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Report: Socio-Community and Economic Effects Management Plan 2024 Annual Report

Overview: This report summarizes actions completed in 2024 for management plans listed under the Socio-Community and Economic Effects Management Plan (SCEEMP) for Elk Valley Resources' Elkview Operations. The report includes information on monitoring, feedback, and updates or changes to management plans, and covers noise, visual quality, reclamation and closure, fugitive dust, blasting, and vibration, and socio-economic effects.

This report was prepared by EVR to meet annual reporting requirements and supports continued collaboration with SCEEAC and the District of Sparwood.

For More Information

If you have questions regarding this report, please:

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Future studies will be made available at glencore.ca/en/evr/sustainability

Socio-Community and Economic Effects Management Plan

2024 Annual Report

April 30, 2025

A GLENCORE COMPANY

Signatures

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Report History

Version	Date	Edited by	Comments
1.0	February 28, 2025	Refer to prepared by above	Draft report submitted to the SCEEAC
2.0	April 3, 2025	Refer to prepared by above	Final report submitted to the SCEEAC

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1.0 Introduction

Elkview Operations (EVO) has committed to annual summary reports on the following management plans as part of the Socio-Community and Economic Effects Management Plan (SCEEMP):

- Noise;
- Blasting and Vibration;
- Air Quality and Fugitive Dust;
- Five year Mine and Reclamation;
- Visual Quality; and
- Socio-community, and Economic Effects.

These management plans outline actions that EVO must take to mitigate Baldy Ridge Extension Project (BRE) impacts. Below is a summary of the status of actions related to these management plans from the prior calendar year, any changes to planned actions, and feedback received from communities about topics related to these management plans.

1.1 Project Status

In 2024, mining operations were ongoing at Baldy Ridge 2 (BR2), Baldy Ridge 6 (BR6), Baldy Ridge 7 (BR7), and Natal Phase 2 (NP2) pits. The BR2 pit is nearing completion, with an anticipated completion date in Q2 2025. The mined rock extracted from the Baldy pits was deposited in the Baldy Ridge Backfill, Natal Phase 1 Backfill, and the Erickson Mine Rock Placement area. Mining activities at NP2 continued, hauling waste materials to the Natal Phase 1 Backfill and the Erickson Mine Rock Placement area. Reclamation activities on the Cedar North Spoil continued in 2024, including contouring, site preparation. In addition, EVO completed a first of its kind high-elevation grassland soil salvage and direct placement trial, with soil salvaged from the BR4 area and placed on the Cedar North landform. Construction activity for the new Administrative and Maintenance Complex (AMC), which is located mid-mountain and includes administrative offices, maintenance facilities, the warehouse and laydown areas, was largely completed in 2024. Before the end of 2024, a significant milestone for Elkview was reached and all EVO employees who were previously working out of the Harmer Maintenance Complex moved and began working out of the new AMC. Harmer Maintenance Complex demolition was initiated in late 2024, with crews mobilizing and beginning demolition of buildings, and waste materials stockpiled and segregated prior to disposal. Reclamation activities continued at the AMC in 2024, with soil placement completed around the Mannix Pad, and woody debris placed on the east slope. Planting (trees, shrubs, and grasses) was completed on the lower slope of the Mannix Pad area, which is visible from Sparwood.

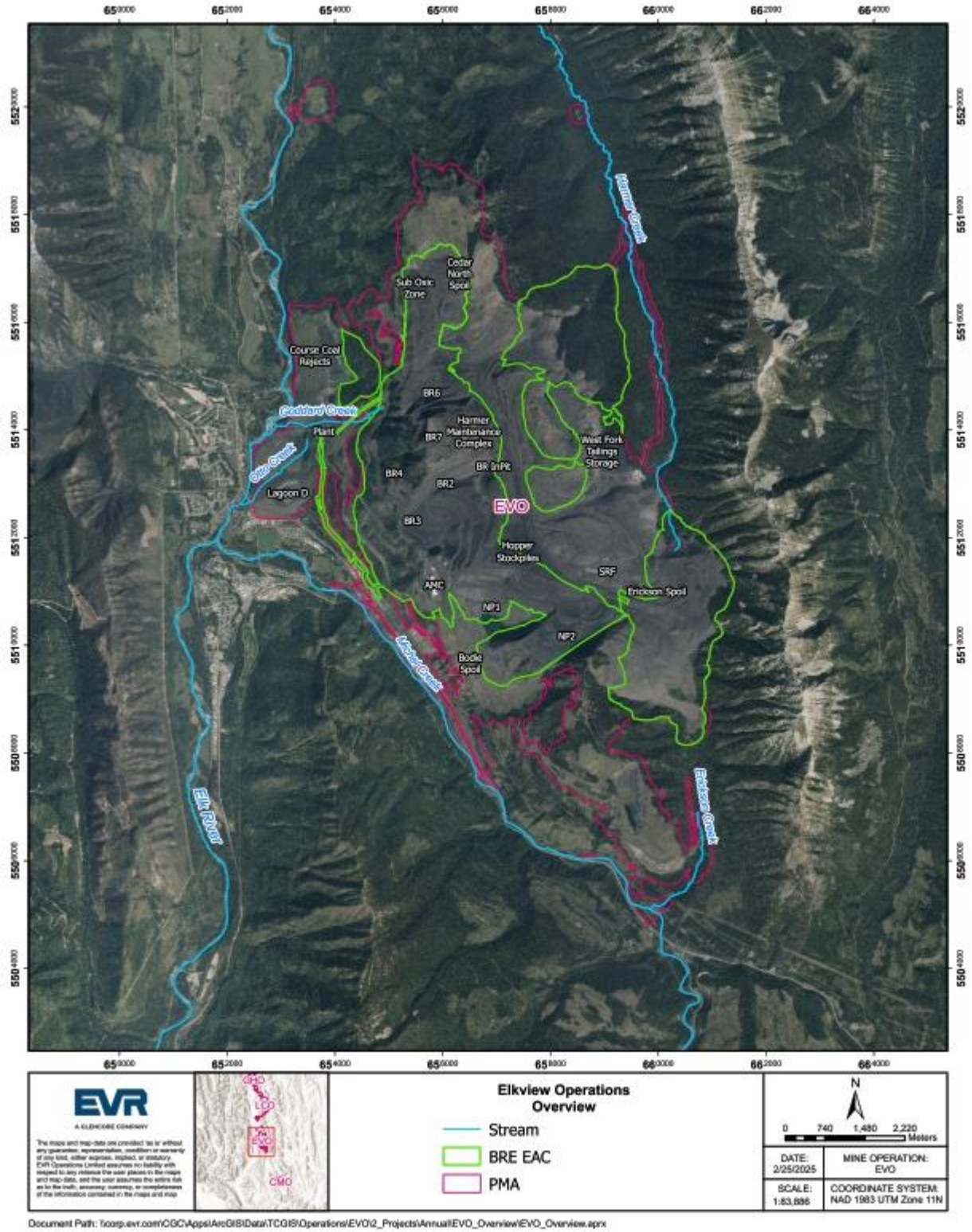

Figure 1-1 Elkview overview

1.2 Feedback

Feedback is defined as any comment, inquiry or complaint received from Communities of Interest (COI) about Elk Valley Resources' (EVR's) operations and associated activities outside of regulatory approvals processes. Feedback may include questions, ideas, concerns, suggestions, complaints, or compliments. Feedback from the community helps EVR understand its impacts on the community, can provide information on whether mitigation measures are considered to be working, and if new issues are emerging.

The feedback mechanism is available to all COIs in the area of influence of EVR's operations. It applies to EVR's operations activities and all personnel, including employees and contractors. The Feedback mechanism defines how EVR will implement its feedback mechanism to meet Glencore's and international standards, identify risks early, monitor risks, be transparent and consistent, minimize conflicts and legal disputes, and build and maintain positive social performance.

EVR's Feedback Mechanism Process is reviewed every two years. It was last updated in November 2023 following recommendations by community members involved with the Socio-Community and Economic Effects Advisory Committee (SCEEAC) and the Communities of Interest Advisory Initiative (COIAI). The next planned update will be published in 2026 within the 2025 SCEEMP annual report.

2.0 Noise

2.1 Noise Monitoring

Daily activities at EVO include mining, processing, maintenance, coal storage and loading coal onto trains. These activities generate sound that may be audible beyond the mine boundary and could become more noticeable as ongoing mining activity progressively moves closer to Sparwood residences and infrastructure. The scope of the Noise Management Plan (NMP) includes all mining (and construction) activities that have the potential to generate noise, except for blasting (refer to Section 3 for information on the Blasting and Vibration Management Plan). Specifically, the NMP focuses on the following mine-related aspects, including but not limited to:

- Site preparation and site access;
- Operation of heavy equipment throughout the operation (pits, haul roads, waste rock spoils, hopper, raw coal conveyance and breaker), including active mining areas and areas undergoing reclamation;
- Process plant activities; and
- Building and facility construction and operation activities.

The NMP includes receptor locations used for monitoring (Table 2-1, Figure 2-1), as well as nighttime and daytime Permissible Sound Levels (PSLs) for the receptor locations. The PSLs for each receptor location are based on methodology described in the provincial Oil and Gas Commission guidance (as mining specific noise management guidance is not available). In conjunction with the NMP, a noise model has been developed (last updated in 2023), the model is used to:

- Update and/or confirm Permissible Sound Levels;

- Confirm that modelled planned mining activities at EVO will not exceed Permissible Sound Levels within the next five years; and
- Update and/or confirm receptor locations for future noise modelling.

Table 2-1 Noise level receptor locations

Receptor Location	Daytime (07:00 – 22:00) PSL	Nighttime (22:00 – 7:00) PSL
R01 – Michel Creek Road[1]	63 dBA L_{EQ}	53 dBA L_{EQ}
R01_A – 2022 Alternate Michel Creek Road Location	63 dBA L_{EQ}	63 dBA L_{EQ}
R01_B – 2023/2024 Alternate Michel Creek Road Location	63 dBA L_{EQ}	63 dBA L_{EQ}
R02 – Plant Gate	63 dBA L_{EQ}	53 dBA L_{EQ}
R03 – Sparwood Heights	58 dBA L_{EQ}	48 dBA L_{EQ}
R04 – Rivercrest Cemetery	58 dBA L_{EQ}	48 dBA L_{EQ}
R05 – Alexander Creek North	50 dBA L_{EQ}	40 dBA L_{EQ}
R06 – Alexander Creek South	50 dBA L_{EQ}	40 dBA L_{EQ}

Note: PSL: Permissible Sound Levels; dBA[2]: A-weighted decibel: LEQ: equivalent continuous sound level

Under the NMP, EVO conducts continuous and intermittent noise monitoring in the community, the results of which are used for the following:

- Future validations of the noise model;
- Community updates (sharing results), investigations into feedback; and
- Indicators that the Permissible Sound Levels (PSL) may be reached or exceeded.

[1] Since 2022, the R01 location has not been used for intermittent noise monitoring due to nearby construction activities (BC Hydro substation build), which had the potential to influence monitoring results. Receptor location R01_A was used in 2022, with R01_B, located 350 m north of R01, used in 2023 and 2024. See Figure 2-4.

[2] More detailed description of dB and dBA weighting corrections can be found in the links below.
https://www.engineeringtoolbox.com/decibel-d_59.html
https://www.techtarget.com/whatis/definition/A-weighted-decibels-dBA-or-dBa-or-dBa
https://www.animations.physics.unsw.edu.au/jw/dB.html

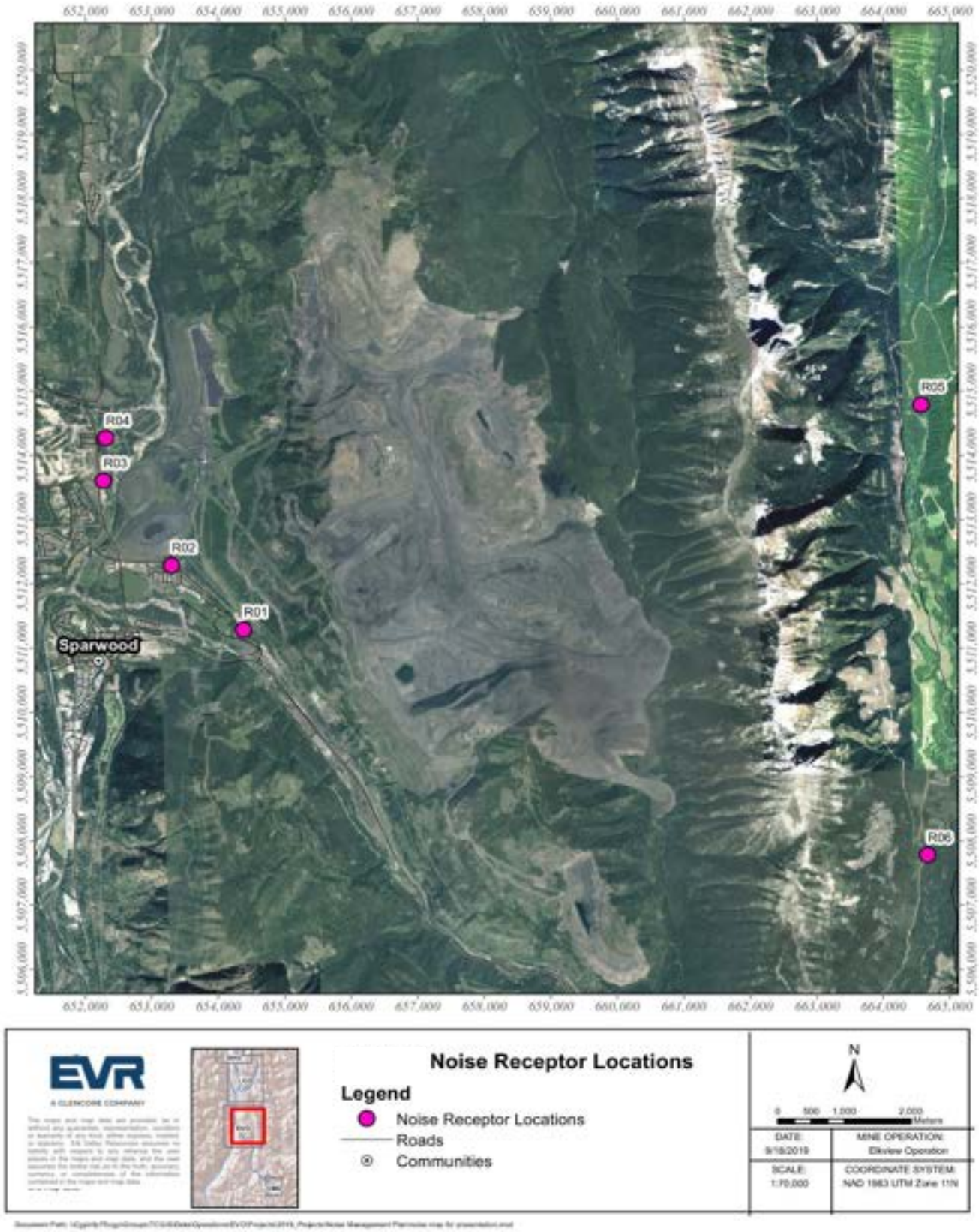

Figure 2-1 Noise Receptor Locations

2.1.1 Continuous Noise Monitoring

Continuous noise monitoring is conducted at the R02 Receptor Location (Figure 2-1) near the Plant gate. The sound level meter collects the following sound data in 1-minute logging intervals:

- L[3]min, Lmax, Leq sound levels;
- L1, L5, L10, L50, L90, L95, L99 statistical sound levels[4]; and
- One-third octave band Leq sound levels from 6.3 Hz to 20 kHz.

The sound level meter also records digital audio signals simultaneously to facilitate the isolation and investigation of extraneous noise events. A third-party qualified professional (QP) reviews and processes the noise monitoring data.

Continuous noise monitoring data for 2024 is available from January 1 to December 31, with the exception of the period from June 11th (16:47 onwards) to June 24th (up to 11:21), where data was not recorded due to an exceedance of storage capacity limits in the noise monitor (see red square in Figures 2-2 and 2-3). Upon discovering this data gap, EVO completed an investigation, including a review of site operational activities to understand if unexpected or unusual activities during that period (thus potential exceedances of PSLs), and confirmation with the EVR Social Responsibility team that no feedback was received during that period. The results of the investigation concluded that an exceedance of PSLs was unlikely during the data-gap period. Following this technical issue, EVO implemented corrective actions to prevent reoccurrence, including working with the third-party QP to support the noise monitoring program to improve the configuration of the noise monitor and increase storage capacity. In 2024, there were no instances where PSLs were exceeded, as measured by the daily average. While some higher sound levels were detected for brief periods, subsequent investigation indicated that these sound levels at the R02 receptor were not related to mining activities (Figures 2-2 and 2-3), for example, elevated noise levels during nighttime periods in March, November, and December were attributed to wind events. Similarly, idling vehicles and other non-mine-related noises were associated with higher recorded sounds in May and October.

[3] Lmin, Minimum sound Level in dBA Lmax, Maximum sound level in dBA Leq Equivalent Continuous Sound Level

[4] Numerical value corresponds to % of time that a given sound level was exceeded (hypothetical example: for L10 – for 10% of the time, sound levels exceeded 50 dBA)

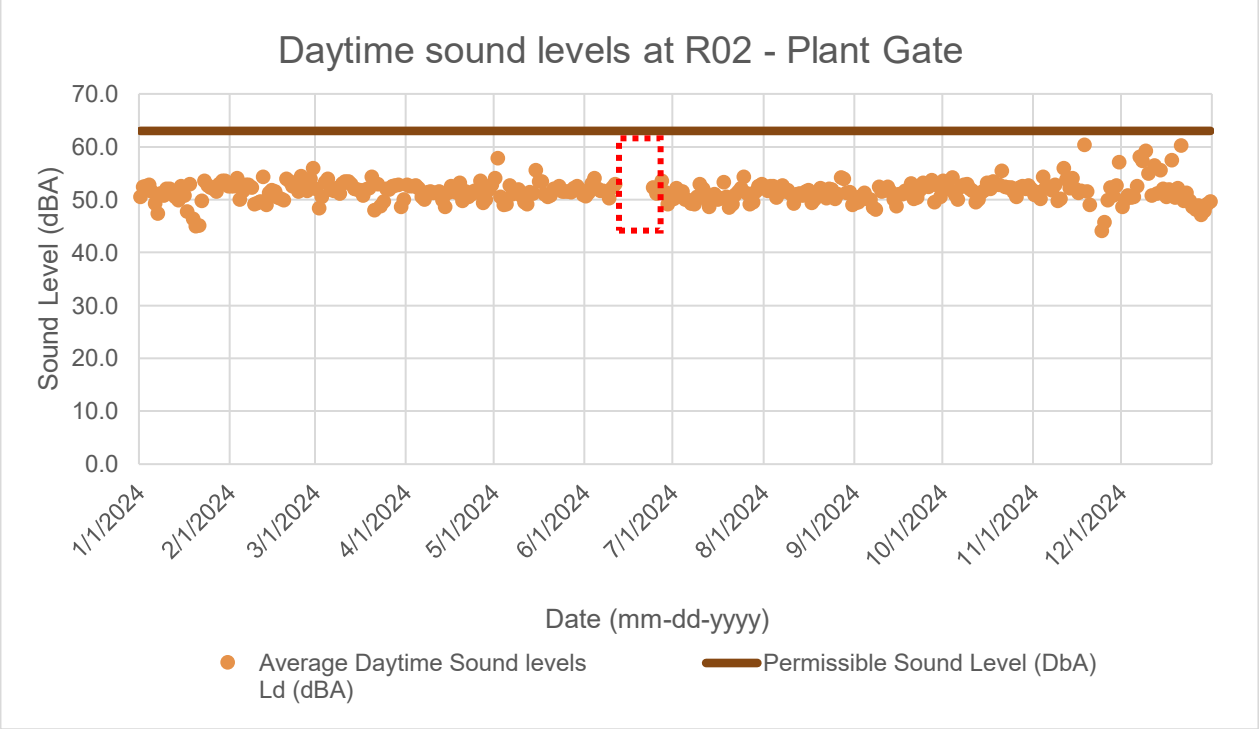

Figure 2-2 Validated average daytime sound levels measured at R02[5]

[5] The daytime permissible sound level for the R02 station is 63 dBA

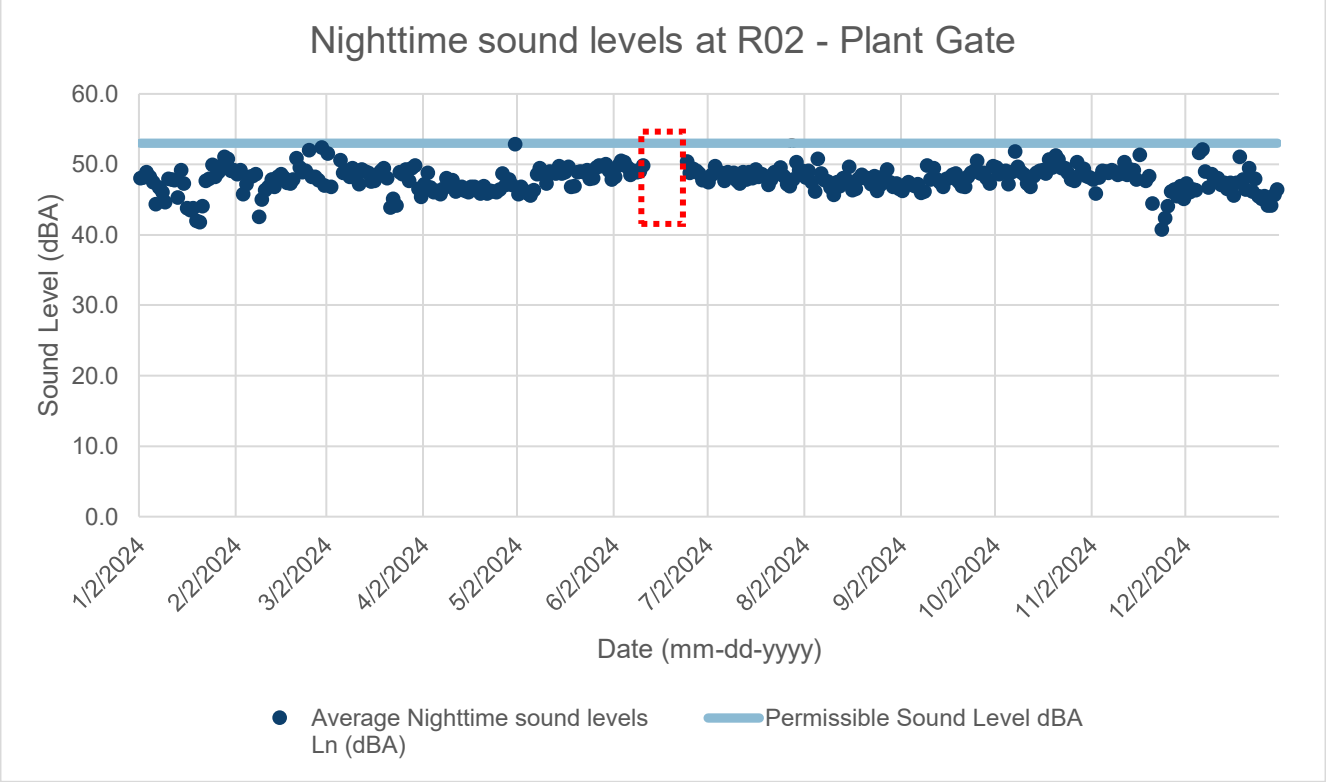

Figure 2-3 Validated average nighttime sound levels measured at R02[6]

2.1.2 Intermittent Noise Monitoring

Intermittent noise monitoring consists of collecting 1-minute sound levels (Lmin, Lmax, Leq, 1/3 octave band spectra and six statistical Ln levels) and continuous audio signals for no less than four daytime and nighttime periods at the four noise monitoring stations nearest to Sparwood (R01, R02, R03, R04). Noise sampling must occur between June 1 and September 30 annually. In 2024, an annual intermittent noise monitoring survey was conducted over four daytime and nighttime periods between September 9 and September 12 at the four pre-defined locations (Table 2-1). In 2023 and 2024, the R01_B station was used, as the R01 and R01_A stations are not accessible due to ongoing construction of the new BC Hydro Substation at Natal; the R01_B receptor is approximately 350 m away at R01 receptor (Figure 2-4). The QP responsible for performing the intermittent noise monitoring considered the acoustic environment at the new station to be representative of the original station, meaning the slight location change would not impact how sound from EVO was being evaluated against permissible sound levels.

[6] The nighttime permissible sound level for the R02 station is 53 dBA

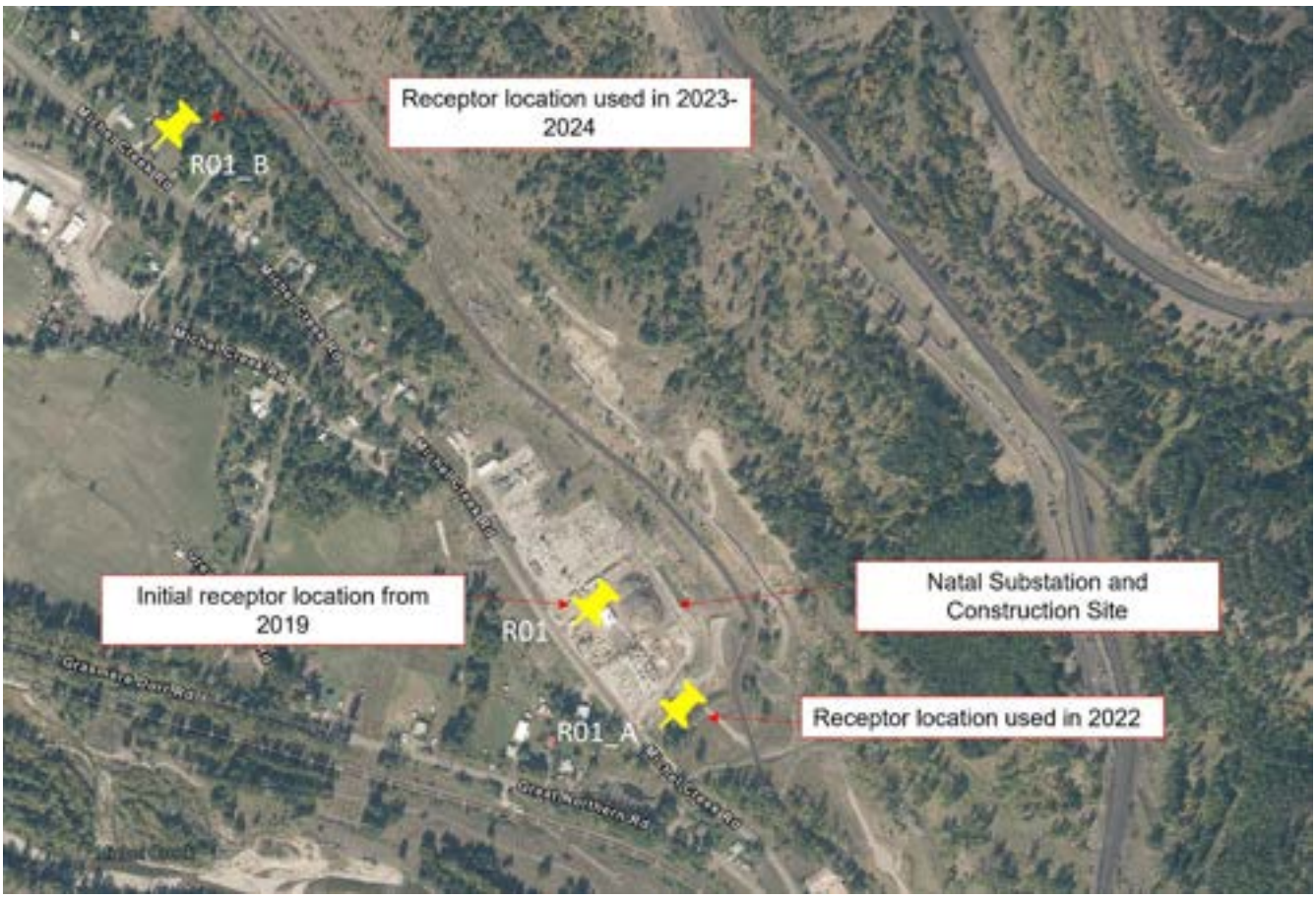

Figure 2-4 Noise monitoring locations R01_B (used for monitoring in 2024)

Measured noise data were processed through isolation analysis to remove invalid or abnormal events unrelated to EVO operations (e.g., vehicle traffic and weather events such as strong winds). At each monitoring location, valid 1-minute Leq sound levels were used to calculate averaged hourly, daytime and nighttime Leq sound levels. The averaged sound levels were summarized for each day and compared with the identified noise limits. Sound levels measured at R01_B, R02, R03 and R04 complied with the daytime and nighttime PSLs during intermittent noise monitoring (Figure 2-5).

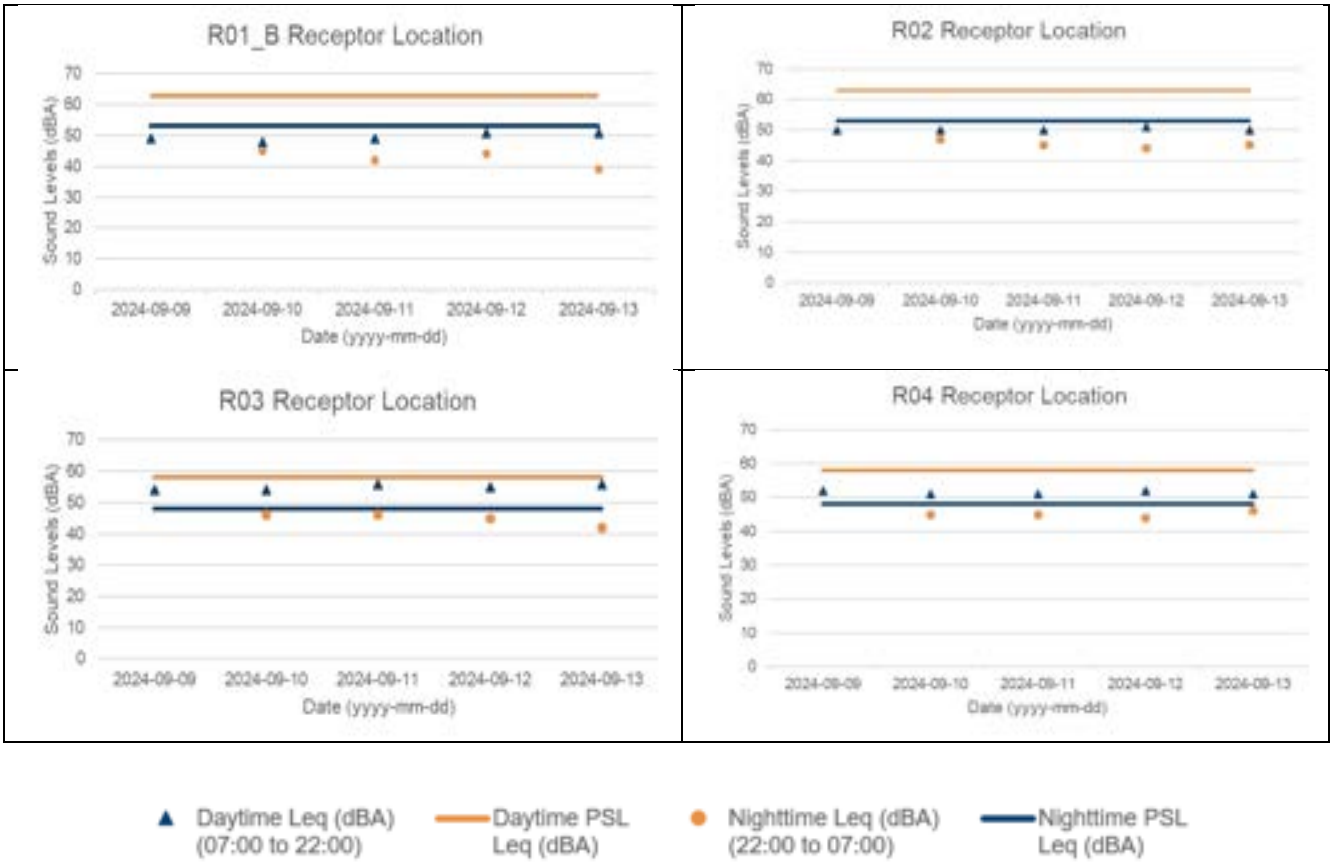

Figure 2-5 Intermittent monitoring of daytime and nighttime sound levels measured by location[7]

2.2 Feedback Received in 2024

In 2024, EVO received feedback on the noise monitoring program during the 2024 BRE Open House, hosted on May 22, 2024, in Sparwood. One attendee inquired about installing a monitor near the Sparwood Recreational Center. EVO discussed with the attendee and indicated that receptor locations are being discussed as part of the upcoming QP audit of the Noise Management Plan. It was also acknowledged that a location closer to busy areas of town may increase noise interference from activities unrelated to mining. Another attendee inquired about how a noise exceedance would be resolved. Should an exceedance occur, EVO would work with our third-party Qualified Professional to investigate the noise source, establish whether this is a one-time or recurring issue, and, as appropriate, develop corrective actions and/or implement mitigation measures.

2.3 Changes and Updates to the Plan

No changes were made to the NMP in 2024. In 2023, EVO completed the update of the noise model to include:

- The Production Increase Project at the Plant;

[7] Daytime permissible sound levels for the R01_B and R02 receptor locations are 63 dBA and 58 dBA for the R03 and R04 stations. Nighttime permissible sound levels for the R01_B and R02 receptor locations are 53 dBA and 48 dBA for the R03 and R04 stations.

- Construction and Operation of the new Administrative and Maintenance Complex;
- Maintenance activities occurring at the Mannix Pad;
- Light vehicles and heavy vehicles (e.g., graders and water trucks) used on the front side (area closest to the District of Sparwood) of EVO;
- Cumulative effects scenarios combine the various projects for mine years up to 2028.

An audit by a Qualified Professional (QP) was initiated in Q4 2024 and is expected to be finalized in Q1 2025. The Noise Management Plan will be reviewed and updated in 2025 to reflect the model update and any recommendations from the QP audit.

3.0 Blasting and Vibration

Extraction of coal at EVO requires the blasting of hard rock layers. Due to EVO's close proximity to the community of Sparwood, special considerations with respect to blast design and practice are taken. Mining is progressing closer to Sparwood and EVR continues to be committed to mitigating impacts and working collaboratively with Communities of Interest.

Several aspects of blasting require management to minimize the potential impacts to the receiving environment and communities, specifically: fly rock, ground vibrations, air overpressure vibrations, blast fumes and dust.

Fly rock is material that is ejected into the air during a blast. Fly rock is managed through engineered blast design and processes with consideration of shot direction, material type, topography, borehole size, charge weight and proper burden/relief, stemming material and best practices. Blast clearance zones are used to manage the risk of injury to on-site personnel, wildlife, equipment and infrastructure from fly rock.

Blasting-related vibrations have two components which are outlined below: ground vibration and air over pressure. Both are managed through blasting practice and design.

- Ground vibration is the blast wave front that is carried through the ground. Ground vibration is measured as peak particle velocity (PPV) in millimetres per second (mm/s). While inaudible, ground vibration can be detected by humans and, if they are not controlled could cause damage to property or infrastructure. Ground vibrations will decrease with distance, diminishing significantly as they move further from the source.
- Air overpressure is the blast wave front that travels through the atmosphere as sound waves. Air overpressure is measured as pressure or decibels (dB(L)) and can be generally felt further away from the source than ground vibrations. The rate at which air blast overpressure levels diminish is dependent on distance, atmospheric conditions and topography. When a blast is felt or heard, it is typically due to air blast overpressure rather than ground vibration, as ground vibrations attenuate more rapidly near the source.

An adaptive management approach is used to meet EVR's objectives, allowing for adjustments based on site conditions, monitoring results, and emerging technologies. Continuous blast monitoring enables updates to fly rock and blast vibration predictive models, supporting necessary changes to blasting practices as mining progresses. Regular monitoring and review are key to driving ongoing improvements.

EVO operates five monitoring stations for ground vibrations and air overpressure. Two (S1 and S2) are within Sparwood, while S3 and S4 are positioned between these community stations and the mine site. In late 2023, S4 was relocated to the western edge of Lagoon D to improve coverage between S1 and S2. S5, located with a line of sight to Baldy Ridge 2, monitors near-field air overpressure and will be relocated in early 2025 to support BR6 and BR7 operations. These monitors help assess on-bench practices and refine EVO's blasting standards. S3 and S4 are strategically placed closer to active operations, with occasional repositioning for optimal coverage as mining advances. S4 and S5 are the only monitors within the *Mines Act* C-2 Permitted Mine Area. (See Figure 3-1 for a general overview map of locations at EVO).

Each monitoring location continues to operate with Sigicom blast monitors, installed in late 2021 and calibrated in 2023, with the next calibration scheduled for 2025. These monitors automatically transfer recorded events to NCVIB, an online reporting tool that permanently logs and displays blast vibrations and air overpressure. NCVIB features an interactive map displaying monitor and blast locations, along with integrated analysis tools. The system's automated blast regression analysis continuously refines the attenuation formula by incorporating new blast data. This monitoring system enhances reporting, tracking, and analysis of both blast-related and non-blast-related events.

The primary objective of the Blasting and Vibration Management Plan is to blast safely and sustainably while protecting property and minimizing the effect on residents, wildlife and infrastructure. This plan encompasses all blasting practices at EVO. Specifically, the Plan focuses on managing the following mine blast-related aspects:

- Blast safely and control the generation of fly rock;
- Protect property and infrastructure from the potential effects of ground vibration;
- Protect property and infrastructure from the potential effects of air overpressure vibration;
- Manage nuisance vibration and noise effects to local community; and
- Minimize and avoid the generation of blasting related dust and fumes

The plan also outlines ground vibration and air overpressure limits which are listed below in Table 3-1.

Table 3-1 Ground vibration and air overpressure limits at EVO

Component	Limit
Ground Vibration[8]	12.7 mm/s
Air Overpressure Limits[9]	133 dBL

Taylor Greer, P. Eng. (a qualified professional) completed an annual review of the implementation of the Blasting and Vibration Management Plan. The qualified professional review concluded that EVR complies with all conditions and actions outlined in the Blasting and Vibrations Management Plan.

[8] U.S. Bureau of Mines: Investigation RI-8507 (1980).

[9] U.S. Bureau of Mines: Investigation RI-8485 (1980). dB = decibel; mm/s = millimetres per second; USBM = United Sates Bureau of Mines.

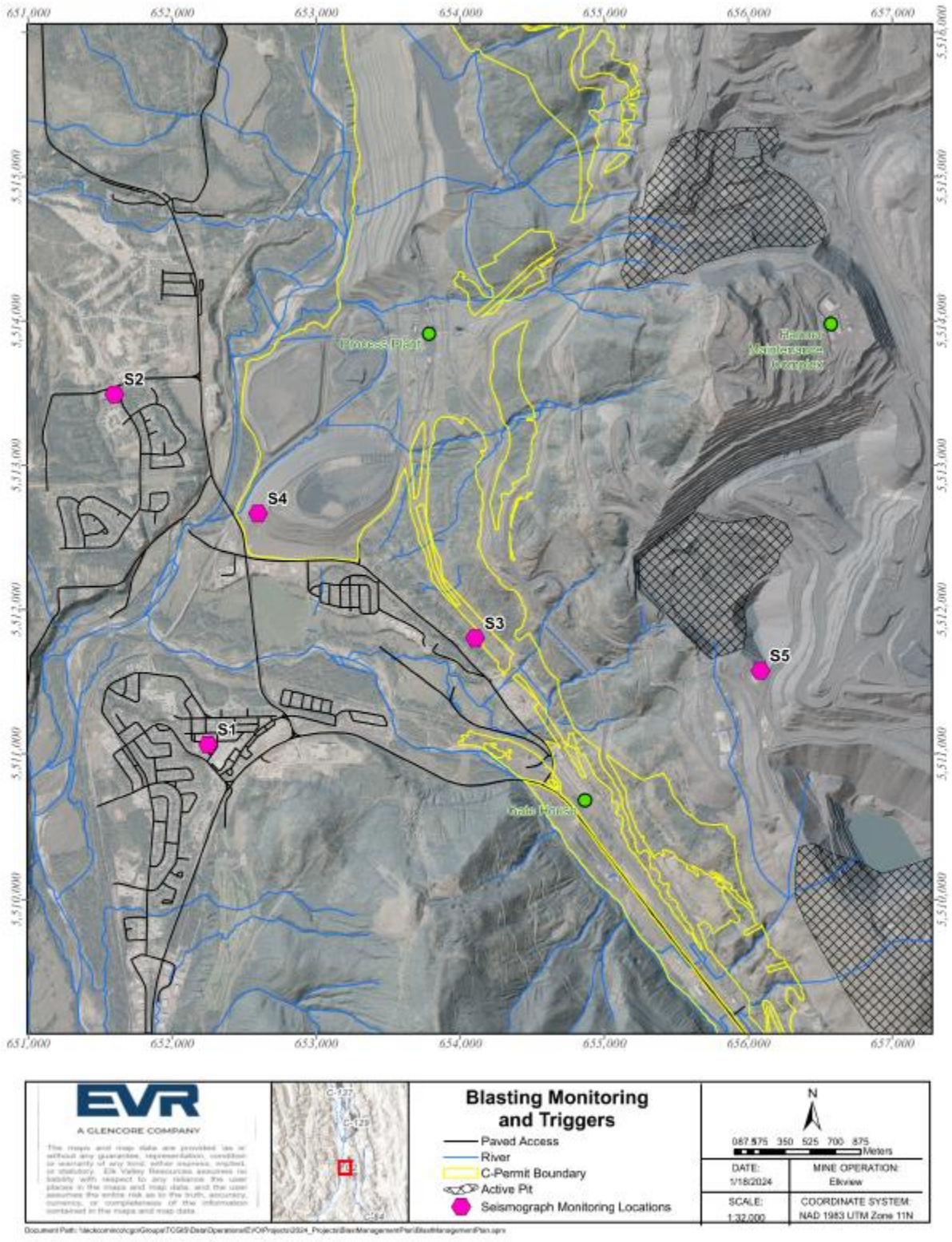

Figure 3-1 Seismograph locations for monitoring blasting and vibration at EVO

3.1 Air Overpressure and Vibration

EVO conducted 259 blasts in 2024. The distribution of blasts is shown in Figure 3-2 below. In 2024, 203 blasts fell within the BRE footprint. Of the 203 blasts within the BRE footprint, 31 were in NP2, 41 were in BR3, 58 were in BR7, and 73 were in BR6.

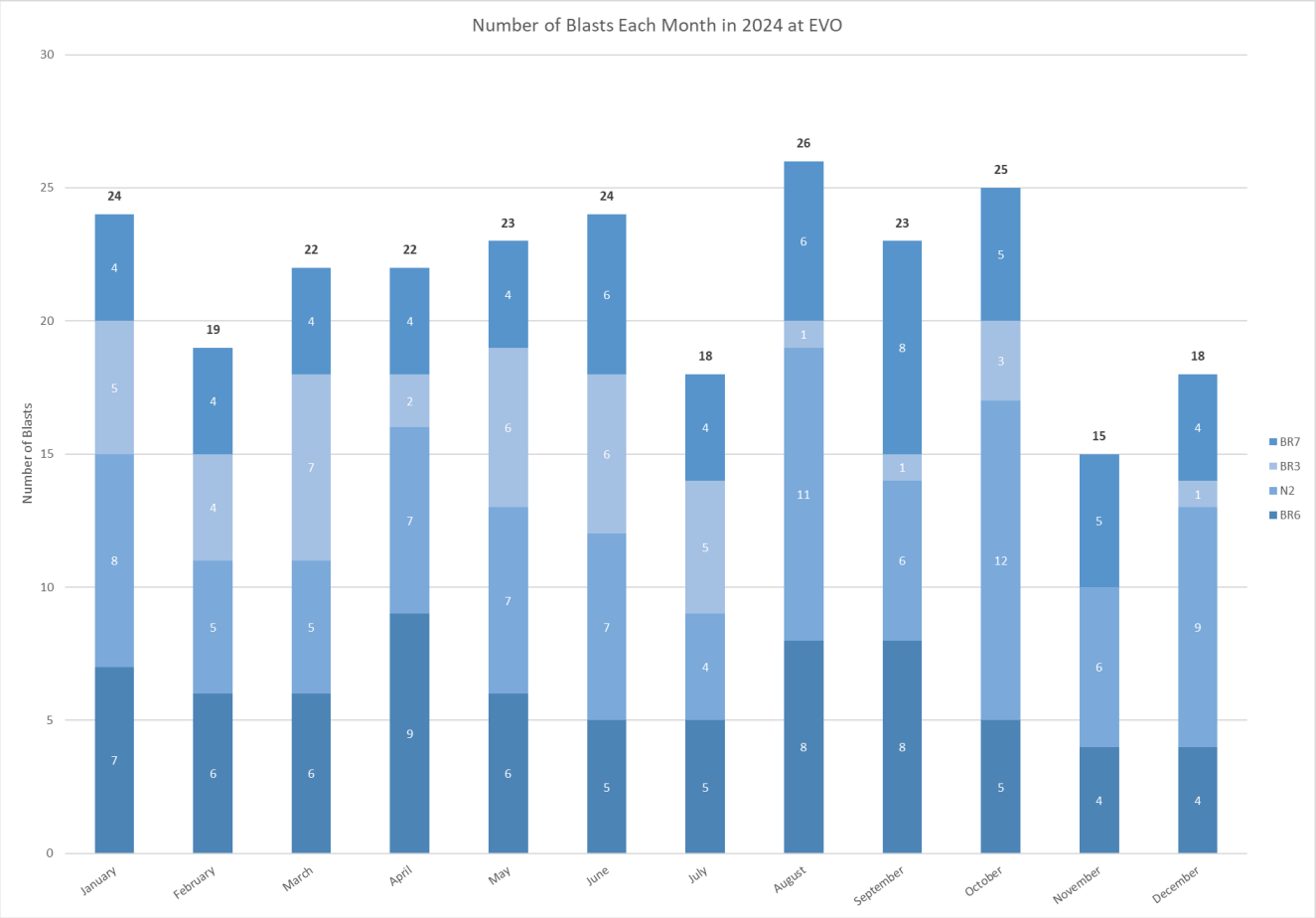

Figure 3-2 Number of blasts at EVO for each month in 2024

3.1.1 Air Overpressure and Vibration Monitoring Results

During 2024, a total of 60 blast events were detected in five seismograph locations (Figure 3-3), all of which were below the limits for ground vibrations of 12.7 mm/sec and air overpressure of the limit of 133 dB(L) (Figure 3-4 & Figure 3-5)..

The monitors recorded 22,882 non-blast-related air overpressure events and 2,547 ground vibration events. To optimize storage, trigger limits were increased in the new monitoring system while remaining below industry standard minimums. The Sigicom system actively incorporates blast-related data into modelling, supporting adjustments to blasting practices as part of EVO's adaptive management approach.

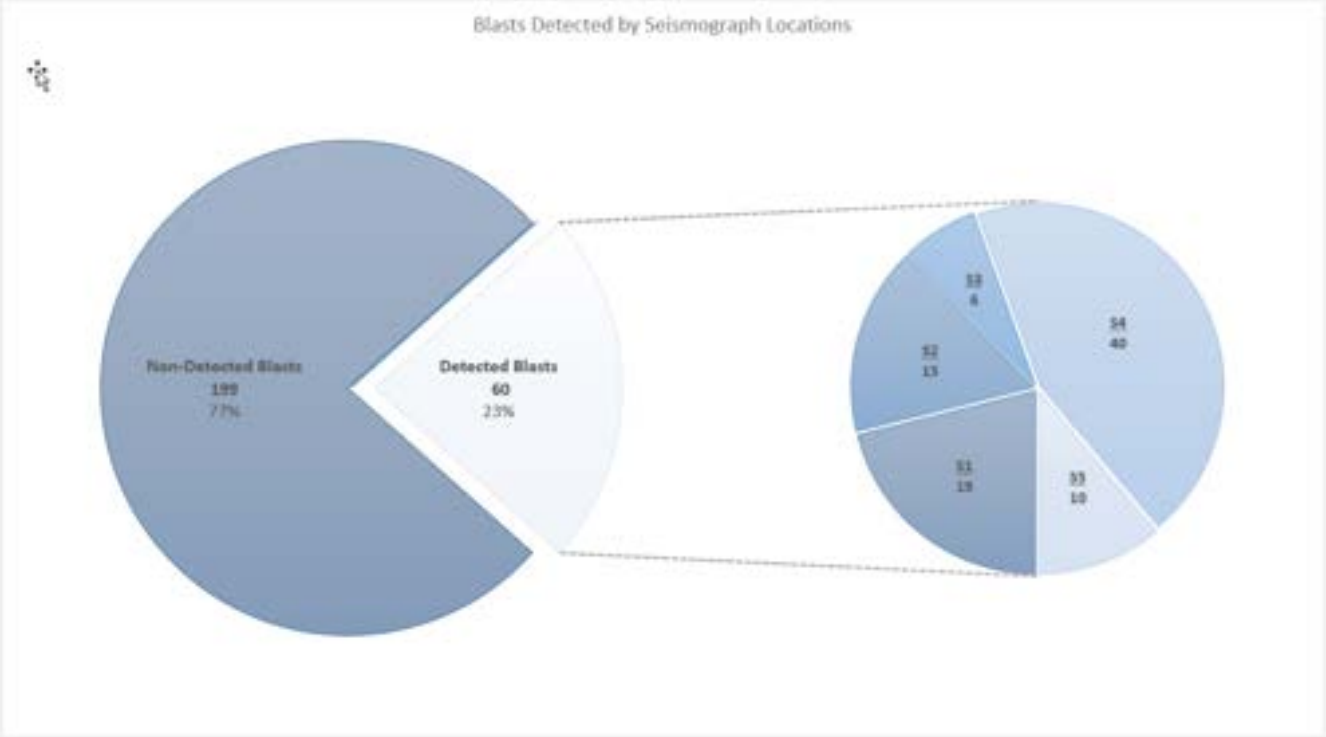

Figure 3-3 Number of blasts detected and non-detected at each seismograph location in 2024 (Location, Number of Blasts, Percent of Blasts)

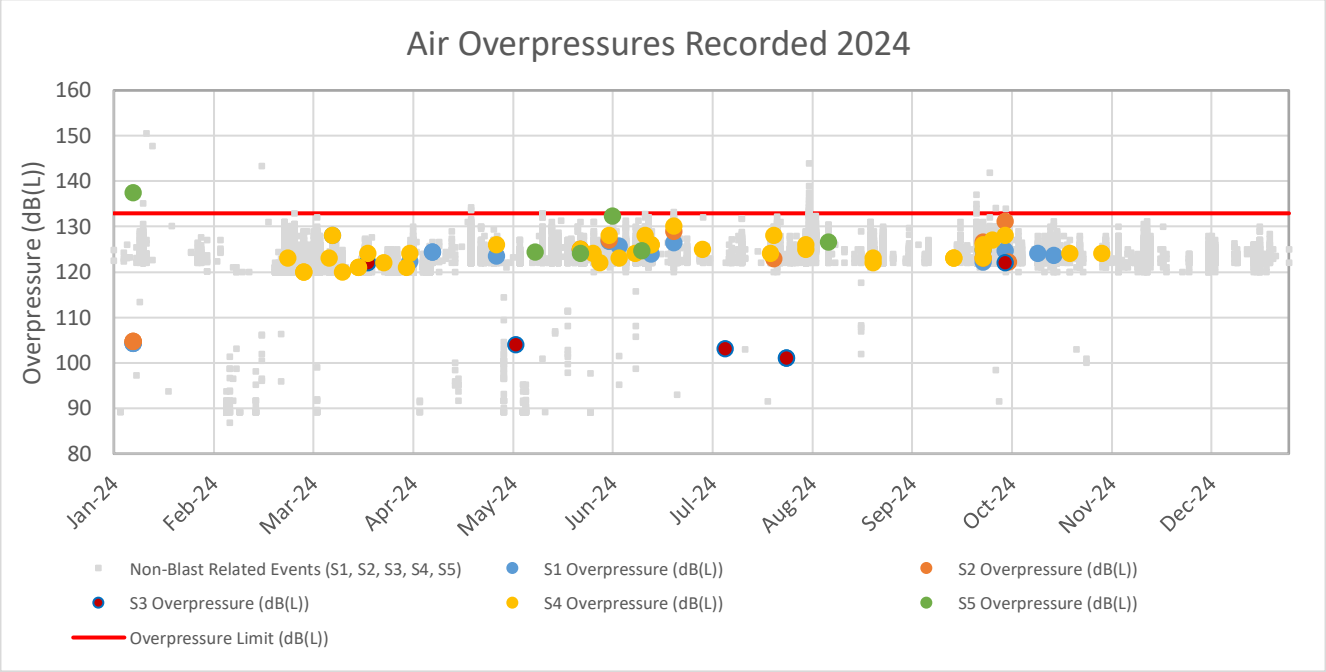

Figure 3-4 Recorded air overpressure (dB(L)) at each station compared to limits

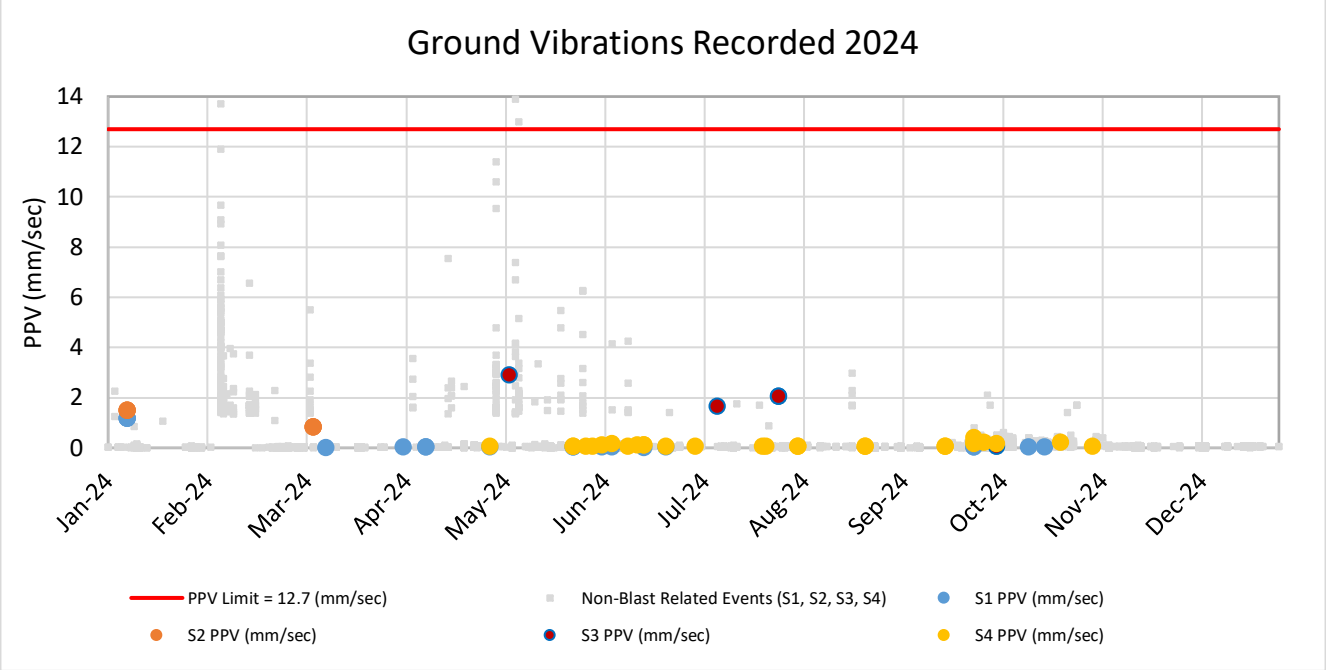

Figure 3-5 Recorded ground vibrations (GV) at each station compared to limits

3.2 Feedback Received in 2024

In 2024, five instances of community feedback were received through EVR's Feedback Mechanism regarding the Blasting and Vibrations Management Plan. On January 7, two Sparwood residents reported concerns about a blast at 3:26 PM. A review of blast monitoring data confirmed no exceedances in ground vibration or air overpressure limits. Further investigation of the Baldy Ridge 2 blast suggested that low cloud cover and a split with minimal confinement may have contributed to low-frequency air vibrations travelling farther than usual. This atmospheric condition likely caused sound waves to refract downward, making the blast more noticeable in the community.

On March 5, 2024, another Sparwood resident reported a noticeable blast at their residence. A review of blast videos and monitoring data confirmed that weather conditions, including wind direction and cloud cover, along with minimal confinement in presplit holes, contributed to the perception of the blast. However, no exceedances in ground vibration or air overpressure limits were recorded.

Elkview continues to notify the District of Sparwood when loading anomalies are detected, allowing for potential adjustments or delays to align with favourable weather conditions. Additionally, two of the residents who provided feedback permitted the installation of temporary blast monitors on their properties from April to November 2024, reinforcing Elkview's commitment to transparency and community engagement. No exceedances due to blasting were observed from these additional monitors during this period (Figure 3-6 & Figure 3-7).

During the 2024 BRE Open House, community members provided feedback, primarily in the form of general inquiries about blasting practices rather than concerns about specific blasts. Positive feedback was also received, with residents noting that blasting impacts were rarely noticeable.

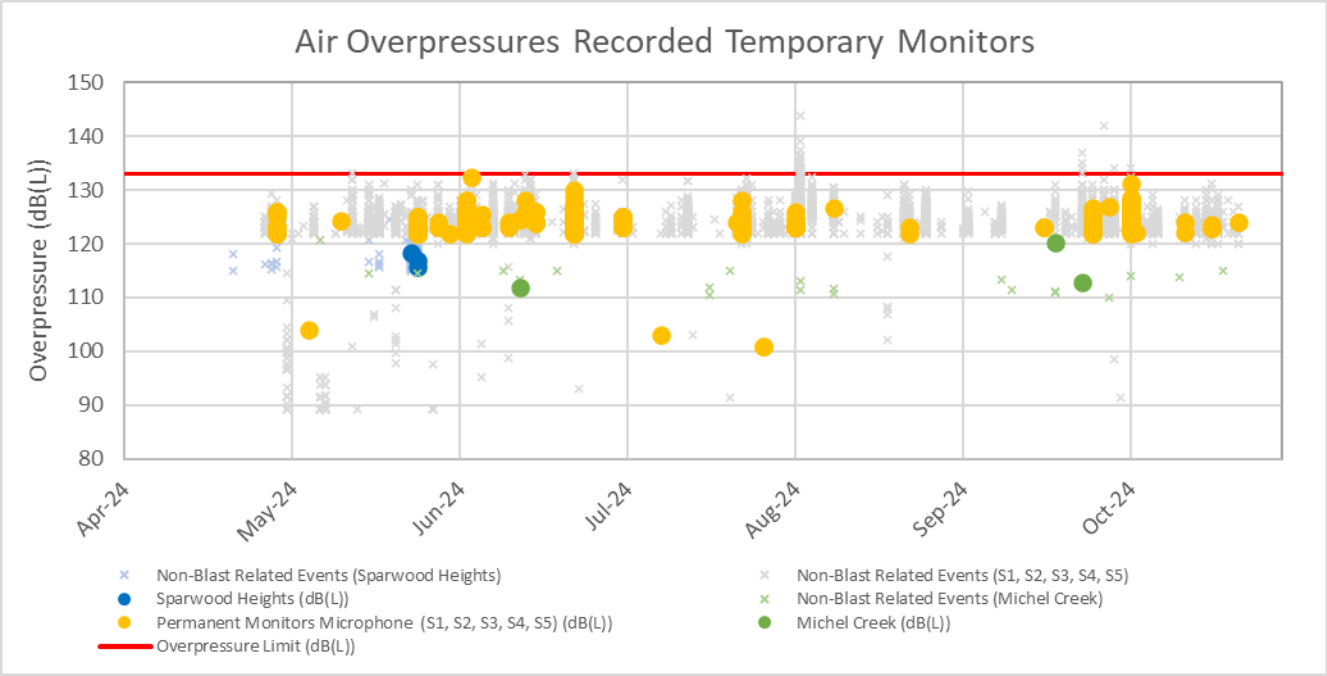

Figure 3-6 Recorded air overpressure (dB(L)) at the temporary monitors compared to limits

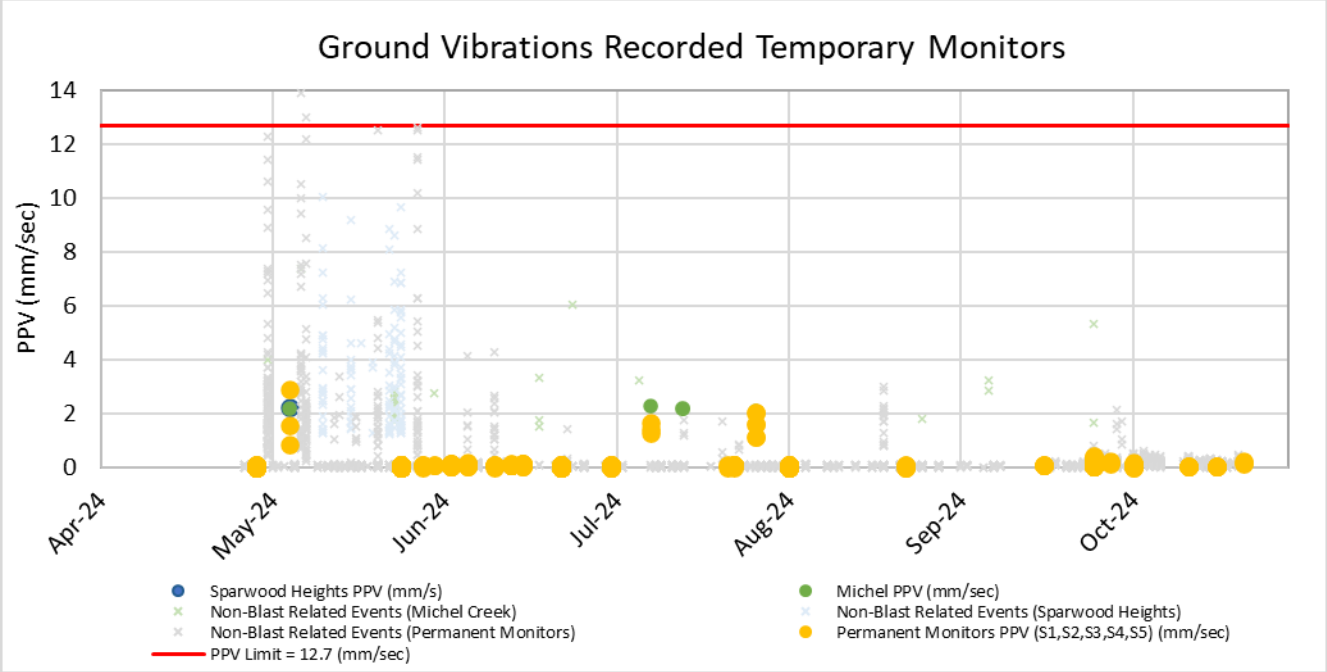

Figure 3-7 Recorded ground vibration (mm/sec) at the temporary monitors compared to limits

3.3 Changes and Updates to the Plan

The Blasting and Vibration Management Plan was last updated in 2019 in consultation with the SCEEAC and BC Environmental Assessment Office (EAO). No changes were made in 2024. The plan undergoes an annual audit by a qualified professional, with the 2024 audit confirming that EVO's blasting practices and monitoring coverage remain sufficient. Trigger limits were maintained at 2023 levels to enhance far-field blast data collection, particularly on-site. The S5 monitor will be relocated in early 2025 once BR2 is complete and moved in close proximity to BR6 and BR7 operations. Temporary monitors placed at two residential locations in 2024 verified that permanent monitoring locations provide adequate community coverage, with no unexpected recordings observed.

4.0 Air Quality and Fugitive Dust

The primary objective of EVO's Fugitive Dust Management Plan (FDMP) is to manage site activities and mitigate effects on air quality related to particulate matter from fugitive dust.

Fugitive dust sources at EVO include the use of haul and light vehicle roads, spoiling of waste rock, and blasting and stockpiling of materials. Source emissions at EVO are primarily related to coal processing (Dryer and Breaker Stacks). EVO's primary greenhouse gas (GHG) sources are from coal release, light vehicle and mobile mining equipment operation, and natural gas use for drying coal and heating buildings.

Below are definitions of terms as they relate to Section 4 of this report:

- Greenhouse gas: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, and any other substance prescribed by regulation;
- Particulate matter (PM): all solid and liquid particles suspended in air – can be measured based on the size of a particle (e.g., $PM_{2.5}$ – less than 2.4 micrometer [µm] diameter) or all particulate matter (total suspended particulate);
- Source dust: dust emitted from a definable point source (e.g., Dryer Stack);
- Fugitive dust: dust not emitted from a definable point source (e.g., stockpile); and
- Ambient air monitoring: continuous measurement and periodic assessment of air quality as it relates to particulate matter emissions.

4.1 Air Quality Monitoring

During 2024, EVO monitored two permitted ambient air quality stations adjacent to the mine site (Figure 4-1) as well as a station at Hosmer which represents background conditions. Ambient air stations are used to assess air quality related to fugitive dust and point source emissions. Samples were collected continuously and monitored for PM less than 10 µm diameter (PM_{10}), less than 2.5 µm diameter ($PM_{2.5}$) and total suspended particulate (TSP).

Two source locations, the Dryer Stacks and Breaker Stack (Figure 4-1), are sampled twice a year and compared to Permit 1807 discharge limits set by the Ministry of Environment and Climate Change Strategy (ENV). Source sampling was conducted in Q1 and Q4 2024 and the results are summarized in Section 4.1.1.

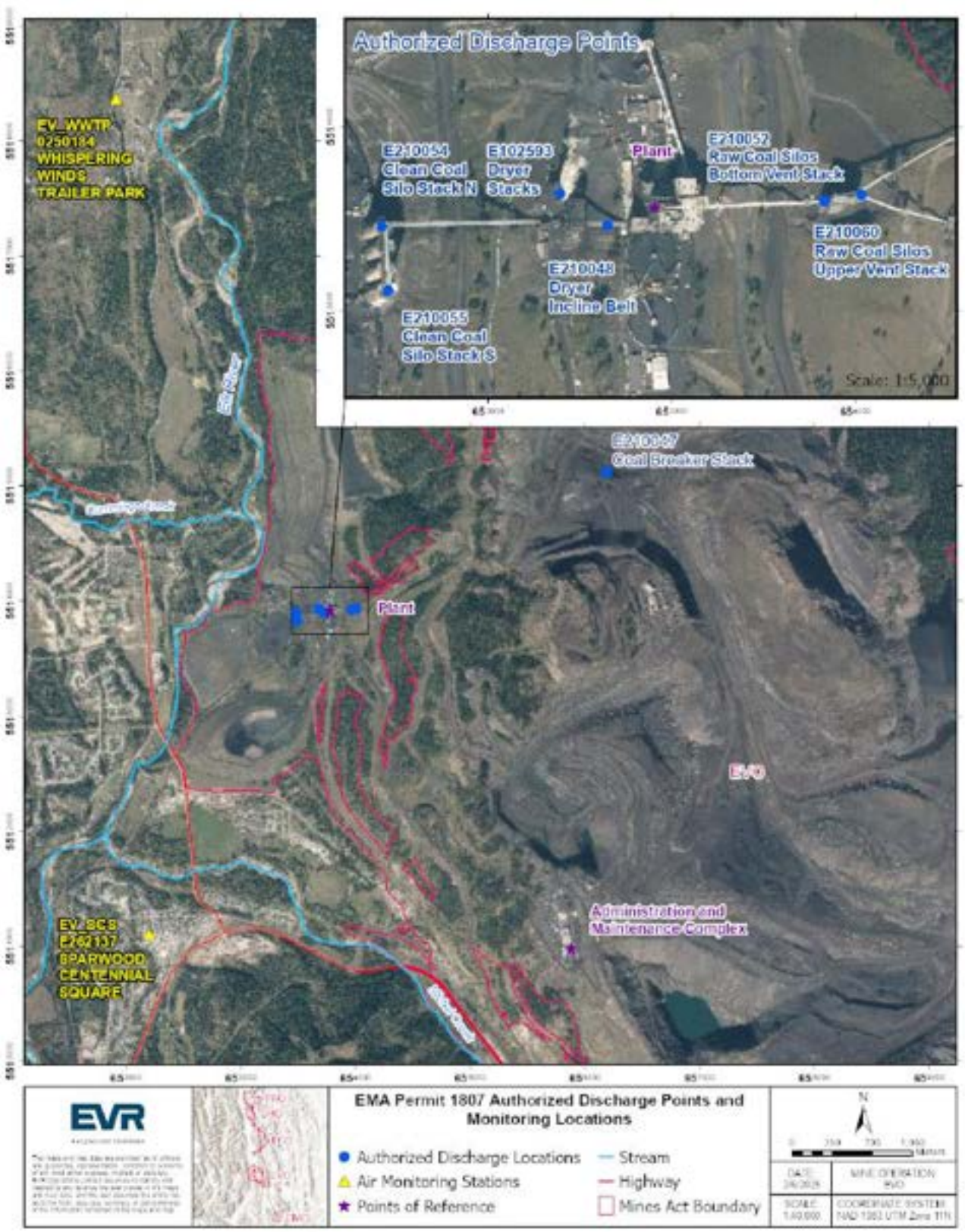

Figure 4-1 EVO authorized discharge points and permitted monitoring locations

4.1.1 Source Monitoring

EVO's Dryer Stacks (Permit 1807 Site Identification Number E102593) and Breaker Stack (E210047) are sampled twice a year by qualified third-party professionals at approximately equal time intervals in accordance with Permit 1807. During sampling, the Plant operation rate must be at least 75% of the normal maximum operating rate.

Source emissions sampling in 2024 was conducted from March 14th to 16th and from October 22nd to 23rd. All results from this sampling were below permit limits. The stack sampling results from 2024 are shown in Table 4-1.

Table 4-1 Source monitoring results from 2024

Location	Sample Date	Average Flow Rate (m^3/s)	Permitted Flow Rate (m^3/s)	Average Total Particulate Matter (mg/m^3)	Permitted Total Particulate Matter (mg/m^3)
Breaker Stack	March 16, 2024	8.45	**14**	< 19.6	**150**
	October 23, 2024	9.16	**14**	52.8	**150**
North Dryer Stack	March 15, 2024	106.6[10]	**133**	38.0	**85**
	October 22, 2024	116[11]	**133**	16.7	**85**
South Dryer Stack	March 14/15, 2024	106.6[9]	**133**	37.0	**85**
	October 22, 2024	116[10]	**133**	24.5	**85**

Notes: Bold font indicates permit limits; m^3/s = cubic meters per second; mg/m^3 = milligrams per cubic meter

4.1.2 Ambient Monitoring

EVO monitored ambient air quality at two permitted monitoring locations in 2024: Sparwood Centennial Square (SCS) and Whispering Winds Trailer Park (WWTP). The results of continuous air monitoring at these stations are compared to the British Columbia Ambient Air Quality Objectives (BCAAQO) for $PM_{2.5}$ and PM_{10} (Figures 4-2 and 4-3).

There were seven daily average $PM_{2.5}$ concentrations above the BCAAQO in 2024: four at SCS and three at WWTP. There were seven daily average PM_{10} concentrations above the BCAAQO in 2024: seven at SCS and zero at WWTP.

All elevated results were investigated using all available data and resources. Elevated PM_{10} results were determined to be primarily associated with dust generated at local roads, highways, and parking lots. Fugitive

[10] Dry reference combined flow rate from Q1 2024 Dryer Stacks sampling
[11] Dry reference combined flow rate from Q4 2024 Dryer Stacks sampling

dust from mining may have contributed to the elevated concentrations in March when conditions were dry, and the majority of routine mitigation measures were not yet available due to overnight freezing temperatures.

Elevated $PM_{2.5}$ results were determined to be primarily associated with dust generated from wildfires in July and open slash burning in November. This is supported by Smoky Skies bulletins which were issued for the Elk Valley by ENV on July 22, 25, 27, 28, and 29th and an Air Quality Advisory and Open Burning Restriction issued by ENV to Elkford on November 21st. Elevated PM concentrations from smoke is also evident at EVR's background monitoring station in Hosmer during the same timeframes[12]. EVO may have also contributed to elevated PM concentrations during hot, dry, and/or windy conditions.

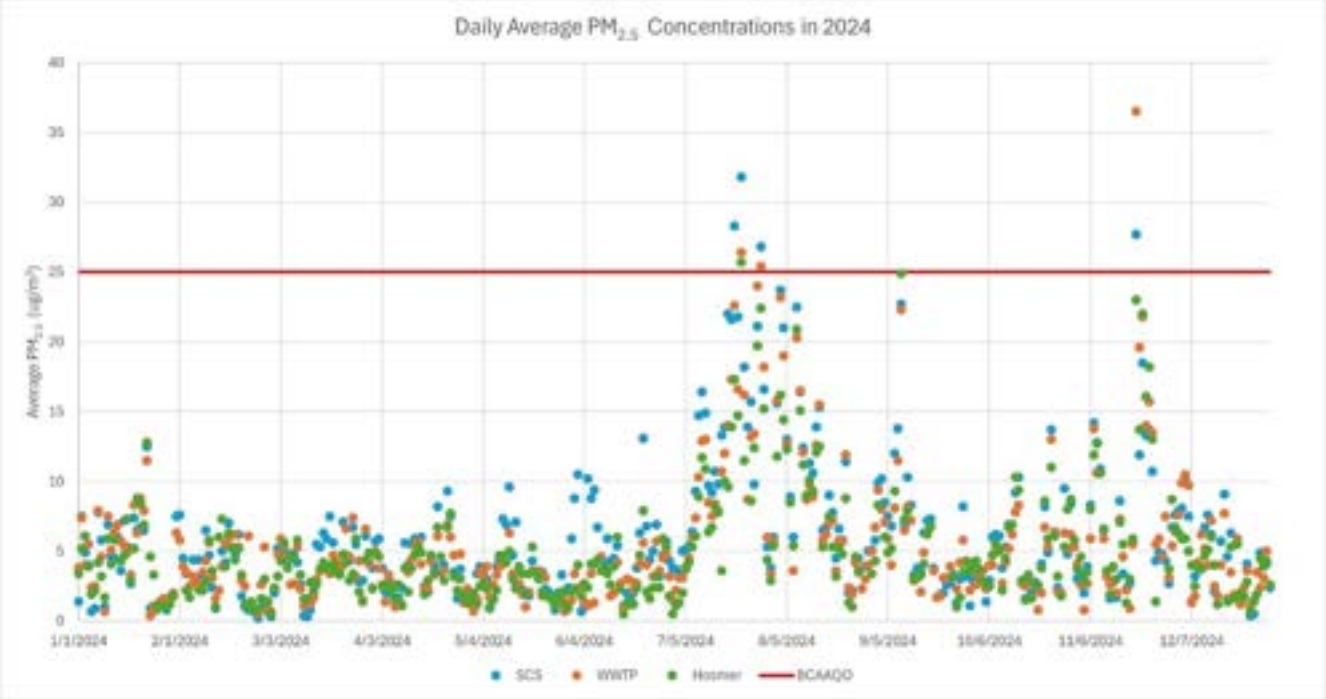

Figure 4-2 $PM_{2.5}$ daily average results in 2024

[12] Missing PM_{10} data from the Hosmer station is a result of the monitor being taken out of service for repairs from June 26 to August 15 in 2024.

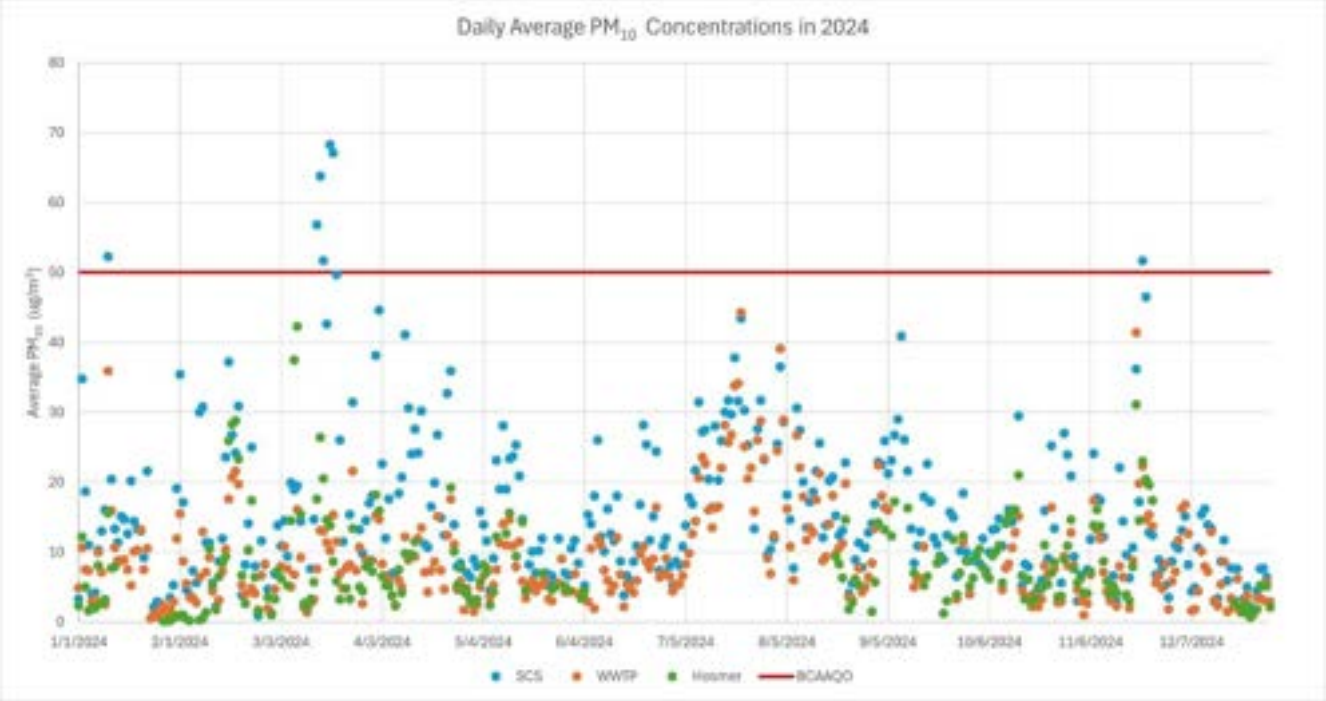

Figure 4-3 PM_{10} daily average results in 2024

4.2 Feedback Received in 2024

EVO continues to prioritize efforts to minimize fugitive dust generated from site. Receiving feedback on air quality and visual impacts of fugitive dust from both the community and the SCEEAC is important in helping determine the effectiveness of current practices. It also helps to inform new processes EVR is pursuing in partnership with industry experts like RWDI Consulting Engineers and Scientists, and Envirosuite Limited.

In 2024, EVO received 14 submissions from the public related to air quality and dust, and 244 homes in Sparwood were scheduled to be cleaned through the exterior house cleaning program. Table 4-2 summarizes the categories of all the feedback received in 2024.

Table 4-2 Summary of Community Feedback Related to Air Quality and Dust at EVO

Topic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Dirty vehicles	1												
Visible dust				3		2	3			1			
General Inquires, complaints, and feedback	1						1	1		1			
2024 Total Feedback Related to Air Quality and Dust at EVO													**14**
2024 Total Number of Properties Scheduled to be Cleaned in Sparwood													**244**

4.3 Changes and Updates to the Plan

The FDMP was not updated in 2024; the next scheduled update is in 2025. On August 29, 2024, EVO received new requirements under Permit 1807 Section 2.8.1 Fugitive Dust Management Plan. The new permit conditions require EVO to include a description of the continuous fugitive dust source monitoring network and use real-time monitored values to trigger the Trigger Action Response Plan in the FDMP. These new requirements are being reviewed and will be incorporated into the 2025 FDMP update.

5.0 Reclamation and Closure

EVO currently has 1,256.2 hectares (ha) of area considered reclaimed. These areas include those which have been prescribed reclamation treatment that has been completed with vegetation established, or vegetation has been established as a result of natural vegetation ingress. The completed reclamation area accounts for approximately 28% of the total disturbance area at EVO.

5.1 Reclamation Summary: 2024 Complete and 2025 Planned

Table 5-1 2024 Reclamation Summary

2024 Reclamation Summary		
Reclamation Activity	Area Planned (Ha)	Area Completed (Ha)
Contouring	39.0	54.9
Site Preparation	56.0	67.6
Soil Placement	9.8	10
Planting	9.0	9.0
Seeding	50.0	70.5
Fertilizer	15.3	15.0
TOTAL	179.1	227

Landforming activities include contouring, site preparation, and soil placement. Reclamation activities have been occurring at the Cedar North Landform since 2023. Progressive reclamation continued at this location in 2024, and included contouring, site preparation, and direct soil placement. The target ecosystems for the Cedar North area includes dry forest, brushland, and high elevation grassland. The reclamation activities and ecosystems contribute to objectives that include biodiversity, visual quality, wildlife function, and long-term stability. Landforming activities were also completed around the AMC facility, utility corridor, and Lagoon D.

Vegetation activities include planting, seeding, and fertilizer treatment. Planting activities occurred at the southwest aspect of the AMC facility, which is visible from Sparwood. There were 66,780 seedlings planted which consisting of a mix of trees, shrubs, herbs, and grasses. Seeding treatment occurred near the AMC

facility, Harmer Ridge, Lagoon D, South Pit, and soil salvage areas. Vegetation objectives include biodiversity, visual quality, fugitive dust management, erosion control, and wildlife function.

In 2024, EVO completed a first of its kind trial salvage and direct placement of high-elevation grassland (HEG) soils, as part of the expansion of the Baldy Ridge 4 (BR4) Pit. Surveys of the site, vegetation, and soil were completed to assess slope characteristics, drainage type, soil moisture, nutrient regimes, and percentage of organic matter and determine salvaging options. The salvaged soil (from approximately 2.6 ha of HEG) was placed in a trial at the Cedar North reclamation area to test the success of recreating high-elevation grassland ecosystems using directly placed soil. A monitoring schedule to assess the trial implementation is in place, with various tasks scheduled in the spring of 2025 and onwards.

Landforming activities planned for 2025 include contouring, site preparation, and soil placement. Landforming activities are planned to occur at Cedar North, Harmer Ridge, Bodie, Coarse Coal Refuse area, and areas near the AMC. Vegetation activities planned for 2025 are planting and seeding. Vegetation is planned at Cedar North, Harmer Ridge, Coarse Coal Refuse area, Utility Corridor, and area near the AMC facility.

Table 5-2 2025 Reclamation planned

2025 Reclamation Planned	
Reclamation Activity	Area Planned (Ha)
Contouring	13.0
Site Preparation	66.0
Soil Placement	19.0
Planting	67.0
Seeding	85.0
Fertilizer	0.0
TOTAL	250

5.2 Feedback Received in 2024

Elkview continues to put significant emphasis on progressive reclamation. Not only does feedback related to our reclamation programs help us better understand community sentiment, it helps us gather local knowledge and gauge potential post-reclamation land use. Ultimately, the capturing of community feedback contributes to a more socially and ecologically informed reclamation program both at Elkview, and at the rest of our Elk Valley Operations. During the 2024 BRE Open House, community members provided feedback, primarily in the form of general inquiries about reclamation, notably on the progression of reclamation at the Cedar North In-Pit Backfill Extension and South Pit. One attendee of the BRE Open House also asked why previously reclaimed areas are still being worked on. EVR indicated that some older reclaimed sites might have become compacted and can benefit from new reclamation efforts. Positive feedback was also received, with residents noting how important it

is to communicate with the community what reclamation work is being done. Regular updates on reclamation were also provided to the SCEEAC in 2024, including updates on landforming activities at Harmer Knob (May 2024 SCEEAC meeting), and overall progress of reclamation in 2024 (September 2024 SCEEAC meeting)

5.3 Changes and Updates to the Plan

The EVO Five-Year Mine and Reclamation was submitted on June 30, 2022. The Five Year Mine and Reclamation Plan presents mining activities planned to occur over the next five years in detail as well as conceptual mine plans out to the end of operations and through closure. The reclamation planning sections of the plan includes information related to end land use objectives, reclamation planning and scheduling and describe specific reclamation treatments. Finally, the plan provides conceptual closure planning considerations to provide context and consideration for that phase of the operation. The next update to the Five Year Mine and Reclamation Plan will be submitted June 30, 2027.

6.0 Visual Quality

In 2019, a Visual Quality Management Plan (VQMP) was developed for EVO in consultation with the SCEEAC, KNC, Ministry of Forest, Lands, Natural Resource Operations and Rural Development (FLNRORD)[13], and EAO.

The VQMP constitutes a foundation for adaptive management of the BRE Project's visual effects. The plan provides a working environmental management tool for managing ongoing visual effects on the landscape from BRE Project mining activity and other BRE Project components. An adaptive approach will address the uncertainty of visual effects and/or the effectiveness of mitigation strategies and procedures through integrating knowledge and experience gained through ongoing engagement, mitigation measures, monitoring, and research.

Management of visual quality for the BRE Project area focuses on strategies for visual design of landscape features compatible with the surrounding natural landscape character. This approach aims to minimize the visual dominance of BRE Project mining features and infrastructure while supporting intended end land uses. The VQMP also considers other management objectives (e.g., biodiversity, air quality, reclamation and closure), mine development, and operational requirements to support an appropriate balance in planning, design and management of activities.

6.1 Visual Quality Monitoring

The objective of the VQMP is to address the potential adverse effects on visual quality from mining activities and infrastructure associated with the BRE Project. The VQMP outlines a monitoring, reporting, and auditing program on a five-year cycle in alignment with the Five Year Mine Plan Reclamation Plan. The first audit of the VQMP occurred in the summer of 2022 to correspond with the submission of the 2022 Five Year Mine Plan and Reclamation Plan. KNC provided feedback on the monitoring and auditing reports. Responses from EVR were

[13] FLNRORD was recently divided into two separate ministries: the Ministry of Forests (FOR) and the Ministry of Water, Land and Resource Stewardship (WLRS)

provided to KNC in May 2023. No additional feedback on the responses was submitted. Monitoring and auditing of the VQMP will be conducted by a QP again in 2027.

6.2 Feedback Received in 2024

In 2024, EVR presented an update on the visual quality improvements at EVO during the 2024 BRE Open House. A member of the public inquired about the colour selection for the AMC buildings. EVO discussed that the particular colour and pattern was selected to blend in with the surrounding environment, including the sky and the advancing progressive reclamation surrounding the area.

6.3 Changes and Updates to the Plan

No changes to the VQMP occurred in 2024. The VQMP was finalized in 2019 and included milestones for further development in 2020, including:

- The identification of Key Viewpoints;
- Definition of Visual Management Zones;
- Submission of a draft VQMP Toolkit for review and comment to the SCEEAC, KNC, and regulators;
- Submission of draft visual monitoring and auditing procedures for review and comment to the SCEEAC, KNC, and regulators; and,
- Developing and presenting training on the Toolkit to EVO mine planners.

The VQMP Toolkit is a supplement to the VQMP and describes a set of visual principles, strategies, procedures, and design techniques that mine design engineers can apply when planning mine activities. Each tool includes procedures, design parameters, considerations for implementation, and visual precedents. The VQMP Toolkit was finalized in December 2020. Following the finalization and rollout of the Toolkit in 2020, the VQMP was updated in 2021 to include the consultation summary during the development of the Visual Quality Toolkit.

The implementation of the toolkit and the VQMP in 2024 focused on significant visual quality improvements in key areas around the site. The following actions are specific to the Cedar North In-Pit Backfill Extension Project area:

- Site preparation was completed on the west-facing lifts of the Cedar North Spoil visible from Highways 43 and 3.
- Contouring was completed in 2024 on the Cedar North-West Phase, visible from Highways 43 and 3.

The following activities are planned for the coming years at the Cedar North In-Pit Backfill Extension Project area that will be visible to the local community:

- More contouring is scheduled for 2025 and targets the highest three lifts, around 20 m of slope.
- Planting is targeted for 2026. The target ecosystems will be a dry forest, grassland, and brushland mosaic.

Regarding the Administrative and Maintenance Complex, the following reclamation activities were undertaken in 2024:

- Soil placement of the east and west slopes around the AMC was completed in 2024.

- Woody debris was placed on the east slope of the AMC to create various features and habitats for local wildlife.
- Planting of trees, shrubs and grasses was completed on the lower slope below the AMC, which are visible from Sparwood.
- Hydro-seeding and heli-seeding were completed along the footprint of the Utility Corridor between the processing plant and the Road Crew shops to support vegetation re-establishment.

The following activities are planned for the coming years at the Administrative and Maintenance Complex location:

- More contouring on the north-west to prepare for soil placement is scheduled in 2025.
- Hydro-seeding is planned for the east and west slopes of the AMC.

While the objective of the VQMP is to address the potential adverse effects on visual quality from mining activities and infrastructure associated with the BRE Project as well as the CNIBE and the AMC, strategies from the Visual Quality Toolkit are being used and implemented at other locations at EVO, including:

- Soil placement and hydro-seeding were completed around Lagoon D to support dust mitigation activities.
- At the Bodie spoil, islands are intended to create vertical and textural contrast on existing grassland reclamation. In 2024, EVR helped design and trial a pelletized amendment product that could be applied using a helicopter instead of the more traditional hydroseeding. In September 2024, a 4 ha area at the Bodie spoil received an application of the pelletized amendment (visible from Highway 3).
- Landforming activities were advanced at Harmer Knob in 2024, including regrading the plateau. This work is part of a multi-year project to improve water management and landform stability in the Harmer Knob area and improve the overall visual quality of the area (as visible from Highway 43).

7.0 Socio-Community and Economic Effects

EVO and the DOS worked collaboratively throughout 2018 to prepare the SCEEMP and outline the role and objectives of the SCEEAC. The SCEEAC is a select committee of Council for the DOS. The DOS Council appointed seven volunteer community members, two representatives from Council and three representatives from EVR: Manager Social Responsibility, EVO Environment Superintendent, and EVO General Manager.

The Terms of Reference for the SCEEAC was approved by DOS Council on December 3, 2018, and are viewable at www.sparwood.ca/livable. The mandate of the SCEEAC is to comply with Condition 21 of the BRE EAC. The SCEEAC is a group intended to:

- Perform an advisory role, focused on making recommendations to DOS Council and EVR for consideration with respect to implementing Condition 21 of the BRE EAC;
- Provide a broad community voice;
- Act as a conduit for communication between EVR DOS, and the public, and to build trust;
- Advise on engaging the broader community of Sparwood;
- Review results for other management plans preapproved under the BRE EAC; and

- Assist in identifying on-going socio-community impacts and possible solutions for adaptive management.

The SCEEAC met four times last year in sessions featuring presentations from different EVR subject matter experts related to the BRE project. Meeting minutes are located here: https://sparwood.civicweb.net/filepro/documents/109065/

7.1 Socio-Community and Economic Effects Monitoring

A Livability Study led by the DOS was completed in November 2019. The study was the first step in monitoring performance with respect to the SCEEMP. The purpose of the study was to better understand the quality of life in Sparwood by reviewing multiple focus areas such as social engagement and cohesion, environmental sustainability, healthcare, the economy, education, mobility, housing, recreation, and social space. The study can be viewed at the following location: https://sparwood.civicweb.net/FileStorage/4C8D14839D1F4DDA9B18E54BFB4F78FE-Livability%20Study%20-%20What%20We%20Learned%20Report.pdf

7.2 Feedback Received in 2024

In 2024, there were no cases of feedback received through the Feedback Line regarding the SCEEAC or SCEEMP. There were 88 cases of feedback originated from the 2024 Baldy Ridge Extension Annual Public Meeting (BRE Open House).

There were four SCEEAC meetings in 2024 which included public question periods. Meeting minutes are located here: https://sparwood.civicweb.net/filepro/documents/83712/ As required under the SCEEMP, the Annual BRE Public Meeting was held on May 22, 2024.

Table 7-1 Significant engagement between EVR and the SCEEMP in 2024

Date	Engagement Type	Engagement
February 6th	Q1 Quarterly SCEEAC Meeting	EVR presented at the 2024 Q1 meeting the following topics: - SCEEMP Annual Report Summary
May 15th	Q2 Quarterly SCEEAC Meeting	EVR presented at the 2024 Q2 meeting the following topics: - Noise Model and Management Plan - Administrative and Maintenance Project Update - Fugitive Dust Management Update - Elkview plant dryer update - BRE Annual Public Meeting - Harmer Knob Project Update

May 22nd	BRE Open House	EVR hosted an open house with the following stations: - Noise Management and Visual Quality - AMC - Socio-Community and Economic effects - Blasting and Vibration - Reclamation - Air Quality and Dust Management
September 11th	Q3 Quarterly SCEEAC Meeting	EVR presented at the 2024 Q3 meeting on the following topics: - Sale of Teck Coal - BRE Open House overview - Reclamation Highlights - Air and Dust Update
November 27th	Q4 Quarterly SCEEAC	EVR presented at the 2024 Q4 meeting on the following topics: - AMC Update - Air and Dust Update - Noise Monitoring - 2025 SCEEAC Planning

7.3 Changes and Updates to the Plan

The Feedback Line undergoes a review every two years, with the most recent review completed in 2023. The next review and update of the SCEEMP is scheduled for 2025, during which any necessary improvements to the feedback mechanism will be made.

8.0 Summary and Conclusion

The 2024 SCEEMP Annual Report for Elkview Operations (EVO) provides an overview of ongoing efforts to address environmental and community impacts adhering to regulatory and operational commitments.

The Noise Management Plan (NMP) includes all mining (and construction) activities that have the potential to generate noise, except for blasting. In 2024, continuous and intermittent noise monitoring was completed at receptor locations near the mine site. Results confirmed compliance with Permissible Sound Levels (PSL), with no recorded exceedances. Community feedback regarding noise is captured during public engagement activities or sent directly to EVR. EVR analyzes the comments to assess the effectiveness of current mitigation measures. In 2024, EVO only received feedback regarding noise during the BRE Open House hosted in May 2024. EVO continues to refine its noise management strategies as mining activities progress closer to residential areas.

Blasting and vibration management remained a priority in 2024, with all blasting events completed in compliance with regulatory limits. EVO continued to operate five monitored stations, including one relocated in late 2023 to improve coverage. Throughout the year, 259 blasts were carried out, with none exceeding the ground vibration

limit of 12.7mm/sec or the air overpressure limit of 133 dB9L. All five reports of community feedback related to blasting were investigated. In each case, monitoring data confirmed that atmospheric conditions, such as cloud cover and wind direction, contributed to the perceived intensity of the blasts, despite recorded levels remaining within regulatory thresholds. No changes were made to the Blasting and Vibration Management Plan in 2024.

EVO's air monitoring program was implemented in alignment with Permit 1807, focusing on mitigating the effects of particulate matter from fugitive dust. Air quality monitoring continued at both ambient and source locations, with two primary ambient air stations measuring PM_{10} and $PM_{2.5}$ levels. While most recorded levels remained within BC Ambient Air Quality Objectives (BCAAQO), seven exceedances of $PM_{2.5}$ and seven exceedances of PM_{10} were recorded. Investigations attributed these elevated levels primarily to external factors, such as road dust and wildfire smoke. However, during dry and windy conditions, mine related fugitive dust may have contributed to elevated readings. EVO received 14 public submissions related to air quality and dust, prompting ongoing reviews of dust mitigation strategies. The Fugitive Dust Management Plan is scheduled for an updated in 2025 to incorporate new requirements under permit 1807, including continuous monitoring and real-time data integration into the Trigger Action Response Plan.

Reclamation efforts at EVO continued to progress in 2024, with a total of 1,256.2 hectares of land considered reclaimed, representing 28% of the total disturbance area. Completed activities exceeded planned targets, with 54.9 hectares of land contoured, 67.6 hectares prepared, 7.8 hectares receiving soil placement and 70.5 hectares seeded (including a first of its kind high-elevation grassland soil salvage trial). Vegetation efforts including the planting of 66,780 seedlings consisting of a mix of trees, shrubs and grasses, supporting biodiversity and long-term ecosystem restoration. Reclamation focused on key areas such as Cedar North, Harmer Ridge, and the Administrative and Maintenance Complex, with land-forming and vegetation efforts aimed at improving landscape stability, improving visual quality, and minimizing fugitive dust emissions.

In 2024, no feedback related to the SCEEAC or SCEEMP was submitted through the Feedback Line. However, 88 cases of feedback were recorded during the BRE Annual Public Meeting. The SCEEAC held four meetings throughout the year. Meeting minutes and additional details are found on the District of Sparwood's Website (http://sparwood.ca/category/sceeac-meetings/). In accordance with the SCEEMP, the Annual BRE Public Meeting took place on May 22nd, 2024.

The 2024 Annual SCEEMP Report highlights EVO's efforts in resource management, environmental management, and community engagement. EVR acknowledges the engagement and continued discussions about the BRE Project and is committed to managing its impacts on visual quality, noise, blasting, air quality, and reclamation.