimed which involves excavating the soil, and has been identified as the source of the sediment release. Figure 3 shows a black pipe being used as a

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culvert where the water flowed into the bush line which eventually reports to the West Creek Diversion (WCD).



Fig 2: The sediment release was observed from the orange circle, the four samples taken are show by the red, green, blue and purple circles which are SW26, SW25, Upstream of Marr Diversion, and West Creek Diversion Inlet, respectively.



Fig 3: Sediment Release as originally found, with a black pipe being used as a culvert

At 14:30 New Gold personnel were notified, and on site to remediate. At 16:30, silt fence, erosion blanket and a coir log were installed as seen in Figure 4. The concrete laydown is planned to be reclaimed within the next two weeks. At roughly 15:00 the TSS exceedance was reported to SAC, and an update was given at 17:40 to notify them that mitigation measures had been installed.

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Fig 4: Erosion blankets, silt fence and coir log

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Table 1:	List of	NIU	readings and	Samples	laken

Date	Time	Location	NTU	Sampled? (Y/N)
2020-10-12	10:32	SW 26	3.3	N
2020-10-12	10:55	SW 25	283	N
2020-10-12	11:20	Upstream of Marr Diversion	158	N
2020-10-12	12:35	West Creek Diversion Inlet	0	Y
2020-10-12	12:55	Upstream of Marr Diversion	113	Y
2020-10-12	13:15	SW 25	236	Y
2020-10-12	13:30	SW 26	4.4	Y
2020-10-12	13:50	EDL 2	0.8	N
2020-10-12	14:05	SW 27	2.6	N
2020-10-12	16:42	SW 25	183	N
2020-10-12	17:10	SW 26	3	N
2020-10-13	12:00	SW 25	54.1	Y
2020-10-13	12:00	SW 26	10.9	Y
2020-10-14	14:15	SW 25	24.8	Y
2020-10-16	16:00	SW 25	5.4	Y



Continuous monitoring of the WCD was completed during the week which identified more erosion control measures were required. As shown in Figure 5, total suspended laden water was continuing to leave the batch plant reclamation area during rain events.



Fig. 5: Previously installed erosion controls deemed to have minimal effect on the turbid water leaving the batch plant reclamation area.

Further inspection identified that the erosion controls in place had minimal effect on the turbid water. New Gold personnel were contacted again and upgrades were installed. Additional



erosion blanket was installed in the ditching along the round house entrance road with the inclusion of straw bale check dams (Figure 6). As well as rock lining a drainage ditch closer to the batch plant reclamation pad with coir log check dams (Figure 7).



Fig. 6: Additional erosion control measures in the ditch line along the round house entrance road.



Fig. 7: Additional erosion controls on batch plant drainage ditch to control source.



Table 1 summarized the NTU readings and samples taken. From this data it is suspected that there is minimal flow in the WCD, and the sediment is settling slowly near SW25.

New Gold will continue to monitor the concrete laydown after rain events, to assess the mitigation measure put in place. Once you have had the opportunity to review this document, please contact me at (343) 363 4667 with any questions or concerns.

Regards,

M. Wilsog

Matthew Wilson Environmental Specialist

cc. Sylvie St.Jean (sylvie.st.jean@newgold.com)

Dated: ( 9 2020 Spill Reporting Department Manager Enkironmental lanager General Manager

### newg Cond<sup>™</sup> Rainy River

2020-10-27

Matt Hoffmeister Senior Environment Officer, Kenora Area Ministry of the Environment and Climate Change 808 Robertson Street Kenora, ON P9N 1X9 Via email; Matt.Hoffmeister@ontario.ca

Dear Mr. Hoffmeister,

#### RE: EDL2 Discharge Line Pipe Leak – SAC Reference #6088-BUET73

At approximately 16:15 on October 15th, 2020, during the first discharge of treated effluent from the EDL2 final discharge point, water was observed spraying out of the EDL2 pipeline. It was discovered by the Project Coordinator who was completing a final walkdown while discharge was taking place. They immediately contacted their Supervisor and then called the Mill control room to turn off the discharge. The leak only lasted approximately 15 minutes as discharge had just begun. The line was allowed to drain so it could depressurize, and repairs made that evening by Capital Projects. The Environmental Department was at EDL2 collecting a discharge sample, including acute toxicity, when the leak was discovered. Laboratory results are still pending regarding this incident. As the effluent was being discharged, all past results were examined and are below discharge criteria monthly average. Sample results will be provided once available.



Photo 1: Map depicting pipe leak location (red dot).

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Photo 2: Leaking EDL2 pipe when discovered.

An estimated 500 L of treated mine effluent is assumed to be spilled with this event. This number is an estimate as it is unknown how long the event occurred. It hadn't started when the Environmental Department and Project Coordinator passed the location of the leak to get to EDL2 during discharge. Therefore, pooled water in the road ditch beside the pipe was used to calculate the spilled volume. This event occurred over 600 meters away from fish bearing water but was the same treated effluent being discharged from EDL2 into the Pinewood River.

Upon investigation into this event some deficiencies were noted. There was not an Inspection and Test Plan (ITP) included in the construction package for this pipeline. This has been corrected so that all pipeline contracts include an ITP before commissioning.

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Once you have had the opportunity to review this document, please contact the undersigned with any questions or concerns or Sylvie St-Jean at (807) 707-3497.

Regards,

Cotall

Garnet Cornell Environment Supervisor

New Gold Inc. Rainy River Mine 5967 Highway 11/71, P.O. Box 5 Emo, Ontario, Canada, POW 1E0 T: +1 807 482 0900; ext:8203 C: +1 807 276 0106 Garnet.Cornell@newgold.com www.newgold.com TSX/NYSE MKT:NGD

Dated: Cotober 27,2020 Spill Reporting Department Manager Envitonmental lanager General Manager



January 8, 2021

Matt Hoffmeister & Jason Tittlemier Senior Environmental Officers Ministry of the Environment, Conservation and Parks 808 Robertson St. Kenora, ON P9N 1X9

Dear Mr. Hoffmeister and Mr. Tittlemier,

#### SUBJECT: NORTH STATION AMBIENT AIR QUALITY EXCEEDANCE OF 24-HOUR TOTAL SUSPENDED PARTICULATE MONITORING LIMITS SAC REFERENCE#: 6851-BWYPC6

During the review of November air quality lab results, it was noted that on November 11<sup>th</sup>, 2020, the total suspended particulates (TSP) concentration at Gallinger Ambient Air Quality Monitoring Station had exceeded Ministry approved limits of 120 ug/m<sup>3</sup>. On November 11, 2020, the TSP concentration at Gallinger Ambient Air Quality Monitoring Station was 158.3 ug/m<sup>3</sup>.

The delay between the date of occurrence and when we became aware of the exceedance, and hence reporting, is due to the wait time for lab results. The following letter report accompanies a copy of the Notification of Exceedance form (NOE) as per ECA #0412-A2LR4V.

Gallinger Road Ambient Air Quality Monitoring Station is located approximately 2 km due east of the East Mine Rock Stockpile on the Rainy River Mine Site. (see Figure 1) Gallinger Road itself passes by the Ambient Air Quality Monitoring Station in a north-south direction at approximately 50 meters east.

TSP samples were collected during a 24-hr period on November 11, 2020 as per Rainy River Project Ambient Air Quality Monitoring Plan, accepted by MECP on November 9th, 2016. During this 24-hour period, predominant wind direction was from the west southwest and some wind from the southeast. (see Figure 2) With these wind directions, it is likely that the source of the dust would be from the East Mine Rock Stockpile, which is situated to the southwest of the air monitoring station and suggests that the source was related to the haul road dust.

New Gold will continue to maintain the haul roads, applying water or calcium chloride under non-freezing conditions. New Gold is exploring other potential mitigation measure to reduce the dust on the haul roads.



Figure 1: Map of EMRS, the Gallinger Station is marked with an orange square.



Figure 2: Windrose for November 11, 2020 at Barron Weather Station

Once you have had the opportunity to review this document, please contact me at (343) 363 4667 with any questions or concerns.

Regards,

M. Wilson

Matthew Wilson Environmental EIT

cc. Sylvie St.Jean (sylvie.st.jean@newgold.com)



November 12, 2020

Matt Hoffmeister Senior Environment Officer, Kenora Area Ministry of the Environment and Climate Change 808 Robertson Street Kenora, ON P9N 1X9 Via email

Dear Mr. Hoffmeister,

#### **RE: EDL1 Monthly Copper Limit Exceedance for October 2020**

At approximately 16:00 on November 5, 2020, the preliminary metals results for discharge samples collected on October 28, 2020 were release by ALS Thunder Bay. As these sample results were the final outstanding metals results for October 2020, the monthly average was calculated for parameters with effluent limits in Tables 1 and 2 of ECA #7004-BC7KQ5 (the ECA). For final discharge point EDL1, the monthly average concentration for the parameter copper (0.0158 mg/L) exceeded the monthly average effluent concentration limit in Table 2 of the ECA (0.014 mg/L). This exceedance was reported to you via telephone on November 5, 2020 at 16:20, followed by notification via email at 16:35. As required by Condition 12(3) of the ECA, this report has been submitted to outline the cause of this non-compliant event and the remedial measures implemented to return to compliance.

#### **Timeline of Events**

#### October 13, 2020

• Discharge for final discharge point EDL1 commenced at approximately 12:20. As the Water Management Pond (WMP) water quality was confirmed to be compliant with all effluent objectives and limits listed in Tables 1 and 2 of the ECA, the EDL1 discharge was direct from the WMP to the Pinewood River. WMP effluent quality results for ECA effluent limits are presented in Table 1.

#### October 14, 2020

- A sample was collected from EDL1 for weekly ECA parameters and acute toxicity.
- Surface water sampling was completed, including SW23 (upstream of EDL1) and SW24 (downstream of EDL1), results for ECA surface water benchmarks are presented in Table 2. The ECA surface water benchmark was exceeded for copper for the month of October.

#### October 20, 2020

• An ad hoc sample was collected for weekly ECA parameters during an Industrial Sewage Works site inspection conducted by yourself and Senior Environment Officer Jason Tittlemier.

#### October 21, 2020

• A sample was collected from EDL1 for weekly ECA parameters.



#### October 28, 2020

• A sample was collected from EDL1 for weekly ECA parameters.

#### October 30, 2020

• Preliminary metals results were reported for the October 14, 2020 weekly sample, the copper result for EDL1 was 0.203 mg/L. As this was not an expected result, a request was submitted to ALS Thunder Bay via email to recheck all October 14, 2020 discharge sample metals values and expedite all October 20 and 21, 2020 discharge sample metals results.

#### November 1, 2020

• The weekly email to agencies mentioned the elevated copper results for a sample collected on October 14, 2020 and informed of the request for re-analysis of metals.

#### November 2, 2020

• The environment manager verbally informed yourself that the elevated copper result was for EDL1.

#### November 3, 2020

- The October 14, 2020 preliminary metals results were confirmed by recheck.
- An email was sent by the environment manager with the preliminary metals results from October 14, followed later by another email relaying that the external laboratory confirmed the October 14 results once we received notice from the external laboratory.
- The preliminary October 20 and 21, 2020 copper results were reported, 0.0141 mg/L and 0.0143 mg/L respectively. A recheck was requested for metals for both dates and a rush request was made for the October 28, 2020 metals results. A request was made for another ALS laboratory to run the October 14, 2020 metals sample to confirm (results pending).

#### November 4, 2020

• A sample was collected from EDL1 for weekly ECA parameters and acute toxicity.

#### November 5, 2020

• At approximately 16:00, the preliminary October 28, 2020 copper results were reported by the external laboratory to be 0.0144 mg/L. The EDL1 monthly copper average was calculated as 0.0158 mg/L for October, and a verbal report was made to yourself by Amanda Jacobs at 16:20. EDL1 effluent quality results for ECA effluent limits are presented in Table 3.

#### **Timeline of Remedial Actions and Monitoring**

#### November 4, 2020

- As the October 14, 2020 EDL1 copper result was confirmed, the decision was made to discontinue direct discharge from the WMP via EDL1 after the weekly sample was collected to ensure any effect to the environment was documented.
- The EDL1 sample collected for weekly ECA parameters included acute toxicity, which was originally scheduled for November 11, 2020 four weeks after the previous acute toxicity sample.



#### November 5, 2020

- Direct discharge from the WMP to the Pinewood via EDL1 ceased at 10:35. EDL1 Discharge resumed at 12:35 via BCR2 and the Outflow Basin. Details of the RRM discharge configuration are included as Figure 1.
- A sample was collected from EDL1 for thrice weekly ECA parameters and total metals after the WMP direct discharge to the Pinewood River stopped.

#### November 6-9, 2020

• A sample was collected from EDL1 for thrice weekly ECA parameters and total metals each day

#### November 10, 2020

Surface water sampling was completed, including SW23 (upstream of EDL1) and SW24 (downstream
of EDL1), results are pending however it is not anticipated that the copper ECA benchmark will be
exceeded at SW24 for a second month based on the discontinuation of direct discharge from the
WMP to the Pinewood River.

#### November 11, 2020

• A sample was collected for EDL1 for weekly ECA parameters.

External laboratory results are pending for November 4 and November 11, 2020 weekly samples however internal laboratory analysis for copper has shown that copper concentration has dropped below 0.010 mg/L for the EDL1 discharge. Going forward, the EDL1 copper values should mirror EDL2 discharge copper values. The October EDL2 monthly average for copper was 0.0023mg/L. With regards to the November 4 acute toxicity sample, there were no mortalities or immobility reported for *Daphnia magna*, and at the time of this report the Rainbow Trout analysis was not yet complete however had no mortalities or stressed fish observed.

The ECA surface water benchmark for copper was exceeded by 0.0007 mg/L for the October 14, 2020 SW24 sample. As the direct discharge from the WMP to EDL1 was ceased on the morning of November 5, 2020, it is not anticipated that the ECA surface water benchmark for copper will be exceeded at SW24 for the November 11, 2020 sample as we believe the remedial actions taken to return to compliance have been successful.

The cause of this non-compliant event is believed to be a pycnocline layer present in the WMP, which before discharge commenced contained approximately 4.7Mm<sup>3</sup>. The WMP monitoring samples are believed to have been collected from the mixed layer of the WMP, which may explain the compliant copper results that were obtained over the month(s) preceding the commencement of and during discharge directly from the WMP. It is believed that the elevation of the pump intake in the WMP pumphouse used for EDL1 discharge may have been drawing from the pycnocline or potentially a deeper layer that has different water quality due to a density gradient.

A Van Dorn sampler for sampling at depth has been ordered to confirm the presence or absence of layers of varying water quality in the WMP. This sampling will be undertaken this winter if ice conditions allow, or next spring when the WMP is ice free.



Once you have had the opportunity to review this document, please contact myself or Sylvie St. Jean with any questions or concerns.

Regards,

amanda Jav

Environmental Specialist, Water

New Gold Inc. Rainy River Mine 1361 Roen Road Chapple, Ontario, Canada POW 1A0 T: (807) 482-0900 ext 8076



WMP	ECA Effluent Limits		10/28/2020	10/21/2020	10/13/2020	10/7/2020	
							Monthly
Data Point	Daily	Monthly	VVIVIF	VVIVIF	VVIVIF	VVIVIF	Average
Ammonia Un-ionized (as N) (mg/L)	0.08	0.04	0.001	0.001	0.001	0.001	0.001
Cyanide, Free (mg/L)	0.02	0.010	0.0001	0.0005	0.0005	0.0009	0.0005
Cyanide, Total (mg/L)	0.1	0.05	0.0002	0.0008	0.0016	0.0006	0.0008
Field pH	6.0-9.5	6.0-9.5	8.02	7.86	8.13	8.10	8.03
Phosphorus(P)-Nutrient (mg/L)		0.1	IP	0.0075	0.008	0.008	0.0078
Total Suspended Solids (mg/L)	30	15	2.50	1.50	2.00	1.00	1.75
Arsenic (As)-Total (mg/L)	0.034	0.017	0.00237	0.00219	0.00229	0.00231	0.00229
Copper (Cu)-Total(mg/L)	0.028	0.014	0.0139	0.0133	0.0129	0.0128	0.01323
Lead (Pb)-Total(mg/L)	0.03	0.015	0.00005	0.00005	0.00003	0.00005	0.00005
Nickel (Ni)-Total(mg/L)	0.094	0.047	0.00138	0.00124	0.00126	0.00122	0.0013
Zinc (Zn)-Total(mg/L)	0.348	0.174	0.0025	0.003	0.003	0.0005	0.0023

#### Table 1: October WMP Effluent Quality Results for ECA Limit Parameters

IP = In process

#### Table 2: October Surface Water Results for SW23 and SW24 for ECA Benchmarks

			Field			Ammonia,	Arsenic,	Copper,			Nickel,	
	Parameter	Field pH	Temperature	Conductivity	Hardness	Unionized	Total	Total	Cyanide, Free	Lead, Total	Total	Zinc, Total
Receiver	Unit	pH units	°C	μS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ECA Benchmarks						0.02	0.01	0.008	0.005	0.008	0.025	0.09
Pinewood	SW23	7.28	7.69	248	128	<0.001	0.0012	0.0011	0.0008	0.00022	0.0020	0.0010
River	SW24	7.28	7.23	801	261	<0.001	0.0021	0.0087	< 0.0001	0.00024	0.0018	0.0015

Table 3: October EDL1 Effluent Quality Results for ECA Limit Parameters

EDL1 Discharge	ECA Effluent Limits		10/28/2020	10/21/2020	10/20/2020	10/14/2020	
			EDL1	EDL1	EDL1	EDL1	Monthly
Data Point	Dally	iviontniy					Average
Ammonia Un-ionized (as N) (mg/L)	0.08	0.04		0.001	0.001	0.016	0.0060
Cyanide Free (mg/L)	0.02	0.01	0.0001	0.0001	0.0001	0.0027	0.0019
Cyanide Total (mg/L)	0.1	0.05	0.0002	0.0010	0.0008	0.0038	0.003
Field pH	6.0-9.5	6.0-9.5	7.77	7.98	8.25	8.48	8.18
Phosphorus(P)-Nutrient (mg/L)		0.1	IP	0.008	0.008	0.009	0.008
Total Suspended Solids (mg/L)	30	15	1.50	0.50	2.00	2.00	1.13
Arsenic (As)-Total(mg/L)	0.034	0.017	0.0023	0.0023	0.0023	0.0026	0.0024
Copper (Cu)-Total (mg/L)	0.028	0.014	0.0144	0.0143	0.0141	0.0203	0.0158
Lead (Pb)-Total(mg/L)	0.03	0.015	0.000030	0.000040	0.000030	0.000040	0.000035
Nickel (Ni)-Total(mg/L)	0.094	0.047	0.0013	0.0013	0.0013	0.0014	0.0013
Zinc (Zn)-Total(mg/L)	0.348	0.174	0.0020	0.0010	0.0005	0.0030	0.0016

IP = In process

Figure 1: Rainy River Mine EDL1 and EDL2 Discharge Configuration and Water Distribution Schematic



2020-12-15

Matt Hoffmeister Senior Environment Officer, Kenora Area Ministry of the Environment and Climate Change 808 Robertson Street Kenora, ON P9N 1X9 Via email; Matt.Hoffmeister@ontario.ca

Dear Mr. Hoffmeister,

#### RE: Follow up Investigation to BCR2 Overfill Event Findings and Solution – SAC Reference #6165-BVMSLI

A follow up investigation into what caused BCR2 to overfill was carried out and the results of that investigation are as follows; It appears there was erratic signal coming from the level probe in the transfer well between BCR2 and the Outflow Basin (OB) on November 13. An interlock bypass was entered into the Direct Control System (DCS) to allow flow to continue from the Water Management Pond (WMP). Unfortunately, the bypass remained in play the day communication was lost, and this resulted in the spill.

Had the interlock bypass not been in play this would not have occurred. To prevent recurrence of this type of event an additional level probe will be installed, should one probe fail and require a bypass the second will still shut the system down in the event of a high-level reading. BCR2 is currently empty and will not be in use again until spring and a second level probe will be put in place before that time.

Once you have had the opportunity to review this document, please contact the undersigned at (807) 271-3190 with any questions or concerns or Sylvie St-Jean at (807) 707-3497.

Regards,

Watter Bus of

Environmental Specialist -Wildlife

New Gold Inc. Rainy River Mine 5967 Highway 11/71, P.O. Box 5, Emo Ontario, Canada, POW 1E0 M +1.807.271.3190

Dated:2020-12-15
Spill Reporting Department Manager
Envitonmental Manager
Awill .?
General Manager

2020-11-30

Matt Hoffmeister Senior Environment Officer, Kenora Area Ministry of the Environment, Conservation and Parks 808 Robertson Street Kenora, ON P9N 1X9 Via email; Matt.Hoffmeister@ontario.ca

Dear Mr. Hoffmeister,

#### RE: BCR2 Overtopping Incident - SAC Reference #6165-BVMSLI

At 1600 on November 20th, 2020, it was noticed that BCR2 was overtopping as the transfer pump to the Outflow Basin had stopped even if it was shown as active on the Mill digital control system. It was found that the pump communication box had lost power. Power was restored, the transfer pump was restarted and the water level in BCR2 was shortly returned to the normal operating level. Due to a procedural error, New Gold Environment was unaware of this incident until 0718 on November 23<sup>rd</sup>, 2020, at which time an investigation was initiated.



Photo 1: Incident location (red dot).

An estimated 1276 m<sup>3</sup> of mine effluent is assumed to have spilled during this incident. This volume is an estimate as at the time BCR2 was in a recirculation loop with the Outflow Basin (OB) and the Water Management Pond (WMP) to keep the lines from freezing. The input to BCR2 was 319 m<sup>3</sup> per hour from WMP at the time. It is assumed the pump to the OB failed after 1200 the same day, as that was the last time it was visually inspected before the overtopping was noticed at 16:00. The estimated volume assumes four hours of pumping at 319 m<sup>3</sup> per hour for a total of 1276 m<sup>3</sup>. This incident occurred 120 meters away from fish bearing water (West Creek Diversion). An impact sample could not be collected due to lack of water in the receiving environment at the time

New Gold Inc., Rainy River Mine 5967 Highway 11/71, P.O. Box 5 Emo, ON POW 1E0



that New Gold Environment was made aware of the incident. Based on topography, it is suspected the effluent entered remnant Loslo Creek which is fish bearing approximately 1300 meters downstream. A sample of BCR2 effluent was collected and sent to ALS Laboratory Thunder Bay for analysis of monthly discharge parameters. The available preliminary water quality results at the time of reporting were within ECA 7004-BC7KQ5 effluent discharge limits for EDL1/EDL2. It should be noted that BCR2 is the last treatment structure in the water treatment train before mine effluent is discharged to environment.

The water treatment train is configured with safeguards to protect against this type of incident. Under normal operating conditions, a pump failure would shut down the entire system. The transfer pump between BCR2 and the OB that lost communication does have this safeguard however, it was in bypass mode at the time of the incident. An investigation is underway to determine why the safeguard was bypassed and what corrective actions are required. A follow up report with the findings of the investigation will be submitted no later than December 18<sup>th</sup>, 2020.

Once you have the opportunity to review this report, please contact the undersigned at (807) 271-3190 or Sylvie St-Jean at (807) 707-3497 with any questions or concerns.

Regards,

Watter Bus of

Environmental Specialist - Wildlife

New Gold Inc. Rainy River Mine 5967 Highway 11/71, P.O. Box 5, Emo Ontario, Canada, POW 1E0 M +1.807.271.3190

Dated: No	ov 30, 2020	
Spill Repo	orting Department Manager	
Sau	: Lonu	
Enviconm	iental Mahager	
General N	Manager	



2020-12-01

Matt Hoffmeister Senior Environment Officer, Kenora Area Ministry of the Environment, Conservation and Parks 808 Robertson Street Kenora, ON P9N 1X9 Via email; Matt.Hoffmeister@ontario.ca

Dear Mr. Hoffmeister,

#### RE: UPDATED Outflow Basin Pipeline Drain Point Incident – SAC Reference #2344-BVMSVS

At 0945 on November 23rd, the New Gold Environment Department was contacted to attend a possible reportable incident concerning a failed vent on the Outflow Basin (OB) pipeline to Water Management Pond. Upon initial assessment it appeared any effluent lost would report to the OB and repair of the vent was started by depressurizing the pipeline and thawing the vent.



Photo 1: OB pipeline drain point and OB pictured (vent being heated under orange trap).

The assumption at the time was that any effluent leaving either the failed vent or the pipeline drain point would report to the OB. However, after some time had passed it became evident that as the ground thawed the effluent no longer reported to the OB but penetrated the ground.





Photo 2: Ice/snow thawed and eroded from drain point into OB



Photo 3: effluent seeping into impact site not reporting to OB

### newg to d Rainy River



Photo 4: Evidence of effluent forming ice over liner but no flowing effluent.

Once this condition was noted, draining of the line was stopped until a line could be installed that ensured the water reported to the OB. A sample of BCR2 water had been taken at 0940 in relation to another incident that same day and sent to ALS Laboratories to be run for all monthly discharge criteria in Thunder Bay. The available preliminary water quality results at the time of reporting were within ECA 7004-BC7KQ5 effluent discharge limits for EDL1/EDL2. It should be noted that BCR2 is the last structure in the water treatment train where any chemical or biological treatment occurs before the treated effluent is discharged to environment. BCR2 is pumped into the OB which only acts as the final internal compliance point..

A visual estimate of the volume of water lost was made based on assumptions of line pressures, diameter of drain point and duration of event. This estimate is 5 m<sup>3</sup>. The high pressure of the water draining from the drain point and splash back in a tight space rendered a bucket test ineffective and no other method of measurement was available.

Once you have the opportunity to review this report, please contact the undersigned at (807) 271-3190 or Sylvie St-Jean at (807) 707-3497 with any questions or concerns.

Regards,

Watter Bus of

Environmental Specialist - Wildlife

Dated: 2020-12-01
C3
Spill Reporting Department Manager
CIF CM On Behalf of Sylvie St. Jean
Environmental Manager
June
General Manager

### NEW GOLD RAINY RIVER MINE APPENDIX K.2 REGULATORY REPORTING TABLE



#### 2020 Regulatory Reportable Table

Incident	New Gold or Contractor	Spill Origin	Date	Product Spilled	Impact	Quantity	Description & Cause	Remediation & Disposal	AGENCY	Transmittal #
Spill	New Gold or Contractor	South Ringroad Pipeline	4/9/2020	Effluent from Sump 4	Land	75,000 L	Pipeline connecting Sump 4 with TMA ruptured during realignment.	Pumped effluent which pooled on the south side of the pipeline road to Sump 1. Repaired gouge in pipeline. After flow was stopped, no effluent was observed entering the Pinewood River.	MECP	MECP-IFI-0113 Rev. A
Exceedance	New Gold	Operations	5/12/2020	24-hr Total Suspended Particulates and iron	Air	N/A	February 27, 2020, the total suspended particulates (TSP) concentration and iron concentrations at Gallinger Road and Tait road Ambient Air Quality Monitoring Station had exceeded Ministry approved limits of 120 ug/m3 and 4 ug/m3 respectively. The delay between the date of occurrence and reporting, is due to the wait time for lab results and staffing issues within the last few months.	New Gold will continue to maintain Gallinger Road by applying water or calcium chloride under non-freezing conditions. New Gold will also continue to suggest that no New Gold traffic be restricted on Gallinger and along Hwy 600 near Tait Road. Regular maintenance of both ambient air quality monitoring stations will be implemented.	MECP	MECP-IFI-0031 Rev G
Spill	New Gold	Discharge Pipeline near Hwy 600 alignment	5/13/2020	Treated effluent	Land	5896 L	A passerby noticed the leak from the discharge pipeline located at 419552.49E and 5407824.45N on Saturday morning. New Gold Environment was informed Wednesday morning at approximately 9:00am. Total volume leaked has been estimated at 5,896 litres based on the Saturday morning sighting. The rate of the leak and the spray resulting from the line was depressurizing to when it was stopped.	The leak was stopped by 11:00 am when the presssure gauge was replaced. SAC and ECCC were called to report the spill of effluent outside of regulated compliance discharge point.	MECP and ECCC.	MECP-IFI-0117 Rev A ECCC- IFI-0006 Rev B
Regulatory Non- Compliance	New Gold	Cell # 3 Dam	6/3/2020	Tailings Slurry Elevation	Land	N/A	Tailings Deposition Exceedance was 0.08 masl with a maximum of 0.12 masl at one location.	Tailings deposition halted immediately and the tailings were rerouted.	MECP	MECP-IFI-0118 Rev A
Spill	New Gold	WMP Reclaim Line	6/9/2020	Treated effluent	Land	152.5 m <sup>3</sup>	Valve leaking on WMP reclaim line released mine effluent	Repaired valve.	MECP and ECCC	MECP -IFI-0091 Rev C and ECCC-IFI-0011
Exceedance	New Gold	Marr Creek Diversion	6/9/2020	Total Suspended Solids	Land	N/A	Total suspended solids readings at the confluence of Marr Creek Diversion and West Creek Diversion exceeded regulatory limits.	Pumped Marr Diversion end sump to cease turbid water flow.	MECP	MECP-IFI-0092 Rev B/B-1
Spill	New Gold	Sediment Pond # 1	7/16/2020	Contact Water	Water	162 m <sup>3</sup>	Valve for permitted discharge pipeline infrastructure was reported leaking.	Valve removed and replaced with hardline connection.	MECP	MECP-IFI-0120 Rev A
Spill	New Gold	Water Management Pond Area	10/8/2020	Treated Water	Land	135 m <sup>3</sup>	Gasket blew on water line feeding the mill.	Pump was stopped and valves isolated to minimize leak. Gasket replaced.	MECP	MECP -IFI-0122 Rev A
Exceedance	New Gold	Concrete Plant Laydown	10/12/2020	Total Suspended Solids	Water	N/A	Total suspended solids readings at the West Creek Diversion exceeded regulatory limits. The source was found to be the Concrete Plant Laydown where excavation is occurring for remediation of the site.	Silt fence, erosion blanket and coir logs were installed to stop the water flow until remediation is complete.	MECP	MECP-IFI-0123 Rev A
spill	New Gold	EDL 2 discharge line	10/15/2020	Treated effluent	Land	<1 m <sup>3</sup>	A hole was found during the first attempt to discharge	Line was repaired	ECCC	MECP-IFI-0124
Exceedance	New Gold	EDL1	11/5/2020	Copper Exceedance	Water	N/A	October monthly average concentration for copper exceeded Environmental Compliance Approval effluent limit by 0.0018 mg/L, no daily limits exceeded. Suspected a concentration of copper where discharge pump inlet located in Water Management Pond.	Direct discharge from Water Management Pond to Pinewood River ceased, discharge water directed through water treatment train to treat copper before discharge.	MECP	MECP-IFI-0125
Exceedance	New Gold	North Air Monitoring Station	11/11/2020	Total Suspended Particulates Exceedance	Air	N/A	Gallinger Ambient Air Quality Monitoring Station TSP concentration was 158.3 ug/m3.The Ministry approved limit is 120 ug/m3.	With the wind directions, it is likely that the source of the dust would be from the East Mine Rock Stockpile, which is situated to the southwest of the air monitoring station and suggests that the source was related to the haul road dust. New Gold will continue to maintain the haul roads, applying water or calcium chloride under non-freezing conditions. New Gold is exploring other potential mitigation measure to reduce the dust on the haul roads.	MECP	
Spill	New Gold	BCR #2	11/20/2020	Treated Water	Water	1276 m <sup>3</sup>	BCR #2 transfer pump stopped pumping. It was discovered that the communication cabinet lost power.	Electrician restored power and pump restarted.	MECP	MECP-IFI-0126
Spill	New Gold	BCR #2	11/23/2020	Treated Water	Land	5 m <sup>3</sup>	Vacuum break on the outfow basin pump to the Water Management Pond was leaking.	Contacted control room and pump shutdown. Vacuum break repaired.	MECP	MECP-IFI-0127