

EXECUTIVE SUMMARY (PLAIN LANGUAGE)

Section 41(i)(v) of the Environmental Assessment Certificate (EAC) requires a plain-language executive summary that summarizes the data, results, and conclusions of the Country Foods Monitoring Plan (CFMP) be provided. Rather than providing a fully separate report, this Executive Summary section provides the required plain language summary of the 2023-2024 CFMP sampling program, results, and conclusions.

CONTEXT AND SITE ACTIVITIES FROM APRIL 2023 TO MARCH 2024

Section 41 of the EAC for the Blackwater Mine (the Mine) requires a CFMP, including the sampling of air, surface water, fish tissue, soil, plant and berry tissue, and small mammals. The purpose of the CFMP is to:

- determine the effects of the Mine on the aquatic and terrestrial environments with respect to metal concentrations in country foods; and
- to confirm the predictions made in the human health risk assessment (HHRA) for the optimized Project, submitted as part of the provincial Joint *Mines Act/Environmental Management Act* permits application. The HHRA predicts potential changes due to the Project to environmental media (i.e., water, soil, air) and country foods (i.e., plants and berries, fish, and wildlife) that people may come in contact with or consume and evaluates whether risks are acceptable to human health.

If unexpected effects of the Project are found (i.e., risks are higher than predicted by the HHRA and may become unacceptable), the CFMP includes an adaptive management framework to identify the need for additional mitigation measures to reduce or eliminate mine-related effects.

The Mine initiated limited Early Works and other construction activities at the mine site in October 2022, which continued into 2023 and 2024. Construction activities included clearing, grubbing, ditching, site levelling at the Plant Site and Operation camp locations, installation of sediment and erosion controls, and construction of ditches, diversions, and a sediment control pond. Six clear span bridges within the mine site were also replaced in 2023 with suitable construction equipment rated structures. The Plant site continued to be constructed and site clearing was completed for Open Pit initial development and diversion systems in Q1 of 2024.

BW Gold received an amended Environmental Management Act (EMA) Permit PE-110652 and PE-110650 in May 2023, authorizing discharge of effluent to surface water and groundwater from the Blackwater mine site and discharge of air contaminants to the atmosphere from the mine, respectively. In 2023, there were no effluent discharges from the Mine to surface water, however, a permitted discharge to ground occurred to the Rapid Infiltration Basin (RIB) during the 2023 monitoring period. In Q1 of 2024, the Mine started discharging from the Tailings Storage Facility Stage 1 Sediment Control Pond to Davidson Creek.

BW Gold has a permitted diesel-fired putrescible waste incinerator (PE-106530), which is located near the exploration camp. The incinerator had a trial run in 2023 to ensure that it is in good working condition. However, in 2023 and Q1 of 2024 the incinerator was not used as a part of the

Waste Management Plan at the Mine. No point source emissions to air occurred in 2023-2024 as construction of the mine site progressed.

Activities in 2023-2024 that could have resulted in emissions of fugitive dust (non-point source emissions) to air were the following:

- Land clearing and earthworks for the camp, plant site, and initial development of the open pit;
- Construction of plant site;
- Construction and use of unpaved access and mine roads;
- Material handling/re-handling at aggregate and topsoil stockpiles;
- Parking lot and road grading;
- Construction of water management structures (e.g., diversion channels);
- Aggregate extraction from borrow pits;
- Borrow and aggregate crushing and screening; and
- Concrete Batch Plants.

In July 2023, a lightning-caused wildfire (Davidson Creek wildfire) started in areas adjacent to the mine site, which affected all field sampling programs including the CFMP. Although access to the mine site was allowed again in late July, the wildfire affected field sampling programs under the CFMP by preventing safe access to some sites (e.g., due to presence of danger trees) or burning of plants and berries that would normally be sampled at a given site. Due to access limitations, field sampling programs were carried out later in the field season (e.g., late August into September) in 2023 compared to previous years.

SAMPLING UNDER THE CFMP IN 2023-2024

The CFMP intends to monitor potential impacts of Project activities on environmental media (water, air, soil) and tissues of plants, berries, fish, and wildlife that people may come in contact with. Sampling focuses on areas potentially affected by the Project (impact sites) and control sites. Samples are analyzed for metals that were identified as contaminants of potential concern in the HHRA for the optimized project. A summary of these analyses under the CFMP are presented for 2023-2024 as follows:

- Air quality: dustfall samples (as a surrogate for metals associated with inhalable particulate matter in air) were collected at four sites close to the mine site (near-field sites) and four control sites away from the mine site. These sites are also sampling sites for soil, plants, and berries.
- Soil: soil samples were collected at a total of 42 sites (36 regular sampling sites and 6 new sampling sites). Three sites that are normally part of the CFMP sampling program could not be sampled in 2023 due to the fire that occurred in July 2023.
- Plants and berries: a total of 40 willow samples, 26 sedge samples, and 14 Labrador tea samples were collected, while only 2 berry samples were collected (berries were not available for sampling due to a hot, dry summer). Three sites that are normally part of the CFMP sampling program could not be sampled in 2023 due to the fire that occurred in July 2023. Plant and berry samples were collected at the same sites and at the same time as the soil samples.

- **Small mammals:** a total of 32 deer mice and 25 red-backed voles were sampled at the same sites where dustfall samples were collected (4 sites near the mine site, 4 control sites), with liver and carcass (rest of the body minus the liver) sent to the lab for tissue metal analysis.
- **Surface water:** a total of 101 water samples were collected at control sites (locations either upstream of the mine site or located in an adjacent watershed, outside of the influence of the mine site) and 246 water samples were collected at impact site (locations downstream or downgradient of the mine site).
- **Fish tissue:** a total of 116 fish tissue samples were collected, with 59 sampled from potential impact sites and 57 sampled from control sites.

RESULTS OF CFMP SAMPLING IN 2023-2024

Results of sampling in 2023-2024 are summarized for metals in air (dustfall), soil, plants, berries, surface water, and fish tissue in the following paragraphs, in the context of the adaptive management framework for the CFMP.

The adaptive management framework in the CFMP identifies triggers (called numeric performance metrics, NPMs) to define no, low, medium, and high action levels based on comparison of the sampling results with the triggers defined for metals in air, soil, plants and berries, surface water, and fish tissue. Each action level has different “management responses” that identify actions that are needed to identify and address causes of unexpected Mine-related changes. If the trigger levels are not exceeded, the action level is defined as “none” and no changes to mitigation are needed as mitigation measures are working in the way they were expected to perform. There are three types of triggers (NPMs):

- **Guideline NPMs:** guidelines defined by regulatory agencies (such as Health Canada or BC Ministry of Environment and Climate Change Strategy) that are protective of human health for air, soil, plants, berries, surface water, and fish.
- **Baseline NPMs:** concentrations defined based on baseline datasets for air, soil, plants, berries, surface water, and fish.
- **Predicted NPMs:** concentrations defined based on predictive modelling for the Mine for air, soil, plants, berries, surface water, and fish.

For metals in air (based on dustfall metal results), average concentrations of all parameters in 2023 were lower than the air quality Guideline NPMs. However, manganese and lead concentrations were found to be higher than the Baseline and Predicted NPMs. Statistical analysis found that changes in manganese concentrations were significantly higher at control sites (away from the mine site) than at impact sites near the mine site and changes in lead concentrations were not significantly different. Based on results of 2023 monitoring, the trigger level in the adaptive management framework for air quality is “Low”. However, no specific action is recommended based on 2023 dustfall monitoring results because concentrations higher than the Predicted NPMs are likely an artefact of the methods used to estimate metal concentrations in predictive modelling for air and because changes in concentration of manganese was higher at control sites, not impact sites, which is not a Mine effect.

For soil, average concentrations of metals were lower than Baseline, Predicted, and Guideline NPMs for soil. Similarly for plants, average concentrations of metals were lower than Baseline, Predicted, and Guideline NPMs for plants.

For berries, interpretation of the results is difficult as only two samples were obtained in 2023 because there were not many berries available for sampling (hot, dry summer). Other than arsenic in one berry sample, all metals were below the Baseline, Predicted, and Guideline NPMs for berries. The arsenic concentration in one huckleberry sample that was higher than the NPMs appears to be an outlier (an unusual result), as it is substantially higher than any arsenic concentration measured previously and significant changes in arsenic concentrations were not found in air (dustfall), soil, or plants. Thus, based on 2023 monitoring results, the trigger level in the adaptive management framework for soil, plants, and berries is "None".

Average concentrations of metals in surface water were below Guideline NPMs for water quality. Except for aluminum, copper, and iron, average concentrations of metals were below the Baseline and Predicted NPMs. Based on statistical analysis, the change in aluminum and iron concentrations compared to control sites was significant, but changes in the mean concentration were likely driven by a few samples with high concentrations in Davidson Creek and Creek 661. It is unlikely that these infrequent high concentrations are indicative of Mine-related changes to water quality because they occurred in Creek 661, which did not receive Mine-related discharge or seepage during the monitoring period, and because higher concentrations in Davidson Creek started occurring prior to commencement of discharge from TSF-SCP-D in January 2024. Assignment to a trigger level for water quality in the adaptive management was not completed because it is based on monitoring results from two consecutive years of sampling that indicate an exceedance of the Baseline or Predicted NPMs. No immediate action is recommended based on results of 2023-2024 monitoring in surface water because:

- Aluminum and iron were the only parameter in surface water with average concentrations higher than Baseline and Predicted WQ NPMs in 2023-2024;
- Higher concentrations in aluminum and iron were infrequent and unlikely related to Mine-related discharges to Davidson Creek; and
- Average aluminum and iron concentrations measured in surface water in 2023-2024 are 15 and 24 times lower than the drinking water quality guideline, respectively, and therefore not of concern to human health.

For fish tissue, average concentrations were lower than Baseline, Predicted, and CF Guideline NPMs for fish tissue. Thus, based on 2023 monitoring results, the trigger level in the adaptive management framework for fish tissue is "None".

Sampling of small mammals in 2023 was completed to provide baseline or pre-Operations phase data on tissue concentrations of COPCs, as a foundation for future monitoring. There are no human health-based NPMs based on rodent tissue sampling.

CONCLUSION

Based on the results of the 2023-2024 monitoring programs under the CFMP, no adjustments to current mitigation measures are required at this time to protect human health. The results of the 2023-2024 monitoring program are in line with what would be expected, given the Early Works and other construction activities in 2023-2024.

Sampling under the CFMP or linked monitoring programs is proposed for April 2024 to March 2025, including the following:

- Air quality for criteria air contaminants, as described in the Air Quality and Fugitive Dust Management Plan;
- Fish tissue sampling, as described in the Aquatic Effects Monitoring Plan; and
- Surface water quality, as described in the Aquatic Effects Monitoring Plan.