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SEC Registration Number

[illegible]

(Group's Full Name)

[illegible]

(Business Address: No. Street City/Town/Province)

Mr. Reynaldo P. Mendoza

(Contact Person)

8812-1380

(Group Telephone Number)

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Month *Day*
(Calendar Year)

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(Form Type)

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Month *Day*
(Annual Meeting)

Not Applicable

(Secondary License Type, If Applicable)

Dept. Requiring this Doc.

Amended Articles Number/Section

16,857

Total No. of Stockholders

□ □ □ □ □

Domestic

Foreign

To be accomplished by SEC Personnel concerned

[illegible]

File Number

LCU

LCU

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Document ID

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SEC FORM 17-A

ANNUAL REPORT PURSUANT TO SECTION 17 OF THE SECURITIES REGULATION CODE AND SECTION 141 OF THE CORPORATION CODE OF THE PHILIPPINES

1. For the fiscal year ended**DECEMBER 31, 2024**.....
2. SEC Identification Number**11341**..... 3. BIR Tax Identification No. ...**000-051-037**....
4. Exact name of issuer as specified in its charter**BENGUET CORPORATION**.....
5.**PHILIPPINES**.....
Province, Country or other jurisdiction of
incorporation or organization
6. (SEC Use Only)
Industry Classification Code:
7. **7F UNIVERSAL RE-BUILDING, 106 PASEO DE ROXAS, MAKATI CITY****1226**.....
Address of principal office Postal Code
8.**(632) 8812-1380**.....
Issuer's telephone number, including area code
9.
Former name, former address, and former fiscal year, if changed since last report.

1. Securities registered pursuant to Sections 8 and 12 of the SRC, or Sec. 4 and 8 of the RSA

<u>Title of Each Class</u>	<u>Number of Shares of Common Stock Outstanding and Amount of Debt Outstanding (as of December 31, 2024)</u>
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Convertible Preferred Class A ₱3.43 par value	217,061 shares
Common Class A Stock ₱1.00 par value	428,120,008 shares*
Common Class B Stock ₱1.00 par value	285,064,121 shares*

(*) – Net of Treasury Shares

Total consolidated outstanding principal loans payable as of December 31, 2024- ₱0 Million

11. Are any or all of these securities listed on a Stock Exchange.

Yes [**X**] No []

If yes, state the name of such stock exchange and the classes of securities listed therein:

The Convertible Preferred Class A, Common Class A and Common Class B shares of the Company are listed in the Philippine Stock Exchange (PSE).

12. Check whether the issuer:

- (a) has filed all reports required to be filed by Section 17 of the SRC and SRC Rule 17.1 thereunder or Section 11 of the RSA and RSA Rule 11(a)-1 thereunder, and Sections 26 and 141 of The Corporation Code of the Philippines during the preceding twelve (12) months (or for such shorter period that the registrant was required to file such reports);

Yes ☒ No ☐

- (b) has been subject to such filing requirements for the past ninety (90) days.

Yes ☐ No ☒

13. State the aggregate market value of the voting stock held by non-affiliates of the registrant. The aggregate market value shall be computed by reference to the price at which the stock was sold, or the average bid and asked prices of such stock, as of a specified date within sixty (60) days prior to the date of filing. If a determination as to whether a particular person or entity is an affiliate cannot be made without involving unreasonable effort and expense, the aggregate market value of the common stock held by non-affiliates may be calculated on the basis of assumptions reasonable under the circumstances, provided the assumptions are set forth in this Form.

Not Applicable.

**APPLICABLE ONLY TO ISSUERS INVOLVED IN
INSOLVENCY/SUSPENSION OF PAYMENTS PROCEEDINGS
DURING THE PRECEDING FIVE YEARS:**

14. Check whether the issuer has filed all documents and reports required to be filed by Section 17 of the Code subsequent to the distribution of securities under a plan confirmed by a court or the Commission.

Yes ☐ No ☐

DOCUMENTS INCORPORATED BY REFERENCE

15. If any of the following documents are incorporated by reference, briefly describe them and identify the part of SEC Form 17-A into which the document is incorporated:

- (a) Any annual report to security holders;
- (b) Any information statement filed pursuant to SRC Rule 20;
- (c) Any prospectus filed pursuant to SRC Rule 8.1.

PART I – BUSINESS AND GENERAL INFORMATION

ITEM 1. BUSINESS

1. BUSINESS DEVELOPMENT

Benguet Corporation (the “Company” or “Benguet”) is a publicly-listed company that pioneered modern mining in the Philippines. It was established on August 12, 1903 to engage in gold mining. It has since expanded into refractory chromite operation in 1934, quicklime and hydrated lime production in 1950, copper production in 1971, and then into nickel mining operation in 2007. From Benguet Consolidated Mining Company in the 1900s to Benguet Consolidated Inc. in the decades of the 1950s to 1980s, and finally to its present corporate name, Benguet Corporation, the Company looks with pride at its 121 years of existence as a testament to its enduring legacy in mining excellence, sustainable practices and community development in the face of challenges brought about by global events, natural phenomena, economic conditions, and industry trends.

Benguet operates gold mines in Benguet Province, nickel mines in Zambales Province and limestone production facility in Baguio City. It also continues to hold interests in Ampucao Copper-Gold in Itogon, Benguet Province, Pantangan Epithermal Gold in Bataan, Zamboanga Gold in Zamboanga Del Sur, Copper-Gold in Agusan Del Norte, Surigao Coal in Surigao del Sur, the Ilocos Norte and Apayao FTAA prospects, all in the Philippines and as well as mining properties in Royston Hills, Nevada. Aside from mining and mineral exploration, the Company is also into healthcare and diagnostics services through its subsidiary, Benguetcorp Laboratories, Inc. (BCLI); port and shipping services through its subsidiary, Keystone Port Logistics and Management Services Corporation (Keystone) and land development through its subsidiaries Agua de Oro Ventures Corporation (AOVC) and BC Property Management, Inc. (BCPM). In 1980, the Company established Benguet Management Corporation (BMC), a wholly owned non-mining subsidiary, primarily to invest in projects and enterprises that diversify, stabilize and strengthen the investment portfolio of the Benguet Group of Companies. BMC is involved in other lines of business which include logistics services through its subsidiary, Arrow Freight and Construction Corporation (AFCC) (formerly Arrow Freight Corporation); trading of construction materials, equipment and supplies through its subsidiary, Benguettrade, Inc. (BTI); and real estate development and lime kiln operation through its subsidiary, BMC Forestry Corporation (BFC).

In 1950, Benguet acquired the Irisan Lime Project (ILP) from Mr. Richard L. Lile (formerly Lime Products Manufacturing). ILP is engaged in the production and trading of quicklime and hydrated lime.

In 2002, Benguet reopened Benguet Gold Operation (BGO) on a limited scale through the Acupan Contract Mining Project (ACMP) now renamed as the Acupan Gold Project (AGP). ACMP was initially conceived as a community based underground mining operation which started commercial operation in January 2003.

In 2007, Benguet developed the Sta. Cruz Nickel Project (SCNP), a surface nickel mining operation in Zambales Province operated by its wholly owned subsidiary, Benguetcorp Resources Management Corporation (BMRC). On December 10, 2010, the Company transferred the mining permit denoted as Mineral Production Sharing Agreement (MPSA) No. 226-2005-III of its SCNP, to BRMC. The transfer of the MPSA was approved by the Mines and Geosciences Bureau (MGB) on January 16, 2012.

For the past three years, Benguet and its subsidiaries have not been involved in any bankruptcy, consolidation, or purchase/sale of significant amount of assets not in the ordinary course of business.

MINING OPERATIONS

Benguet Gold Operation (BGO) in Itogon, Benguet Province:

The Company's gold operation delivered strong performance in 2024 on the back of record gold prices inspite of challenges in the first four months of the year. It reported pre-tax income of ₱130.3 million, a turn around from the pre-tax loss of ₱7.2 million in 2023, over 4 times the pre-tax income of ₱29.2 million in 2022, although slightly lower than the pre-tax income of ₱132.5 million in 2021.

Gold production in 2024 reached 5,508.05 ounces, compared to 5,931.97 ounces in 2023, 9,402.31 ounces in 2022 and 10,675.01 ounces in 2021. Decline in production is due to lower ore milled this year. AGP milled a combined 23,667 tons ore at higher average mill head of 8.48 grams of gold per ton this year, compared to 29,195 tons at an average mill head of 7.19 grams of gold in 2023, 47,516 tons at an average mill head of 7.35 grams of gold in 2022 and 56,753 tons at an average mill head of 5.86 grams of gold in 2021.

Net revenue in 2024 amounted to ₱791.8 million, higher than the ₱627.6 million in 2023, although lower than ₱914.8 million in 2022, and ₱945.8 million in 2021. The increase in revenue is attributed to higher price of gold partly offset by lower volume of gold sold. Gold sold in 2024 decreased to 5,750.74 ounces from 5,803.21 ounces in 2023, 9,363.56 ounces in 2022 and 10,685.25 ounces in 2021. Gold was sold at an average price of US\$2,414.80 per ounce this year compared to US\$1,941.83/ounce in 2023, US\$1,802.02/ounce in 2022 and US\$1,806.68/ounce in 2021.

With the continuous increase in price of gold, BGO plans to mine Level 2000 to increase its production. BGO is engaging the services of consultants to upgrade the previous study on how to mine the flooded areas on level by level basis.

On the BGO Tailings Project, search for new technologies that will yield higher recovery of gold is still on-going. The previous study conducted to reprocess the tailings using ultra-fine grinding will yield only 63% recovery.

AGP is scheduled to undergo ISO 14001:2015 recertificaton applicable to Mining and Processing of Gold in April 2025 by NQA Philippines, an accredited certifying body.

Sta. Cruz Nickel Project (SCNP) in Sta. Cruz, Zambales Province:

SCNP reported lower revenue in 2024 compared to 2023, 2022 and 2021. Revenue for the year amounted to ₱1.5 billion lower versus ₱1.7 billion in 2023, ₱2.9 billion in 2022, and ₱2.8 billion in 2021. The decline was attributed to lower nickel price resulting in lower volume of ore sold. SCNP sold 15 boatloads with an aggregate tonnage of 808,556 tons in 2024, versus 16 boatloads with an aggregate tonnage of 854,074 tons in 2023, 1,169,328 tons in 2022, and 1,175,050 tons in 2021. Nickel ore was sold at an average price of US\$31.39/ton this year, against US\$37.07/ton in 2023, US\$46.97/ton in 2022, and US\$47.38/ton in 2021. This resulted to income this year of ₱206.62 million, lower compared to ₱397.00 million in 2023, ₱1.0 billion in 2022, and ₱880.4 million in 2021.

Despite the drop in nickel prices primarily due to huge growth in supply of nickel pig iron from Indonesia and sluggish demand from China in 2024, the Company is optimistic that the future of nickel is still bright.

With the continued demand for nickel, SCNP continued its mining operation and activities in Area 2 and 3 in alignment with the approved 3-year Development and Work Program.

During the MGB-III Regional Mining Summit held on June 6, 2024, BRMC was recognized for the 6 Million Man-Hours Worked without Lost Time. SCNP maintain its ISO 14001:2015 certification

from NQA Philippines. The certification is valid until February 3, 2026 applicable to Mining of Nickel Ore.

Irisan Lime Project (ILP) in Baguio City:

The Company's ILP generated ₱96.8 million revenue this year, slightly lower than the ₱97.7 million in 2023, ₱105.6 million in 2022 but higher than ₱80.9 million in 2021. Lime sold declined to 6,362 DMT from 6,464 DMT in 2023, 7,237 DMT in 2022 and 7,702 DMT in 2021. The effect of lower sales volume was partly offset by the increase of sale price this year. Lime products were sold at an average price of ₱15,956/DMT this year, versus ₱15,757/DMT in 2023, ₱14,587/DMT in 2022, and ₱10,518/DMT in 2021. Pre-tax income amounted to ₱25.4 million in 2024, lower compared to ₱29.8 million in 2023, ₱24.1 million in 2022, and ₱19.6 million in 2021.

ILP was awarded Safest Mineral Processing – Calcining Plant Category Award by the Philippine Mine Safety and Environment Association and DENR-Mines and Geosciences Bureau on November 22, 2024.

Benguet Antamok Gold Operation (BAGO) in Itogon, Benguet Province:

The Antamok Final Mine Rehabilitation and Decommissioning Plan (FMRDP) has undergone rigorous evaluation by both the MGB-CAR and the Contingent Liability and Rehabilitation Fund Steering Committee (CLRFSC), resulting in comprehensive revisions and updates. Phase 1 activities are in progress within the framework of the Annual Care and Maintenance Programs with total expenditure of ₱16.6 million since 2017. Out of the budgeted total of ₱40.03 million for the FMRDP, BAGO has already allocated resources to various rehabilitation initiatives, including the Liang Emergency Spillway, Liang Channel, reforestation activities, maintenance and patrolling of watershed areas, water quality monitoring, and solid waste management, as outlined in the annual Care and Maintenance Program or CMP to align with the FMRDP's objectives. Beyond outlining Decommissioning and Rehabilitation Plans for Antamok, the FMRDP also establishes dedicated funds to implement measures aimed at preventing and mitigating any identified risks and impacts stemming from previous project operation. Recently, the FMRDP has already been approved by the CLRFSC. The FMRDP is instrumental in ensuring the implementation of activities geared towards the sustainability of previously operated mine site areas. For the year 2024, the Company spent ₱0.8 million for the care and maintenance of BAGO.

EXPLORATION, RESEARCH AND DEVELOPMENT

Exploration, research and development are currently undertaken by the Company's in-house team, with or assisted by consultants and other service providers, like engineering and/or drilling contractors.

Balatoc Tailings Project (BTP) in Itogon, Benguet Province:

Similar to the Acupan Contract Mining Project, BTP will be an integral part of the Acupan Gold Project geared to re-develop the Company's Benguet Gold Operation (BGO) that was suspended because of the 7.8-magnitude earthquake that occurred on July 16, 1990.

The Company currently updates the feasibility study on BTP that will reprocess the materials in its BGO gold tailings stacking facility. BTP viability becomes more attractive given the higher prices of gold and the availability of new and modern technologies that would provide higher milling recovery rate, lesser capital expenditures, and power efficient machinery, tools and equipment. The viability study covers BTP adherence to ESG investing.

Pantangan Gold Prospect in Bagac, Bataan Province:

The Pantangan property is located in Bataan peninsula and is covered by MPSA No. 154-2000-III. It remains to be a viable prospect for epithermal gold mineralization and aggregates. The Mines and Geosciences Bureau (MGB) approved the renewal of the MPSA and the Company continues to implement the drilling programs to explore the two (2) targeted areas – V9SL and V2SL being undertaken by Coreline ExploDrill Incorporated. The drilling was quite delayed due unfavorable

weather condition in the region. Other activities performed during the year were continuous repair and rehabilitation of the access roads and man-way trails, hole-to-hole transfer and mobilization of the drill-rigs, coring operation, hauling of core-boxes, quick structural logging of cores, cutting of cores into halves and sampling. The Company also implemented consultation with the Indigenous Peoples (IPs).

On the aggregates prospect, the Company continues to apply for permits including road-right-of-way in the 30-hectares Quarry Permit Area (QPA) outside the MPSA. Permits of 6 QPAs are expected to be completed by year-end. The large-scale quarry in PAB-1 and 2 still needs drilling for Declaration of Mining Project Feasibility (DMPF). In the QPA area, the MGB has issued area clearance while the NCIP has issued Certificate of Non-Overlap (CNO) while the Environmental Management Bureau (EMB) has approved and released the ECC.. The Company is working on LGU consent and tree inventory for Tree Cutting Permit. Upon completion of the requirements for 6 QPAs, the Company will proceed on permitting of another 8 QPAs.

Ampucao Copper-Gold Prospect in Itogon, Benguet Province:

Ampucao is a viable prospect for the discovery of deep-seated porphyry copper-gold deposit corresponding to surface and underground initial geological evaluation done by geologists of the Company. Copper bearing formation hosted by intensely silicified quartz diorite was delineated in outcropping on a river within the Hartwell claims and at the mine levels of 1500 and 2300 of BC's Acupan Mine. A one-(1) kilometer long deep hole of surface drilling has been suggested to probe the down-dip extension of the projected mineralization in the Ampucao prospect. This project is covered by the Company's Application for Production Sharing Agreement (APSA) which was converted to EXPA No. 0122-CAR pursuant to Section 9 of the Department of Environment and Natural Resources (DENR) DAO No. 2021-25.

Zamboanga Gold Prospect (BOLCO) in R.T. Lim Zamboanga del Sur:

The property is about 150 kilometers from Zamboanga City. It straddles the common boundary of R. T. Lim, Zamboanga Sibugay and Siocon, Zamboanga del Norte and is covered with Exploration Permit No. EP-012-2023-IX. The Company has an operating agreement with Orelina Mining Corporation to explore and operate the property comprising of 399.0288 hectares. The Company has started the implementation of exploration works for the Work Program submitted to MGB Region IX.

Surigao Coal Project in Lianga, Surigao del Sur:

The Company acquired a coal property in Surigao del Sur through a Royalty Agreement with Diversified Mining Company in 1981. The property consists of 12-coal blocks with a total area of 12,000 hectares. Six-(6) coal blocks were extensively explored by way of mapping, trenching, drilling, electrical logging and topographic surveying. The ground evaluation works of the Company resulted in the delineation of seven-(7) coal seams of lignitic to sub-bituminous coal quality (steam grade). In the Company's application for a new Coal Operating Contract (COC), the Department of Energy (DoE) has declared it has passed the required bidding process. The Company awaits for the issuance of new COC subject to FPIC compliance. Market prospects for local coal with low BTU remains to be a concern, considering DoE's preference for clean energy and global shift to net-zero emissions.

Copper and Gold Prospect in Santiago, Agusan Del Norte

The property is located in Municipality of Santiago, Agusan Del Norte and covered by Exploration Permit Application No. 000259-XIII. The Company has signed an operating agreement with Asiga Mining Corporation to explore and operate the property consisting of 3,483 hectares claim holdings.

Financial Technical Assistance Agreement:

The Company and its subsidiary company, Sagittarius Alpha Realty Corporation (SARC), holds two (2) pending applications for Financial Technical Assistance Agreement (FTAA) denominated as AFTA No. 003 and AFTA No. 033, AFTA No. 003 with an area of 21,189.37 hectares covering

four (4) individual parcels, is within the provincial jurisdiction of Ilocos Norte, whereas AFTA No. 033 consisting of 51,892.92 hectares covering two (2) individual parcels is situated in Apayao province. Both mineral claims lie within the porphyry copper-gold and epithermal gold mineralization belt of Northern Luzon and are still greenfield for mineral exploration. BC already negotiated and signed four-(4) out of the five-(5) Memoranda of Agreement (MOA) with the concerned Indigenous People (IP) for the AFTA No. 003, and now awaiting confirmation from the National Commission on Indigenous People (NCIP) of the Free, Prior and Informed Consent (FPIC) requirement.

SUBSIDIARIES AND AFFILIATES

A. LOGISTICS

- Arrow Freight and Construction Corporation (AFCC)

AFCC, the logistics provider of the Company generated ₱76.0 million revenue this year, lower compared to revenues of ₱92.4 million in 2023, ₱80.9 million in 2022, and ₱83.2 million in 2021. Revenues were derived from the 12% management fee in providing the logistical requirements of BRMC, ore loading and hauling using its own backhoes and dump trucks and equipment rental for the maintenance of tailing ponds and roads. Net income in 2024 amounted to ₱29.3 million, lower than the net income of ₱38.6 million in 2023, ₱26.8 million in 2022, and ₱17.9 million in 2021. Currently, AFCC has 11 units of dump truck, 4 backhoes, 1 water truck and 1 fuel tanker used by BRMC in ore loading, hauling, road maintenance and environmental maintenance of its tailing ponds. AFCC plans to purchase additional dump truck and earth moving equipment for its logistic and construction business.

- Keystone Port Logistics and Management Services Corporation (KPLMSC)

KPLMSC, the port and barging services provider of the Company generated ₱63.9 million revenue, lower against ₱63.9 million revenue in 2023, ₱84.7 million 2022, and ₱78.3 million in 2021.

The revenue came from the port services and barge and management fee in handling BRMC's 808,556 tons of nickel ore exports in 2024, 854,074 tons in 2023, 1,169,328 tons in 2022, and 1,175,050 tons in 2021. Net income in 2024 amounted to ₱20.6 million, lower than ₱25.2 million in 2023, ₱40.8 million in 2022, and ₱48.4 million in 2021. Repair of the damaged side of the port is completed. Dredging of the port has been partially accomplished and expected to be completed as soon as the issue on transferring of the dredge materials is resolved. This will result in more efficient shipment loading operation for BRMC.

B. REAL ESTATE

- BMC Forestry Corporation (BFC)

BFC manages the real estate projects and the lime kiln operation of Irisan Lime Project. BFC reported net income of ₱2.5 million this year, compared to the net income of ₱3.9 million in 2023 and ₱2.5 million in 2022, and slightly higher than the net income of ₱1.8 million in 2021.

BFC acquired a 6-hectares property in the Province of La Union for its Woodspark expansion. Land conversion is on-going from agriculture to residential. The land development is projected to commence in October 2025.

BFC plans to continue to acquire and develop new lands as part of its plan to expand its real estate projects in La Union, Pangasinan and Tarlac.

Kelly Ecozone Project (KEP)

Phased development activities of the proposed Kelly Ecozone Project (KEP) are still on hold pending resolution of tenurial issues.

Updating and assessment of improvements of small-scale miners that will be affected by the KEP and consultation with the project-affected-people (PAP) and the local government units is a continuing program.

Assessment and evaluation of areas for the agroforestry component of KEP including site preparation and sourcing of spring to supply the water needs of the project is a work in progress. Establishment of coffee plantations is also being implemented in the area.

C. HEALTHCARE

- BenguetCorp Laboratories Inc. (BCLI)

BCLI, the healthcare provider of the Company, generated ₱45.2 million revenue this year, lower against ₱47.1 million in 2023, ₱48.8 million in 2022, and ₱47.9 million in 2021. The decrease is attributed to lost bid to service the need of major client Texas Instruments for Clinic Management and Annual Physical Examination. BCLI's net income this year amounted to ₱4.0 million, comparable to the net income of ₱3.5 million in 2023, but lower against net income of ₱8.1 million in 2022, and net income of ₱6.7 million in 2021.

BCLI continue to serve its core customers, HMO (Health Maintenance Organization), corporate clients in Baguio City, and government agencies. To further improve its laboratory services, conform with the DOH-FDA requirements and augment its income, BCLI purchased one (1) Mobile X-ray with Digital Radiography system this year and also plans to purchase one (1) Threadmill Stress Test Machine.

BCLI passed the ISO 9001:2015 - Quality Management System recertification audit conducted by TUV Rheinland in November 3, 2023 valid from January 2024 to January 2, 2027. To- date BCLI is the only free standing private medical and diagnostic facility that is ISO certified in Baguio City since 2018.

BCLI received Certificates of Recognition and Appreciation from various agencies, including DOH-CAR, Social Security System, Pagibig Fund and Baguio City Health Services, for its active support and compliance with their programs and regulations.

D. BENGUETCORP INTERNATIONAL LIMITED (BIL) IN HONGKONG

- In 1988, the Company acquired BenguetCorp International Limited (BIL), a Hongkong-based and wholly owned subsidiary for international operations, which remains largely inactive. BIL's subsidiary, BenguetCorp USA Limited's (BUSA) renewed its claims over 217 hectares of mineral property for gold/silver in Royston Hills, Nevada, USA. The Company engaged the services of Burgex, Inc. to provide and perform services as needed to identify and evaluate mineral interest and opportunities in the property.

2. BUSINESS OF ISSUER

Products or Services/Sales and Market and Distribution Method

The Company currently produces and markets gold (with silver by-product) from its AGP, nickel laterite ore from BMRC, and quicklime and hydrated lime from ILP. AGP directly sells the gold it produced to Bangko Sentral ng Pilipinas, BRMC principally exports nickel ores, and ILP's quicklime products are mainly sold to local customers. The Company, through its subsidiaries, provides logistics services under AFCC, port and shipping services under KPLMSC, healthcare services under BCLI and real estate projects under BFC.

Percentage of Sales/Revenue

The Company's sales/revenue of product/services which contributed ten percent (10%) or more to sales/revenues for the past four years are as follows:

	2024 (% to total revenue)			2023 (% to total revenue)			2022 (% to total revenue)			2021 (% to total revenue)		
	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total
Gold	33%	-	33%	25%	-	25%	23%	-	23%	25%	-	25%
Lime	4%	-	4%	4%	-	4%	3%	-	3%	2%	-	2%
Nickel	-	61%	61%	-	69%	69%	-	73%	73%	-	72%	72%
Logistics & Others	2%	-	2%	2%	-	2%	1%	-	1%	1%	-	1%
Total	39%	61%	100%	31%	69%	100%	27%	73%	100%	28%	72%	100%

Status of Any Publicly-Announced New Product or Service

The Company and its subsidiaries have no publicly-announced new products or service introduced in 2024 whether prototypes that are existing or in planning stage.

Competition

The gold produced by the Company is directly sold to Bangko Sentral ng Pilipinas and the price is based on world spot market prices from the London Metal Exchange. The price of gold is currently at above-average historical level but there is no assurance that the upward trend will continue. There is virtually no competition in the industry and gold producers can easily sell their products. On the other hand, the Company principally competes in selling its nickel ores outside the Philippines. The method of competition is basically in price. However, the Company believes it can effectively compete in price with other companies due to lower operating cost and proximity of the mine to major buyers/users in Asia and China. Prices of the company's products are dictated by the world market.

Sources of Raw Materials and Supplies

The ore mined from the Company's gold properties in Acupan Gold Project (AGP) is the raw material that is processed into gold (silver by-product), while in the Sta. Cruz Nickel Project (SCNP), the nickel laterite ore that are actually mined are directly exported/sold to foreign buyers. On the other hand, limestone ore is the basic raw material of quicklime and hydrated lime produced by ILP.

In the process of producing gold (silver by-product), nickel laterite ore and quicklime, labor, materials and supplies, power, and other services are employed and utilized. Labor is generally provided by the Company's regular employees, augmented by outsourced workers and contractors for certain projects and seasonal activities in the gold, lime and nickel mining operations. In the Company's AGP, it engaged the services of accredited mining contractors to do underground mining. Operating supplies, equipment and spare parts, which are generally available, are obtained on competitive basis from sources both locally and abroad. The Company has no existing major supply contracts. Electrical power to run the Company's mining operations in Itogon, Benguet Province is currently provided by Aboitiz Power Corporation through its wholly owned subsidiary Therma Luzon, Inc. (TLI) under the term of 20-year contract up to 2031.

Customers

The gold produced by the Company's AGP, which is directly sold to Bangko Sentral ng Pilipinas represents 33% of the total sales. The Company and its subsidiary, BRMC, have existing off-take agreement with Korean trading company for the sale of nickel ore. Outside of this, BRMC is free to sell its nickel ore to other traders or refineries.

Transactions with and/or Dependence on Related Parties

In the normal course of business, the Company has transactions with its subsidiaries which principally include: (a) Purchase of materials and supplies and services needed in its mining operations which are consummated at competitive prices, (b) Sales of mine products, (c) Rental of office space and certain machinery and equipment, and (d) Other transactions comprising non-interest bearing cash advances for working capital requirements. The Company has dealings with its subsidiaries as follows:

- a. On January 1, 2021, the Company entered into a marketing agreement with BRMC for five (5) years and may be extended upon mutual agreement of the parties. BRMC shall pay a marketing fee per ton of nickel ore shipped. The Company earned ₱139.8 million, ₱141.2 million, ₱186.5 million and ₱172.7 million in marketing fees for 2024, 2023, 2022 and 2021 respectively. Outstanding trade receivable from this transaction amounted to ₱24.9 million, ₱33.5 million, ₱14.2 million, ₱111.8 million, and ₱3.9 million in 2024, 2023, 2022 and 2021 respectively.
 1. The business purpose of the arrangement is for the Company to market the ore production of BRMC at the best price obtainable in the market and under terms most advantageous to BRMC.
 2. The Company is authorized to enter into a long-term supply agreement and to negotiate and receive advance payment from the buyer and is entitled to a definite marketing fee. BRMC is a subsidiary that is controlled and significantly managed by the officers of the Company.
 3. The transaction was determined after the conduct of a market study and cost benefit analysis.
 4. The Related Party Transaction Committee and Management Committee reviewed and evaluated the transaction. The said Committees practiced the vetting process wherein it evaluated the fairness of the terms of the related party transactions and ensured that the terms are at arm's length following the Related Party Transactions policy of the Company. The related party transaction terms were compared with the terms granted to non-related parties under comparable circumstances and conditions. In cases where comparable transactions are not available, adequate justifications on the selection of the related party and the benefits of the engagement shall be provided.
 5. The marketing agreement was renewed for another five (5) years from January 1, 2021 to December 1, 2025.
- b. AFCC, a wholly owned subsidiary of the Company through BMC, continued to provide services to the Company for the delivery of various materials and supplies to various project sites. Total amount charged to the Company in 2024, 2023, 2022 and 2021 amounted to ₱0.4 million, ₱1.4 million, ₱2.7 million and ₱2.8 million respectively.
 1. The business purpose of the arrangement is to provide equipment services to the Company for the delivery of equipment and/or raw materials to the various project sites.
 2. AFCC must provide all the required equipment/ service vehicle as well as personnel necessary for the Company's operations in its project sites. AFCC is a wholly owned subsidiary of BMC, and BMC is a wholly owned subsidiary of the Company that is significantly managed by the same Officers of the Company.
 3. The transaction price was determined after the conduct of a market study and cost-benefit analysis.
 4. The Related Party Transaction Committee and Management Committee reviewed and evaluated the transaction. The said Committees practiced the vetting process wherein it evaluated the fairness of the terms of the related party transaction and ensured that the terms are at arm's length following the Related Party Transaction Policy of the Company. The related party transaction terms were compared with the terms granted to non-related parties under comparable circumstances and conditions. In cases where comparable transactions are not available, adequate justifications on the selection of the related party and the benefits of the engagement shall be provided.
 5. This arrangement is still in effect as intended by both parties.
- c. BFC, a wholly owned subsidiary of the Company thru BMC, was appointed as General Manager of the Company's Irisan Lime Project. Total amounts charged to the Company in 2024, 2023, 2022 and 2021 are ₱2.8 million, ₱3.3 million, ₱2.7 million and ₱0.7 million respectively.
 1. The business purpose of the arrangement is to handle the over-all operations and management of the Irisan Lime Project.
 2. BFC is to manage and supervise the marketing functions, all production aspects, the industrial and personnel relations functions, financial and internal accounting activities, and to furnish financial statements and progress reports regularly to the Company.

3. The transaction price was determined after the conduct of a market study and cost-benefit analysis.
4. The Related Party Transaction Committee and Management Committee reviewed and evaluated the transaction. The said Committees practiced the vetting process wherein it evaluated the fairness of the terms of the related party transaction and ensured that the terms are at arm's length following the Related Party Transaction Policy of the Company. The related party transaction terms were compared with the terms granted to non-related parties under comparable circumstances and conditions. In cases where comparable transactions are not available, adequate justifications on the selection of the related party and the benefits of the engagement shall be provided.
5. The management contract is effective for a period of five (5) years which started on January 1, 2021 to December 31, 2025.

Please see Note 24 – Related Party Transactions, of the Company's 2024 (Parent) Audited Financial Statements for details.

Terms and Expiration Dates of Royalty Contracts

The Company does not own any trademark, patent, copyright, franchise or concession. The Company has Operating Agreement with the following claimowners: Balanga Bataan Minerals Corporation (BBMC) for its Pantingan Gold Prospect in the Province of Bataan; Orelina Mining Corporation (OMC) for its Zamboanga Gold Prospect (BOLCO) in R.T. Lim, Zamboanga Sibugay; Diversified Mining Corporation for its Surigao Coal Project in Lianga, Surigao Del Sur; and Asiga Mining Corporation for its Gold and Copper-Molybdenum Project in Santiago, Agusan Del Norte. Duration of said agreements is up to end of mine life.

Government Regulations and Approval

All necessary business licenses and permits required for the continuous operation, production and sale of Company's products have been secured by the Company including new licenses or permits as well as those that have to be renewed periodically. The following Exploration Permit Application (EXPA) are undergoing evaluation by the Department of Environment and Natural Resources – Mines and Geosciences Bureau (MGB): (a.) EXPA No. 0122-CAR (formerly Application for Mineral Production Sharing Agreement (APSA) No. 009 CAR for the Company's Antamok Gold Operation; and (b) EXPA No. 0123-CAR (former APSA Nos. 010, 011, 012 and 013) for the Company's Benguet Gold Operation and Ampucao Copper-Gold Prospect in Itogon, Benguet. The Foreign Technical Assistance Agreement (FTAA) application in Ilocos Norte (AFTAA- 003) is undergoing Free, Prior and Informed Consent (FPIC) process under the NCIP Regional Office while the Apayao AFTA-033 is under evaluation by the MGB Central.

Effect of Existing or Probable Governmental Regulations

The effect of existing governmental regulations is mainly on the corresponding costs of compliance. In the case of probable government regulations, the effect or impact of such probable governmental regulations on the Company's operations could only be determined upon their passage and implementation. The indecisive stance of some government agencies to approve and issue much-needed permits and licenses may also cause delays in the mining and/or operating activities of the Company and its Subsidiaries.

Research/Developmental Expenses

The Company's total expenses for exploration and development activities for the last four (4) years as follows:

	Amount in Millions	% to Total Revenues
2024	₱27.1	1.1%
2023	₱28.3	1.1%
2022	₱31.2	0.8%
2021	₱11.7	0.3%

Costs and Effects of Compliance with Environmental Laws

The Company is committed to the protection and enhancement of our environment by ensuring that its mining operations do not just meet legal environmental standards, but also take proactive steps toward environmental sustainability. The Company's commitment to environmental protection is both strategic and holistic – integrating strict regulatory compliance with forward-looking initiatives aimed at environmental enhancement and sustainability.

Since March 2016, its gold and nickel operations have consistently maintained ISO 14001:2015 certification, reflecting robust Environmental Management System (EMS) and a firm dedication to minimizing the environmental footprint of these operations. This commitment is further solidified through the implementation of the Annual Environmental Protection and Enhancement Program (AEPEP), a comprehensive framework developed in alignment with the Mines and Geosciences Bureau (MGB) guidelines. The AEPEP outlines the Company's environmental objectives, key activities, and measurable achievements – ranging from progressive mine rehabilitation and reforestation to waste management and biodiversity conservation.

For the year 2024, the Company's gold operation spent ₱10.7 million in environmental protection activities bringing its expenditures to-date to ₱116.4 million since 2015; the nickel operation spent ₱13.8 million bringing its expenditures to-date to ₱347.9 million since 2010 and the Irisan Lime Project spent a total of ₱1.9 million bringing its expenditures to-date to ₱14.8 million since 2014. These expenditures focused on land resource enhancements, progressive rehabilitation, maintenance of environmental structures such as Tailings Storage Facilities (TSF) and its appurtenances, drainage tunnels, and strict implementation of hazardous and solid waste management, as well as carrying out close monitoring of air, water and noise quality, Biodiversity Enhancement and Protection, alongside Coastal Resources Protection and Management, emphasizing adherence to environmental stewardship and community engagement. Furthermore, the Company also actively support the government's Mining Forest Program and National Greening Program and Bamboo Plantation Program which is done through continuous propagation and maintenance of various seedlings in the Company-owned nurseries and garden. For the year 2024, the gold operation planted 856 propagules of bamboo, 1600 seedlings of coffee and 1,841 seedlings of Benguet Pine while nickel operation have planted additional 58,890 seedlings of various species and planted 14,200 bamboo culms.

In summary, the Company not only meets regulatory standards but demonstrated that economic development and environmental sustainability go hand in hand.

Community Relations/Social Development & Management Programs (SDMP)

The Company remains steadfast in fulfilling its social development commitments by implementing Social Development and Management Programs (SDMP). These initiatives supplements the general welfare services provided by national and local governments, while addressing diverse community needs such as healthcare, medical assistance, public safety, livelihood, education, waste management, infrastructure development, and scholarship program among others.

During the year 2024, the Company's gold operation spent ₱3.8 million bringing its expenditures to-date to ₱67.9 million since 2005. Meanwhile, the nickel operations spent ₱7.3 million bringing its expenditures to-date to ₱76.0 million since 2013. The Company's Irisan Lime Project (ILP) contributed ₱0.6 million to SDMP in 2024, bringing cumulative expenditures to ₱10.2 million since 2013.

Moreover, the Company's Community Development Program (CDP) for its Pantingan Project reached a financial accomplishment of ₱2.2 million to-date, since 2022.

The Company made significant contribution to education within its host communities in Itogon, Benguet supporting 58 students under its Scholarship Program. In Zambales, the Company provided educational assistance to 391 high school students and 223 college students. It also

extended educational assistance to 15 high school and 11 college students in Brgy. Liyang, Bataan. Additionally, the Company supported the educational services within the barangay and actively participated in initiatives like Brigada Eskwela and Brigada Pagbasa programs and activities.

The Company continuously introduce various health initiatives to improve medical services and facilities in all its communities. These efforts included providing various medicines along with other essential medical supplies. Additional programs included the PhilHealth Sponsorship Program, medical missions, disaster risk reduction efforts, and support for barangay activities through fuel and vehicle maintenance. The Company also facilitated health profiling, anti-rabies vaccination, and community health monitoring programs. Support was also extended to health workers, nutrition aide, and public safety officers.

The Company supported various livelihood programs to strengthen and empower community associations. Such programs included assisting the Livelihood Association of the barangays, empowering solo parents through food processing and providing sewing materials for the Virac Women's Club and Balatoc Women's Association, providing technical vocational training for indigent residents of the community and supported TODA members in Brgy. Biaan, Mariveles, Bataan, by financing motorcycle parts. Bamboo farming was also introduced in the host communities of Zambales, along with the provision of farming equipment. These efforts were designed to boost economic growth and strengthen community resilience.

The Company also supported various infrastructure projects aimed at improving community facilities and accessibility. Key initiatives included the improvement of the Farm-to-Market Road at Sitio Lumbag, Barangay Ampucao, construction of canal and rehabilitation of a footpath in Barangay Poblacion in Itogon, road concreting, facility improvements within barangays, repainting of community structures, repairs of the multi-purpose hall/plazas and installation of solar lights in the communities of Zambales.

These activities show the Company is committed to responsible mining and delivering social services that will help uplift the living condition of the community where it operates.

Total Number of Employees

The Company has a total manpower complement of 1,244 in 2024, 1,131 in 2023, 1,330 in 2022, and 1,422 in 2021. This is broken down as follows:

Type of Employee	2024	2023	2022	2021
Administrative	176	133	226	175
Clerical	13	15	10	20
Exploration/Operation	209	391	292	304
Outsourced Staff (seasonal, project based, security guards, janitors and retainers / consultants	846	592	802	923
Total	1,244	1,131	1,330	1,422

The Company anticipates no material change in the number of employees for the next 12 months. There are presently no labor unions in the Company and its subsidiaries, nor were there any major pending labor actions against the Company and its subsidiaries during the past four (4) years. The Company continuously provides free housing or accommodation to managers and employees at mine site with free water, free meals and power utilities. Basic and major medical; educational assistance; transportation allowance; vacation/sick/paternity/birthday leave with pay; free protective and safety paraphernalia; Integrated Retirement Plan; Group Life and Personal Accident Insurance; and Stock Option Plan, among others are currently enjoyed by covered employees.

Business Risks

The Company recognizes, assesses, and manages certain risks that could materially and adversely affect its business, financial condition, results of operations and prospects. Regulatory risks are changes in regulations, policies, and law that will affect the mining industry and Company in particular.

- a. The operations of the Company's business are subject to a number of national and local environmental laws and regulations which should be adhered to. Non-compliance or failure to comply may delay or suspend mining operations or could result in substantial fines and penalties. In ensuring compliance, the Company is obliged to allot a considerable amount from its operational funds for rehabilitation, reforestation and other environmental protection projects in the areas of operations. The Company liaisons and maintains relationship with regulatory agencies to allow the Company to identify potential regulatory risks and proactively respond to these risks. While the Company believes it is in substantial compliance with all material environmental regulations, it can give no assurance that changes in these regulations will not occur in the future which may impact its operation and/or impose added costs to the Company.
- b. The Company's exploration, development and extraction of, minerals entail significant operating risks. There is no certainty that the activities of the Company, which by the character of its business involve substantial expenditures and capital investments in the exploration and development of its resource properties, will result in the discovery of mineralized materials in commercial quantities and thereafter in viable commercial operation. The Company tries to temper its exposure to these risks by prudent management and the use of up-to-date technology.
- c. The Company's revenues are directly affected by the world market prices of the metal it produces, which are gold (silver by-product) and nickel ore. The Company has experienced, and expects to continue to experience, significant fluctuations in operating results due to a variety of factors, including among others, depreciation of the Philippine Peso against the US Dollar, ore grades, mineable ore reserves and interest rates. The ultimate outcome of this matter cannot presently be determined and related effects will be reported as they become known. The metal prices in the world market are US Dollar denominated. The Company's reporting currency in its financial statements is the Philippine Peso. Changes in the US\$/Php exchange rate may adversely affect the financial condition of the Company. The Company exports the saleable stockpiled nickel ores to foreign buyers at favorable market price while the gold produced is directly sold to Bangko Sentral Ng Pilipinas.
- d. The Company depends on certain key personnel, and its business and growth prospects may be disrupted if their services are lost. There is no assurance that certain key officers and employees which are critical to the continued operation of the Company's business will remain employed. Should several of these key personnel resign or are separated from their present posts, the Company may face difficulties in hiring replacements and the business and operations may be disrupted as a result, which may adversely affect the financial condition and operations of the Company. To maintain their employment, the Company continuously reviews and ensure that compensation and benefit packages for officers, managers and rank and file personnel are competitive with industry standards. Continuous trainings are provided to ensure that their knowledge and skills are being updated.
- e. The operations of the Company's business is also subject to various other risks which are beyond its control. These include typhoons, earthquakes, floodings, landslides, and virus outbreak among other natural disasters which may disrupt its operations. There can be no assurance that these risks will not have an adverse effect on the Company. To mitigate the risks, management and operations meetings are conducted regularly to identify, assess and formulate related contingency plans to manage or minimize the adverse impacts of potential risks and to ensure that concerned units manage or promptly address identified risks.

- f. The Company faces competition from large metal producers who have greater financial and technical resources (resulting to lower production cost) thereby flooding the market with cheaper metal produce. This competitive pressure could result not only in sustained price reductions, but also in a decline in sales volume, which would have a material adverse effect in the long term on the Company's business, operating results and financial condition. The Company principally competes in selling its nickel ores outside the Philippines. However, the Company believes it can effectively compete in price with other companies due to lower operating cost and proximity of the mine to major buyers/users in Asia and China. For gold, there is no competition in the industry and gold producers may easily sell their product directly to Bangko Sentral ng Pilipinas.

ITEM 2. PROPERTIES

The Company owns private and patented lands, mining and milling equipment, various automotive units/vehicles and support facilities for its gold mining operations in Itogon, Benguet Province; and Irisan Lime Project in Baguio City; port, dump trucks and mining equipment in Zambales. The Company also owns various artworks, vehicles, office furniture and computer units in its corporate office in Makati City. It likewise owns milling and support facilities at Zamboanga Gold Prospect in R.T. Lim Zamboanga del Sur, which are currently on care and maintenance basis.

The Company continues to lease office space at the Universal Re Building, 106 Paseo de Roxas, Makati City where its Corporate Head Office is situated. Rental is ₱793,659.32 per month VAT inclusive subject to 10% escalation yearly up to June 30, 2025.

Subsidiaries: BRMC (formerly BNMI) is the holder of MPSA No. 226-2005-III with an area of 1,406.74 hectares located in Sta. Cruz, Zambales. It owns assaying/laboratory equipment and various automotive equipment/vehicles for its mining business operations. BRMC continues to lease at ₱82,760.61 per month for office occupancy in Sta. Cruz, Zambales. The lease is renewable every 5 years subject to escalation rate of 7.5% every two years. Also, it leases a property being used as staff house for ₱25,000 per month net of tax subject to 10% escalation rate every two years.

KPLMSC leases a property in Candelaria, Zambales at ₱9,284.22 per month subject to 5% escalation yearly.

BFC owns 2 office condominium units (Unit 304 with a floor area of 138.27 square meters and Unit 305 with a floor area of 186.20 square meters) located in 3rd Floor One Corporate Plaza Condominium, Pasay Road, Legaspi Village, Makati City. BFC continues to develop and sell the remaining three (3) lots with an aggregate area of 1,043 square meters in its real estate project called Woodspark Rosario Subdivision located in Rosario, La Union. BFC purchased a parcel of land located in Naguillian, La Union with an area of 60,882 square meters to be developed as housing project.

BTI owns 2 residential lots where a 3 storey residential building staff house is erected with a floor area of 283 square meters. The two (2) lots have an aggregate area of about 708 square meters and are located in Monteraza Village, Barangay Tuding, Itogon, Benguet.

BCLI, a wholly owned subsidiary of the Company owns various medical instruments, medical furniture/fixtures/appliances, office and laboratory equipment for its clinic operations. BCLI continues to lease for its business operation occupancies in SM Baguio at ₱466,754.40 per month, and in Centermall, Baguio City at ₱100,015.30 per month which ends on February 28, 2025.

AFCC owns various heavy equipment/vehicles for its logistics business operations. It leases a property at ₱25,330.84 per month for office occupancy at Sta. Maria, Bulacan subject to 10% yearly escalation rate up to February 15, 2026. It also leases office space and land for motorpool purposes at Sta. Cruz, Zambales for ₱22,000.00 per month.

The Company and its subsidiaries have no intention at present to acquire any significant property in the next 12 months.

Please refer to Item I of this report under title “Business Development” as to the conditions of the mining operations/projects and non-mining properties/projects of the Company.

ITEM 3. LEGAL PROCEEDINGS

As of December 31, 2024, the Company and its subsidiaries have no pending legal proceedings where claims exceed ten percent (10%) of total assets on a consolidated basis. The Company and its subsidiaries are involved in litigation on a number of cases and are subject to certain claims which arise in the normal course of business, none of which, in the opinion of management, is expected to have a material adverse effect on each of the Company’s operations.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

In the December 20, 2024 virtual Annual Stockholders’ Meeting of the Company, no election of directors was held because the 1993 Supreme Court Temporary Restraining Order (TRO) enjoining the holding of elections of directors, has not been lifted. Since no election of directors was held, the Company’s incumbent directors (the composition of the Board of Directors is presented in Item 9 of this report) remained in office on hold-over capacity until their successors shall have been duly elected and qualified.

Except for the matters taken up in the December 20, 2024 Annual Stockholders’ Meeting of the Company, there were no other matters submitted to vote of security holders during the period covered by this report. All matters taken up and voted upon at the annual meeting including tabulation of votes in person and by proxy for approval, against and abstention to each matter and the results of annual stockholders’ meeting were disclosed under SEC Form 17-C to the SEC and PSE on December 20, 2024. The disclosure was posted in the Company’s website.

PART II – OPERATIONAL AND FINANCIAL INFORMATION

ITEM 5. MARKET FOR ISSUER’S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Market Information

The Company has three classes of shares, two of which (the Common Class A with a par value of ₱1.00 per share and Convertible Preferred Class A shares with a par value of ₱3.43 per share) can be owned only by Philippine nationals and the other class of the Company’s share is Common Class B with a par value of ₱1.00 per share which may be owned by anyone regardless of nationality. The Company’s shares are listed and traded in the Philippine Stock Exchange (PSE) under the trading symbol of “BC” for Common Class A; “BCB” for Common Class B; and “BCP” for Convertible Preferred Class A share.

The closing prices of the Company’s Common shares in the PSE on April 28, 2025 for Common Class A was ₱4.12 per share and on April 23, 2025 for Common Class B was ₱4.02 per share. The closing price of the Company’s Convertible Preferred Class A on the last trading day of April 14, 2025 was ₱24.40 per share.

a) For each Quarter 2024, 2023 and First Quarter 2025, the high and low prices of the Company’s shares in the PSE are as follows:

	1 ST QUARTER		2 ND QUARTER		3 RD QUARTER		4 TH QUARTER		2025 1 st Quarter
	2024	2023	2024	2023	2024	2023	2024	2023	
CONVERTIBLE PREFERRED CLASS A*									
Highest Price/Share	P24.55	P -	P17.22	P -	P18.20	P -	P23.25	P34.95	P16.30
Lowest Price/Share	24.55	-	12.08	P -	18.10	P -	23.25	34.90	16.30
COMMON CLASS A									
Highest Price/Share	P4.89	P5.70	P4.55	P4.88	P4.18	P4.70	P4.18	P5.20	P4.20
Lowest Price/Share	4.15	4.05	3.85	4.38	3.46	3.80	3.31	3.80	3.40
COMMON CLASS B									
Highest Price/Share	P5.34	P5.40	P4.83	P4.90	P4.14	P4.73	P4.19	P5.49	P4.58
Lowest Price/Share	4.10	4.06	3.80	4.36	3.34	3.90	3.09	3.81	3.43

(*) No trading transactions in 1st, 2nd and 3rd quarter of 2023..

b.) For each quarter of 2022 and 2021, the high and low prices of the Company's shares in the PSE are as follows:

	1 ST QUARTER		2 ND QUARTER		3 RD QUARTER		4 TH QUARTER	
	2022	2021	2022	2021	2022	2021	2022	2021
CONVERTIBLE PREFERRED CLASS A*								
Highest Price/Share	P47.30	P27.00	P -	P30.00	P -	P45.00	P33.20	P31.55
Lowest Price/Share	47.30	18.00	P -	18.90	P -	45.00	23.30	31.55
COMMON CLASS A								
Highest Price/Share	P7.20	P3.73	P7.68	P5.88	P5.89	P5.88	P5.05	P6.58
Lowest Price/Share	4.95	2.26	5.45	2.48	4.77	4.40	4.07	4.80
COMMON CLASS B								
Highest Price/Share	P7.00	P3.60	P7.77	P5.58	P5.95	P5.87	P5.44	P6.40
Lowest Price/Share	4.50	2.41	5.60	2.40	4.90	4.12	4.03	4.73

(*) No trading transactions in 2nd and 3rd quarter of 2022.

Holders:

- As of April 15, 2025, the Company's public float is 40.10% of the 715,779,951 outstanding shares of the Company consisting of 429,547,273 common Class A, 286,015,617 common class B and 217,061 Convertible Preferred Class A shares with a total of 16,857 stockholders.
- Of the 715,779,951 outstanding shares of the Company, 79,400,172 common Class B shares or 11.09% are owned by foreign nationals/institutions as of April 15, 2025.

The list of top 20 stockholders for Common Class "A", Common Class "B" and Convertible Preferred Class "A" shares of the Company as of April 15, 2025 are as follows:

A. Common Class "A" Share

Name	Number of Shares Held	Percent to Total Outstanding/Class
PCD Nominee Corporation (Filipino)	191,900,903	44.68%
Palm Avenue Holding Company, Inc.	65,624,727	15.28%
Palm Avenue Holdings Co. and/or Palm Avenue Realty Corp.	63,920,490	14.88%
Red Earth Mineral Resources Corporation	53,000,000	12.34%
Palm Avenue Holdings Co. and/or Palm Avenue Realty Corp.	30,384,375	7.18%
FEBTC TA 4113-000204-5 (ESPP)	5,067,846	1.18%
FEBTC TA 4113-000204-5	3,016,623	0.70%

Sysmart Corporation	2,036,181	0.47%
Cynthia Manalili Manalang	1,500,000	0.35%
Paredes, Gabriel M. or Paredes, Marianne G.	564,900	0.13%
Sun Hung Kai Sec. AC#YU034	356,625	0.08%
Marilex Realty Development Corporation	331,200	0.08%
Hermogene H. Real	240,300	0.06%
Luis Juan L. Virata	234,003	0.05%
Francisco M. Vargas	219,000	0.05%
The First Nat'l Invest Co.	188,130	0.04%
Ionian Realty and Development Corporation	148,500	0.03%
Estate of Alfonso T. Yuchengco	136,272	0.03%
Vital Ventures Management Corporation	135,000	0.03%
Juvencio Tan	114,000	0.03%

B. Common Class "B" Share

Name	Number of Shares Held	Percent to Total Outstanding/Class
PCD Nominee (Filipino)	122,441,172	42.81%
Palm Avenue Realty and Development Co.	43,680,000	15.27%
Red Earth Mineral Resources Corporation	37,000,000	12.94%
Cede & Co.	29,674,860	10.38%
PCD Nominee (Non-Filipino)	24,962,744	8.73%
Michael Vozar TOD Sharon K. Vozar Sub To Sta Tod Rules	736,260	0.26%
Charles F Carroll TTEE, UA 05/24/95 FBO Carroll Family Trust 1	543,000	0.19%
National Financial Services	504,033	0.18%
Fairmount Real Estate, Inc.	484,257	0.17%
Independent Realty Corporation	483,441	0.17%
Evelyn B. Stephanos TR US 05/12/11 Elizabeth Bakas Irrev Trust	450,000	0.16%
Richard Soltis & Veronica T. Soltis JT Ten	396,000	0.14%
Arthur H. Runk TTEE of Arthur H. Runk Liv Tr U/A dtd 08/17/1990	354,000	0.12%
HSBC Private Bank (Suisse) SA 9-17 Quai Des Bergues	303,795	0.11%
William David Courtright	300,000	0.10%
William T. Coleman	300,000	0.10%
Garry A. Gil TTEE FBO Arthur Weir Gill Rev Tr	300,000	0.10%
Edmund S. Pomon	300,000	0.10%
Sysmart Corporation	273,729	0.10%
Sanford Halperin	251,364	0.09%

C. Convertible Preferred Class "A" Share

Name	Number of Shares Held	Percent to Total Outstanding/Class
PCD Nominee Corporation (Filipino)	65,794	30.31%
Fairmount Real Estate	59,262	27.30%
Jose Concepcion, Jr.	5,000	2.30%
Reginaldo Amizola	1,737	0.80%
Evangelina Alave	1,720	0.79%
Maverick Marketing Corp.	1,720	0.79%
Jayme Jalandoni	1,380	0.64%
Rosendo U. Alanzo	1,376	0.63%
Romelda E. Asturias	1,376	0.63%
Rosalina O. Ariacho	1,324	0.61%
CMS Stock Brokerage Inc.	1,324	0.61%
Luisa Lim	1,238	0.57%

Delfin GDN Jalandoni	1,118	0.52%
Ventura O. Ducat	1,032	0.48%
Equitiworld Securities, Inc.	1,000	0.46%
Benito V. Jalbuena	1,000	0.46%
Conchita Arms	1,000	0.46%
Remedios Rufino	1,000	0.46%
Carlos W. Ylanan	1,000	0.46%
B & M Incorporated	952	0.44%

Dividends – The dividend rights and restrictions of the Company's Convertible Preferred Class A, Common Class A and Common Class B stocks are contained in the Amended Articles of Incorporation of the Company, to wit:

“For a period of ten years after issuance, the holders of each shares of Convertible Preferred Stock shall be entitled to receive out of surplus profits of the Corporation earned after issuance of such Stock, when and as declared by the Board of Directors, cash dividends equal to the peso amount of and payable at the same time as that declared on each share of Common Class A or Common Class B Stock. The total cash dividends payable at any given time on Common Class A, Common Class B and Convertible Preferred Stock shall not exceed seventy-five per centum (75%) of the total after-tax earnings for any current fiscal year of the Corporation from all sources.

Immediately upon the expiration of ten years from issuance, the holders of shares of Convertible Preferred Stock still outstanding shall be entitled to receive out of surplus profits of the Corporation, when and as declared by the Board of Directors, cash dividends at the fixed annual rate of eight percentum (8%) of the par value of such Stock before any cash dividends shall be declared or set apart for holders of Common Class A and Common Class B Stock. The balance of the net profits of the Corporation available for cash dividends shall be distributable exclusively to holders of Common Class A and Common Class B Stock. Dividends accrued and unpaid, if any, on the Convertible Preferred Stock at the end of any given fiscal year of the Corporation shall be cumulated, provided and to the extent that the net profits of the Corporation earned during such fiscal year are at least equal to the amount of such accrued and unpaid dividends; no cash dividends shall be declared and paid to holders of Common Class A and Common Class B Stock until after such accumulated, accrued and unpaid dividends on the Convertible Preferred Stock shall have been paid or provision for payment thereof made. Holders of Convertible Preferred Stock shall not be entitled to any part of stock dividends declared and issued on outstanding Common Class A and Common Class B and no stock dividends may be declared and issued on Convertible Preferred Stock.”

Following the termination on October 22, 2024 of the Debt Restructuring Agreement dated 20 December 1993 and the loan security: Mortgage Trust Indenture dated 20 December 1993, Real State Mortgage dated 18 March 1994 and Chattel Mortgage dated 18 March 1994, the Company declared cash dividend equivalent to ₱0.28 per share of the Company's outstanding Preferred Class “A” shares and ₱0.20 per share of the Company's outstanding Common Class “A” and “B” shares with November 14, 2024 as record date for stockholders entitled to dividends and payment date set on December 10, 2024 during its Special Board Meeting on October 29, 2024. The dividend was paid from the Unrestricted Retained Earnings as of December 31, 2023.

The Company has not declared cash dividends in fiscal year 2023, 2022 and 2021 due to the restrictions provided in Section 13(d) of the 1993 Debt Restructuring Agreement which prevents the Company from declaring or paying dividends to its stockholders during the pendency of the debt.

Recent Sales of Unregistered or Exempt Securities

Under the present implementation of the Company's Stock Option Plan (the “Plan”), below are the transactions of sold stocks/exercised options in the past four years ended December 31, 2024, 2023, 2022 and 2021:

1. In the May 3, 2011 stock option grant:
 - a) 431,198 Class “A” shares at option price of ₱1.69/share with par value of ₱1.00/share;
 - b) 334,176 Class “B” shares at option price of ₱1.91/share with par value of ₱1.00/share.
2. In the September 7, 2012 stock option grant – There were no options exercised.
3. In the May 28, 2014 stock option grant – There were no options exercised.
4. In the March 17, 2017 stock option grant:
 - a) 3,779,350 Class “A” shares at option price of P1.38/share with par value of P1.00/share;
 - b) 2,517,023 Class “B” shares at option price of P1.43/share with par value of P1.00/share.
5. In the March 18, 2021 stock option grant – There were no options exercised.

Other than the above transactions, the Company has not sold or issued any securities within the past four years ended December 31, 2024, 2023, 2022 and 2021 which are not registered under the SRC including the sales of reacquired securities, securities issued in exchange of property, services, or other securities, and new securities resulting from the modification of outstanding securities.

ITEM 6. MANAGEMENT’S DISCUSSION AND ANALYSIS OR PLAN OF OPERATION

FOR THE YEARS ENDED DECEMBER 31, 2024, 2023, 2022 AND 2021

The following discussion and analysis of financial performance of the Company should be read in conjunction with the Company’s Audited Consolidated Financial Statements (ACFS) and related notes as of December 31, 2024, 2023, 2022 and 2021 prepared in conformity with Philippine Financial Reporting Standards (PFRS). The results and plan of operation of the Company and its subsidiaries are presented and discussed under Business Development in Item 1-Business of this report.

CONSOLIDATED RESULTS OF OPERATIONS

Despite lower nickel sales in 2024, the Company continued to report strong operating results with its Acupan mine contributing significantly from its gold output.

Consolidated net income for 2024 amounted to ₱435.7 million, lower than net income of ₱554.1 million in 2023, net income of ₱1.3 billion in 2022 and net income of ₱1.4 billion in 2021. The increase/decrease in net income was the net effect of the following:

Revenues

The Company registered consolidated revenues of ₱2.4 billion in 2024, lower than ₱2.5 billion in 2023, ₱4.0 billion in 2022, and ₱3.8 billion in 2021. Revenues were composed mainly of nickel, gold and lime sales.

	2024	2023	2022	2021
Nickel	₱1,451.4	₱1,757.68	₱2,952.3	₱2,766.5
Gold and silver	791.7	627.5	914.8	945.8
Lime and others	142.8	146.3	158.1	129.6
Gross Revenue	₱2,385.9	₱2,531.4	₱4,025.2	₱3,841.9

Revenues are attributed mainly from the sale of 15 boatloads of nickel ore aggregating 808,556 tons , lower compared to 16 boatloads of nickel ore aggregating 854,074 tons in 2023, 22 boatloads aggregating 1,169,328 tons in 2022 and 22 boatloads aggregating 1,175,050 tons in 2021. Nickel ore was sold at effective average price of US\$31.39/ton this year versus US\$37.07/ton in 2023, US\$46.97/ton in 2022, and US\$47.38/ton in 2021. Nickel sales contributed 61% of gross revenues. Gold sales on the other hand contributed 33% on account of better price this year. The Acupan Gold Project (AGP) sold 5,750.24 ounces of gold this year, against 5,803.21 ounces of gold in 2023, 9,363.56 ounces of gold in 2022, and 10,685 ounces in 2021. Average selling price of gold in 2024

jumped by 24% to US\$2,414.80/ounce from US\$1,941.83/ounce in 2023, US\$1,802.02/ounce in 2022, and US\$1,806.68/ounce in 2021.

Operating and Other Expenses

Cost and operating expenses this year amounted to ₱1.9 billion, higher against ₱1.9 billion in 2023 but lower against ₱2.4 billion in 2022, and ₱2.3 billion in 2021. The increase/decrease is mainly due to the net effect of the following:

Cost of mine products sold increased to ₱822.2 million from ₱680.47 million in 2023, but decreased from ₱970.4 million in 2022, and ₱938.2 million in 2021. The increase is mainly due high cost of fuel, power and materials and supplies.

Cost of services and other sales slightly increased to ₱85.4 million from ₱84.06 million in 2023, ₱80.2 million in 2022 and ₱74.8 million in 2021. The increase is mainly due to high cost of fuel, power and materials and supplies.

Selling and general expenses decreased to ₱866.5 million from ₱903.0 million in 2023, ₱1.1 billion in 2022, and ₱1,027.0 million in 2021. The decrease is mainly due to lower volume of nickel ore sold this year.

Excise taxes and royalty fees decreased to ₱162.3 million from ₱182.4 million in 2023, ₱299.8 million in 2022, and ₱284.3 million in 2021. Decrease is mainly from the lower sale of nickel laterite ores.

Other income this year amounted to ₱106.9 million, higher compared to ₱57.0 million in 2023 but lower against ₱164.0 million in 2022, and ₱280.3 million in 2021. Other income this year came from interest earned from money market placements, income from fair value gain of financial assets at FVPL, and foreign exchange gain on the Company's export of nickel ore. The other income in 2023 is mainly attributable to the change in fair value of financial assets at FVPL, amounting to ₱51.9 million and ₱8.1 million gains on foreign currency exchange. The other income in 2022 was mainly due to the ₱85.3 million gain on revaluation of investment properties, ₱39.7 million gains on foreign currency exchange and ₱39.3 million gains on recovery of impairment on loss on advances to contractors, while in 2021, the other income was mainly attributed to the ₱277.0 million gain in revaluation of investment properties.

Provision for income tax in 2024 amounted to ₱113.3 million, lower versus ₱178.5 million in 2023, ₱428.2 million in 2022, and ₱372.4 million in 2021. The provision for income tax pertains to the Regular Income Tax (RCIT) of Benguet Corporation (Parent Company), Benguetcorp Resources Management Corporation (BRMC), Arrow Freight and Construction Corporation (AFCC), Keystone Port Logistics and Management Services Corporation (KPLMSC) and Benguetcorp Laboratories, Inc. (BCLI).

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

Assets

The Company's consolidated total assets as of December 31, 2024 stands at ₱10.87 billion, higher compared to ₱10.34 billion in 2023, ₱9.91 billion in 2022, and ₱8.75 billion in 2021. The increase is the net effect of the following:

Cash and cash equivalent increased to ₱1.8 billion from ₱774.2 million in 2023, ₱1.0 billion in 2022, ₱603.2 million in 2021. Increase pertains to additional investment in Unit Investment Trust Fund (UITF) and collection of nickel ore sold in 2024 and 2023.

Trade and other receivables decreased to ₱741.3 million from ₱746.7 million in 2023, ₱782.5 million in 2022, and ₱515.0 million in 2021. Decrease pertains to collection of nickel ore sold in 2023 and 2022.

The increase, however, against 2021 pertains to the sale of nickel ore and lime collected in the subsequent year.

Inventories decreased to ₱191.9 million from ₱248.0 million in 2023. Decrease pertains to nickel ore inventories sold in 2024. Increase in 2024 versus ₱180.6 million in 2022, and ₱142.1 million in 2021 is mainly due to the nickel ore produced from the continuous mining of its nickel operation.

Financial assets at fair value through profit or loss (FVPL) decrease to ₱704.6 million from ₱1.3 billion in 2023, ₱1.1 billion in 2022. Decrease in 2024 is attributed to the withdrawal of unit investment trust fund. The fund was used to fully settle the loan obligation. On the other hand, increase versus ₱675.0 million in 2021 pertains to the additional investment in unit trust fund and the change in net asset value per unit.

Other current assets decreased to ₱368.7 million, from ₱660.6 million in 2023, ₱352.4 million in 2022 and ₱481.7 million in 2021. Decrease refers to change in investment classification from more than 90 days' time deposits to less than 90 days time deposits.

The property, plant and equipment at revalued amount slightly increased to ₱2.0 billion from ₱1.8 billion in 2023, ₱1.7 billion in 2022, and ₱1.7 billion in 2021. Increase is due to revaluation increment on land and art works.

Property, plant and equipment (PPE) at cost, decreased to ₱743.9 million from ₱789.9 million in 2023, ₱780.2 million in 2022, and ₱848.4 million in 2021. The decrease this year is mainly due to the depletion and depreciation booked this year.

Deferred mine exploration costs increased to ₱550.5 million from ₱520.4 million in 2023, ₱492.5 million in 2022, and ₱455.4 million in 2021. Additions pertain to drilling and other ongoing exploration activities in the Company's Pantingan gold and aggregate prospect in Bataan.

Investment properties improved to ₱3.3 billion from ₱3.0 billion in 2023, ₱2.99 billion in 2022, and ₱2.9 billion in 2021. Improvement pertains to revaluation of land.

Increase in deferred tax assets is mainly from the deferred tax assets derived from the group's lease liabilities and amortization of past service costs from pension liabilities.

Other noncurrent assets increased to ₱506.6 million from ₱489.0 million in 2023, ₱471.9 million in 2022, and ₱402.0 million in 2021. Increased refers to additional funding of mine rehabilitation fund in compliance with the requirement of the Mines and Geosciences Bureau (MGB) under DAO 2010-21 and increase in advances to suppliers and contractors for the exploration, construction and other related activities and projects.

Liabilities

Total consolidated liabilities as of December 31, 2024, decreased to ₱1.70 billion, from ₱1.97 billion in 2023, ₱2.13 billion in 2022, and ₱2.34 billion in 2021. The decrease was due to the following:

Trade and other payables increased to ₱604.3 million from ₱507.8 million in 2023, ₱555.7 million in 2022, but lower against ₱669.4 million in 2021. Increase refers to contract liabilities reclassified from other noncurrent liabilities.

Loans payable is nil in 2024 from ₱339.2 million in 2023, ₱337.0 million in 2022 and 2021. The reduction pertains to the full payment of outstanding loans with Armstrong Capital Holdings Corporation (ACHC). The loan was acquired from Social Security System thru bidding conducted in 2024.

Increase in lease liabilities (current and noncurrent) is mainly from the renewal of lease contract of BCLI clinic spaces.

Liability for mine rehabilitation (current and noncurrent) amounted to ₱53.0 million in 2024, ₱62.1 million in 2023, ₱59.1 million in 2022, and ₱60.7 million in 2021. Decrease in liabilities for mine rehabilitation pertains to the actual rehabilitation costs spent during the year partially offset by the change in estimate and norma accretion expense.

Income tax payable amounted to ₱38.9 million higher compared to ₱33.3 million in 2023 but lower compared to ₱105.9 million in 2022, and ₱137.8 million in 2021. Liability pertains to BRMC income tax due during the fourth quarter of 2024. The increase against previous years is due to higher taxable income reported in 2024.

Decrease in pension liability is mainly due to the funding of retirement trust fund of the group.

Deferred tax liability amounted to ₱826.8 million in 2024, higher than ₱775.9 million in 2023, ₱769.2 million in 2022 and ₱748.6 million in 2021. Increase pertains to the revaluation of the group's land and artworks.

Equity

Stockholders' Equity at year-end amounted to ₱9.18 billion, higher than ₱8.37 billion in 2023, ₱7.78 billion in 2022, and ₱6.41 billion in 2021. The increase was due to the following:

Capital stock increased to ₱714.3 million from ₱624.3 million in 2023, ₱624.0 million in 2022 and ₱624.0 million in 2021 due to subscription of Red Earth Mineral Resources Corporation ("Red Earth") amounting ₱90.0 million.

Capital surplus increased to ₱686.6 million from ₱415.5 million in 2023, ₱415.1 million in 2022 and ₱409.9 million in 2021. Increase is mainly due to the subscription of Red Earth.

Retained earnings amounted to ₱6.2 billion, higher than ₱5.9 billion in 2023, ₱5.4 billion in 2022, and ₱4.0 billion in 2021. The increase was due to the net income earned during the year partly offset by the cash dividend declared in October 2024 amounting ₱143.6 million.

Other components of equity amounted to ₱1.6 billion higher compared to ₱1.4 billion in 2023, ₱1.4 billion in 2022, and ₱1.4 billion in 2021. Increase is mainly from the revaluation increment of land and artworks, cumulative translation from foreign subsidiaries and remeasurement gain on pension liabilities.

Consolidated Cash Flows

The net cash flows generated from operating activities for 2024 amounted to ₱360.2 million, lower than ₱537.5 million in 2023, ₱1,263.4 million in 2022, and ₱1,347.3 million in 2021.

In 2024, the net cash flow came mainly from the sale of 15 boatloads of nickel ore, 5,750.74 ounces of gold and interest income of ₱41.7 million.

In 2023, the net cash flows came mainly from the sale of 16 boatloads of nickel ore to China, 5,803.21 ounces of gold and ₱134.98 million VAT refund granted by the BIR.

In 2022, the net cash flows generated is attributable mainly from the 22 boatloads of nickel ore, 9,363 ounces of gold sold this year and ₱136.3 million VAT refund obtained from the BIR.

In 2021, the net cash flows came mainly from the sale nickel ore to China, gold sold to Bangko Sentral ng Pilipinas (BSP) and VAT refund obtained from the BIR.

During the year, the Company invested ₱27.1 million in exploration activities, ₱1.7 million in mining, milling and logistics equipment. The Company also invested ₱19.7 million in unit trust funds and ₱18.5 million in investment properties.

In 2023, the Company invested ₱28.3 million in exploration activities, ₱68.3 million in mining, milling and logistics department. The Company also invested ₱162.3 million in unit trust funds and ₱6.2 million in investment properties.

In 2022, the Company invested ₱31.2 million in exploration activities and ₱45.4 million in mining and milling equipment for the expansion of its Acupan Gold Project and Sta. Cruz Nickel Operation in Zambales. The Company also invested ₱480.7 million in unit trust funds during the year.

In 2021, the Company invested ₱11.7 million in exploration activities and ₱40.9 million in mining and milling equipment for the expansion of its Acupan Gold Project and Sta. Cruz Nickel Operation in Zambales. The Company also invested ₱660.1 million in unit trust funds during the year.

Net cash flows used in financing activities amounted to ₱388.6 million. This year, the Company paid loans payable amounting to ₱655.2 million, cash dividend of ₱108.1 million partly offset by proceeds from issuance of shares amounting to ₱360.0 million and ₱20.0 million deposit for future subscription.

In 2023, the Company paid principal portion of lease liabilities amounting to ₱5.6 million.

In 2022, the Company paid some of its advances from Bright Mining Resources Corporation and other contractors/suppliers.

In 2021, the Company fully paid its outstanding loan with Transmiddle East amounting to ₱185.0 million and made some payment to Bright Mining Resources Corporation and other contractors amounting to ₱99.6 million. The usage was partly offset by the cash generated from employees' exercise of stock options and issuance of stocks amounting to ₱9.8 million.

Key Performance Indicators

The Company's considered the following top five key performance indicators:

Working Capital

Working capital (current assets less current liabilities) and current ratio (current assets over current liabilities) measures the liquidity or debt paying ability of the Company. As of December 31, 2024, the Company's current ratio is 5.74:1, 4.16:1 in 2023, 3.38:1 in 2022, and 2.08:1 in 2021.

Metal Price

The Company's revenue is largely dependent on the world market prices for gold and nickel. Favorable metal prices will also have a favorable impact on the Company's revenue. The market price of gold in the Bangko Sentral ng Pilipinas which is based on world spot market prices provided by the London Metal Exchange for gold is the key indicator in determining the Company's revenue level. Average market prices for gold sold were at US\$2,414.80 per ounce this year, US\$1,941.83 per ounce in 2023, US\$1,802.02 per ounce in 2022 and US\$ 1,806.68 per ounce in 2021. Nickel ore was sold at effective average price of US\$31.39/ton this year, US\$37.07/ton in 2023, US\$46.97/ton in 2022 and US\$47.38/ton in 2021.

Tons Milled and Ore Grade

Tons milled and ore grade are key measures of operating efficiency. A lower unit production cost both in ore milled and smelting operation will result in the Company meeting, if not exceeding, its profitability targets. Tons milled totaled 23,667 this year with average ore grade of 8.48 grams per ton of gold, lower compared to 29,195 in 2023 with average ore grade of 7.19 grams per ton of gold, 47,516 in 2022 with average ore grade of 7.35 grams per ton of gold and 56,753 in 2021 with average grade of 5.86 grams per ton of gold.

Gold sold in 2024 were 5,750.74 ounces, lower than 5,803.21 ounces in 2023, 9,363.56 ounces in 2022 and 10,685.25 ounces in 2021. BRMC sold nickel ore this year with an aggregate volume of 808,556 tons ranging from 1.3% to 1.4% grade nickel ores lower compared to 854,074 tons ranging

from 1.3% to 1.4% grade nickel ores, lower than 1,169,328 ranging from 1.2% to 1.4% grade nickel ores in 2022 and lower than 1,175,050 tons of 1.2% to 1.5% grade nickel ores in 2021.

Foreign Exchange Rate

The Company's sales proceeds of its gold and nickel are mainly in U.S. dollars. A higher Philippine Peso to U.S. dollar exchange rate means higher Peso sales but would also reflect a foreign exchange loss on the restatement of the Company's dollar obligations. Conversely, a lower exchange rate reduces the Company's revenue in pesos but brings foreign exchange income on the loans. As of December 31, 2024, the peso to dollar exchange rate was at ₱57.845, ₱55.37 in 2023, ₱55.82 in 2022 and ₱50.99 in 2021.

Earnings Per Share

The earnings per share ultimately reflects the Company's financial and operational growth as a result of its performance in cost management, productivity and will provide investors comparable benchmarks relative to similar companies. The increase in the sale of gold and shipment of nickel ore will have a favorable impact on the Company's net sales and income. The reported Company earnings per share in 2024 is ₱0.61, ₱0.89 in 2023, ₱2.14 in 2022 and ₱2.29 in 2021.

Known Trends, Events or Uncertainties

The Company does not foresee any cash flow or liquidity problems over the next twelve (12) months. BRMC continues its mining operations and bring to the market saleable nickel ores; ILP continues to maintain steady market for quicklime products; AGP is expected to boost gold production and provide positive financial results despite upsurge in operating costs caused by escalating price of commodities and services, exorbitant power charges, fuel hikes, materials and supplies and some services. The Company will pursue innovation and enhancement of milling processes, methods, and equipment. The Company and its subsidiaries have pending claims applicable tax refunds from the Bureau of Internal Revenue.

Within the next twelve (12) months, the Company anticipates slight changes in the number of employees due to hiring of Project/Seasonal workers for the Pantangan project, BRMC, AFCC and KPLMSC.

The known trends, demands, commitments, events or uncertainties that may have a material impact on net sales or revenues or income from the operations of the Company are the prices of nickel and gold in the world market, the dollar to peso exchange rate, changes in the DENR's rules and regulations, drastic changes in fuel prices and the present economic condition affected by global health issues, war and military conflicts.

There are no known events that will trigger direct or contingent financial obligation that is material to the Company, including any default or acceleration of an obligation that have not been booked. The Company could be contingently liable for lawsuits and claims arising from the ordinary course of business which are unlikely to be substantial and not presently determinable. The Company has finally settled the remaining old debt subject of the 1993 Debt Restructuring Agreement on October 22, 2024.

There are no material off-balance sheet transactions, arrangements, obligations (including contingent obligations), and other relationship of the Company with unconsolidated entities or other persons created during the reporting period.

Except for what has been noted in the preceding paragraph, there were no material events or uncertainties known to management that had material impact on past performance, or that would have a material impact on the future operations, in respect of the following:

- Material commitments for capital expenditures that are reasonably expected to have a material impact on the Company's short-term or long-term liquidity;
- Known trends, events, or uncertainties that have had or that are reasonably expected to have a material favorable or unfavorable impact on net sales/revenues/income from continuing operations.

- Significant elements of income or loss that did not arise from the Company's continuing operations;
- Material changes in the financial statements of the Company from the year ended December 31, 2024 vs December 31, 2023; and
- Seasonal aspects that had a material impact on the Company's financial condition or results of operations.

ITEM 7. FINANCIAL STATEMENTS

The Audited Consolidated Financial Statements (Benguet Corporation and Subsidiaries) for the period ended December 31, 2024 is presented in Part V, Exhibits and Schedules, which said audited financial statements form part of this Annual Report (SEC Form 17-A).

ITEM 8. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

The Company's independent public accountants, Sycip Gorres Velayo and Company (SGV) was re-appointed by the Board of Directors and approved/ratified by the stockholders of the Company on August 29, 2024 and December 20, 2024, respectively. Audit services of SGV for the calendar year ended December 31, 2024 included the examination of the parent and consolidated financial statements of the Company, assistance in the preparation of annual income tax return and other services related to filing of reports made with the Securities and Exchange Commission (SEC).

The Company is in compliance with SRC Rule 68, paragraph (3)(b)(iv) requiring the rotation of external auditors or engagement partners who have been engaged by the Company for a period of five (5) consecutive years. The Company's audit engagement partner for calendar year 2024 is Mr. Peter John R. Ventura- SEC accredited auditing partner of SGV. This is Mr. Ventura's sixth year as engagement partner for the Company. No event has occurred where SGV and the Company had any disagreement with regards to any matter relating to accounting principles or practices, financial statement disclosures, or auditing scope or procedures.

External audit fees

The aggregate audit fees inclusive of VAT and out-of-pocket expenses billed by SGV & Company are ₱6.4 million in 2024, ₱6.6 million for 2023, ₱5.7 million for 2022, and ₱5.5 million for 2021. There are no other services rendered by the external auditor other than the usual audit services as mentioned above.

Tax fees

Tax fee is nil in 2024 and 2023, ₱1.1 million in 2022 and ₱0.7 million in 2021 to the external auditor as professional fees for tax advisory services. For the years 2020 and 2019, no professional fees for tax advisory services were paid to the external auditor.

All other fees

There were no other services rendered by the external auditor other than the audit services and tax advisory services mentioned above.

Audit Committee's approval policies and procedures

Prior to the commencement of audit work, the external auditor presented their program and schedule to the Company which included discussion of issues and concerns regarding the audit work to be done. The external auditor presented to the Audit Committee the audited financial statements of the Company for the year for approval and for endorsement to the Board for final approval prior to release/issuance by the external auditor. Representatives of SGV are expected to be present at the

stockholders' meeting to respond to appropriate questions and will be given the opportunity to make a statement if they so desire.

The Audit Committee of the Company is composed of three (3) directors chaired by Independent Director, Atty. Rhodora L. Dapula, and the members are Independent Director, Dr. Bernardo M. Villegas and Director, Atty. Andrew Patrick R. Casiño.

PART III – CONTROL AND COMPENSATION INFORMATION

ITEM 9. DIRECTORS AND EXECUTIVE OFFICERS OF THE ISSUER

A. DIRECTORS

The Directors of the Company are elected at the Annual Stockholders' Meeting to hold office until the next succeeding annual meeting or until their respective successors have been elected and qualified. In the December 20, 2024 Annual Stockholders' Meeting, no election was held because the Temporary Restraining Order (TRO) issued by the Supreme Court enjoining the election of directors remained in force. The incumbent directors of the Company continued to remain in office on holdover capacity and below is a summary of their attendance to board meetings for the year 2024:

Board	Name	Date of Election/ Appointment	No. of Meetings Held During the Year	No. of Meetings Attended	% Attended
Chairman / Independent	Bernardo M. Villegas*	11.07.2019	6	6	100%
Member	Maria Remedios R. Pompidou	10.25.2000	6	6	100%
Member	Luis Juan L. Virata	08.08.1995	6	5	83.33%
Independent	Rhodora L. Dapula	08.16.2018	6	6	100%
Member	Andrew Patrick R. Casiño	06.04.2020	6	6	100%
Member	Kwok Yam Ian Chan	09.25.2020	6	6	100%
Member	Anthony M. Te	09.25.2020	6	6	100%
Member	Lina G. Fernandez	03.18.2021	6	6	100%
Member	Andrew Julian K. Romualdez	08.24.2022	6	6	100%
Member	Carlos Alfonso T. Ocampo	08.30.2023	6	6	100%
Independent	Elmer B. Serrano	08.30.2023	6	5	83.33%

(*) *Mr. Bernardo M. Villegas was elected Chairman of the Board of Directors effective November 7, 2019. He has been a Director of the Company since June 25, 1998 and appointed as Independent Director since 2002. His extension of term/retention as the Company's Independent Director was approved by the Board on August 29, 2024 and ratified by the Stockholders on December 20, 2024.*

Below are the ages, citizenship, brief descriptions of business experience for the past five (5) years of below named incumbent directors. None of the Directors of the Company are government employees.

DIRECTORS REPRESENTING HOLDERS OF CONVERTIBLE PREFERRED CLASS A AND COMMON CLASS A STOCKS OF THE COMPANY:

MARIA REMEDIOS R. POMPIDOU, Director

Ms. Maria Remedios R. Pompidou, Filipino, 58 years old, first became a Director of the Company by appointment on October 25, 2000 and holds over as a director since then. She is currently the Chairman of BenguetCorp Laboratories, Inc., a wholly owned subsidiary of the Company (2013 to present); Trustee of Doña Remedios Trinidad Romualdez Medical Foundation Inc., Dr. V. Orestes

Romualdez (DVOR) Educational Foundation Inc., and RTR Foundation for Scientific Research and Development Inc.; and Director of Sequioa Business Management Corporation, Perea Realty and Development Corporation and Red Palmtree Realty and Development Corporation. She is Rockefeller University Council Member and Cornell Weill Medical School Dean's Council Member.

LUIS JUAN L. VIRATA, Director

Mr. Luis Juan L. Virata, Filipino, 71 years old, first became a Director of the Company by appointment on August 8, 1995 and holds over as a director since then. He is Chairman and major shareholder of Amber Kinetics Philippines, Inc. Mr. Virata is also Chairman Emeritus of Exchange Equity Partners Group Corporation, Chairman of Cavite Holdings, Inc., Chairman of MTV Investment Properties Holdings Corporation and Vice President of Exchange Properties Resources Corporation. He is also a Founder and Trustee of Asia Society Philippine Foundation and the Metropolitan Museum of Manila and is a Board Member of the Huntsman Foundation Wharton School University of Pennsylvania. He previously held positions with Dillon, Read and Co., Crocker National Bank, Bankers Trust Company, Philippine Airlines, the Philippine Stock Exchange and Makati Stock Exchange. He received his Bachelor of Arts and Master of Arts degrees in Economics from Trinity College, Cambridge University, UK in 1976 and his Master of Business Administration degree from the Wharton School, USA in 1979.

ANDREW PATRICK R. CASIÑO, Director
Member of the Audit Committee

Atty. Andrew Patrick R. Casiño, Filipino, 58 years old, first became a Director of the Company by appointment on June 4, 2020 and holds over as a director since then. He is a litigation lawyer with 25-year work experience as practicing lawyer in New York State in the fields of: - Criminal matters (domestic violence, DWI, orders of protection, misdemeanors), Commercial litigation, Philippine law matters (counseling and review of legal documents), Real estate (sale and purchase), Family and domestic matters (custody, child support, orders of protection, spousal support), Probate of last will and testaments, Petitions for administration of estates, Family based immigration, Employment based Immigration, US naturalization, Deportation proceedings, Petitions for political asylum, Loan contracts, Employment contracts, Commercial & Residential leases, Settlement agreements, Loan disputes, Trademarks and copyrights, Divorce and legal separation. Presently, he is collaborator on all legal matters in the United States of Philippine based law firms, Florello R. Jose and Associates and Law Firm of Ocampo Manalo. He graduated from the University of the Philippines with a degree of Bachelor of Science in Economics in 1987 and Bachelor of Laws in 1991. He obtained his Masters of Laws in Intellectual Property from the Franklin Pierce Law School, University of New Hampshire in 1999. Mr. Casiño passed the Philippine Bar Examinations in 1991 and New York State Bar Examinations in 1996.

ANTHONY M. TE, Director
Chairman of the Executive Committee and Salary and Stock Option Committee;
Member of the Nominations and Election Committee

Mr. Anthony M. Te, Filipino, 55 years old, first became a Director of the Company by appointment on September 25, 2020 and holds over as director since then. He is currently a Director of listed companies Marcventures Holdings, Inc., EEI Corporation and Philippine Stock Exchange, Inc. He is also a director at Manila Standard Today Management, Inc., Media Quest Holdings Inc., Philippine Veterans Bank, Media Serbisyo Production Corporation, Armstrong Capital Holdings Corporation, Marcventures Mining and Development Corporation and Strong Building (Mining) Development Corporation. He was elected to the PSE Board in 2022 and was appointed to the Capital Market Development Committee. He is the nominee of Arnstrong Securities, Inc. and Director of the Chamber of Mines of the Philippines. Mr. Te is the chairman of Amalgamated Project Management Services, Inc., AE Pproteina Industries, Inc., Asian Asset Insurance with Brokerage Corporation (where he also serves as Soliciting Official) and Asian Appraisal Company, Inc. He is the Chairman and President of Cymac Holdings Corporation, Chairman and Chief

Financial Officer of Mactel Corporation since 1999 and Principal of MNM Capital OPC in 2021. He was an independent director of Equitable PCI Bank (2004-2006), Director and Treasurer of PAL Holdings, Inc. (2000-2003), Director of Balabac Resources and Holdings Co., Inc., EBECOM Holdings, Inc., MRC Allied Industries, Inc., Oriental Petroleum and Minerals Corporation, PGA Cars, Inc. and Phoenix Energy Corp. Mr. Te obtained his Bachelor of Arts in Business Management in De La Salle University.

CARLOS ALFONSO T. OCAMPO, Director

Member of the Executive Committee and Board Risk Oversight Committee

Atty. Ocampo, Filipino, 59 years old, first became a Director of the Company by appointment on August 30, 2023. He is Founding Partner of Ocampo & Manalo Law Firm which was established in 1997. He is currently a board member of publicly-listed companies EEI Corporation and Marcventures Holdings Inc. as Director and Independent Director, respectively. He is a member of the Board of other corporations including MAA General Assurance Corporation, BlueLion Motors Corporation, Jam Transit, Inc., Prestige Cars, Autohaus Corporation, Subic Air, Inc., Brycl Resorts International Inc., Autohaus Quezon City, Inc., Jam Liner, Inc. He is Vice-Chairman of Philippine Veterans Bank. He is the Corporate Secretary of Manila Golf & Country Club, MAA General Assurance Corporation, Skytowers Infra, Inc., among others. He previously served as Vice President and General Counsel of Air Philippines and Senior Consultant of Capital Equity Legal Group. He obtained his Bachelor of Laws from the University of the Philippines and completed an Executive Management Program at the Asian Institute of the Philippines and earned a Certificate in International Finance from Harvard Law School at Harvard University, Executive Education as well as a Certificate in Economic Development from the John F. Kennedy School of Government at Harvard University, Executive Education.

RHODORA L. DAPULA, Independent Director

Chairman of the Audit Committee and Member of the Corporate Governance Committee

Atty. Rhodora L. Dapula, Filipino, 47 years old, first became an Independent Director of the Company by appointment on August 16, 2018 and holds over as independent director since then. She is currently an Independent Director of *listed company* Bright Kindle Resources and Investments, Inc. She is a partner in Dapula, Dapula and Associates Law Offices since August 2007; and President/CEO of G.D. Brains and Castles Inc., and Proficientlink Realty Corporation since 2017. She is a CPA-Lawyer, Professional Regulation Commission (PRC) Licensed Real Estate Broker, PRC Licensed Real Estate Appraiser, PRC Licensed Real Estate Consultant, PRC Licensed Environmental Planner and Licensed Life and Variable Life Financial Advisor. She is a PRC accredited lecturer for Real Estate Service Seminars and Trainings and a Certified International Property Specialist.

ELMER B. SERRANO, Independent Director

Chairman of the Board Risk Oversight Committee, Member of the Corporate Governance Committee, and Member of the Related Party Transactions Committee

Atty. Serrano, Filipino, 57 years old, was appointed as an Independent Director of the Company on August 30, 2023. He is a practicing lawyer specializing in corporate law and is the Managing Partner and founder of the law firm SERRANO LAW. Atty. Serrano has been awarded "Asia Best Lawyer" by the International Financial Law Review (IFLR), "Leading Lawyer-Highly Regarded" by IFLR 1000, and named "Leading Individual" by the Legal 500 Asia Pacific.

Atty. Serrano is the Chairman of Dominion Holdings, Inc. (formerly BDO Leasing and Finance, Inc.), a director of DFNN Inc., and Independent Director of Philippine Telegraph and Telephone Corporation. He is also a director of 2GO Group, Inc. He is also the Corporate Information Officer of BDO Unibank, Inc. and serves as the corporate secretary of bank's subsidiaries and affiliates.

Atty. Serrano is also the Corporate Secretary of SM Investments Corporation, SM Prime Holdings, Inc., Premium Leisure Corporation, Atlas Consolidated Mining and Development Corporation, as well as subsidiaries of BDO Unibank, Inc., and of DFNN Inc. He is also Corporate Secretary of, or counsel to, prominent financial industry organizations, such as the Bankers Association of the Philippines, the Philippines Payments Management, Inc. and the PDS Group of Companies.

Atty. Serrano is a Certified Associate Treasury Professional and was among the top graduates of the Trust Institute of the Philippines in 2001. He holds a Juris Doctor degree from the Ateneo de Manila University and a BS Legal Management degree from the same university.

REPRESENTING HOLDERS OF COMMON CLASS B STOCK OF THE COMPANY:

BERNARDO M. VILLEGAS, Chairman of the Board / Independent Director, Chairman of the Nominations and Election Committee, Corporate Governance Committee and Related Party Transactions Committee; Member of the Executive Committee, Salary and Stock Option Committee, Audit Committee and Board Risk Oversight Committee

Dr. Bernardo M. Villegas, Filipino, 86 years old, has been the Chairman of the Board since November 7, 2019. He first became a Director of the Company by appointment on June 25, 1998. He was designated Independent Director of the Company since 2002 up to present, although he has been a Director prior to the issuance of SEC Circular No. 16 dated November 29, 2002. He is currently Chairman and Independent Director of listed company, Filipino Fund, Inc and Independent Director of listed companies: DMCI Holdings, Inc. and Abacore Capital Holdings, Inc. He holds, among others, the following directorships/positions: Independent Director of Benguetcorp Resources Management Corporation (2012 to present), a wholly owned subsidiary of the Company; Director and Consultant of Transnational Diversified, Inc. (1998 to present); Director, PHINMA Properties (2011 to present); Director, Dualtech Foundation (1998 to present); Columnist, Manila Bulletin (1964 to present); Professor, University of Asia and the Pacific (1989 to present) and Chairman and Director, Cuervo Appraisers, Inc. Formerly, he was Independent Director of First Metro Philippine Equity Exchange Traded Fund, Inc. (2010-2022); Director of Alaska Milk Corporation (1999-2019); Director, Makati Business Club (1981-2010); Director, Phinma Foundation (1995-2001); Director, Pilipinas Shell Foundation (1995-2001); Senior Vice President, University of Asia and the Pacific (2004-2006); Chairman, Center for Research and Communication (1995); President, Philippine Economic Society (1972-1974); Chairman, Department of Economics-De La Salle University Manila (1964-1969), Committee on the National Economy & Patrimony (1986); Director, Economic Research Bureau and Graduate School of Business-De La Salle University Manila (1967-1968); Project Director, Philippine Economic History under the National Historical Commission (1969-1972); Member, Preparatory Commission for Constitutional Reforms and Constitutional Commission (1999); Consultant, Productivity Development Center-National Economic Council and Program Implementation Agency (1968-1969). He earned his Ph.D. in Economics from Harvard University and obtained his Bachelor's degrees in Commerce and Humanities (both Summa Cum Laude) from De La Salle University.

KWOK YAM IAN CHAN, Director **Member of Related Party Transactions Committee**

Mr. Kwok Yam Ian Chan, Filipino, 37 years old, first became a Director of the Company by appointment on September 25, 2020 and holds over as director since then. He is currently an Independent Director of listed companies Marcventures Holdings, Inc. and Bright Kindle Resources and Investments, Inc. He is a Managing Director of Zenith System and Heavy Equipment, Seaborne Shipping Inc., Isky Empire Realty Inc., King Dragon Realty Corporation, Armstrong Securities, Inc. and DK Ventures Inc. Mr. Chan graduated from De La Salle- College of St. Benilde with a Bachelor of Science degree in Business Administration major in Export Management. He obtained his master's degree in Economics, major in Finance at California Polytechnic University.

LINA G. FERNANDEZ, Director
Member of Executive Committee and Related Party Transactions Committee

Atty. Fernandez, Filipino, 60 years old, first became a Director of the Company by appointment on March 18, 2021. She was elected as President of the Company since March 18, 2021. Before her election/appointment, Atty. Fernandez served as one of the designated Officers-In-Charge of the Company (October 2018-Mar 2021), and concurrently Senior Vice President for Finance and Comptroller since March 2018-March 2021. Atty. Fernandez previously served the Company as its Senior Vice President for Finance and Nickel Marketing Officer (November 2015-March 2018); Vice President for Corporate Planning; Chief of Staff (August 2006-November 2015); Risk Management Officer (March 2011-March 2018) and Compliance Officer for Corporate Governance (December 2016-March 2018). She also holds several positions and directorship in the following subsidiaries of the Company: President (2021 to present) and Director (2014-Present) of Benguetcorp Resources Management Corporation; Chairman of Arrow Freight and Construction Corporation, Benguetcorp Construction and Development Corporation (Formerly Batong Buhay Mineral Resources Corporation), BC Property Management, Inc., Berec Land Resources, Inc., Balatoc Gold Resources Corporation, Benguet Pantukan Gold Corporation and Keystone Port Logistics and Management Services Corporation; Chairman and President of Benguet Management Corporation and BMC Forestry Corporation; Director and President of Ifaratoc Mineral Resources Corporation, Director, President and Chief Operating Officer of Pillars of Exemplary Consultants, Inc.; Director and Vice President of Acupan Gold Mines, Inc., and Sagittarius Alpha Realty Corporation; Director and Treasurer of Agua de Oro Ventures Corporation, and Benguetrade, Inc. and Director of Benguet Laboratories, Inc. She is a CPA-lawyer.

ANDREW JULIAN K. ROMUALDEZ, Director
Member of Executive Committee, Salary and Stock Option Committee
and Nominations and Election Committee

Mr. Romualdez, Filipino, 25 years old, first became a Director of the Company by appointment on August 24, 2022. He is currently a Director of *listed companies* Marcventures Holdings, Inc. (MHI) and Bright Kindle Resources and Investments, Inc. (BKR). He is also a director of the Company's subsidiaries, Benguetcorp Resources Management Corporation, Arrow Freight and Construction Corporation, Benguetcorp Laboratories, Inc. and Benguet Management Corporation. He is also a Director of MHI's subsidiaries namely: Marcventures Mining and Development Corporation, Alumina Mining Phils., Inc. Bauxite Resources, Inc. and Brightgreen Resources Corporation. He is also a director of BKR's subsidiary, Brightstar Holdings and Development, Inc. He is a Director of Armstrong Securities, Inc. and Armstrong Capital Holdings, Inc. Mr. Romualdez graduated from Cornell University in 2022 with a Bachelor's Degree in International Agriculture and Rural Development.

B. EXECUTIVE OFFICERS

The executive officers of the Company are appointed or elected annually to a one-year term (subject to removal) by the Board of Directors immediately following the Annual Stockholders' Meeting.

Below are their respective ages, citizenships, positions held in the Company and its subsidiaries and brief description of business experiences. None of the executive officers of the Company are government employees.

LINA G. FERNANDEZ, Filipino, 60 years old, is the President of the Company since March 18, 2021.

REYNALDO P. MENDOZA, Filipino, 67 years old, is the Executive Vice President since March 18, 2021 and Assistant Corporate Secretary (2002 to present). He previously served as one of the

two Officers-In-Charge of the Company (October 2018 to March 2021) and concurrently Senior Vice President for Legal (August 2006 to March 2021). Currently, he holds various positions and directorship in the following subsidiaries of the Company: He is concurrent Chairman and President of Acupan Gold Mines, Inc. and Sagittarius Alpha Realty Corporation; Chairman of BenguetCorp Resources Management Corporation, Agua de Oro Ventures, Inc., Ifaratoc Mineral Resources Corp., Benguetrade, Inc. and Pillars of Exemplary Consultants, Inc.; Director and President of Benguetcorp Construction and Development Corporation (Formerly Batong Buhay Mineral Resources Corporation), Benguet Pantukan Gold Corporation, Berec Land Resources, Inc., Balatoc Gold Resources Corporation, and BC Property Management, Inc.; Director of BenguetCorp Laboratories, Inc., and BMC Forestry Corporation; Director and Chief Operating Officer of Benguet Management Corporation; Director and Vice President-Legal of Arrow Freight and Construction Corporation and Director and Vice President of Keystone Port Logistics and Management Services Corporation. Before joining Benguet Corporation, he was Staff Lawyer of PDCP (1987-1988) and Malayan Insurance Company (1986-1987); Associate Lawyer, Castro, Villamor & Associate (1985-1986); Apprentice Lawyer, Gono Law Office (1985-1986). He obtained his Bachelor of Law degree from the University of the Philippines in 1984 and passed the bar examination in the same year.

MAX D. ARCEÑO, Filipino, 63 years old, is the Senior Vice President for Finance and Treasurer of the Company since March 18, 2021. He was also designated as Compliance Officer for Corporate Governance since August 24, 2021. He previously served as its Vice President for Finance and Treasurer (November 2019-March 2021); Vice President for Finance, Treasurer, Taxation/Materials (March 2018-November 2019); Vice President for Accounting and Treasurer (March 2013-March 2018) and Assistant Vice President for Treasury (July 2011-February 2013). He also holds various positions in the following subsidiaries of the Company: he is concurrent Director and Treasurer of BenguetCorp Laboratories, Inc. (Feb. 2013 to present); Director, President and General Manager of Arrow Freight and Construction Corporation and Benguetrade, Inc.; Director and President of Keystone Port Logistics and Management Services Corporation, Director and Treasurer of BenguetCorp Resources Management Corporation, Benguet Management Corporation, BMC Forestry Corporation, Berec Land Resources, Inc., BC Property Management, Inc., Balatoc Gold Resources Corporation, Benguet Pantukan Gold Corporation, Benguetcorp Construction and Development Corporation (Formerly Batong Buhay Mineral Resources Corporation), Acupan Gold Mines, Inc., Sagittarius Alpha Realty Corporation, Ifaratoc Mineral Resources Corporation and Pillars and Exemplary, Inc.; and Director of Agua de Oro Ventures, Inc. Mr. Arceño graduated from the University of the East (Batch 1983) with a degree in BSBA-Accounting and passed the board examination for Certified Public Accountant in 1984. He joined the Company in 1985 as Accounting Staff I, where he rose from the ranks.

VALERIANO B. BONGALOS, JR., Filipino, 75 years old, is the Vice President/Resident Manager of Benguet District Operations since January 15, 2020. He also holds positions in the following subsidiaries of the Company: Director and President of Agua de Oro Ventures Corporation and Director of Acupan Gold Mines, Inc., Balatoc Gold Resources Corporation, Benguetcorp Construction and Development Corporation (Formerly Batong Buhay Mineral Resources Corporation), BC Property Management, Inc. Berec Land Resources, Inc., Benguet Management Corporation, BMC Forestry Corporation, Benguet Pantukan Gold Corporation, Ifaratoc Mineral Resources Corporation, Pillars of Exemplary Consultants, Inc. and Sagittarius Alpha Realty Corporation. He previously served the Company as its Consultant (May 2018-January 14, 2020); Vice President & General Manager of Benguet District Operations (July 2013-Sept 2015), and Mine Manager of Benguet Gold Operation, Antamok Northern Division (1978-1980) and in 1984-1992. He was a Mine Manager, Lepanto Consolidated Mining Co., Lepanto, Mankayan, Benguet (2016-2017). He was Vice President for Operations and Resident Manager, Apex Mining Co., Compostella Valley, Mindanao. Inc. (May 2010-July 2011); Mine Manager, Phuoc Son Gold Company, Ltd., Quang Nam, Vietnam (November 2006-July 2009); Mine Planning Manager, Ban Phuc Nickel Mines in Hanoi, Vietnam (March to June 2006); Mine Superintendent, Lepanto Consolidated Mining Company (1999-2001); Tunnel Superintendent, San Roque Multipurpose Dam (1998); Mine Manager, Base Metal Mineral Res. Corp. (1996-1997) Davao Del Norte; Project

Manager, Ground Specialist, Inc.-Contractor (1994-1995) Lepanto Mine, Mankayan; Drilling & Blasting Engineer of Al Dhary International Group in Tabuk, Saudi Arabia (1993-1994); Senior Assistant Mining Engineer, Zambia Consolidated Copper Mines (Underground Copper Mine) in Zambia, Africa (1980-1983); Project Engineer, Argonaut Mineral Exploration (1975-1978); and Shift Foreman, Long Beach Mining Corporation (1974). He is a BS Mining Engineering graduate of Mapua Institute of Technology (1973) and completed his Management Development Program at AIM in 1987. He obtained his Mining Engineering license in 1974.

EMMANUEL M. PUSPOS, Filipino, 62 years old, is the Assistant Vice President for Mining and Business Development following his promotion on August 30, 2023. He was appointed as Chief Risk Officer on March 26, 2025 to replace Ms. Pamela M. Gendrano who died on January 17, 2025. Before his promotion, he was the Company's Chief Mining Engineer (April 2022 – August 2023). He previously served the Company as Senior Mining Engineer – Corporate Engineering Head (June 2008 to May 2011) and Company's subsidiary, Benguetcorp Resources Management Corporation as Assistant Vice President – Head of Operations/Engineering (June 2011 to August 2014). He was formerly the Mine Manager, OIC-Mine and Port Operations (April 2016 to July 2019) of Agata Mining Ventures, Inc. and Chief Mining Engineer of TVI Resource Development (Philippines) Inc. (January 2015 to April 2016). He obtained his Bachelor's degree in Mining Engineering from Mapua Institute of Technology. He is a licensed Mining Engineer.

DEOGRACIAS P. HALOG, Filipino, 71 years old, is the Assistant Vice President for Technical Operations since March 22, 2024. He is a licensed Mechanical Engineer. He started his mining career in the Company in 1977 and was involved in various operations and projects such as Benguet Gold Operations (BGO), Benguet Antamok Gold Operations (BAGO) and Benguet Canada Ltd. – Ecuador Project. He left in 1990 to seek opportunity to work abroad and joined local construction and mining companies, to name a few: Apex Mining Co. Inc., Paramina Earth Technologies, Inc., Besra Vietnam, Peti Trading Inc., Lepanto Consolidated Mining Company and TVIRD-BGSP. He earned his Bachelor of Science degree in Mechanical Engineering from Mapua Institute of Technology in 1976. He attended course in Management at the Asian Institute of Management (AIM) in 1987 and Entrepreneurship at University of the Philippines-Diliman in 1996.

HERMOGENE H. REAL, Filipino, 69 years old, is the Corporate Secretary of the Company since October 25, 2000. She is currently Director of publicly-listed Companies: (i) Bright Kindle Resources and Investment, Inc., where she is also Assistant Corporate Secretary (2014 to present) and (ii) Prime Media Holdings, Inc. (2021 to present). She is also Director of Arrow Freight and Construction Corporation (2019 to present); Director of Benguetcorp Laboratories, Inc. (2019 to present); Director of Southern Alluvial Minerals and Alumina Resources Inc. (2017 to present); Director of Brightgreen Resources Holding, Inc. (2017 to present); Director of Strong Mighty Steel, Inc. (2017 to present); Director/President of Mairete Asset Holdings, Inc. (2017 to present); Director of Crimson Bauxite Mining Development Corp. (2018 to present); Director of High Reliance Holdings Company, Inc. (2021 to present); Director/Treasurer of Golden Peregrine Holdings, Inc. (January 2022 to present); and Director of Bright Star Holdings and Development, Inc. (March 2022 to present). She is also Corporate Secretary of Benguetcorp Resources Management Corporation (2014 to present), Corporate Secretary of Universal Re Condominium Corporation; Trustee and Assistant Corporate Secretary, Doña Remedios Trinidad Romualdez Medical Foundation, Inc. (1996 to present); and Practicing Lawyer, D. S. Tantuico and Associates (1998 to present).

Resignation / Demise of Directors or Officers

No directors have resigned as of to date. Demise of Ms. Pamela M. Gendrano, Assistant Vice President for Environmental Compliance and Chief Risk Officer on January 17, 2025.

Significant Employees

Other than the executive officers, other employees are expected by the Company to make significant contribution to the business.

Family Relationship

Except with respect to Mr. Andrew Julian K. Romualdez who is nephew of Ms. Maria Remedios R. Pompidou, no other directors or executive officers is related to another by affinity or consanguinity.

Involvement in Certain Legal Proceedings

The Company is not aware of any bankruptcy proceeding against any of its directors and officers during the past five (5) years. Neither is the Company aware of any conviction by final judgment in any criminal proceeding, or the involvement, of any of its directors or officers, in any case where such officer or director has been subject to any order, judgment or decree of competent jurisdiction, permanently or temporarily enjoining, barring, suspending, or otherwise limiting his involvement in any type of business, including those connected with securities trading, investments, insurance or banking activities.

ITEM 10. EXECUTIVE COMPENSATION

Summary Compensation Table

The aggregate compensation paid or incurred during the last two fiscal years and estimated to be paid in the ensuing fiscal year to the President, four most highly compensated executive officers and all other directors and officers of the Company as a group are as follows:

<u>Name</u>	<u>Principal Position</u>
1. Lina G. Fernandez	President
2. Reynaldo P. Mendoza	Executive Vice President and Asst. Corporate Secretary
3. Max D. Arceño	Senior Vice President, Finance & Treasurer
4. Valeriano B. Bongalos, Jr.	Vice President/Resident Manager-Benguet District Operation
5. Emmanuel M. Puspos	Assistant Vice President for Mining and Business Development
6. Deogracias P. Halog	Assistant Vice President for Technical Operations

	<u>Year</u>	<u>Salary (In-Million)</u>	<u>Bonus (In-Million)</u>	<u>Other Annual Compensation</u>
All above-named officers as a group	2025*	₱33.2	₱4.1	₱1.6
	2024**	29.6	3.7	1.6
	2023**	29.6	3.6	1.7
	2022**	28.8	4.8	1.6
All other directors and officers as a group unnamed	2025*	₱12.2	₱7.0	₱3.2
	2024**	10.6	5.9	3.2
	2023**	10.5	5.0	2.0
	2022**	9.9	7.9	2.3

(*) - Estimate (**) – Actual

Employment Contract with Executive Officers

The Company has no special employment contracts with its executive officers. In the ordinary course of business, the Company has employment contracts with all its employees, including officers, in compliance with the applicable labor laws and regulations. There are no compensatory plan or arrangements with any executive officers, which results or will result from the resignation, retirement or any other termination of the executive officer's employment or from a change-in-control in the Company or a change in the executive officer's responsibilities following a change in control of the Company.

Compensation of Directors

The non-executive directors of the Company do not receive any regular compensation from the Company, except for every regular, special or committee meeting actually attended, for which members of the Board of Directors receive a per diem of ₱25,000.00 (gross). For the year 2024 and 2023, the directors received Christmas gift in appreciation of their invaluable service and support to the Company. There are no other material terms of, nor any other arrangements with regard to compensation as to which directors are compensated, or are to be compensated, directly or indirectly, for any services provided as a director.

Retirement Plan

The Company maintained a qualified, noncontributory trusted pension plan covering substantially all of its executive officers and employees. Normal retirement age under the plan is age 60, except for non-supervisory underground mine workers who have the option to retire at age 55. An employee shall also be entitled to a benefit equal to 50% of his monthly basic salary or the normal benefit, whichever is higher, if his employment is terminated for reasons beyond his control, such as death, disability or government policy. Benefits are dependent on the years of service and the respective employee's compensation.

Incentive Bonus Plan

The Company has an Incentive Bonus Plan. The purposes of the Plan are: (1) to attract, employ and retain management personnel of outstanding competence, and (2) to motivate its management personnel to deliver superior performance in pursuing the goals and business interests of the Company. The Plan provides for a bonus award, calculated on the basis of net income, to top operating executives, managers and members of the Board of Directors. Bonus awards are either paid in full directly to the awardees or are transferred to a trust fund and are payable to the awardees in three installments generally over a period of two years. Bonus awards for any year shall be paid in cash, or in common stock. Either Common Class A or Common Class B shares may be issued under the Plan subject to the legal limitations on ownership of Common Class A shares which can be owned only by Philippine citizens. From 1995 to 2024, there was no amount set aside for payment of bonuses in accordance with the Plan.

Warrants and Options Outstanding

Since 1975, the Company provided Stock Option Plan (the "Plan") for its and subsidiaries' selected staff employees, directors and consultants. The purpose in granting options are: (1) to encourage stock ownership in the Company, and thereby generate an interest in the Company and its subsidiaries, (2) to promote its affairs, and (3) to encourage its staff employees, directors and consultants to remain in the employ of the Company. The Plan have been amended several times and among others, to extend the termination date of granting stock options. The latest amendment was approved by the Board of Directors on August 24, 2022 and ratified by the stockholders of the Company during the November 9, 2022 annual stockholders' meeting, extending the termination date of granting stock options under the Plan until May 31, 2031.

The following changes in the stock option grants was approved by the Board in its meeting held on August 31, 2016 and ratified by the stockholders during the November 8, 2018 Annual Stockholders' Meeting due to change in par value of both Class A and B common shares from ₱3.00 to ₱1.00 per share: (a.) Change in the total number of unexercised shares on the May 3, 2011, September 7, 2012 and May 28, 2014 grants and corresponding change in the exercise price; (b.) Change in the maximum number of shares per grant: from 500,000 to 1,500,000 shares; and (c.) Repricing of the unexercised options in the May 3, 2011, September 7, 2012 and May 28, 2014 grants. The exercised price (net of 25% discount) is ₱1.69 per share for Common Class "A" and ₱1.91 per share for Common Class "B". (The exercised price is based on closing price of August 18, 2016: Common Class A – ₱2.25 and Common Class B – ₱2.55 less 25% discount pursuant to the provisions of the Plan of the Company). The repricing was brought about by the low turn-out in the avancement of the grant due to high exercise price compared to market price.

In the current implementation of the Company's Plan, as of December 31, 2024, the following stock options are still valid from the date of the grant:

- a. On May 28, 2014, under the amended Plan, the Company granted stock option to certain directors in recognition of their long years of service to the Company. The option grants of 600,000 common shares with par value of ₱3.00 per share consisting of 360,000 Class "A" common shares at an exercise price of ₱7.13 per share and 240,000 Class "B" common shares at an exercise of ₱7.13 per share came entirely from the current balance of unissued/cancelled stock options under the present implementation of the Plan. Due to change in par value of both Class A and B shares from ₱3.00 to ₱1.00 per share and change of exercise prices from ₱7.13 to ₱1.69 per share for class "A" and ₱7.13 per share to ₱1.91 per share, the total number of unexercised shares were adjusted to 1,800,000 common shares consisting of 1,080,000 class "A" shares and 720,000 class "B" shares. The shares are exempted from registration under the SRC Rules, and the listing was approved by the PSE. The options expired on May 28, 2024, pursuant to the provisions of the Plan, that no option is exercisable after ten (10) years from the date of grant. Expired options totaled 1,080,000 common shares available for future grant.
- b. On March 17, 2017, under the amended Plan, the Company granted stock option to directors and to qualified staff, employees, and consultants of the Company and its subsidiaries who have rendered at least two (2) years of service as of March 11, 2017. The options grant of 8,414,375 common shares were sourced from the cancelled, expired and forfeited shares from previous stock option grants consisting of 5,048,625 Common Class A shares at exercise price of ₱1.38 per share and 3,365,750 Common Class B shares at exercise price of ₱1.43 per share. The shares are exempted from registration under SEC's MSRD Resolution No. 5 Series 2020 dated February 28, 2020 and the listing was also approved in principle by the PSE in its Notice of Approval dated March 4, 2021. As of December 31, 2024, the number of options granted to, exercised, and unexercised by the President, four (4) other most highly compensated executive officers and all other officers and directors of the Company under this grant are as follows:

	Option Grants		Option Exercise Price/Share		Options Exercised		Options Unexercised		Options Cancelled (Cessation from employment / directorship)	
	Class A	Class B	Class A	Class B	Class A	Class B	Class A	Class B	Class A	Class B
LG Fernandez	138,600	92,400	₱1.38	₱1.43	138,600	92,400	-	-	-	-
Four Highest Paid Named Exec. Officers:										
RP Mendoza	138,600	92,400	₱1.38	₱1.43	138,600	92,400	-	-	-	-
MD Arceño	127,050	84,700	₱1.38	₱1.43	127,050	84,700	-	-	-	-
VB Bongalos, Jr.	-	-	-	-	-	-	-	-	-	-
EM Puspos	-	-	-	-	-	-	-	-	-	-
All Other Officers and Directors as a Group Unnamed	462,000	308,000	₱1.38	₱1.43	115,500	77,000	346,500	231,000	-	-

Under the Plan, options are exercisable to the extent of 30% after one year from the grant, 60% after two years from the grant, and 100% after three years from the grant. Shares included in each installment may be exercised in whole at any time, or in part from time to time, until the expiration of the option. Payment may be made in full and in cash or installment over three years, at the time of the exercise of the option, provided that the stock certificate shall be issued only upon full payment of the option price. Options are non-transferable and no option is exercisable after ten (10) years from the date of the grant.

- c. On March 18, 2021, under the amended Plan, the Company granted stock option to directors, qualified staff, employees, and consultants of the Company and its subsidiaries who have

rendered at least two (2) years of service as of March 15, 2021. The option grant of 3,003,612 common shares were sourced entirely from the current balance of unissued / cancelled stock option under the present implementation of the Plan consisting of 1,802,179 Common Class A shares at exercise price of ₱2.19 per share and 1,201,433 Common Class B shares at exercise price of ₱2.05 per share. The shares are exempted from registration under SEC's MSRD Resolution No. 3 Series of 2024 dated April 4, 2024 and the listing was also approved in principle by the PSE in its Notice of Approval dated December 4, 2024.

As of December 31, 2024, the number of options granted to, exercised and unexercised by the President, four (4) other most highly compensated executive officers and all other officers and directors of the Company are as follows:

	Option Grants		Option Exercise Price/Share		Options Exercised		Options Unexercised		Options Cancelled (Cessation from employment / directorship)	
	Class A	Class B	Class A	Class B	Class A	Class B	Class A	Class B	Class A	Class B
LG Fernandez	57,750	38,500	₱2.19	₱2.05	-	-	57,750	38,500	-	-
Four Highest Paid Named Exec. Officers:										
RP Mendoza	57,750	38,500	₱2.19	₱2.05	-	-	57,750	38,500	-	-
MD Arceño	43,313	28,875	₱2.19	₱2.05	-	-	43,313	28,875	-	-
VB Bongalos, Jr.	24,750	16,500	₱2.19	₱2.05	-	-	24,750	16,500	-	-
EM Puspos	-	-	-	-	-	-	-	-	-	-
All Other Officers and Directors as a Group Unnamed	315,000	210,000	₱2.19	₱2.05	-	-	315,000	210,000	-	-

Under the Plan, options are non-transferable and exercisable to the extent of 30% after one year from the grant, 60% after two years from the grant, and 100% after three years from the grant. Shares included in each installment may be exercised in whole at any time, or in part from time to time, until the expiration of the option. Payment may be made in full and in cash or installment over three years, at the time of the exercise of the option, provided that the stock certificate shall be issued only upon full payment of the option price. No option is exercisable after ten (10) years from the date of the grant.

ITEM 11. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Security Ownership of Certain Beneficial Owners

The following table sets forth certain information about persons (or "groups" of persons) known by the Company to be the directly or indirectly the record or beneficial owner of more than five percent (5%) of any class of the Company's outstanding stocks as of April 15, 2025:

Title of Class	Name, Address of Record Owner And Relationship with Issuer	Name of Beneficial Owner & Relationship with Record Owner	Citizenship	Number of Shares Held	Percent Per Class
	PCD Nominee Corporation (Filipino), 29 th Floor, BDO Equitable Tower, 8751 Paseo de Roxas,	(see note ¹)	Filipino	191,900,903	44.64%

¹ PCD Nominee Corporation ("PCDNC") is a wholly-owned subsidiary of Philippine Central Depository, Inc. ("PCD"). The beneficial owners of such shares registered under the name of PCDNC are PCD's participants who hold the shares in their own behalf or in behalf of their clients. The PCD is prohibited from voting these

Class A Common	Makati City. (Stockholder)				
	Palm Ave. Holding Company, Inc. 3F Universal Re-Building, 106 Paseo de Roxas, Makati City (Stockholder)	(see note ²)	Filipino	65,624,727	15.27%
	Palm Avenue Holding Company and/ or Palm Avenue Realty Corp., Metro Manila, Phil. Sequestered by the Republic of the Philippines, Presidential Commission on Good Government under Executive Order Nos. 1 & 2 c/o PCGG, IRC Bldg., #82 EDSA, Mandaluyong City. (Stockholder)	(see note ²)	Filipino	63,920,490	14.87%
	Red Earth Mineral Resources Corporation 16 th Floor, Citibank Tower (now BDO Towers- Valero), Paseo de Roxas, Makati City. (Stockholder)	(see note ³)	Filipino	53,000,000	12.33%
	Palm Avenue Holdings Company and/or Palm Avenue Realty Corporation, Metro Manila, Philippines. Sequestered by the Republic of the Philippines thru PCGG under E.O. Nos. 1 & 2 and reverted to Palm Avenue as sequestered shares per Supreme Court Entry of Judgment dated March 15, 1993 in G.R. No. 90667 entitled Republic of the Philippines vs. Sandiganbayan, Palm Avenue Realty Development Corp. and Palm Avenue Holdings Company c/o PCGG, IRC Bldg., #82 EDSA Mandaluyong City. (Stockholder)	(see note ²)	Filipino	30,834,375	7.17%
Class A Convertible Preferred	PCD Nominee Corporation (Filipino), 29 th Floor, BDO Equitable Tower, 8751 Paseo de Roxas, Makati City. (Stockholder)	(see note ¹)	Filipino	65,794	30.31%
	Fairmount Real Estate c/o PCGG 6 th Floor, PhilComcen Bldg., Ortigas Avenue cor. San Miguel Avenue, Pasig City (Stockholder)	(see note ⁴)	Filipino	59,262	27.30%
Class B Common	PCD Nominee Corporation (Filipino), 29 th Floor, BDO Equitable Tower, 8751 Paseo de Roxas, Makati City. (Stockholder)	(see note ¹)	Filipino	122,441,172	42.80%
	Palm Ave. Realty & Devt. Corporation, 3F Universal Re-Building, 106 Paseo de Roxas, Makati City (Stockholder)	(see note ²)	Filipino	43,680,000	15.27%

shares, instead the participants have the power to decide how the PCD shares in Benguet Corporation are to be voted.

² The Company is not aware of who is/are the direct or indirect beneficial owner/s of the stocks issued to Palm Avenue Holdings Company, Inc. and Palm Avenue Realty and Development Corporation (the “Palm Companies”). In the December 20, 2024 Annual Stockholders’ Meeting of the Company, the Palm Companies issued a proxy in favor of its legal counsel, Attys. Otilia Dimayuga-Molo/Andrea Rigonan-De La Cueva, to vote in all matters to be taken up in the stockholders’ meeting.

³ The Company is not aware of who is/are the direct or indirect beneficial owner/s of the stocks issued to Red Earth Mineral Resources Corporation. In the December 20, 2024 Annual Stockholders’ Meeting of the Company, the Red Earth Mineral Resources Corporation issued a proxy in favor of its Chairman and President, Atty. Edgar Dennis A. Padernal, to vote on matters to be taken up in the stockholders’ meeting.

⁴ Sequestered shares which is presently in trust by PCGG and the record owner of which is Fairmount Real Estate. The Company is not aware of who is/are the direct or indirect beneficial owner/s of the stocks issued to Fairmount Real Estate.

	Red Earth Mineral Resources Corporation 16 th Floor, Citibank Tower (now BDO Towers-Valero), Paseo de Roxas, Makati City (Stockholder)	(see note ³)	Filipino	37,000,000	12.93%
	CEDE & CO. (Non-Filipino), P.O. Box 20, Bowling Green Stn., New York, NY 10004	(see note ⁵)	American	29,674,860	10.37%
	PCD Nominee Corporation (Non-Filipino) 29 th Floor BDO Equitable Tower, 8751 Paseo de Roxas, Makati City	(see note ¹)	American	24,962,744	8.73%

Please note that: (a) Palm Avenue Holding Company, Inc. and Palm Avenue Holdings Company are one and the same corporation, and (b) Palm Avenue Realty and Development Corporation and Palm Avenue Realty Corporation are one and the same corporation.

The following are participants under the account of PCD Nominee who hold five percent (5%) or more of any class of the Company's outstanding capital stocks as of April 15, 2025:

Title of Class	Name, Address of Record Owner And Relationship with Issuer	Name of Beneficial Owner & Relationship with Record Owner	Citizenship	Number of Shares Held	Percent Per Class
Class A Common	RYM Business Management Corporation, Universal Re Building, 106 Paseo de Roxas, Makati City (Stockholder)	(see note ⁶)	Filipino	62,930,820	14.64%
Class B Common		(see note ⁶)	Filipino	60,108,441	21.01%

Security Ownership of Management

The following table sets forth certain information as of April 15, 2025, as to each class of the Company's securities owned by the Company's directors and officers.

Title of Class	Name of Beneficial Owner	Citizenship	Amount and nature of beneficial ownership		Total	Percent Per Class
			Direct	Indirect		
A	Maria Remedios R. Pompidou	Filipino	15	0	15	0.00%
A	Rhodora L. Dapula	Filipino	1	39,375*	39,376	0.01%
B			0	26,250*	26,250	0.01%
A	Carlos Alfonso T. Ocampo	Filipino	1	0	1	0.00%
A	Elmer B. Serrano	Filipino	1	0	1	0.00%
A	Anthony M. Te	Filipino	3	154,875*	154,878	0.04%

⁵ Cede & Co. is the registered owner of the shares in the books of the Company's transfer agent Stock Transfer Service, Inc (STSI). Cede & Company operates as a subsidiary of Depository Trust Company (DTC) a New York City-based central securities depository, the securities holding bank for most stock brokerages, shares of stock that are held in brokerage accounts. During stockholders' meeting, DTC provides Omnibus Proxy as soon as possible after the record date. The Omnibus Proxy assign Cede & Co. consenting on voting rights to Cede's participants to whom account securities are credited on the record date. To the best knowledge of the Company, there are no participants under the Cede & Co account who own more than 5% of the Company's voting securities. Cede & Co. and DTC, the securities holding bank for most stock brokerages in U.S., is not in any way related to the Company.

⁶ The Company is not aware of who is/are the direct or indirect beneficial owner/s of the stocks issued to RYM Business Management Corporation. In the December 20, 2024 Annual Stockholders' Meeting of the Company, the RYM Business Management Corporation issued a proxy in favor of its Chairman and President, Atty. Remegio C. Dayandayan, Jr., and/or its Corporate Secretary, Minda P. De Paz, to vote in all matters to be taken up in the stockholders' meeting.

B			0	103,250*	103,250	0.04%
A	Luis Juan L. Virata	Filipino	234,003	0	234,003	0.05%
B			69,600	0	69,600	0.02%
A	Andrew Patrick R. Casiño	Filipino	3	39,375*	39,378	0.01%
B			3	26,250*	26,253	0.01%
A	Kwok Yam Ian Chan	Filipino	0	39,375*	39,375	0.01%
B			1	26,250*	26,251	0.01%
A	Andrew Julian K. Romualdez	Filipino	1,000	0	1,000	0.00%
B			1,000	0	1,000	0.00%
B	Bernardo M. Villegas	Filipino	3	0	3	0.00%
A	Lina G. Fernandez	Filipino	1,566	208,350*	209,916	0.05%
B			0	146,900*	146,900	0.05%
A	Reynaldo P. Mendoza	Filipino	4,866	202,750*	207,616	0.05%
B			0	38,500*	38,500	0.01%
A	Max D. Arceño	Filipino	1,533	58,313*	59,846	0.01%
B			0	113,575*	113,575	0.04%
A	Emmanuel M. Puspos	Filipino	5,100	0	5,100	0.00%
A	Deogracias P. Halog	Filipino	225	0	225	0.00%
A	Hermogene H. Real	Filipino	240,600	39,375*	279,975	0.07%
B			125,300	26,250*	151,550	0.05%

(*) All indirect shares of the directors and officers of the Company are lodged through a broker.

As a Group

Class A Convertible Preferred	Filipino	59,262 shares ⁷	27.30%
Class A Common	Filipino	277,581,116 shares ⁸	64.58%
Class B Common	Filipino	141,491,573 shares ⁹	49.46%

Voting Trust Holders of 5% or More

There are no voting trust holders of 5% or more of the Company's stock.

Changes in Control of the Registrant

There had been no changes in control of the Company that had occurred since the beginning of the last fiscal year. Furthermore, management is not aware of any arrangement, which may result changes in control of the Company.

ITEM 12. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

- a) There are no transactions or proposed transactions during the last two years in which the registrant or any director or executive officer, any nominee for election as director, any security holder or member of their immediate families, is a party nor had a direct or indirect material interest. None of the directors, officers or affiliates of the Company, or beneficial owner of more

⁷ Include 59,262 Convertible Preferred Class A shares, the record owner of which is Fairmount Real Estate which is presently in trust by PCGG. In the past stockholders' meetings of the Company, the shares of Fairmount Real Estate were not voted by any person or proxies. The Company is not aware of who is/are the direct or indirect beneficial owner/s of the stocks issued to Fairmount Real Estate

⁸ Include 30,834,375 and 63,920,490 sequestered Common Class A shares, the record owners of which are Palm Avenue Holdings Company and/or Palm Avenue Realty Corporation and presently held in trust by PCGG. Also included is 65,624,727 Common Class A shares, the record owner of which is Palm Avenue Holding Co., Inc. and 62,930,820 Common Class A shares, the record owner of which is RYM Business Management Corporation (PCD Nominee).

⁹ Include 43,680,000 Common Class B shares, the record owner of which is Palm Avenue Realty and Development Corporation and 60,108,441 Common Class B shares, the record owner of which is RYM Business Management Corporation (PCD Nominee)

than 10% of any class of voting securities of the Company, or any associate of any such director or security holder, or any of its subsidiaries, had a transaction with the Company or any of its subsidiaries nor had a direct or indirect material interest.

- b) There were no transactions with promoters since the Company was organized far beyond the five (5) year period requirement.
- c) The Company has no parent company.
- d) Intercompany transactions are eliminated in the consolidated financial statements. Items eliminated are separately disclosed in a schedule in accordance with Philippine SEC requirements under SRC Rule 68, as Amended. Information regarding related party disclosure is discussed and presented on Note 28 – Related Party Disclosures of the Notes to 2024 Audited Consolidated Financial Statements of the Company.

PART IV – CORPORATE GOVERNANCE

ITEM 13. CORPORATE GOVERNANCE

The Company continues to further improve its current code of corporate governance practices and develop an efficient and effective evaluation system and processes to measure the performance of the Board of Directors and management, or determine the level of compliance of the Board of Directors and management with the Manual of Corporate Governance (the “Manual”) of the Company. The Manual was adopted to institutionalize the principles of good corporate governance in the entire organization and in compliance with SEC Memorandum Circular No. 19, S2016, Corporate Governance Code for Publicly Listed Companies. The Company is a recipient of a 2 Golden Arrow Award in the 2024 ACGS Golden Arrow Awards by the Institute of Corporate Directors recognizing outstanding performing Publicly Listed Companies in the Philippines.

The Company submitted its 2023 Integrated Annual Corporate Governance Report (2023 I-ACGR) to the Commission and Exchange on May 30, 2024. The 2024 I-ACGR will be submitted on or before May 30, 2025.

The directors, officers and employees adhere to the leading practices and principles of good corporate governance. Corporate governance policies and principles are established to ensure that the interest of stakeholders are always taken into account; that directors, officers and employees are conducting business in a safe and sound manner; and that transactions entered into between the Company and related interests are conducted at arm’s length basis and in the regular course of business. The Company confirms full compliance with its Manual of Corporate Governance. There is no incidence of deviation from the Company’s Manual requiring disclosure as to the person/s and sanction/s imposed.

The Company’s Corporate Governance Committee is composed of three independent directors and one compliance officer namely: Dr. Bernardo M. Villegas is the Chairman and the members are: Atty. Elmer B. Serrano and Atty. Rhodora L. Dapula; the Compliance Officer is Mr. Max D. Arceño.

In compliance with SEC Memorandum Circular 4 Series of 2019, attached to this Annual Report (SEC form 17-A) is the Company’s Sustainability Report for the year ended December 31, 2024 (Annex “A”).

PART V – EXHIBITS AND SCHEDULES

ITEM 14. EXHIBITS AND REPORTS ON SEC FORM 17-C

(A) Exhibits and Schedules

1. Benguet Corporation & Subsidiaries - Audited Consolidated Financial Statements for fiscal year ended December 31, 2024:
 - Statement of Management’s Responsibility for Consolidated Financial Statements
 - Independent Auditors’ Report

- Audited Consolidated Financial Statements & Notes for the year ended December 31, 2024
- Independent Auditors' Report on Supplementary Schedules
- Independent Auditors' Report on Components of Financial Soundness Indicators
- Financial Ratios
- Schedule I : Reconciliation of Retained Earnings Available for Dividends Declaration
- Schedule II : Map Showing the Relationship of the Companies within the Group
- Schedule as Required by SRC Rule 68
 - Schedule A. Financial Assets
 - Schedule B. Amounts Receivable from Directors, Officers, Employees, Related Parties and Principal Stockholders (Other than Related Parties)
 - Schedule C. Amounts Receivable from Related Parties which are Eliminated during the Consolidation of Financial Statements
 - Schedule D. Long Term Debt
 - Schedule E. Indebtedness to Related Parties
 - Schedule F. Guarantees of Securities of Other Issuers
 - Schedule G. Capital Stock
- . 2. Benguet Corporation (Parent) Audited Financial Statements for fiscal year ended December 31, 2024:
 - Statement of Management's Responsibility for Financial Statements
 - Independent Auditors' Report
 - Audited Financial Statements & Notes for fiscal year ended December 31, 2024

(B) The following disclosures have been reported and disclosed to the SEC and PSE under SEC Form 17-C during the last six months period covered by this report including disclosure up to the date of filing this report:

Date of SEC Form 17-C	Description of Disclosure
04.14.2025	Change in number of issued and outstanding shares of the Company due to exercised stock options
04.14.2025	Report on the list of Top 100 Stockholders of the Company with PCD Beneficial Owner Participants for the quarter ended March 31, 2025
04.10.2025	Report on the computation of the minimum public ownership report for the quarter ended March 31, 2025
04.04.2025	Report on the implementation of the amended stock option plan for the month of March 2025
04.03.2025	Report on shares by lot for the month of March 2025
03.26.2025	Press Release entitled "BenguetCorp Reports 2024 Positive Income"
03.26.2025	Disclosure on the approval by the Board of Directors of the Company's Audited Parent Financial Statements and Audited Consolidated Financial Statements as of year ended December 31, 2024 and of the execution of the operating agreement between the Company and Asiga Mining Corporation which grants operating rights over the latter's claim holdings located in the Municipality of Santiago, Agusan Del Norte.
03.10.2025	Change in number of issued and outstanding shares of the Company due to exercised stock options
03.04.2025	Report on shares by lot for the month of February 2025
03.04.2025	Report on the implementation of the amended stock option plan for the month of February 2025
02.11.2025	Change in number of issued and outstanding shares of the Company due to exercised stock options
02.11.2025	Disclosure regarding the annual verification and certification issued by the Mines and Geosciences Bureau (MGB)
02.06.2025	Report on the implementation of the amended stock option plan for the month of

	January 2025
02.05.2025	Report on shares by lot for the month of January 2025
01.20.2025	Report on the passing of the Company's Assistant Vice President for Environmental Compliance and Chief Risk Officer, Ms. Pamela M. Gendrano
01.14.2025	Report on the list of Top 100 Stockholders of the Company with PCD Beneficial Owner Participants for the quarter ended December 31, 2024
01.13.2025	Report on the computation of the minimum public ownership for the quarter ended December 31, 2024
01.07.2025	Report on the implementation of the amended stock option plan for the month of December 2024
01.06.2025	Report on the shares by lot for the month of December 2024.
01.06.2025	Annual Report on the implementation of the amended stock option plan for the year ended December 31, 2024
12.20.2024	Results of the (i) 2024 Annual Mtg of the Stockholders of Benguet Corporation and (ii) Organizational Mtg of the Board of Directors after the ASM
12.20.2024	Press release entitled "Benguet Corporation becomes debt free after 35 years"
12.06.2024	Report on the implementation of the amended stock option plan for the month ended November 30, 2024 pursuant to PSE Notice of Approval (NOA) dated December 4, 2024 to cover the stock option granted on March 18, 2021 to qualified participants
12.03.2024	Report on shares by lot for the month of November 2024
12.03.2024	Report on the implementation of the amended stock option plan for the month of November 2024
11.11.2024	Amendment of the comprehensive corporate disclosure relative to the private placement of Red Earth Mineral Resources Corporation in the Company due to inclusion of AFS of Red Earth for the three fiscal years
11.07.2024	Comprehensive corporate disclosure relative to private placement by Red Earth Mineral Resources Corporation
11.07.2024	Report on the implementation of the amended stock option plan for the month of October 2024
11.06.2024	Report on the updated computation of minimum public ownership of the Company as of November 5, 2024 following the issuance of 90,000,000 common shares to Red Earth Mineral Resources Corporation
11.05.2024	Change in the number of issued and outstanding shares of the Company following the First Private Placement by Red Earth Mineral Resources Corporation
11.05.2024	Signing of two (2) Private Placement Agreements between the Company and Red Earth Mineral Resources Corporation
11.05.2024	Report on shares by lot for the month of October 2024
10.29.2024	Board's approval of the proposal for a private placement of Red Earth Mineral Resources Corporation
10.29.2024	Declaration of cash dividends
10.29.2024	Postponement of the Company's 2024 virtual Annual Stockholders Meeting (ASM) previously scheduled on November 28, 2024 to December 20, 2024
10.22.2024	Execution of Mutual Rescission Agreement between Benguet Corporation, Wilshire Business Consulting Corporation and Armstrong Capital Holdings Corporation, with Philippine Veterans Bank as Trustee
10.14.2024	DENR's approval of the renewal of the Mineral Production Sharing Agreement (MPSA) No. 154-2000-III granted to Balanga Bataan Mineral Corporation/Benguet Corporation (as operator)
10.10.2024	Report on the list of Top 100 Stockholders of the Company with PCD Beneficial Owner Participants for the quarter ended September 30, 2024
10.04.2024	Report on the computation of the minimum public ownership report for the quarter ended September 30, 2024
10.03.2024	Report on the implementation of the amended stock option plan for the month of

	September 2024
10.02.2024	Report on shares by lot for the month of September 2024
09.05.2024	Report on shares by lot for the month of August 2024
09.04.2024	Report on the implementation of the amended stock option plan for the month of August 2024
09.03.2024	Signing of Amendment to Mortgage Trust Indenture and Deed of Chattel with Philippine Veterans Bank
08.29.2024	Board's approval of the increase of authorized capital stock of the company and the corresponding amendment to Article Seventh of the Amended Articles of Incorporation and Article 1, Section 1 of the Amended By-Laws of the Company
08.29.2024	Board's approval of the schedule of the 2024 Annual Stockholders' Meeting
08.29.2024	Board's approval on retention of Chairman Bernardo M. Villegas as Independent Director
08.05.2024	Report on the implementation of the amended stock option plan for the month of July 2024
08.02.2024	Report on shares by lot for the month of July 2024
07.12.2024	Report on the list of Top 100 Stockholders of the Company with PCD Beneficial Owner Participants for the quarter ended June 30, 2024
07.04.2024	Report on the computation of minimum public ownership report for the quarter ended June 30, 2024
07.03.2024	Report on the implementation of the amended stock option plan for the month of June 2024
07.02.2024	Report on shares by lot for the month of June 2024
06.05.2024	Report on the implementation of the amended stock option plan for the month of May, 2024
06.04.2024	Report on shares by lot for the month of May, 2024.


SIGNATURES

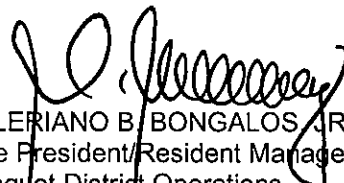
Pursuant to the requirement of Section 17 of the Code and Section 141 of the Corporation Code, this report is signed on behalf of the issuer by the undersigned, thereunto duly authorized, in the City of Makati on APR 30 2025.

BENGUET CORPORATION

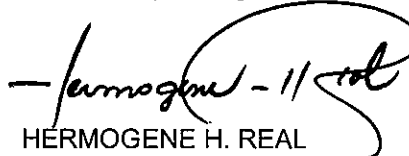
(Issuer)

By:


LINA G. FERNANDEZ
President
Principal Executive Officer


VALERIANO B. BONGALOS, JR.
Vice President/Resident Manager –
Benguet District Operations
Principal Operating Officer


MAX D. ARCEÑO
Senior Vice President, Finance & Treasurer
Principal Financial/Accounting Officer



HERMOGENE H. REAL
Corporate Secretary

REPUBLIC OF THE PHILIPPINES)
MAKATI CITY) S.S.
X ----- X

SUBSCRIBED AND SWORN to before me this APR 30 2025 at Makati City, Affiants exhibited to me their identifications to wit: Atty. Lina G. Fernandez with Social Security System (SSS) No. 03-75370258, Valeriano B. Bongalos, Jr. with SSS No. 03-31004128, Max D. Arceno with SSS No. 03-82056688; Atty. Hermogene H. Real with SSS No. 03-32358763, all are issued by the Office of the Social Security System, Philippines.

Doc. No. 185
Page No. 38
Book No. J
Series of 2025.

DOCUMENTARY STAMP TAX PAID
SERIAL NO. 22453293
DATE: APR 30 2025


SHEILA L. CENIT-BELGICA
Commission No. M-234
Notary Public for Makati City
Until December 31, 2025
7F Universal Re Building
106 Paseo de Roxas, Makati City
Roll No. 53476
IBP Life Member No. 014470 / 02,18,16
PTR No. MKT 10469596 dated January 3, 2025

Annex A: Sustainability Report

Contextual Information

Company Details	
Name of Organization	Benguet Corporation
Location of Headquarters	7F Universal RE Building, 106 Paseo de Roxas, 1226 Makati City Philippines
Location of Operations	Itogon, Benguet Province for mining of gold and silver Irisan, Baguio City for operation / processing of lime products
Report Boundary: Legal entities (e.g. subsidiaries) included in this report*	Benguet Gold Operations (BGO) Corporate Headquarters (CHQ) Irisan Lime Project (ILP)
Business Model, including Primary Activities, Brands, Products, and Services	Natural resources company engaged in, but not limited to the following: <ol style="list-style-type: none"> 1. Mineral exploration; 2. Mine development; 3. Mineral resources extraction; 4. Gold & silver processing; 5. Management of mine waste and mill tailings; 6. Production of quicklime and hydrated lime; and 7. Restoration / rehabilitation of mined-out areas.
Markets Served	Processed gold is sold to Bangko Sentral ng Pilipinas (BSP); Lime products are sold to mining and allied companies and farmers within Benguet and neighboring Provinces.
Scale of the Organization	<ol style="list-style-type: none"> 1. Total average number of employees for 2024 is 301 employees which includes Central Headquarters (CHQ), Benguet Gold Operation (BGO) and Irisan Lime Project (ILP). 2. Total number of operations: <ul style="list-style-type: none"> ➤ One (1) – Mining and milling operations for gold and silver ➤ One (1) – 3 Kilns alternately operating for lime production. 3. Net Sales (private sector) <ul style="list-style-type: none"> ➤ Total Capitalization ➤ Debt – Php_1.69B ➤ Equity – Php7.934B 4. Quantity of products – <ul style="list-style-type: none"> ➤ Gold – 5,750.74 ounces ➤ Silver – 999.10 ounces ➤ Lime – 6,362.14 Metric Tons
Reporting Period	CY 2024
Highest Ranking Person responsible for this report	Atty. Lina G. Fernandez – President

Materiality Process

Explain how you applied the materiality principle (or the materiality process) in identifying your material topics.¹

The 2024 Sustainability Report provides the fundamentals of informing our stakeholders in understanding the most critical and material topics that contributed to and affected the 2024 ESG performance that impacted people's health, environment, and economy. Beyond the unprecedented challenges, the Company has embodied a solution-driven mindset to impart lasting value to its investors and stakeholders. The report provides a detailed overview of the way best sustainability practices are deeply rooted in Benguet Corporation's business.

It is of these facts that Benguet Corporation unceasingly strives to manage its operation under the following principles and commitments to attain its long-term objectives:

- a. Profit and growth-oriented;
- b. Responsible operation and care for the environment;
- c. Commitment to improving the quality of life of our employees, the communities, and all stakeholders; and
- d. Compliance with existing laws, rules, and other obligations

The Board has a clearly defined and updated vision, mission, and core values. Please refer to the BC website under the tab "About Us" <http://benquetcorp.com/about-us/>

Please refer also to the Board Charter p.8 which states that one of the general responsibilities of the Board is to determine the Company's purpose, vision, mission, and strategies to carry out its objectives. <http://benquetcorp.com/corporate-governance/board-committee/>

Economic Material Factors

Our economic performance is based on the value our operations contribute to the local and national governments, host and neighboring mining communities, and the environment, at large. Our operations have created derived demand resulting in the establishment of micro, small, and medium enterprises in our mining community as well as in other areas where we source our value chain. Through our operations, the quality of life of our shareholders, employees, and other stakeholders has improved, local economies vigorously grew, and protection of the environment- intensified

Environmental Material Factors

Benguet Corporation is committed to the protection and enhancement of the environment by ensuring that its mining operations are in full compliance with mining and environmental laws, rules, and regulations. It ensures close collaboration and coordination with the Department of Environment and Natural Resources (DENR), the Mines and Geosciences Bureau (MGB), the Environmental Management Bureau (EMB), and all the government agencies that monitor compliance. Sustainability is core to BC's corporate strategy and sits at the heart of everything it does. Our operation aims to be environmentally responsible, respecting human rights and supporting the communities in which BC operates. It is the leading value that enables our people to understand our common purpose, our values, how we measure success, and the basis for our decision-making. It is about managing our risks, reducing adverse environmental, social, economic, and cultural impacts, and supporting and sustaining the communities and environments in which we operate.

The Environmental Material Factors have been considered essential in keeping our operations successful. As a mining company, we are committed partners of the government in the conscientious development of the country's natural resources. This agreement comes with a huge responsibility not just to harness, but most specifically to protect, nurture, restore, and enhance the environment. Nature and the resources within are the main enablers of our business, and as such, considerable care is our priority. Mitigating any possible adverse effects of our operations on the environment is part of our day-to-day function. The Company's mining activity is guided by the provisions of the Philippine Laws, such as but is not limited to the following:

1. Department Administrative Order No. 2010-21 (Implementing Rules and Regulations of R.A. 7942 – The Philippine Mining Act of 1995)
2. R.A. 9275 – Philippine Clean Water Act Of 2004
3. Department Administrative Order No. 2005-10 (IRR of R.A. 9275 – Philippine Clean Water Act);
4. Department Administrative Order No. 2000-98 (Mine Safety and Health Standard);

¹ See [GRI 102-46](#) (2016) for more guidance.

5. Department Administrative Order No. 2000-81 (IRR of R.A. 8749 – Philippine Clean Air Act);
6. R.A. 8371 – Indigenous Peoples Rights Act;
7. DENR Administrative Order NO. 2001-34 (IRR of R.A. No. 9003 – Ecological Solid Waste Management Act),
8. R.A. No. 6969 – An Act to Control Toxic Substances and Hazardous and Nuclear Wastes
9. Department Administrative Order No. 28 (IRR of R.A. 6969 – Toxic Substances and Hazardous and Nuclear Wastes Control Act); and
10. DENR Administrative Order No. 2003-30 (Revised Procedural Manual of P.D. 1586 – Environmental Impact Statement System).

We constantly monitor the land, air, and water quality, the siltation levels in bodies of water, as well as the forest cover / density in the affected areas within our operations and its surrounding environs. We adhere to the strict parameters laid out by the government in ensuring that we protect the ecosystem, promote biodiversity, and enhance the environment.

Social Material Factors

Benguet Corporation puts health and safety as top priority and believes that sustainability includes playing an appropriate role in addressing global issues such as climate change, supporting and respecting human rights, and advocating for social change such as by supporting the rights of Indigenous Peoples. As a century-old corporation, BC has witnessed and navigated through countless crises together with our employees, suppliers, and local communities but BC managed to put top priority concerns to people first.

As a responsible business entity, our Vision, Mission, Goals, Safety and Environmental Policies are centered on achieving productivity and advocating for the safety and health of our employees, assisting the people within our host and neighboring communities, and the continuous enhancement of our environment. We share the stewardship of our country's natural resources. As we operate within the indigenous communities, we support local cultures and respect human rights as we help drive economic development in the area.

As a responsible corporate partner of society, the Company has a social obligation not only to preserve, protect, and enhance the physical and ecological environment but also to improve the quality of life of the people in the communities surrounding the operation.

Aside from the Company's commitment to be socially responsible and environmentally conscious, it also aims to achieve competitiveness and excellence as a natural resource development Company through enhanced productivity and improvement of quality of life of its employees, their families and the host communities. At the heart of Benguet Corporation's philosophy are the people (employees and other stakeholders) promoting not only their interests and maintaining good community relationships but also to enable them to be empowered for the stewardship of the environment and natural resources surrounding them. To support this, we empowered and developed an inclusive and diverse workforce that is representative of the communities where we operate.

As a continuing commitment and manifestation of the Company's compliance with the implementation of its Social Development and Management Programs, Benguet Corporation has extended assistance on the various needs of its host and neighboring communities in all its areas of operations based on the following development framework as provided under the SDMP guidelines:

1. On Human Resource Development and Institutional Building,
2. On Enterprise Development and Networking,
3. On Assistance to Infrastructure Development and Support Services,
4. On Access to Education and Educational Support Programs,
5. On Access to Health Services, Health Facilities and Health Professionals
6. On Protection and Respect to Socio-Cultural Values
7. On the Development of Mining Technology, and
8. On United Nations Sustainable Development Goals.

This is our fundamental way to maintain our social license.

ECONOMIC PERFORMANCE

Direct Economic Value Generated and Distributed

Disclosure	Amount (2024) - BGO	Amount (2024) - ILP	Total Amount (2024)	Total Amount (2023)	Unit
Direct economic value generated (revenue)	791.96	100.02	891.77	727.81M	Php
Direct economic value distributed:					
a. Operating costs	388.31	64.50	452.81	350.35M	Php
b. Employee wages and benefits	98.42	4.34	102.76	123.59M	Php
c. Payments to suppliers, other operating costs	134.00	11.07	145.07	182.92M	Php
d. Dividends given to stockholders	143.56		143.56	0.00	Php
e. Interest payments to loan providers	7.934M		7.934M	2.521M	Php
e. Taxes given to government (excise)	31.64	Consolidated BC		25.46M	Php
f. Investments to community (e.g. donations, CSR)	4.91	0.67	5.58	6.77M	Php

Identification of Impact	Stakeholders Affected	Management Approach
<p>Benguet Corporation's mining operations encompass two key sites: the Benguet Gold Operation (BC-BGO) in Benguet, which utilizes underground mining or tunneling methods, and the Irian Lime Project (ILP) in Baguio City. ILP sources its raw limestone from land development and quarrying suppliers in the surrounding areas of Baguio City and Benguet Province as feed material for its kiln plant.</p> <p>Total Revenue for 2024 increased to Php891.77 million, up Php163.96 million or approximately 22.5% from Php727.81 million in 2023.</p> <p>The increase was primarily driven by:</p> <ul style="list-style-type: none"> BGO contributing Php791.96 million, approximately 88.8% of total revenue. ILP contributing Php100.02 million, about 11.2% of the total. <p>Gold production in 2024 reached 5,508.05 ounces, lower compared to 5,931.97 ounces in 2023. Decline in production is due to lower ore milled this year. Increase in revenue is attributed to higher price of gold partly offset by lower volume of gold sold. Gold sold in 2024 decreased to 5,750.74 ounces from 5,803.21 ounces in 2023.</p> <p>ILP generated P100.02M revenue this year, slightly lower than 2023. Lime sold decline to 6,362.14 DMT from 6,464 DMT in 2023, but this was partly</p>	<p>The Company's operations generate significant economic impacts, benefiting a diverse range of stakeholders:</p> <ul style="list-style-type: none"> Employees Mining Contractors Host and Neighboring Communities Local and National Government: Service Providers and Suppliers Local Business Establishments National Government: Micro, Small, and Medium Enterprises (MSMEs) Shareholders 	<p>The Company manages its economic impacts through strict regulatory compliance, ethical business practices, and fulfillment of stakeholder commitments; it drives operational excellence and invests in long-term resilience via diversification into agribusiness, land development, and renewable energy; management, finance, health and safety, and diversification teams each have defined responsibilities, supported by proactive measures to mitigate potential negative economic impacts.</p> <p>The Company remains steadfast in its commitment to employees and host communities by providing the following key benefits:</p> <ul style="list-style-type: none"> Fosters economic growth in host and neighboring communities. Maintains the family income of employees and community residents. Delivers medical services through the Social Development and Management Program (SDMP). Offers educational scholarships to deserving students from host and neighboring communities. Ensures the continued collection of tax revenue by local government units. Assists in local government infrastructure projects and sustains the delivery of essential community services via the SDMP. Guarantees budgetary allocations for the protection and enhancement of the environment and for social development programs. Subsidizes electricity and provides free

offset by the increase of price in 2024. A notable shift in 2024 was the payment of Php143.56 million in dividends to stockholders, whereas no dividends were distributed in 2023. This was due to the settlement of its old debt subject to the 1993 Restructuring Agreement. It underscores the company's commitment to shareholder returns.		water to employees and other stakeholders within the communities.
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What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<p>Risk identified that have affected the 2024 operation are the following:</p> <ul style="list-style-type: none"> • Financial volatility, • Resource constraints, • Evolving regulatory uncertainties, • Illegal mining intrusions (both external and internal), • Internal theft, • Safety and security breaches, • Environmental risks (particularly water quality), • Unstable power supply, • Depletion of non-renewable resources, • Scarcity of timber for mine support, and • Increased competition for water resources. 	<ul style="list-style-type: none"> • The Company • Employees of the Company and Mining Contractors • People in the Host and Neighboring Communities • Local and National Government • Service Providers and Suppliers 	<p>The Company employs a comprehensive approach encompassing environmental protection (ISO 14001:2015 EMS compliance and rehabilitation investments), proactive stakeholder engagement (with Indigenous Peoples, LGUs, and communities through SDMP), strong regulatory communication and compliance (with DENR, MGB, EMB), and robust asset protection measures (enhanced monitoring, increased security surveillance, and technology deployment to abate gold pilferage).</p>

What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<p>The Company actively pursues strategic opportunities to enhance operational efficiency and financial resilience in the context of rising energy costs and evolving market conditions:</p> <ul style="list-style-type: none"> • By implementing shared mill charges, the Company reduces exposure to fluctuating fuel and power prices. • With continued increases in gold prices, BGO is investing in deeper-level mining studies to optimize ore extraction, leveraging external consultants for technical evaluations, for its Expansion in below Level 2000. • The Company is exploring advanced technologies to improve gold recovery from tailings, supporting both economic value creation and resource sustainability. 	<ul style="list-style-type: none"> • The Company • Mining Contractors: • Investors 	<p>BGO addresses rising energy costs and leverages high gold prices by implementing shared mill charges to promote cost efficiency and sustainability.</p> <p>The Company engages consultants to assess other areas for increased production potential and is actively exploring new technologies to enhance gold recovery from tailings.</p> <p>These initiatives support long-term financial resilience and operational efficiency, aligned with the Company's sustainability goals.</p>

Climate-related risks and opportunities²

<p>Governance</p> <p><i>Disclose the organization's governance around climate-related risks and opportunities.</i></p> <p>The Company acknowledges the significant impacts of its energy-intensive activities, including GHG emissions. Climate-related risks and opportunities are integrated into the Company's governance structure and overseen by the Board Risk Oversight Committee (BROC). The BROC develops and implements the enterprise risk management plan, evaluating key risks, including climate and EESG factors. The Chief Risk Officer supervises risk management processes, while the executive team implements the climate strategy. The Company's ISO 14001:2015 certified EMS and the EPEP provide frameworks for managing climate risks, ensuring sustainable operations through Board oversight.</p> <p><i>Please refer to Manual on Corporate Governance.</i> http://benquetcorp.com/corporate-governance/board-committees/</p>
<p>Strategy</p> <p><i>Disclose the actual and potential impacts³ of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.</i></p> <p>Global warming is distinct. Climate change covers a wide range of different circumstances, such as the increasing number of natural calamities caused by abnormal weather conditions, depletion of water resources, food scarcity, flooding, typhoons, earthquakes, etc. Under each condition, the impacts to the mining operation of BC-BGO and to the surrounding environment are pronounced.</p> <p>Every year, BGO and ILP allocate a portion of its operating cost to further strengthen its environmental programs that, to some extent, go beyond mere regulatory compliance.</p> <p>BGO and ILP operations are in collaboration with the host and neighboring communities to actively participate in CO₂ sequestration by planting more trees in their surroundings.</p> <p>All plantations that were previously established are being maintained yearly.</p> <p>The total expenditures for the implementation of the environmental protection program of BC-BGO in 2024 amounted to P10,706,065.42.</p>
<p>Risk Management</p> <p><i>Disclose how the organization identifies, assesses, and manages climate-related risks.</i></p> <ul style="list-style-type: none"> • Identification and Assessment: In accordance with ISO 14001:2015, BC-Benguet Gold Operation systematically identifies and assesses environmental aspects and their associated impacts, including climate-related risks. This process considers both direct and indirect impacts of our operations. • Environmental Risk Management System Manual: All identified and assessed climate-related risks, along with their corresponding mitigation measures, are documented and addressed within our Environmental Management System (ERMS) Manual. This manual outlines procedures for managing these risks, including operational controls, monitoring, and emergency preparedness. Specifically: Benguet Corporation identifies, assesses, and manages climate-related risks through its enterprise risk management framework overseen by the Board Risk Oversight Committee (BROC). The committee develops and monitors risk management strategies that integrate climate-related risks with other environmental, economic, and social factors. Climate-related risks are assessed within the broader risk framework, with mitigation plans developed to manage them. Reports on risk exposures and the effectiveness of mitigation strategies are provided to the Board to ensure comprehensive management. • Environmental Protection and Enhancement Program (EPEP): The Environmental Protection and Enhancement Program (EPEP), which is continuously monitored by regulatory agencies, includes specific measures to mitigate climate-related risks. This may include initiatives to reduce GHG emissions, improve energy efficiency, manage water resources sustainably, and protect biodiversity. The EPEP ensures that our operations comply with environmental regulations and strive for continuous improvement in our environmental performance.

² Adopted from the Recommendations of the Task Force on Climate-Related Financial Disclosures. The TCFD Recommendations apply to non-financial companies and financial-sector organizations, including banks, insurance companies, asset managers and asset owners.

³ For this disclosure, impact refers to the impact of climate-related issues on the company.

- **Monitoring and Review:** The effectiveness of our climate-related risk management measures is continuously monitored and reviewed as part of our EMS and EPEP. This includes regular audits, performance evaluations, and management reviews to ensure that our strategies remain effective and aligned with best practices.

Please see Risk Management Charter <https://benquetcorp.com/wp-content/uploads/2024/06/Risk-Management-Charter.pdf>
And ERM Framework <https://benquetcorp.com/wp-content/uploads/2024/06/Enterprise-Risk-Mgmt-Framework.pdf>

Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

The Company continuously looks at ways in contributing to community and ecosystem resiliency.

With the approved Annual Environmental Protection and Enhancement Program (AEPEP), the Company laid out its annual targets and milestones to continuously address and mitigate the identified climate related risks which are stated in its Corporate Governance Manual.

Recommended Disclosures

<p><i>a) Describe the board's oversight of climate-related risks and opportunities.</i></p> <p>The Board of Directors of BC-Benguet Gold Operation oversees climate-related risks and opportunities through the Board Risk Oversight Committee (BROC). The BROC ensures these risks are identified, assessed, and managed within the enterprise risk management framework. It monitors implementation, advises on risk appetite, and integrates climate considerations into the EMS and EPEP, aligning with ISO 14001:2015. The Chief Risk Officer and executive team support the BROC with regular updates, ensuring that climate risks are addressed strategically and sustainably at the highest level of governance.</p>	<p><i>a) Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term.</i></p> <p>Among the identified risks and opportunities related to climate change are the following:</p> <ol style="list-style-type: none"> 1. Risks - <ol style="list-style-type: none"> a. Deforestation b. Landslide c. Forest fire / bush fire d. Underground water depletion e. Air pollution 2. Opportunities – <ol style="list-style-type: none"> a. Employment through reforestation activities b. Watershed enhancement c. Water spring and water impounding development d. Cleaner air
<p><i>a) Describe the organization's processes for identifying and assessing climate-related risks.</i></p> <p>BC-Benguet Gold Operation employs a structured process for identifying and assessing climate-related risks, integrated into its broader risk management framework and aligned with ISO 14001:2015. Key elements include:</p> <ol style="list-style-type: none"> 1. Systematic Risk Identification: Climate-related risks (physical and transition) are systematically identified as part of environmental aspect assessments, which aligns with the principles of ISO 14001:2015. 2. Site Manager Involvement: Site Managers assess operational risks. This ensures that operational realities and site-specific vulnerabilities to climate change are thoroughly considered. 3. Risk Response Development: Management develops mitigation plans with budget estimates. 4. Executive Management Approval: Plans are reported to Executive Management for approval, and to BROC, if 	<p><i>a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.</i></p> <p>We recognize that there is increasing pressure to better understand and mitigate GHG emissions. Our Company strategically integrates the assessment of climate-related risks and opportunities in our business functions and risk management processes through transparent communication and a commitment to environmental stewardship, measured through the following :</p> <ol style="list-style-type: none"> 1. Integrated Governance and Communication: Open lines of communication exist between the Board, Committees, Company Executives, and Site Management. We track the content of Board and Committee discussions pertaining to climate-related risks and opportunities.

<p>necessary.</p> <ol style="list-style-type: none"> 5. Implementation and Reporting: Site Management implements plans and reports on progress . 6. Monitoring: The Chief Risk Officer monitors mitigation effectiveness. 7. Regulatory Reporting: Risks and actions are reported to regulatory agencies. <p>Please refer to Board Risk Oversight Committee Charter link http://benquetcorp.com/wp-content/uploads/2020/06/C-Board-Risk-Oversight-Comm-Charter.pdf</p>	<ol style="list-style-type: none"> 2. Prioritized Climate-Related Programs: Programs on climate-related risks, particularly water management, pollution control, tailings management and reforestation, are top management priorities. The effectiveness of our water management programs is assessed through metrics measured against regulatory standards. Pollution control efforts are evaluated based on reductions in air and water pollutant emissions (measured in relevant units like ppm or mg/L) and adherence to permitted levels. The success of reforestation activities is tracked by the number of hectares reforested and the survival rate of planted species. 3. Compliance with Environmental Laws and Regulations: BC-BGO and ILP adhere to the provisions of the following various Philippine Environmental Laws and Regulations: <ol style="list-style-type: none"> a. R.A. 9275 – Philippine Clean Water Act of 2004 b. DAO No. 2005-10 (IRR of R.A. 9275 – Philippine Clean Water Act); c. DAO No. 2000-81 (IRR of R.A. 8749 – Philippine Clean Air Act); d. DENR Administrative Order NO. 2001-34 (IRR of R.A. No. 9003 – Ecological Solid Waste Management Act); e. R.A. No. 6969 – An Act to Control Toxic Substances and Hazardous and Nuclear Wastes; f. Department Administrative Order No. 28 (IRR of R.A. 6969 –Toxic Substances and Hazardous and Nuclear Wastes Control Act); and g. DENR DAO No. 2003-30 (Revised Procedural Manual of P.D. 1586 – Environmental Impact Statement System). <p>Our compliance with environmental regulations (R.A. 9275, DAO 2005-10, DAO 2000-81, DENR AO 2001-34, R.A. 6969, DAO 28, and DENR AO 2003-30) is rigorously monitored through regular audits and inspections, recording any instances of non-compliance and the corrective actions taken. We also track the number of environmental permits and licenses held and their renewal status to ensure continuous operational legality.</p>
<p><i>b) Describe management's role in assessing and managing climate-related risks and opportunities.</i></p> <ul style="list-style-type: none"> • Executive management, led by the Chief Risk Officer (CRO), manages the day-to-day assessment and management of these risks. • At BC-Benguet Gold Operation, climate change management is a shared responsibility among key managers and front-line personnel. • Executive management's duties include: <ol style="list-style-type: none"> a. Identifying and assessing physical and transition risks through departmental collaboration. b. Developing and implementing mitigation and opportunity strategies. c. Monitoring effectiveness against set targets. d. Regularly reporting to Executive Management and BROCC 	<p><i>b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.</i></p> <p>The mining operation is an extractive process that is always associated with environmental risk. Benguet Corporation's operation in Itogon is the subject of rigorous evaluation and monitoring by regulatory agencies on its compliance with environmental laws and regulations to reduce or eliminate pollution.</p> <p>The Company stands in solidarity with the government to arrest the deteriorating climate pattern through wise utilization of natural resources and lowering CO2 emission that affects the ozone layer.</p>

<p>(when necessary).</p> <ul style="list-style-type: none"> e. Integrating climate considerations into the Environmental Management System (EMS) and Environmental Protection and Enhancement Program (EPEP), aligned with ISO 14001 standards. f. Collaborating with external stakeholders on climate issues. <ul style="list-style-type: none"> • The CRO oversees the Enterprise Risk Management (ERM) process and communicates top risks, including climate-related ones, to the BROC. 	<p>The Company's reforestation programs (Mining Forest Program and the National Greening Program) are its positive contribution to the worsening climate change.</p> <p>As presented in the approved Annual Environmental Protection and Enhancement Program of 2024, Plans/Programs/Activities (P/P/A's) are all provided with corresponding budget and monitoring strategies.</p>
<p><i>b) Describe the organization's processes for managing climate-related risks</i></p> <p>BC recognizes the role in collaborating with others to achieve progress in managing the challenges of climate change. Experts from the private sector, government agencies, the academe, and non-government organization are were consulted on various aspects to prevent and minimize the effects of climate change. The company implements programs that are consistent with its goals and targets.</p> <p>The budget for the full implementation of the reforestation program on denuded slopes of the mountain and rehabilitation of eroded areas are funded.</p> <p>Water pollution control measures are strictly monitored to prevent the escape of processed water from leaks that may contaminate the water bodies.</p> <p>The company seeks opportunities to work with partners to utilize technologies that will include carbon capture and the natural climate solutions of reforestation and afforestation. We will continue to seek opportunities to collaborate with value chain partners, investors, researchers, and government agencies to work towards reducing the negative effects of climate change.</p>	<p><i>c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.</i></p> <p>The implementation of the approved 2024 Environmental Protection and Enhancement Program (EPEP) of BGO and ILP includes the annual targets and corresponding budget per activity.</p> <p>The total expenditures for the implementation of the 2024 EPEP amount to PHP 10,706,065.42, reflecting approximately 59.09% of the approved PhP 18,117,248.00 AEPEP budget.</p>
<p><i>d) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios including a 2°C or lower scenario.</i></p> <p>BC's environmental enhancement program, particularly on reforestation and forest protection, is aimed at reducing CO₂ in the atmosphere.</p> <p>In addition to the establishment of forest plantations, additional projects implemented to attain the different climate-related scenarios are as follows:</p> <ul style="list-style-type: none"> • Increased preventive maintenance schedule of anti-pollution devices such as scrubbers to arrest air pollutants from gold smelting processes. • Dust emissions were reduced with a dust suppressor system using air and water to act as suppressors for spraying along roads inside industrial area. • Regular preventive maintenance program is being conducted on vehicles and equipment to ensure smoke emissions are within the DENR-prescribed standards. 	<p><i>c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.</i></p> <p>The Board Risk Oversight Committee and CRO are tasked to make sure that the Company's environmental programs and compliances are integrated into the overall mine development program and implemented in accordance with the approved program by the Department of Environment and Natural Resources through the Mines and Geosciences Bureau and Environmental Management Bureau.</p>

<ul style="list-style-type: none"> All environmental safeguards are put in place to mitigate and reduce the emission of CO². 	
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Procurement Practices

Proportion of spending on local suppliers

Disclosure	Quantity				Units
	BGO		ILP		
	2024	2023	2024	2023	
Percentage of procurement budget used for significant locations of operations that is spent on local suppliers.	92% 123,830,567.00	91% 114,454,825.00	100% 62,131,972.29	100% 61,696,298	% Php

Identification of Impact	Stakeholders Affected	Management Approach
<p>Both BGO and ILP demonstrate a very high proportion of their procurement budget being spent on local suppliers in both 2024 and 2023. BGO shows a slight increase in its percentage of spending on local suppliers from 91% in 2023 to 93% in 2024.</p> <p>On the other hand, ILP maintained a consistent 100% of its procurement budget spent on local suppliers in both years.</p> <p>The high proportion of spending on local suppliers by both BGO (91-92%) and ILP (100%) in 2023-2024 aligns strongly with the company's emphasis on sustainable procurement and working closely with key partners along the value chain.</p> <p>This preference for local sourcing contributes to several sustainability objectives:</p> <ul style="list-style-type: none"> Local Economic Development: By prioritizing local suppliers, both BGO and ILP are directly supporting the economies within the Philippines. This fosters local job creation, strengthens local businesses, and contributes to the overall economic well-being of the communities. Reduced Transportation Emissions: Sourcing locally for essential commodities, supplies, and materials can significantly reduce the environmental impact associated with long-distance transportation, including lower GHG emissions 	<p>Employees in-charge of procurement</p> <p>Suppliers/manufacturers of product and services providers</p> <p>Materials Management Departments</p>	<p>BC believes that the success of the operation can be achieved through respect and transparent dealings between the management and the various agencies/entities and suppliers that provide the goods and services to the Company. It manages supplier relationships through its values and compliance with applicable regulatory frameworks. To ensure sustainability in our supply chain, a risk-based approach in assessing suppliers is in place. Suppliers must comply with the standard requirements, such as ISO certified or government standard compliances. We acknowledge the invaluable contributions of our suppliers and service providers who play an integral role in our holistic value chain.</p>

<p>from freight and reduced reliance on extensive logistics networks.</p> <ul style="list-style-type: none"> Stronger Partnerships: The practice of working closely with our key partners/suppliers fosters long-term relationships, promotes knowledge sharing on sustainability practices, and builds a more resilient and responsible supply chain within the Philippines. 		
What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<p>Delays in the delivery of imported supplies and materials/equipment parts have affected the mechanical availability of the equipment.</p> <p>Sub-standard quality of supplies and materials or products that may affect or slow down the operation and reduce gold production.</p> <p>Sourcing imported materials is expensive and may delay the delivery of needed supplies which will affect production.</p>	<p>Shareholders – lesser revenue due to lower production;</p> <p>Employees of contractors and suppliers – productivity is affected;</p> <p>Operations – they must work around the limitations of local suppliers sometimes sacrificing the timeliness of the process which may result in higher production costs.</p> <p>Suppliers – loss of trust and confidence</p>	<p>To ensure sustainability in the supply chain, a risk-based approach is being taken in assessing suppliers. We engage them through a commercial framework that is aligned with BC's Purchasing Policy.</p> <p>Long-term planning on mining development and programs to advance the forecasting of needed materials and supplies to ensure availability when needed by the operation.</p> <p>The company has prioritized suppliers with ISO 14001-2015 Certification.</p>
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<p>Partnering with local suppliers gives BC better credit lines, more responsive lead times, and customization options (smaller minimum order requirement).</p> <p>Through its mining operation, the Company is opening doors and providing business opportunities to suppliers and service providers, (local and foreign suppliers, and community residents).</p>	<p>Suppliers – local suppliers can sustain and grow their operations because of the mining operation of BGO and ILP.</p> <p>MSMEs – as mining operations expand, intermediate industries are given the opportunity to address the needs in each part of the value chain.</p> <p>Employees – direct collaboration in dealing with local suppliers</p>	<p>Continue to develop good relationships with suppliers and service providers.</p> <p>Continue to work with local suppliers that provide quality services and products at lower costs.</p>

Training on Anti-corruption Policies and Procedures

Disclosure	Quantity	Units / %
The percentage of employees to whom the organization's anti-corruption policies and procedures have been communicated to	100	%
Percentage of business partners to whom the organization's anti-corruption policies and procedures have been communicated to	100	%
Percentage of directors and management that have received anti-corruption training	100	%
Percentage of employees that have received anti-corruption training	100	%

Identification of Impact	Stakeholders affected	Management Approach
<p>BC practices zero tolerance to corruption in the conduct of its business. Some potential sources of corruption are as follows:</p> <p>Employees may be involved in bribery and corruption on permit and license acquisition and during land acquisitions/negotiation.</p> <p>As there are numerous purchasing transactions, employees may be offered bribes/ incentives on these engagements.</p> <p>Giving or asking special favors to/from mining contractors, Service Contractors, or other stakeholders in exchange for personal gain such as but not limited to relaxing company policies and procedures.</p>	<p>Suppliers – all suppliers must go through the same screening. This ensures the company gets what it pays for, and the supplier delivers what it promises.</p> <p>Employees – must be the vanguards of integrity especially when representing the company to external parties.</p> <p>Community – those who support corruption by supporting peers engaged in unlawful conduct deprive honest businesses of the chance of flourishing their trade and contributing back to the community.</p> <p>Management – should always advocate a culture of excellence and integrity. They set the values of the company and must promote the example of anti-corruption.</p> <p>Government regulatory agencies – officials must practice global policies on anti-corruption in the conduct of government and private business transactions.</p>	<p>The board sets the tone and makes a stand against corrupt practices by adopting an Anti-fraud, Corruption, and Whistleblowing Policy and its Code of Employee and Business Conduct.</p> <p><i>Pls refer to the following links:</i> <i>Anti-Fraud, Corruption and Whistleblowing Policy:</i> https://benquetcorp.com/wp-content/uploads/2024/06/anti-fraud-corruption-whistleblowing-policy.pdf</p> <p><i>Policy on Whistle Blowing:</i> https://benquetcorp.com/wp-content/uploads/2024/06/Policy-on-Whistle-Blowing.pdf</p> <p><i>Code of Employee Conduct and Discipline</i> http://benquetcorp.com/wp-content/uploads/2018/05/ECD%20with%20ee%20acknowledgement.pdf</p> <p><i>Code of Business Conduct and Ethics</i> http://benquetcorp.com/wp-content/uploads/2020/06/E.-Code-of-Conduct-of-Business-and-Ethics.pdf</p>
What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<p>Delay in the acquisition of permits and licenses.</p> <p>Engagement in corrupt practices may result in:</p> <ul style="list-style-type: none"> • Cancellation or suspension of permit/licenses/contract agreements or other kinds of penalty • Court case • Business losses • Exposure to higher or additional operational costs 	<p>Mining contractors – reduced amount of share in volume and value</p> <p>LGU – less tax collection</p> <p>Employees – suspension and withholding of salaries and benefits, dismissal from employment</p> <p>Host community –stoppage of the implementation of social development programs.</p>	<p>Prompt submission of documents and compliance with government requirements to avoid delay in the processing of permits and licenses.</p> <p>Maintain good relationships and close communication with concerned regulatory agencies.</p> <p>The company has clear and stringent Anti-Fraud and Corruption policies and procedures in curbing and penalizing employee involvement in offering, paying and receiving of bribes/unlawful benefits.</p> <p>The Company disseminated the anti-corruption policies and programs to employees throughout the organization via emails and employees signed acknowledgement.</p>

		<i>Pls refer to link Code of Employee Conduct and Discipline, link #41 & 47 Page 8 ECD with ee acknowledgement.pdf (benquetcorp.com)</i>
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<p>With the existence of written policies and communication to all concerned and their vigorous implementation, possible involvement in corruption and bribery will be minimized if not eliminated.</p> <p>Harmonious relationship with the regulatory agencies, community, and other stakeholders.</p> <p>The continuous mining operation is assured, and the integrity and reputation of the Company are maintained with the absence of corruption and bribery in the organization.</p>	<p>Host community – increase in public investment and support to the organization.</p> <p>National government agencies and local government units – strengthen the position of the regulatory system and guarantee a degree of fairness.</p> <p>Suppliers/contractors / service providers – leads to a secure and long-term business relationship.</p> <p>Employees – job satisfaction and security and increase in employee morale and shared values.</p>	<p>Closer relationship with all the stakeholders in the mining circle and government agencies.</p> <p>Strict observance of the schedule for the submission of regulatory reports and compliances.</p>

Incidents of Corruption

Disclosure	Quantity	Units
Number of incidents in which directors were removed or disciplined for corruption	0	#
Number of incidents in which employees were dismissed or disciplined for corruption	0	#
Number of incidents when contracts with business partners were terminated due to incidents of corruption	0	#

What is the impact and where does it occur? What is the organization's involvement in the impact?	Stakeholders Affected	Management Approach
<p>The Company has not experienced and has no recorded incidents of corruption by any of its Board of Directors and Officers nor from its employees. The company's Code of Business Conduct and anti-corruption standards clearly prohibit bribery and corruption in all business dealings.</p> <p>Benguet Corporation has been recognized as a top Philippine publicly listed company for corporate governance based on the 2021 and 2022 ASEAN Corporate Governance Scorecard (ACGS) and Corporate Governance Scorecard (CGS)</p>	<p>The Company, Board of Directors, officers, Senior Managers, and all employees were all responsible for the strict implementation and compliance with the Employee Code of Conduct and compliant to all government and other pertinent governing bodies.</p>	<p>All employees are covered by the Anti-Fraud, Corruption, and Whistleblowing Policy and Employee Code of Business Conduct.</p> <p>Members of the Management Team continued to comply with governing bodies' requirements including Corporate Governance reports and compliances.</p> <p><i>Pls refer to the following links: Anti-fraud, Corruption and Whistleblowing Policy http://benquetcorp.com/wp-content/uploads/2020/06/anti-fraud-</i></p>

assessments by the Institute of Corporate Directors. This commitment is further evidenced by the Company receiving Golden Arrow Awards on January 20, 2023, September 28, 2023, and September 19, 2024. This consistent recognition underscores Management's strong and sustained dedication to good corporate governance.		corruption-whistleblowing-policy.pdf <i>ACGS Awarded Benguet Corporation as top performing publicly listed Company</i> http://benguetcorp.com/corporate-governance/
What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<p>Keeping the workplace free from corruption vis a' vis building a culture of integrity is always a continuous challenge as employees and stakeholders are exposed to high-valued minerals and assets.</p> <p>If the risk of income/profit loss due to corruption or pilferages will not be addressed, it will eventually lead to business closure.</p>	<p>Business closure may affect the following: Mining contractors – reduced amount of share in volume and value. LGU – lesser tax collection Employees – Suspension or termination of employment Host community - community development projects might be suspended/stopped.</p>	<p>Management, including its officers and managers, should set a personal example of integrity. Strong leadership and commitment in the implementation of the Anti-fraud, Corruption and Whistleblowing Policy and the Employee Code of Conduct should be uniformly implemented across all organizations and levels.</p>
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<p>A workplace free of corruption with employees with high regard of integrity could lead to more productive and greater business opportunities for the Company.</p>	<p>The opportunities/outcome will surely be reaped by the communities, LGUs, employees, and other stakeholders.</p>	<p>Management endeavors to further strengthen its core values, systems, and procedures to reduce, if not totally eliminate corruption and fraud in the workplace.</p>

ENVIRONMENTAL PERFORMANCE

Resource Management

Energy consumption within the organization:

Disclosure	Quantity						Units
	BGO		ILP		Total		
	2023	2024	2023	2024	2023	2024	
Energy consumption (kerosene)	2,117.62	1,472.37	0.0	0.00	2,117.62	1,472.37	GJ
Energy consumption (diesel)	4,685.02	3,601.155	311.34	231.12	4,996.36	3,832.275	GJ
Energy consumption (bunker fuel)	0.00	0.00	4,481.7789	4,903.1768	4,481.7789	4,903.1768	GJ
Energy consumption (electricity)	5,022,416.01	4,505,184.79	222,066	209,850	5,244,482.01	4,715,034.79	kWh
Energy consumption (gasoline)	29.32	45.57	8.73	0.00	38.05	45.57	GJ
Energy consumption (LPG)	0.00	0.00	0.00	0.00	0.00	0.00	

Reduction of energy consumption

Disclosure	Quantity						Units
	BGO		ILP		Total		
	2023	2024	2023	2024	2023	2024	
Energy reduction (kerosene)	1,122.75	645.21	0.00	0.00	1,122.75	645.21	GJ
Energy reduction (diesel)	1,448	1,083.865	0.00	80.22	1,448	1,164.085	GJ
Energy reduction (bunker fuel)	0.00	0.00	10,822.10	(421.3979)	2,738.8	(421.3979)	GJ
Energy reduction (electricity)	1,546,240	517,231.22	19,494	12,216	1,565,734	529,447.22	kWh
Energy reduction (gasoline)	29.32	(16.25)	8.73	8.73	38.05	(7.52)	GJ
Energy reduction (LPG)	0.00	0.00	0.00	0.00	0.00	0.00	

Identification of Impact	Stakeholders Affected	Management Approach
<p>The 2024 energy data is shaped by two key operational events: the stoppage of contractor milling at BGO due to high power rates in the 1st Quarter and 2nd Qtr, stoppage of operation of BC Team and reduced mechanical availability of mining and milling equipment at both BGO due to delays in imported parts. The decrease in electricity consumption at BGO is likely a combination of these factors.</p> <p>There was a delay in the development of the underground workings due to the low mechanical availability of equipment that resulted in the slowdown of milling operation due to the lower extraction and delivery of ore.</p> <p>Considering the slowdown of the operation, the Company continuously observes the energy conservation guidelines.</p> <p><i>Please refer to the following: Appendix "A"–EMS Guidelines on Power Conservation</i></p>	<p>Operations – power cost is a significant cost driver in gold operations.</p> <p>Small-scale miners (SSM) – The Company monitored the disconnected illegal connections by SSM to eliminate pilferage of electricity. An increase in milling charges due to the increased cost of electricity and fuel/oil affected the operation of mining contractors.</p> <p>Employees – home activities of employee dependents are affected by the energy conservation measures being implemented.</p>	<p>Safeguards in the following measures to be sustainable:</p> <p>Conduct regular energy level monitoring/ reports.</p> <p>Schedule regular follow-up of the delivery of mechanical parts and supplies.</p> <p>Submission of regulatory reports on energy consumption to Mines and Geosciences Bureau and Environmental Management Bureau.</p> <p>Maintain BC Program on energy conservation.</p> <p>Disconnection of illegally connected power lines by small-scale miners. Regular monitoring is implemented to prevent reconnection.</p> <p>BC–BGO has been re-certified ISO 14001:2015 (by NQA) as proof of commitment to make operations aligned with international environmental and safety standards that include energy conservation.</p>

What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> Price of fuel and oil - The fluctuating world market price of diesel and bunker fuel has affected the overall operating cost and the profitability of the operation. Ore grade - The low grade of ore from the mining operation has affected the milling cost. Pilferage of processed and unprocessed ore - stealing of processed/loaded carbon has contributed to income loss. Misappropriation - inappropriate target/goal setting affected the revenue projection. 	BC Operation Suppliers of fuel & oil Employees/miners Community	<p>BGO follows a strict set of environmental standards in the conduct of its operation to monitor power consumption and utilization. To be sustainable, there is a need to strictly implement the following:</p> <ul style="list-style-type: none"> Energy level monitoring; Strengthen security measures and surveillance of mine and mill workers/employees; Close monitoring of production vs budget and revise projections when necessary; Submission of regulatory reports on energy consumption; Conduct regular Preventive Maintenance Schedule on equipment and vehicles; and Conduct regular monitoring of small-scale miners' operations in the area and implement immediate disconnection of illegally connected power lines.
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<p>Cost savings initiatives are being implemented across the value chain to become the least-cost producer as well as achieve greener, cleaner operations.</p> <p>Develop a better understanding of the mine and mill operations process flow and coordination with security, mill, and mine managers that will improve relationships among department heads to prevent pilferage of commodities..</p>	Community LGU	<p>Continuously monitor its power consumption and check areas that can be subjected to power adjustments.</p> <p>The company maintained reducing power consumption in its industrial areas by shifting to energy-efficient motors and lighting fixtures for a cost-reduction program.</p> <p>Shared electricity rates through graduated increased milling charges to contractors.</p>

Water consumption within the organization

Disclosure	Quantity						Units
	BGO		ILP		Total		
	2023	2024	2023	2024	2023	2024	
Water withdrawal							
Industrial	61,860.54	50,352.42	481	631*	62,341.54	50,983.42	Cubic meters
Domestic	7,131.60	7,191.40	200		7,331.60	7,191.40	
Water consumption							
Industrial	61,860.54	50,352.42	481	631*	62,341.54	50,983.42	Cubic meters
Domestic	7,131.60	7,191.40	200		7,331.60	7,191.40	
Water recycled and reused	0.00	0.00	0.00	0.00	0.00	0.00	Cubic meters

*Combined industrial and domestic figures

Identification of Impact	Stakeholders Affected	Management Approach
<p>Water is a critical input for the mining operations at the BC-BGO site. Recognizing its importance, the Company actively monitors the operational impact on adjacent river systems and downstream communities in Benguet to ensure water resources are maintained at levels that allow for equitable access by all stakeholders.</p> <p>Water Sourcing:</p> <ul style="list-style-type: none"> BC-BGO (Benguet): Industrial water for mining activities is sourced from the Company's old underground mine tunnel located in L-1200, Acupan, Itogon, Benguet. This withdrawal is governed by Water Rights Permit No. 16154 issued by the National Water Resources Board (NWRB). Potable water for employee's consumption at the BGO site is supplied by a private individual who owns and maintains a natural spring for his water delivery business, with the Company procuring this water at a fixed rate per drum. ILP (Baguio City): Domestic water needs for the ILP operations in Baguio City is supplied by the Baguio Water District (BWD). Industrial water for ILP is supplied by private individual, sourced from a natural spring permitted by the government for his water delivery business, with costs negotiated per cubic meter. 	<p>The affected stakeholders are as follows:</p> <p>Company – has 24/7 access to water supply from its underground mine tunnels for industrial use.</p> <p>BC-BGO employees, contractors/service providers, have access to safe potable water within the mine site.</p> <p>Host, and neighboring communities – have free access to water sources present in the area since the Company source and utilize its water internally.</p>	<p>Access to water is a basic human right as it is a shared resource of high economic, environmental, and social value. Considering that its operation is dependent on the free-flowing water from the Company's underground mine tunnel and for the continuous water recharging of the aquifer, it developed a strategy through an intensified watershed development and management by implementing a reforestation program on denuded and sparsely vegetated areas within and outside the Company's mining claims. This activity is included in the Annual Environmental Protection and Enhancement Program.</p> <p>Streamflow measurement and water quality monitoring is done quarterly.</p> <p><i>Please refer to Appendix "B" – Certificate of Approval of Annual Environmental Protection and Enhancement Program (AEPEP for BGO)</i></p> <p><i>Please refer to Appendix "B-1" – Certificate of Approval of Annual Environmental Protection and Enhancement Program (AEPEP) for ILP</i></p>
What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<p>The identified water-related risks are as follows:</p> <ol style="list-style-type: none"> Poor housekeeping practices by underground miners pose a risk to the quality of water intended for domestic use. The growing population and business activity in the surrounding area are expected to double overall water demand, potentially impacting availability and cost. Anticipated drying of some springs during the summer months will likely intensify competition for domestic water resources, potentially leading to price increases and volume limitations. High water competition is expected during the dry season due to the water-intensive ball milling operations of illegal small-scale miners. 	<p>BC-BGO employees, contractors/service providers, community residents.</p>	<p>The company will continue to support a range of projects that offer sustainability co-benefits, including support for local communities' biodiversity conservation, and watershed rehabilitation.</p> <p>The Company's Mining Forest Program is a shared responsibility with the community while the government monitors the implementation of the program. The Company continues to engage with its host and neighboring communities for an uninterrupted partnership in the protection of the reforested areas to increase the water yield of the aquifer.</p>

What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<p>In 2024, total water withdrawal across our operations decreased by 16.44%, from 69,673.14 cubic meters in 2023 to 58,174.82 cubic meters. Industrial water withdrawal dropped by 18.13% due to operational efficiencies and improved process controls, while domestic water withdrawal decreased slightly by 1.91%, reflecting stable consumption patterns.</p> <p>Water consumption mirrored withdrawal trends, ensuring reductions were achieved without compromising operational requirements.</p> <p>No water recycling or reuse activities were recorded during the reporting period. Recognizing this opportunity, we are prioritizing the development of water reuse initiatives to enhance sustainability in future operations.</p> <p>In addition, intensified watershed development in the area has provided livelihood opportunities for Indigenous Peoples (IPs) through contract reforestation, seedling propagation, plantation maintenance, and forest protection activities — further strengthening the community's role in environmental stewardship.</p> <p>Moreover, the Company's abundant underground water source presents significant potential for business development, particularly to supply bulk water needs of the surrounding communities, contributing to local water security and economic development.</p> <p>Our progress demonstrates our commitment to responsible resource management, community development, and environmental sustainability.</p>	<p>Employees, contractors/service providers, community residents</p>	<p>The Company actively engages stakeholders by providing livelihood opportunities such as seedling propagation, contract-based tree planting, and maintenance of reforestation areas. These initiatives strengthen community relationships, empower Indigenous Peoples and local residents, and support long-term forest rehabilitation efforts.</p> <p>Through intensified tree-planting activities within the mining claim, forest cover is being significantly enhanced, leading to increased spring water yield and contributing to lower atmospheric temperatures in the surrounding areas — critical factors in sustaining local ecosystems and improving climate resilience.</p> <p>Additionally, the Company is evaluating the development of its Acupan underground water source as a potential business opportunity to supply bulk water to nearby communities, including Itogon and Baguio City. This initiative aims to contribute to regional water security while creating new avenues for sustainable economic development.</p>

Materials used by the organization

Disclosure	Quantity				Units
	BGO		ILP		
	2023	2024	2023	2024	
Materials used by weight or volume					
Renewable (identify) – lumber, paper, sawdust, flour	333,767.25	92,535	73	592 (paper/carton)	kg/liters
Non-renewable - lubricants, motor oils, bunker fuel oil, diesel oil, kerosene, dynamite explosive, sodium cyanide, nitric acid, ammonium nitrate, sodium hypochlorite, hydrochloric acid, activated carbon, lime and sulfuric acid, caustic soda, hydrochloric acid, nitric acid, etc.	635,258.66	534,513.37	1,112,185.26	1,213,446.03	kg/liters
Percentage of recycled input materials used to manufacture the organization's primary products and services. Note: Only sawdust was used for firing carbon ash while papers are recycled for printing internal reports and memo.	0.09% (Saw Dust)	0.13% (sawdust) 0.11% (paper)	100 73 (paper)	100 592 (paper, carton)	% Kgms.

Disclosure	Quantity		
	Total (BGO and ILP)		Units
	2023	2024	
Materials used by weight or volume			
Renewable (identify) – lumber, paper, sawdust, flour	333,840.25	93,127	kg/liters
Non-renewable - lubricants, motor oils, bunker fuel oil, diesel oil, kerosene, dynamite explosive, sodium cyanide, nitric acid, ammonium nitrate, sodium hypochlorite, hydrochloric acid, activated carbon, lime and sulfuric acid, caustic soda, hydrochloric acid, nitric acid, etc.	1,747,443.92	1,747,959.4	kg/liters
Percentage of recycled input materials used to manufacture the organization's primary products and services.	100 73 (paper)	100	% Kgms.
Note: Only sawdust was used for firing carbon ash while papers are recycled for printing internal reports and memo.			

What is the impact and where does it occur? What is the organization's involvement in the impact?	Stakeholders Affected	Management Approach
BGO's underground mining operations utilize mine timbers for tunnel support to ensure the safety of mine workers. All timbers are procured legally, supported by Certificates of Lumber Origin issued by the DENR. To enhance sustainability, the Company	BGO mine and mill employees, community, suppliers and Irian Lime Project employees and its surrounding residential areas. Employees of the mining contractors.	The underground workings/tunnels are supported by square-set mine timbers to provide safe working conditions for the mine workers. Pre-cast concrete columns are the alternative mine support, but the cost is expensive and may not last especially on heavy grounds and acidic underground. BC-BGO is committed to

<p>recycles wood wastes, such as sawdust for firing carbon ash, and reuses papers internally for printing. Explosives necessary for underground development are handled responsibly, with permits issued by the Firearms and Explosives Unit of the Philippine National Police.</p> <p>The Company actively explores alternative materials for underground support structures. While pre-cast concrete columns are considered, they are often cost-prohibitive and vulnerable to acidic and heavy ground conditions. BC-BGO remains committed to minimizing timber usage without compromising worker safety.</p> <p>Forest plantation initiatives are promoted within the operational area, and suppliers are encouraged to support reforestation activities. The Company complies fully with ISO 14001:2015 standards and R.A. 9003 (Ecological Solid Waste Management Act), ensuring responsible material use and waste management practices.</p> <p>For the period 2024:</p> <ol style="list-style-type: none"> Renewable material consumption dropped dramatically by 72.1%, possibly due to operational scaling or efficiency improvements; Non-renewable material usage remained almost flat, ensuring a stable environmental footprint despite operational needs; Recycling practices notably improved, reflecting strengthened environmental commitment. 		<p>continuing to explore other alternative materials as substitutes for mine timber for underground support without sacrificing the safety of mine workers. This is part of the Company's sustainability commitment to minimize the use of timber resources.</p> <p>Forest plantations will be part of the Company's sustainable commitment to environmental enhancement in its area of operation. It encourages suppliers of mine timber to participate in the reforestation program of the company and the government.</p> <p>In compliance with BC-BGO's commitment and its concurrence to the standards set in its ISO 14001:2015 certification, the company strictly adheres to the standards set by the regulatory agencies (DENR-EMB) on proper recording and labeling of renewable and non-renewable materials in accordance with R.A. 9003 (Ecological Solid Waste Management Act) provisions.</p>
What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> Depletion of Resources: Threatening the availability of renewable materials such as lumber and paper. Environmental Degradation: Improper handling of non-renewables could lead to air, water, and soil pollution. Health and Safety Risks: Worker exposure to hazardous materials increases occupational health risks. Cost Management Risks: Heavy reliance on non-renewable materials can inflate production costs. Operational Risks: Blasting activities pose safety hazards including fly rocks, noise pollution, and dust emissions if improperly managed. 	<p>Underground employees/miners/blasters</p> <p>Employees at the motor pool area, mine and mill mechanical shops;</p> <p>Communities adjacent to the operation.</p>	<ul style="list-style-type: none"> Regular monitoring of implementation of ISO 14001:2015 objectives, targets and performance vs. audit reports Ensure secure storage, waste management, and disposal practices aligned with regulatory standards. Continue regular quality monitoring tests and submission of reports to regulatory agencies for validation of results following DENR Standards. Monitor the strict implementation of the Annual Environmental Protection and Enhancement Program. Provision of complete PPE, regular training on chemical handling, and safety protocols enforcement

<p>Please refer to the following: Appendix "C" - Summary of Risks</p> <p>Appendix "D" – EMS Document # EMSG-03 (EMS Guidelines on Diesel, Oil and Grease Hauling, Transport and Storage)</p> <p>Appendix "E" – EMS Document # EMSG -12 (EMS Guidelines on Contaminated Water)</p>		<p>underground.</p> <ul style="list-style-type: none"> • Conduct regular safety lectures, meetings, and pep talks before deployment in assigned working areas to remind workers of safety protocols in the underground mining activities and proper handling of chemicals at the mill.
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> • Sawdust is being recycled for firing carbon ash while used paper is recycled for printing internal reports and memo. • Continuous improvement in mining technologies and innovations and how it can benefit from renewable sources of energy throughout the stages of operation. • BGO's logistics and support services, on the other hand, utilize renewable materials such as wood and used packing materials (cartons or box containers made of cardboard). • Better planning and forecasting of usage of non-renewable materials in relation to programmed procurement systems can lead to cost efficiencies of the operation. 	<p>Residents in the surrounding communities stand to benefit from cleaner air and water.</p> <p>Employees</p> <p>Operations – cost efficiencies will deliver better profit margins without incremental damage to the environment.</p>	<p>Safety lectures and work briefings before deployment to assigned working areas. Continue to monitor the usage of non-renewable materials to attain reduction year over year without sacrificing production.</p> <p>Implement materials storage, handling, management, monitoring, and disposal of waste/tailings.</p> <p>Continue regular submission of reports to the regulatory body on the use of regulated chemicals.</p> <p>Regular water quality monitoring to ensure water is free from contaminants that are hazardous to human and animal health.</p>

Ecosystems and biodiversity (whether in upland/watershed or coastal/marine)

Disclosure	Quantity		Units
	BGO	ILP	
Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Crosby Park – 11.0 Has. Virac Timberyard – 6.0 Hectares Keystone – 3.0 Hectares Kelly Plantation - 3.0 Hectares	Plantation = within Irisan tenement 0.3711 Ha.	Ha.
Habitats protected or restored	0.00		Ha.
IUCN ⁴ Red List species and National Conservation List species with habitats in areas affected by operations	0.00	-	Ha.

⁴ International Union for Conservation of Nature

Identification of Impact	Stakeholders Affected	Management Approach
<p>The Company recognizes the importance of preserving ecosystems and biodiversity in the areas where it operates. BC continued its commitment to environmental stewardship through dedicated biodiversity and habitat management initiatives</p> <p>The established Crosby Forest Park, a 11.0-hectare man-made forest within the mining property, was continuously maintained and protected. This park serves as crucial support for the company's watershed development efforts. Enrichment planting activities were ongoing in areas with sparse tree cover to enhance the local greenery. The park also serves as a recreational area for employees' families and visitors, offering opportunities for enjoying the scenery and camping.</p> <p>In compliance with its environmental enhancement program, the company implemented a reforestation initiative within and around its mining claims.</p> <p>The Irian Lime Project has continuously maintained a total plantation area of 3,711 square meters (0.3711 hectares).</p> <p>These areas contribute significantly to biodiversity conservation, watershed management, and ecological rehabilitation efforts. Although no formal designation as protected or restored habitats has been made, the Company's initiatives support ecosystem services that benefit both its operations and surrounding communities. Notably, no IUCN Red List species or nationally protected species have been recorded as impacted by the Company's activities within these sites.</p>	<p>Employees and families – benefit from using the Crosby Park</p> <p>Contractors and laborers of the reforestation project.</p> <p>Community residents – inhaling pollution-free and fresh air.</p>	<ul style="list-style-type: none"> • Forest Park Maintenance: Continued care and maintenance activities under the Environmental Work Program (EWP), supported by a hired local caretaker. • Community Engagement: Engaged local communities for stewardship and protection of reforested areas. • Intensified Reforestation: Expanded reforestation and forest protection initiatives under the Annual Environmental Protection and Enhancement Program (AEPEP).

What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<p>Illegal cutting of trees and squatting. Illegal cattle grazing.</p> <p>Forest / bushfire</p>	<p>Employees and nearby residents</p>	<ul style="list-style-type: none"> • Strengthened and frequent foot patrols by the Claims Protection Team to prevent illegal activities such as squatting and small-scale mining. • Ongoing surveillance, installation of warning signage, and coordination with local authorities to enhance protection efforts.

What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<p>Opportunities identified from these efforts include the development of ecological tourism (such as at Crosby Park), watershed restoration that enhances water security and climate resilience, and community employment through reforestation activities.</p> <p>The reforestation and forest maintenance programs continue to provide income opportunities for local families and associations through seedling production, plantation establishment, and forest protection roles.</p>	Employees and the host and neighboring communities.	<p>BGO will sustain the maintenance and enrichment of Crosby Park to strengthen its role in ecological tourism and biodiversity conservation, while expanding reforestation efforts to enhance watershed functions and support landscape restoration.</p> <p>The Company actively works with nearby communities in maintaining these forest areas, conducting regular patrols to prevent illegal activities such as tree cutting and small-scale mining. Forest enrichment planting and further protection activities are continuously implemented to strengthen ecological integrity.</p>

Environmental Impact Management

Air Emissions

GHG

Disclosure	Quantity						Units
	BGO		ILP		Total		
	2023	2024	2023	2024	2023	2024	
Direct (Scope 1) GHG Emissions (Diesel fuel, Gasoline, Kerosene, Bunker fuel)	537	391.78	2,992	3,767.38	3,529	4,159.16	Tonnes CO ₂ e
Energy indirect (Scope 2) GHG Emissions (electricity)	1,422	1,275.28276	63	59.40224	1,485	1,334.685	Tonnes CO ₂ e
Emissions of ozone-depleting substances (ODS)	0.00	0.00		0.00		0.00	Tonnes

Identification of Impact	Stakeholders Affected	Management Approach
<p>In 2024, the Company recorded a total of 4,159.16 tonnes of direct (Scope 1) GHG emissions, reflecting an increase of approximately 17.84% compared to 3,529 tonnes CO₂e in 2023. The increase was mainly due to higher diesel, gasoline, kerosene, and bunker fuel consumption across operational sites.</p> <p>Meanwhile, energy indirect (Scope 2) GHG emissions related to electricity consumption totaled 1,334.69 tonnes CO₂e in 2024, representing a decrease of approximately 10.11% compared to 1,485 tonnes CO₂e in 2023. The reduction reflects the Company's continuous efforts in improving energy efficiency and reducing electricity use.</p>	Employees and their families Community / IP's Suppliers	<ul style="list-style-type: none"> Conduct a comprehensive assessment to identify additional sources of GHG emissions and implement targeted mitigation measures. Optimize energy efficiency by evaluating and right-sizing the horsepower of air conditioning units relative to office floor area, ensuring appropriate cooling capacity while minimizing energy use. Implement a regular preventive maintenance program for all diesel-powered motors and equipment to maintain optimal operating efficiency and reduce unnecessary fuel consumption and emissions. Promote operational best practices and energy-saving behaviors across sites to further minimize the Company's carbon footprint.

What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<p>A. Lime Kiln Operations</p> <ul style="list-style-type: none"> Prolonged operator exposure to high temperatures poses significant health risks, including heat stress and related illnesses. Inhalation of dust from raw materials and fumes, particularly during start-up operations, may result in respiratory health issues. <p>B. Underground Mining Operations</p> <ul style="list-style-type: none"> Failure or breakdown of air compressors could cause operational disruptions, leading to the suspension or slowdown of underground activities. Inadequate ventilation can impair miner performance, decrease productivity, and elevate health risks. Poor ventilation may result in the accumulation of carbon monoxide emissions from diesel-operated locomotives, posing serious health hazards and potential fatality risks to underground personnel. 	<p>Employees - The health of employees is affected which will result in a reduced workforce.</p> <p>Company - reduced ore tonnage</p>	<p>For Lime Kiln Operations, the Company will provide heat-resistant PPE, improve ventilation, and conduct regular health monitoring and safety training to protect workers from heat and dust exposure.</p> <p>For Underground Mining Operations, preventive maintenance of air compressors, enhancement of ventilation systems, installation of gas detectors, and regular emergency drills will be enforced to safeguard miner health and ensure continuous operations.</p>
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> Reduced Scope 1 GHG emissions through lower fuel consumption in BGO and ILP operations, supporting climate goals. Lower operational costs and improved environmental performance from optimized equipment efficiency. Increased kiln product output and sales, driving revenue growth. 	<p>Employees of the company and mining contractors.</p> <p>Residents residing in the camp.</p>	<p>The Company will strengthen coordination among operations and executives to address challenges efficiently. Regular preventive maintenance and monitoring of equipment running hours will minimize downtime, optimize fuel use, reduce GHG emissions, and support increased kiln production and revenue growth.</p>

Air pollutants

Disclosure	Quantity				Unit
	BGO		ILP		
	2023	2024	2023	2024	
NO _x					
Stack emission	143	83.00mg/Ncm	132.9,82.20	<21.4 and 13.5	Mg/Nm3
Ambient	8.20	13.18 ug/Nm3	9.0,9.0,5.33	4/1.97/1.18	
Sox					
Stack emission	10.81	50.25 mg/Ncm	9.6,38.3	18.3 and 1.9	Mg/Nm3
Ambient	11	10.85 ug/Nm3	0.86,0.85,0.71	0.29/0.57/0.94 (3 sampling stations)	
Carbon Monoxide (CO)	0.00	36.75 mg/Ncm	0.00	121 and 25.2 (stack emission)	mg/Nm ³

Persistent organic pollutants (POPs) e.g. PCB's, PFOs; Biphenols; Phthalates; Atrazine (herbicide)	0.00		0.00		kg
Volatile organic compounds (VOCs) Propane, butane	0.00		0.00		kg
Hazardous air pollutants (HAPs) (Lead)	0.002745		0.00		kg
Particulate matter (PM10)	4.67	25.8 mg/Ncm	9.3,49.7	8.06/7.27/6.27 (ambient)	mg/Nm ³
CO Stack emission	0.00	36.57 mg/Ncm	133.2,105.4		
What is the impact and where does it occur? What is the organization's involvement in the impact?	Stakeholders Affected		Management Approach		
<p>Cognizant of the impact of mining operations on the environment particularly on-air quality, the company is very aware of its consequences but equally aware of managing it properly. The identified major sources of air pollution are as follows:</p> <ol style="list-style-type: none"> 1. Generation of dust during mining development caused by blasting; 2. Generated fumes at the mill operation during gold smelting where chemicals are added to separate gold from other impurities; and 3. ILP operation – Kiln plant operation and generation of dust along access road. <p>In 2024, the Company recorded notable improvements in managing air emissions. Nitrogen oxide (NO_x) stack emissions significantly decreased by approximately 42% at BGO and by over 75% at ILP, reflecting enhanced operational controls. Ambient NO_x concentrations at ILP also declined across all monitoring stations.</p> <p>Conversely, sulfur oxide (SO_x) emissions showed an increase, particularly in stack measurements, indicating the need for further emission control efforts. Carbon monoxide (CO) emissions, now being monitored, were detected at moderate levels, underscoring the importance of preventive maintenance and equipment efficiency improvements.</p> <p><i>Please refer also to:</i> Appendix "F" - Report Certification of Greentek Environmental Phils. Co., on Source Emission Test Result for BGO; Appendix "F-1" and "F-2" - Report Certification of BSI Environmental Management Service Provider on Source</p>	<p>BC-BGO - Employees/workers, community.</p> <p>ILP -Employees, community/neighbouring Puroks of the Plant</p>		<p>The Company strengthens preventive maintenance of equipment to reduce emissions, enhance operational efficiency, and prevent breakdowns. Continuous monitoring of air quality parameters and stricter compliance with emission standards will be enforced. Coordination among operations and leadership will be intensified to proactively address air pollutant sources and implement timely corrective measures.</p>		

<p><i>Emission Test Result for ILP and</i></p> <p><i>Appendix "G", and "G-1" Ambient Air Quality and Noise Monitoring Report of Greentek Environmental Engineering Services for BGO and</i></p> <p><i>Appendix "G-2" Ambient Air Quality and Noise Monitoring Report of BSI Environmental Management Service Provider on Source Emission Test Result for ILP</i></p>		
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What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> Poor air quality may pose health risks to employees and nearby communities, potentially resulting in complaints filed with regulatory agencies against the Company (BGO and ILP). Exceedance of DENR standards for dust and acid fumes may lead to regulatory penalties, suspension, or even stoppage of operations. 	<p>Employees/workers, adjacent communities</p> <p>ILP- community/ residents of direct impact areas (Purok 10 and 11; employees</p>	<ul style="list-style-type: none"> Strengthen air quality monitoring systems to ensure compliance with DENR standards. Implement dust suppression measures and install fume extraction systems at critical emission points. Conduct regular maintenance of equipment to minimize pollutant emissions. Provide PPE and health monitoring programs for employees exposed to air pollutants. Engage with nearby communities through information drives and grievance mechanisms to address concerns promptly.
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> Enhanced employee environmental awareness and commitment to air quality protection. Training on advanced anti-pollution equipment operation, aligned with R.A. 8749. Improved chemical handling practices to reduce workplace exposure risks. Sustained compliance with DENR standards and ECC conditions through effective pollution control. 	<p>Employees/ workers, community</p>	<ul style="list-style-type: none"> Continue environmental awareness and pollution control training for employees. Regularly update and maintain anti-pollution devices and technologies. Strictly enforce safe handling protocols for chemicals and reagents. Conduct periodic air emissions testing to ensure continuous compliance with DENR standards and ECC conditions. Strengthen internal audits and corrective actions to immediately address any emission issues.

Solid and Hazardous Wastes

Solid Waste

Disclosure	Quantity				Units
	BGO		ILP		
	2023	2024	2023	2024	
Total solid waste generated	391,226.20	159,323.9	1,152.50	1,653	kg

Reusable (Sawdust, Paper)	411.96	223.90	176	592	kg
Recyclable (used sacks, cartons, pet bottles, cans)	6,606.20	19,500.00	131	254	kg
Composted	-	0.00	0.00	0.00	kg
Incinerated	N/A	0.00	0.00	0.00	kg
Residuals/Landfilled	384,660.00	139,600.00	845.50	807	kg

Disclosure	Quantity		
	Total (BGO and ILP)		Units
	2023	2024	
Total solid waste generated	392,378.7	160,976.9	kg
Reusable (Sawdust, Paper)	587.96	815.9	kg
Recyclable (used sacks, cartons, pet bottles, cans)	6,737.20	19,754	kg
Composted	0.00	0.00	kg
Incinerated	0.00	0.00	kg
Residuals/Landfilled	385,505.50	140,407	kg

What is the impact and where does it occur? What is the organization's involvement in the impact?	Stakeholders Affected	Management Approach
<p>Residents in camps and concession stores are the major source of residual waste.</p> <p>In 2024, the total solid waste generated by both BGO and ILP operations decreased by 59.0% compared to 2023 (from 392,378.7 kg down to 160,976.9 kg). This notable reduction reflects the Company's continuous efforts to improve solid waste management practices. Reusable materials increased by 38.76%, and recyclables rose significantly, from 6,737.2 kg to 19,754 kg, demonstrating better segregation and resource recovery initiatives. Meanwhile, residual waste sent to landfills dropped by 63.56%, supporting the goal of minimizing landfill dependency.</p> <p>This positive trend is the result of a persistent information campaign on the provisions of R.A. 9003 (Ecological Solid Waste Management Act) and the regular collection of garbage in the camps. Increased awareness and practice of proper waste management have now become a sustained culture among the residents and employees, reinforcing the Company's commitment to environmental stewardship.</p>	<p>Employees of Benguet Corporation and workers of solid waste/residual waste hauling contractor.</p> <p>Owners of concession stores.</p>	<ul style="list-style-type: none"> • Integrated proper waste management into daily housekeeping practices. • Enforced strict waste segregation at source in offices and residential areas. • Collected and hauled scrap materials regularly to designated depository areas. • Sold recyclable materials to DENR-accredited contractors to minimize waste generation. • Disposed of residual waste through licensed landfill contractors outside the region. • Operated and maintained a Material Recovery Facility (MRF) for recyclables and biodegradables. • Ensured continuous compliance with R.A. 9003 (Ecological Solid Waste Management Act) and DAO No. 2001-34. • Conducted regular monitoring by the Mine Environment Protection and Enhancement Officer (MEPEO). • Reminded contractors to provide PPE and maintain worker health and permit compliance. • Institutionalized a culture of waste management through persistent information campaigns.

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What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> • Health and Environmental Risks: Accumulation of uncollected waste may cause unsanitary conditions, foul odors, and health issues for workers and nearby communities. • Regulatory Compliance Risks: Failure to comply with R.A. 9003 could lead to complaints, penalties, or sanctions from regulatory agencies. • Contractor Worker Safety: Hauling contractor workers face health and safety risks without proper PPE and management oversight. • Water Pollution Risk: Improper waste management could contaminate nearby water bodies, impacting environmental and community health. 	<p>Workers of solid waste/residual waste hauling contractor</p> <p>Employees of the Company</p> <p>Community</p>	<ul style="list-style-type: none"> • Strict Monitoring and Compliance: Regular inspection of waste segregation, collection schedules, and compliance with R.A. 9003 requirements. • Contractor Oversight: Require hauling contractors to maintain valid permits, provide full PPE to their workers, and conduct regular health and safety checks. • Immediate Waste Disposal: Ensure timely hauling and disposal of waste to avoid accumulation and unsanitary conditions. • Emergency Response Plans: Establish rapid response protocols for waste overflow, missed collections, or accidental spills. • Environmental Safeguards: Maintain the Material Recovery Facility (MRF) and enforce strict waste handling procedures to prevent water pollution. • Community Engagement: Continue awareness campaigns for employees and residents on proper waste segregation, recycling, and sanitation practices.
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> • Sustained cleanliness ensures full compliance with the Ecological Solid Waste Management Act (R.A. 9003) and its IRR (DAO No. 2001-34). • A clean, well-maintained environment enhances the quality of life for employees and surrounding communities. • Compliance strengthens the Company's environmental reputation and reduces risks of regulatory sanctions. • A litter-free, organized community promotes employee pride and fosters stronger community relations. 	<p>Company</p> <p>Hauling contractor Employees</p>	<ul style="list-style-type: none"> • Sustain compliance with R.A. 9003 through regular waste collection and segregation. • Conduct continuous environmental education for employees and residents. • Maintain close coordination with accredited waste haulers. • Promote active involvement of employees and communities in maintaining clean surroundings.

Hazardous Waste

Disclosure	Quantity				Units
	BGO		ILP		
	2023	2024	2023	2024	
Total weight of hazardous waste generated:					
Type of waste generated –					
➤ Mill tailings					
➤ Other hazardous waste (lead compounds, busted fluorescent lamps, non-halogenated organic chemicals, clinical waste, oil contaminated materials, Waste electrical and electronic equipment, Mercury and mercury compounds)	28,520.32 28.848	22,638.52 6.540	61.65	0.0855015	MT. MT.
Total weight of hazardous waste transported	0.00	14,450	0.00		Kg.

Disclosure	Quantity		Units
	Total (BGO and ILP)		
	2023	2024	
Total weight of hazardous waste generated:			
Type of waste generated –			
➤ Mill tailings			
➤ Other hazardous waste (lead compounds, busted fluorescent lamps, non-halogenated organic chemicals, clinical waste, oil contaminated materials, Waste electrical and electronic equipment, Mercury and mercury compounds)	28,521.97 28.848	22,638.52 6.6255	MT. MT.
Total weight of hazardous waste transported	0.00	14,450	Kg.

What is the impact and where does it occur? What is the organization's involvement in the impact?	Stakeholders Affected	Management Approach
<p>Mill tailings is the product from milling the gold-bearing mineral ore to produce said precious metal. The tailings are impounded in the ECC-approved Tailings Storage Facility (TSF) that serves as a treatment facility.</p> <p>In 2024, there was a notable decrease in the total hazardous waste generated, from 28,521.97 metric tons in 2023 to 22,638.52 metric tons. This reduction reflects improved waste management practices, particularly in the handling and disposal of mill tailings and other hazardous substances. Proper maintenance of the tailings treatment facility helped prevent potential soil and water contamination, mitigating environmental risks associated with cyanide and other chemicals present in the waste.</p> <p>For other hazardous wastes, strict protocols on proper labeling, storage, and regular hauling by an EMB-accredited contractor were effectively maintained. Importantly, in 2024, 14.45 kilograms of hazardous waste were successfully transported for proper</p>	<p>Employees of BC-BGO, and ILP Employees of mining contractors and hauler</p>	<p>The Company demonstrates corporate responsibility by strictly adhering to waste management and environmental quality protocols, including compliance with R.A. 9003, R.A. 9275, EMS Guidelines on Hazardous Waste Management, and its Environmental Compliance Certificate (ECC) conditions. Hazardous wastes are properly labeled, stored, and disposed of through a DENR-EMB accredited third-party service provider, ensuring full regulatory compliance.</p> <p>Aligned with the Company's Environmental Policy and Environmental Management System (EMS), continuous monitoring, repair, and maintenance of anti-pollution structures, penstocks, spillways, and tailings dam embankments are regularly carried out. Security personnel are deployed at the Tailings Storage Facility (TSF) to safeguard the structure and prevent unauthorized access.</p> <p><i>Please refer to Appendix "H" – EMSG-07-A (EMS Guidelines on Hazardous Waste</i></p>

<p>disposal, compared to zero recorded transport in 2023. This reflects the Company's commitment to regulatory compliance and proactive environmental stewardship.</p> <p>Overall, the Company's adherence to best practices in hazardous waste management, including persistent monitoring and maintenance, resulted in a cleaner operation and reduced environmental risk, ensuring ongoing compliance with Philippine environmental regulations.</p>		<p><i>Management – Used Oil, Oil and Grease Contaminated Items)</i></p>
What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> Water contamination of the Ambalanga River if hazardous waste, especially cyanide-laced tailings, is not properly contained and managed. Siltation along the river system due to deposition of non-toxic tailings or sediments from accidental leaks, leading to ecosystem disruption and potential health hazards. Chemical exposure and accidents from improper handling, storage, and transport of hazardous wastes like acids, alkalis, used oils, and organic solvents. Non-compliance with environmental regulations such as R.A. 9275 (Philippine Clean Water Act of 2004) and R.A. 6969 (Toxic Substances and Hazardous and Nuclear Waste Control Act), risking suspension of operations or cancellation of the Environmental Compliance Certificate (ECC). Fines, sanctions, or reputational damage arising from regulatory violations and community complaints. 	<p>Employees of BC-BGO, BC-CHQ and ILP</p> <p>Employees of mining contractors</p>	<ul style="list-style-type: none"> Strict enforcement of waste management protocols, especially inside the industrial area, to prevent accidental discharges into the environment. Regular inspection and maintenance of the tailings treatment facility and pipelines to ensure the integrity of impoundment systems and prevent leaks. Proper labeling, safe storage, and secure handling of all hazardous waste materials, with dedicated storage areas designed to avoid spills and leaks. Utilization of EMB-accredited haulers for timely transport and final disposal of hazardous wastes, ensuring compliance with R.A. 6969 and DAO 2004-36. Water quality monitoring programs along the Ambalanga River and other receiving bodies to detect any signs of contamination early and take corrective actions. Implementation of emergency response protocols and spill containment procedures to immediately address accidental releases. Regular employee training on hazardous waste management, chemical handling, emergency response, and environmental protection policies. Strict compliance with the Environmental Compliance Certificate (ECC) conditions and continuous engagement with DENR-EMB to ensure environmental laws and regulations are met. Community awareness programs to maintain transparency and strengthen trust with surrounding communities.
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> Strengthened environmental stewardship by proactively managing hazardous and non-toxic tailings, enhancing the Company's reputation for responsible mining. Continued regulatory compliance (R.A. 	<p>BC-BGO/ACMP, BC-CHQ</p> <p>and ILP employees</p> <p>Employees of mining contractors</p> <p>Suppliers</p>	<p>The Company strengthens its environmental stewardship through strict hazardous waste management, ensuring compliance with R.A. 9275 and R.A. 6969. This protects water bodies like the Ambalanga River, enhances employee safety, fosters community trust, and</p>

<p>9275, R.A. 6969) ensures uninterrupted operations, avoiding penalties, suspension, or cancellation of permits.</p> <ul style="list-style-type: none"> • Improved environmental quality through effective waste management, maintaining a healthy river system and protecting biodiversity. • Enhanced employee skills through regular training on hazardous waste handling, boosting workplace safety and operational efficiency. • Increased community trust through transparent environmental practices and the Company's commitment to protecting local water bodies and ecosystems. • Support for a circular economy through proper recycling, recovery, and responsible waste disposal practices. • Positioning the Company as a model for sustainable operations in the mining and industrial sector 	Community.	<p>sustains operational continuity, positioning the Company as a model for sustainable practices.</p> <p>Please refer to Code of Business Conducts and Ethics link http://benquetcorp.com/wp-content/uploads/2020/06/E.-Code-of-Conduct-of-Business-and-Ethics.pdf</p>
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Effluents

Disclosure	Quantity	Units
Total volume of water discharges Effluent discharge from the mill	61,860.54	Cubic meters
Percent of wastewater recycled.	0.00	%

What is the impact and where does it occur? What is the organization's involvement in the impact?	Stakeholders Affected	Management Approach
<p>In 2024, the mill discharged 50,352.42 cubic meters of effluent — an 18.6% decrease from 61,860.54 cubic meters in 2023 — reflecting improved water management practices.</p> <p>The reduction is primarily attributed to lower ore milling volumes and enhanced containment, recycling, and treatment efforts.</p> <p>Proper TSF operation and maintenance remain critical in minimizing environmental risks and ensuring continued regulatory compliance.</p>	The Company; Employees; Community	<p>The following are measures that were implemented to mitigate the impacts:</p> <ul style="list-style-type: none"> • Treat wastewater through detoxification using sodium hypochlorite to neutralize harmful substances. • Maintain and monitor the Tailings Storage Facility (TSF) to prevent hazardous discharges. • Implement water recycling and optimize treatment processes to reduce effluent volume. • Regularly monitor water quality to ensure compliance with regulatory standards. • Engage with regulatory agencies and local communities to promote transparency and environmental stewardship. • The company adheres to the provisions of R.A. 9275 (Philippine Clean Water Act) and conditions set forth in the Environmental Compliance Certificate (ECC).

		Please refer to Appendix "I" – Environmental Compliance Certificate
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What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> Complaints from farmers/residents downstream of the Tailings Storage Facility (TSF). Health and livelihood impacts of downstream communities of livelihood due to water contamination. Fish kills along river systems. Water contamination leading to suspension of operations. Suspension of Environmental Compliance Certificate (ECC) and/or imposition of monetary penalties due to violation of R.A. 9275 (Philippine Clean Water Act of 2004) leading to regulatory sanctions. 	The Company; Employees; Community	<ul style="list-style-type: none"> Observe proper maintenance of the Tailings Storage Facilities and other appurtenant structures and implement mitigating measures to prevent accidental wastewater discharge/leaks. Assessment of improvement downstream - keep a database of all improvements for future reference. Strict enforcement and compliance with the provisions of environmental laws & policies and the ECC.
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> Increased employee awareness of responsibility and accountability in environmental management. Adoption and application of new technologies to treat wastewater and eliminate or reduce toxicity prior to discharge. Improved environmental performance strengthens corporate image and stakeholder trust. Reduction in water discharge volume demonstrates enhanced operational efficiency and environmental stewardship. Strengthens the Company's reputation for environmental compliance. Opportunity to further improve water recycling rates and sustainable water use. 	Employees, community residents; Mines Environmental Protection and Enhancement Officer; Pollution Control Officer.	<ul style="list-style-type: none"> Maintain and monitor pollution control facilities to ensure safe and compliant operations. Conduct regular education and awareness programs for stakeholders. Implement the Environmental Protection and Enhancement Program (EPEP) to promote responsible mining. Ensure full compliance with all environmental laws and regulations. Foster continuous improvement and a strong culture of environmental stewardship within the organization.

Environmental Compliance

Non-compliance with Environmental Laws and Regulations

Disclosure	Quantity	Units
Total amount of monetary fines for non-compliance with environmental laws and/or regulations No fines or penalty for violations committed against any provisions of environmental laws, permits and licenses that have been assessed or determined with finality during the period under report (2024).	0.00	PhP
No. of non-monetary sanctions for non-compliance with environmental laws and/or regulations	0.00	#
No. of cases resolved through dispute resolution mechanism	0.00	#

What is the impact and where does it occur? What is the organization's involvement in the impact?	Stakeholders Affected	Management Approach
<p>Benguet Corporation remains firmly committed to environmental stewardship and regulatory compliance.</p> <p>As a responsible partner of the government, BC fully adheres to all applicable mining, environmental, and social laws and regulations.</p> <p>All required reports and submissions are completed, reviewed, and approved by the relevant government agencies.</p> <p>The Company implements comprehensive environmental and social programs, maintains regular compliance monitoring, and has consistently received certificates of compliance from regulatory authorities, demonstrating its dedication to sustainable and responsible operations.</p>	<p>The Company employees, service contractors, suppliers, investors, community, local and national government, other stakeholders.</p>	<p>Benguet Corporation is committed to full compliance with all environmental laws, permits, and regulations, maintaining its role as a responsible mining company.</p> <p>Environmental safeguards are in place to manage risks, and Benguet Gold Operation upholds an Environmental Policy focused on excellence in sustainable mineral resource development.</p> <p>Continuous monitoring and engagement with regulators ensure ongoing environmental stewardship.</p>
What are the Risk/s Identified?	Stakeholders Affected	Management Approach
<p>Failure to submit compliance reports on time, or delays and non-implementation of the approved Annual Environmental Protection and Enhancement Program (AEPEP), Annual Social Development and Management Program (ASDMP), and Annual Safety and Health Program (ASHP) may result in penalties and sanctions from regulatory agencies.</p> <p>Non-compliance with environmental laws and regulations could also lead to legal liabilities and reputational damage.</p>	<p>Benguet Corporation, employees, service contractors, suppliers, investors, community, local and national government, other stakeholders</p>	<p>Benguet Corporation ensures strict adherence to reporting schedules and program implementation. Dedicated teams are tasked with monitoring compliance, promptly preparing and submitting reports, and coordinating closely with regulatory bodies. The Company also continuously strengthens its internal processes and training to maintain high standards of environmental, social, and safety performance.</p> <p>Please refer to link - http://benguetcorp.com/wp-content/uploads/2020/06/O.-BC-Internal-Audit-Charter.pdf</p> <p><i>BenguetCorp's Internal Audit Charter – Defining the Scope of Work of the Internal Audit Office (IAO) – Item II, #7-9, p.1 and Detailing Responsibility of IAO – Item V, # 4-6 p. 2 of the Charter.</i></p>
What are the Opportunity/ies Identified?	Stakeholders Affected	Management Approach
<ul style="list-style-type: none"> • Uninterrupted operations through full regulatory compliance. • Improved production via continuous mining activities. • Stronger environmental management through proactive risk mitigation. 	<p>Management, employees, mining contractors, stakeholders</p>	<ul style="list-style-type: none"> • Re-assess and monitor pollution control structures regularly. • Conduct ongoing IEC activities for stakeholders. • Implement and strengthen the Environmental Protection and Enhancement Program

<ul style="list-style-type: none"> Enhanced reputation from consistent environmental and social compliance. 	<ul style="list-style-type: none"> (EPEP). Promote full compliance with environmental laws and regulations. Foster environmental awareness and continuous operational improvement. <p>Please refer to Appendix "J"– Registry of Compliance Obligations for C.Y. 2024</p>
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SOCIAL PERFORMANCE

Employee Management Employee Hiring and Benefits Employee Data

Disclosure	Quantity (2024)			Units
	BGO/CHQ	ILP	TOTAL	
Total number of employees ⁵	294	7	301	Headcount
a. Number of female employees	63	3	66	Headcount
b. Number of male employees	231	4	234	Headcount
Attrition rate ⁶	.32	0		Percent Rate
Ratio of lowest paid employee against minimum wage (P470 lowest rate / regional min. wage of P470 (CAR) and P645 (NCR))		1:1 - about 4% higher rate than the prescribed minimum wage in the region		Ratio

Employee Benefits

List of Benefits	Y/N	% of female employees who availed for the year		% of male employees who availed for the year	
		BGO/CHQ	ILP	BGO/CHQ	ILP
SSS (premium)	Y	100%	100%	100%	100%
PhilHealth (premium)	Y	100%	100%	100%	100%
Pag-ibig (premium)	Y	100%	100%	100%	100%
Parental leaves					
Maternity	Y	8%	0	0	0
Paternity	Y	0	0	3%	0
Solo Parent	Y	1.3%	0	0	0
Vacation leaves	Y	100%	100%	100%	100%
Service Incentive Leave	Y	100%	100%	100%	100%
Sick leaves	Y	100%	100%	100%	100%
Medical benefits (aside from PhilHealth))	Y	100%	100%	100%	100%
Free Housing in camp	Y	100%	100%	100%	100%
Retirement fund (aside from SSS)	Y	1.49%	0	5.5%	0
Tuition Fee Refund	Y	14.2%	0	4.6%	0
Company stock options	Y	0	0	0	0
(Others)					
Insurance (Group life; Accident)	Y	100%	100%	100%	100%
Birthday Leave	Y	100%	100%	100%	100%
Mine workers onsite:					
Subsidized water	Y	14.2%	0	8.6%	0

⁵ Employees are individuals who are in an employment relationship with the organization, according to national law or its application (GRI Standards 2016 Glossary)

⁶ Attrition are = (no. of new hires – no. of turnover)/(average of total no. of employees of previous year and total no. of employees of current year)

Subsidized electricity	Y	4.7%	0	45.02%	0
Free meal during the shift	Y	30.1%	0	22.07%	0

What is the impact and where does it occur? What is the organization's involvement in the impact?	Management Approach
Rising inflation and labor costs pressured operations, leading to manpower rationalization despite high sales. Intense competition for skilled workers post-pandemic increased employee turnover risks. However, BC maintained an 81% local employment rate and upheld competitive benefits to support workforce stability.	<ul style="list-style-type: none"> Maintained a lean but skilled workforce through strategic hiring and rationalization. Strengthened employee retention through competitive compensation and benefits. Focused on local hiring and continuous skills development. Prioritized workforce stability as part of broader debt-free growth and diversification plans.
What are the Risk/s Identified?	Management Approach
<ul style="list-style-type: none"> Rising Operational and Labor Costs: Inflation pressures could strain profitability, requiring strict cost control and efficient workforce management. Talent Retention Challenges: Increased competition for skilled employees, with risks of poaching and attrition to higher-paying opportunities locally and abroad. Lean Workforce Pressure: Maintaining productivity with fewer employees could cause operational gaps if skills and competencies are not properly managed. Potential Talent Pipeline Gaps: Without strong succession planning, key leadership and technical roles may face future shortages. 	<ul style="list-style-type: none"> Control Costs: Maintain a lean, efficient workforce and optimize operations to manage rising expenses. Strengthen Talent Retention: Enhance employee engagement through competitive pay, career growth opportunities, and a positive work environment. Develop Internal Talent: Invest in succession planning, training, and upskilling to secure critical roles and ensure workforce adaptability. Reinforce Employer Brand: Promote BC as a stable, growing company to attract and retain skilled employees. Proactive Monitoring: Regularly track employee engagement and turnover to address risks early.
What are the Opportunity/ies Identified?	Management Approach
<ul style="list-style-type: none"> Agile and High-Performing Workforce: Streamlining operations creates the opportunity to build a more skilled, efficient, and adaptable team. Employer Branding: Strengthening employee value proposition can position BC as an employer of choice, attracting and retaining top talent. Upskilling and Career Development: Investing in training, leadership development, and internal career growth strengthens workforce loyalty and capability. Expansion of Career Opportunities: Diversification strategies can offer employees new roles and growth paths, enhancing retention and engagement. 	<ul style="list-style-type: none"> Invest in Workforce Development: Expand training programs and career pathways to build a highly skilled and loyal workforce. Enhance Employee Value Proposition: Strengthen compensation, benefits, and work-life balance initiatives to position BC as an employer of choice. Promote a Culture of Excellence: Foster innovation, collaboration, and continuous improvement through strong leadership and employee recognition. Build Talent Pipelines: Partner with educational institutions and implement succession plans to ensure a steady flow of future talent. Strengthen Safety and Operational Excellence: Integrate competency-based training and promote a strong safety culture to boost productivity and minimize risks.

Employee Training and Development

Disclosure	Quantity (2023)	Quantity (2024)	Units
Total training hours provided to employees	2,385	1,679	hours
a. Female employees	780	775	hours
b. Male employees	1,605	904	hours
Average training hours provided to employees	5.32	12.34	hours

a. Female employees	10.26	11	hours
b. Male employees	4.30	14	hours

What is the impact and where does it occur? What is the organization's involvement in the impact?	Management Approach
<p>Manpower rationalization in 2024 led to a 30% reduction in total training hours compared to 2023. However, with a leaner workforce, there was a strategic shift towards more targeted and intensive employee development. This is aimed to maintain a skilled, versatile workforce capable of adapting to operational challenges and supporting strategic objectives. Safety and environmental risks remain critical focus areas, necessitating continuous training to ensure a safe and compliant working environment.</p>	<p>Management prioritizes maintaining a competent, adaptable workforce through focused training and skills development, delivering 1,679 training hours in 2024. Average training hours per employee increased, reflecting the shift towards quality over quantity.</p> <p>Safety, Health, and Environmental (SHE) training remains a core, ongoing initiative, embedded in daily operations to cultivate a culture of safety, environmental stewardship, and risk mitigation. Training efforts are tailored to address operational needs, employee well-being, and environmental protection, ensuring alignment with the Company's broader sustainability goals.</p>
What are the Risk/s Identified?	Management Approach
<p>The loss of skilled employees and insufficiently trained personnel could lead to operational inefficiencies, increased safety incidents, project delays, and regulatory non-compliance.</p> <p>External competition for talent heightens the risk of employee turnover, while inadequate training compromises productivity, workplace safety, and adherence to standards.</p>	<p>BC Management prioritizes retaining skilled employees and ensuring continuous workforce development to safeguard operational efficiency, safety, and compliance.</p> <p>A strong succession plan for critical roles is maintained, alongside initiatives promoting an inclusive, engaging, and trust-based workplace culture.</p> <p>Leadership development, regular monitoring of turnover, and proactive employee feedback mechanisms support continuous improvement.</p> <p>These strategies collectively aim to minimize talent loss, address skill gaps, and sustain a resilient and high-performing workforce.</p>
What are the Opportunity/ies Identified?	Management Approach
<p>BC has a strong opportunity to build a highly skilled, engaged, and loyal workforce by investing in employee development, offering competitive rewards, and fostering a positive, inclusive work environment. By strengthening retention and training strategies, BC can position itself as an "Employer of Choice" in the mining sector and beyond, attracting top talent while enhancing productivity, innovation, and operational efficiency.</p> <p>A continuous focus on safety, health, and environmental (SHE) training will reinforce a robust safety culture, minimize risks, and improve regulatory compliance.</p> <p>Additionally, boosting employee morale through growth opportunities and recognition will drive engagement and collaboration.</p> <p>By developing local talent and maintaining effective succession planning, BC can ensure a sustainable talent pipeline.</p>	<p>BC Management is committed to proactively leveraging identified opportunities to strengthen its workforce and drive sustainable growth. Talent development and retention are embedded into the Company's core strategy, supported by dedicated resources for training, competitive compensation, and employee engagement initiatives.</p> <p>Competency-based training, with a strong focus on Safety, Health, and Environment (SHE) standards, underpins operational excellence. BC also prioritizes an inclusive, thriving workplace through diversity, well-being programs, and regular feedback mechanisms. Strong partnerships with educational institutions and industry groups further enhance the talent pipeline. Through these actions, BC aims to transform talent management into a key driver of success, resilience, and competitive advantage.</p>

Labor-Management Relations

Disclosure	Quantity	Units
% of employees covered with Collective Bargaining Agreements	0	%
Number of consultations conducted with employees concerning employee-related policies		%

What is the impact and where does it occur? What is the organization's involvement in the impact?	Management Approach
BC maintains a non-unionized environment, focusing on fostering harmonious relationships between management and employees. This approach directly impacts morale, productivity, and workplace stability within its primary operations. Labor-related policies are developed, reviewed, and communicated through the Policies and Procedures Committee and the HR Department, with structured mechanisms in place for addressing employee grievances.	<ul style="list-style-type: none"> BC fosters a positive, stable, and engaged workforce in a non-unionized environment through proactive management practices. Labor-related policies are developed and regularly reviewed with a focus on fairness, transparency, and employee input. Open communication is promoted via accessible grievance mechanisms and leadership training in employee relations. Competitive compensation and benefits are benchmarked to industry standards and clearly communicated. The Company upholds fair labor practices, full legal compliance, and ethical management conduct. Employee relations are monitored through turnover rates, grievance tracking, engagement surveys, and regular policy audits to ensure continuous improvement.
What are the Risk/s Identified?	Management Approach
Erring employees may seek attention from aggressive militant trade unions or organizations, which could disrupt the harmonious relationship and potentially lead to labor unrest. This risk is heightened if employees feel their concerns are not being adequately addressed through internal channels.	BC proactively fosters a positive, inclusive work environment by strengthening internal communication and grievance mechanisms. Through active listening, transparent processes, and daily leadership practices, the Company builds trust, addresses concerns early, and mitigates the risk of external disruption, ensuring a stable and engaged workforce.
What are the Opportunity/ies Identified?	Management Approach
By strengthening internal communication, grievance mechanisms, and leadership practices, BC can further enhance employee trust, engagement, and workplace stability, reducing the risk of external labor disruptions.	Management ensures that good leadership is maintained, there is competitive compensation package and established employee engagement strategies

Diversity and Equal Opportunity

Disclosure	Quantity (2023)		Units	Quantity (2024)		Units
% of female workers in the workforce	17%		%	21.9%		%
% of male workers in the workforce	83%		%	78.%		%
Number of employees from indigenous communities and/or vulnerable sector*						
	Elderly	16	#	Elderly	22	#
	Solo Parent	0	#	Solo Parent	5	#
	PWDs	2	#	PWDs	1	#
	Indigenous Peoples	198	#	Indigenous Peoples	118	#
	Approximately 90% of the site workforce are Indigenous people.		%	Approximately 40% of the site workforce are Indigenous people.		%

*Vulnerable sector includes, elderly, persons with disabilities, vulnerable women, refugees, migrants, internally displaced persons, people living with HIV and other diseases, solo parents, and the poor or the base of the pyramid (BOP, Class D and E).

Workforce Distribution by Region

Region	No. of Employees (2023)	No. of Employees (2024)
National Capital Region (NCR)	52	55
CARAGA	1	0
Region 1	116	63
Region 2	7	6
Region 3	27	39
Region 4A (CALABARZON)	13	4
Region 4B	1	0
Region 5	5	4
Region 6	1	6
Region 7	8	0
Region 8	1	0
Region 11	4	2
Cordillera Administrative Region (CAR)	212	122
Total	448	301

What is the impact and where does it occur? What is the organization's involvement in the impact?	Management Approach
<p>The Company's operations at Benguet Gold Operation (BGO) and Irisan Lime Project (ILP) have directly influenced employment levels and workforce composition in Benguet and nearby provinces. As of 2024, 81% of the workforce consisted of local residents, reflecting the Company's commitment to community employment and socio-economic development.</p> <p>Efforts to promote gender equality also increased female representation from 17% in 2023 to 21.9% in 2024. However, a manpower rationalization program initiated in early 2024, due to continued financial losses at BGO, resulted in a 30% workforce reduction, negatively impacting employment opportunities despite maintaining a high proportion of local hires.</p>	<p>BC prioritizes local hiring and upholds a non-discriminatory employment policy, prohibiting bias based on vulnerability, sex, or religious affiliation. The Company is committed to providing equal employment opportunities to qualified candidates from impact and nearby communities, achieving an 81% local employment rate as of 2024.</p> <p>Department Heads are responsible for enforcing hiring policies, while Medical and Safety teams monitor workplace conditions for persons with disabilities and underlying health concerns. Safety and HR departments jointly manage employee behavior regarding safety practices, with policy development supported by the HR department and the Policies and Procedures Committee.</p> <p>Key initiatives include local hiring preference, programs to increase female employment, succession planning with local employee inclusion, monitoring of vulnerable employees, and reinforcement of behavioral safety practices through disciplinary measures.</p>
What are the Risk/s Identified?	Management Approach
<ul style="list-style-type: none"> • Vulnerable employees (elderly, persons with disabilities, female workers) may face restrictions in hazardous areas. • Productivity may decline if a large portion of the workforce is from vulnerable groups. • Accident rates may rise if vulnerable employees are not adequately trained. 	<p>Departments identify hazardous jobs during hiring, ensuring proper PPE is provided. Succession planning for elderly managers and close monitoring by Medical and Safety teams help maintain a safe and healthy work environment for vulnerable employees. Behavioral safety is strongly emphasized, with Safety and HR teams enforcing discipline for safety violations.</p>
What are the Opportunity/ies Identified?	Management Approach
<p>1. Knowledge and Skills Transfer: Seasoned employees can transfer knowledge to younger generations, benefiting both the company and the employee (though potentially with initial costs).</p>	<p>Management maintains its approach of giving equal opportunities in the workplace and in the communities where the Company operates. The Company will continue to uphold its Hiring Policy, strengthen safety protocols, and actively promote an inclusive culture that values the contributions of all employees. Management will also explore structured</p>

2. Self-Actualization: Providing work opportunities for the vulnerable sector (PWDs and retirees) can lead to self-worth and actualization.	mentorship programs to facilitate knowledge transfer and ensure that our commitment to equal opportunities translates into tangible career advancement for all segments of our workforce.
3. Equal Competence: Women have proven to be equally capable and competent as men.	

Workplace Conditions, Labor Standards, and Human Rights
Occupational Health and Safety

Disclosure	Quantity (2024)	Quantity (2024)	Units
	BGO-CHQ	ILP	
Safe Man-Hours	2,431,040	87,449	Man-hours
No. of work-related injuries	8	0	#
No. of work-related fatalities	2	0	#
No. of work related ill-health	0	0	#
No. of safety drills:			
1. Fire Evacuation & Rescue Drill	3	1	#
2. Evacuation & Response Earthquake Drill/Nationwide Simultaneous Earthquake Drill	5	3	#
3. Chemical Spill Drill	1	0	#

What is the impact and where does it occur? What is the organization's involvement in the impact?	Management Approach
<p>During the 2024 reporting period, BGO unfortunately recorded two (2) work-related fatalities due to a cave-in and cardiac arrest, and eight (8) work-related injuries consisting of minor abrasions, wounds, and one fracture. No cases of work-related ill-health were reported at BGO. While operations at BGO continued without suspension, the Company acknowledges the significant impact of these incidents on workforce well-being and operational integrity. A thorough review and continuous improvement of safety management systems remain a key priority.</p> <p>In contrast, the ILP site, with a total of 87,449 safe man-hours, reported zero (0) work-related fatalities, injuries, or cases of work-related ill-health in 2024, indicating strong safety performance. This commitment to safety was further recognized with the SAFEST MINERAL PROCESSING-CALCINING PLANT CATEGORY 2024 award.</p> <p>To bolster emergency preparedness across operations, both BGO-CHQ and ILP conducted safety drills in 2024. BGO-CHQ carried out three drills: Fire Evacuation & Rescue (3), Earthquake Evacuation & Response (5), and a Chemical Spill Drill (1). ILP also conducted a Fire Evacuation & Rescue Drill (1) and an Earthquake Evacuation & Response Drill (3). These drills are integral to the Company's ongoing commitment to cultivating a proactive safety culture and minimizing operational risks.</p> <p>Further underscoring its commitment to safety, BGO received the 2nd Runner Up award in the Industrial Category and was Champion in the Bucket Relay at the 5th Itogon Fire Olympics. Additionally, the Company utilized 73.39% (P5,285,148.81) of its allocated ASHP (Annual Safety and Health Program) budget for CY 2024.</p>	<p>Employee safety is a core priority across all operations. We implement comprehensive safety systems, conduct regular emergency drills, and provide ongoing training to ensure hazard awareness and risk mitigation. Incident monitoring and root cause analyses drive continuous improvement. Following 2024 incidents at BGO, we are strengthening safety protocols to further enhance workplace health, resilience, and operational integrity.</p> <p>The Company recognizes that the incidents at BGO-CHQ underscore the need for enhanced safety initiatives. Accordingly, a comprehensive review of safety practices and additional corrective actions are being prioritized to uphold the highest standards of occupational health and safety across all sites.</p>

What are the Risk/s Identified?	Management Approach
<ul style="list-style-type: none"> High-Consequence Hazards: The inherent dangers of mining and milling (strenuous work, perilous conditions) create a significant risk of serious incidents, including fatalities. Persistent Injury Risk: Despite a decrease in injury numbers from 2023 to 2024, the continued occurrence of injuries indicates that hazards are not adequately controlled. Potential for Negative Impacts: Fatalities and injuries can negatively affect employee morale, productivity, legal/regulatory standing, and the company's reputation. 	<p>Mining and milling operations inherently involve high-consequence hazards and persistent injury risks. The Company is committed to minimizing these risks by maintaining a robust safety management system, focused on hazard identification, risk assessment, and the implementation of effective controls.</p> <p>Comprehensive safety training, regular emergency response drills, and strict operational protocols are enforced to ensure all employees are physically prepared and fully aware of workplace hazards. Incident data is systematically analyzed to identify trends and inform continuous improvement initiatives.</p> <p>Following the occurrence of fatalities and injuries at BGO in 2024, the Company is strengthening its safety programs through enhanced training, targeted risk mitigation measures, and more frequent safety audits. These actions aim to protect employee well-being, sustain productivity, and uphold our legal, regulatory, and social license to operate.</p> <p>The Company remains fully committed to fostering a proactive safety culture, preventing serious incidents, and safeguarding both workforce morale and organizational resilience.</p>
What are the Opportunity/ies Identified?	Management Approach
<ul style="list-style-type: none"> Replicate best practices recognized through past safety awards. Strive for industry leadership to enhance reputation and stakeholder trust. Implement competency-based training to boost engagement and retention. Strengthen emergency preparedness through ongoing ERT development. Build on ILP's national safety recognition to drive continuous improvement. (The Irian Lime Project (ILP) is awarded with SAFEST MINERAL PROCESSING-CALCINING PLANT CATEGORY in 2024 by the DENR-Mines and Geosciences Bureau and the Philippine Mine Safety and Environment Association in the pursuit of excellence in safety and health management. 	<p>The Company prioritizes strict compliance with its Occupational Health and Safety Policy, aligned with DENR DAO No. 2000-98, aiming to prevent all work-related fatalities, injuries, and illnesses. A proactive and preventive safety culture is fostered, emphasizing hazard anticipation and early intervention. Employees are empowered to take ownership of safety through active participation in hazard identification and improvement initiatives. The Company aspires to industry leadership in occupational health and safety by continuously improving practices and sharing best standards. Adequate resources are allocated to support these initiatives, the Company utilized 73.39% (P5,285,148.81) of its allocated ASHP (Annual Safety and Health Program) budget for CY 2024 for BGO.</p> <p><i>Please refer to Appendix "K" – Certificate of Approval of 2024 Safety and Health Program for BGO</i></p>

Labor Laws and Human Rights

Disclosure	Quantity	Units
No. of legal actions or employee grievances involving forced or child labor	0	# of employees

Do you have policies that explicitly disallows violations of labor laws and human rights (e.g. harassment, bullying) in the workplace?

Policy on Labor Laws and Human Rights

Topic	Y/N	If Yes, cite reference in the company policy
Forced labor	y	Policy contains provisions of RA 10364 – An Act to Institute Policies to Eliminate Trafficking in Persons specially Women and Children, Establishing the Necessary Institutional Mechanism for the Protection and Support of Trafficked Persons, Providing Penalty for Its Violation and for other Purposes...
Child labor	y	Policy contains provisions of RA 7610
Human Rights	y	Policy on Sexual Harassment – (see link- Policy on Sexual Harassment) Employees Code of Conduct – (see link http://benguetcorp.com/wpcontent/uploads/2018/05/ECD%20with%20ee%20acknowledgement.pdf)

What is the impact and where does it occur? What is the organization's involvement in the impact?	Management Approach
As a Company, Benguet Corporation does not tolerate forced or child labor and human right violations. It ensures that the Philippine law on such is strictly implemented across the organization.	As evidenced in the manpower profile, no employee in the roster is below 18 years of age. No incident of human right violation has been filed by any employee as of to date. Company Policy on Child Labor is in place. (see link http://benguetcorp.com/wp-content/uploads/2023/04/Child-Labor-Policy.pdf) No cases of child labor have been received as of this period.
What are the Risk/s Identified?	Management Approach
Contractors and suppliers may engage in forced labor or employment of minors or below 18 years of age and assign them on hazardous workplaces.	Provision in the contracts that Contractors and suppliers must comply with the Company policies and procedures applicable to them as well as with applicable Philippine laws. Stiffer penalty shall apply to those who will be in violation.
What are the Opportunity/ies Identified?	Management Approach
With the formulated policies on forced and child labor and human rights violation, Management and employees are properly guided	Employees are oriented on the Code of Discipline before start of employment and regular update is done as necessary.

Relationship with Community Significant Impacts on Local Communities

Operations with significant (positive or negative) impacts on local communities (exclude CSR projects; this has to be business operations)	<p>The Company actively fulfills its commitment to its Social Development and Management Programs (SDMP) by addressing key needs in its host and neighboring communities. Aligned with the SDMP framework outlined in DAO 2010-21 and DAO 2010-13, the company invested in the following priority areas:</p> <ol style="list-style-type: none"> 1. Human Resource and Institutional Building 2. Enterprise Development and Networking 3. Infrastructure Development and Support Services 4. Education and Educational Support Programs 5. Health Services, Facilities, and Professionals 6. Protection and Respect of Socio-cultural Values <p>For the 2024 reporting period (January-December), SDMP implementation</p>
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	achieved 82.35%, with an expenditure of PhP 3,931,464.35 out of the PhP 4,774,155.24 budget. The main factor contributing to the 17.65% variance was the late submission of project proposals by beneficiary Barangays. The remaining funds will be allocated to the 2025 SDMP initiatives.
Location	Itogon, Benguet & Baguio City
Vulnerable groups (if applicable)	IPs, women, migrant groups, elderly, youth
Does the particular operation have impacts on indigenous people (Y/N)?	Yes
Collective or individual rights that have been identified that or particular concern for the community	<p>Right to livelihood;</p> <p>Right to education;</p> <p>Right to shelter;</p> <p>Right to health;</p> <p>Water resource and Infrastructure developments;</p>
Mitigating measures (if negative) or enhancement measures (if positive)	<ol style="list-style-type: none"> 1. The Company continues to uphold and respect the rights of Indigenous Peoples (IPs) in the vicinity of its mining operations, actively contributing to poverty reduction and an improved quality of life 2. The Company actively shares the benefits of its operations with vulnerable community members to improve their quality of life. Furthermore, its mining operations and related projects generated significant employment opportunities for local communities. 3. Recognizing the development challenges in the region, the Company actively partnered with the national government on infrastructure and other key projects. This collaboration involved the proactive promotion of responsible mining practices with the DENR and support for initiatives by the DILG and DA. Despite the contributions of bilateral and multilateral projects in sectors like infrastructure, water resources, rural development, and governance, strengthening LGU capacity remained a priority. <p>The Itogon Municipality and Barangays Virac and Poblacion LGUs are significantly dependent on Internal Revenue Allotment, and limited economic growth perpetuates low-income levels.</p> <p>Notably, the approved and well-executed Social Development and Management Program (SDMP) and Environmental Protection and Enhancement Program (EPEP) from BC-BGO and ILP operations have been instrumental in addressing these limitations and strengthening the LGUs' development projects within their operational areas.</p>
<p><i>*Vulnerable sector includes children and youth, elderly, persons with disabilities, vulnerable women, refugees, migrants, internally displaced persons, people living with HIV and other diseases, solo parents, and the poor or the base of the pyramid (BOP, Class D and E)</i></p>	

What are the Risk/s Identified?	Management Approach
<p>The fact that the main reason for the 17.65% variance in SDMP implementation was the delayed or incomplete project implementation due to late submission of proposal by beneficiary Barangays highlights a risk. If this issue persists, it could lead to:</p> <ul style="list-style-type: none"> Communities may not receive the intended benefits (livelihood, infrastructure, education, health, etc.) in a timely manner, leading to dissatisfaction and erosion of trust. Delays could be perceived as a lack of commitment from the company, fostering negative sentiment and potentially leading to social unrest. Delayed projects can slow down the overall development progress in the host and neighboring communities. 	<p>It is the goal to ensure timely and efficient implementation of Social Development and Management Program (SDMP) projects by addressing the root causes of late proposal submissions from beneficiary Barangays, thereby meeting community needs, fostering trust, and supporting sustainable development.</p> <p>The following are being implemented:</p> <ol style="list-style-type: none"> 1. Collaborative Engagement: Working in close partnership with the Barangays throughout the project cycle. 2. Capacity Building: Empowering Barangays with the knowledge and resources to develop timely and quality proposals. 3. Clear Communication: Establishing transparent and consistent communication channels.
What are the Opportunity/ies Identified?	Management Approach
<p>The following may optimize the timely and effective implementation of SDMP projects through collaborative empowerment, streamlined processes, and continuous learning, thereby maximizing community benefits and strengthening stakeholder relationships:</p> <ol style="list-style-type: none"> a. Simplifying the proposal submission and review process. b. Defining clear roles and responsibilities for both the Company and the Barangays. c. Identifying potential delays early and providing necessary assistance. d. Actively engage with the Itogon Municipality and Barangays Virac and Poblacion LGUs to ensure SDMP projects are strategically aligned with their broader development objectives and contribute to local government capacity building. 	<p>The Company moves beyond simply addressing delays to proactively empowering communities, fostering collaboration and learning, to ensure that SDMP projects are not only timely but also impactful and sustainable, contributing directly to the long-term development of the host and neighboring areas.</p> <p>The Community Relations Department leads the implementation of this management approach, providing necessary resources and support, facilitating capacity building, and ensuring effective monitoring and evaluation to foster even stronger relationships with the community and ensuring a more effective and timely delivery of benefits through the SDMP.</p>

For operations that are affecting IPs, indicate the total number of Free and Prior Informed Consent (FPIC) undergoing consultations and Certification Preconditions (CPs) secured and still operational and provide a copy or link to the certificates if available:		
Certificates	Quantity	Units
FPIC –	0	#
CP secured –	0	#

What are the Risk/s Identified?	Management Approach
<p>Several of BC's upcoming projects (e.g., EXPA on mining claims, Malouf SMP, and BTP) are located in areas with Indigenous Peoples (IPs) and thus require FPIC to proceed with regulatory approvals and operations.</p> <p>The following risks are identified:</p> <ul style="list-style-type: none"> • Denial of permits due to failure to secure FPIC (Free, Prior and Informed Consent) from Indigenous Peoples (IP) communities. • Costly and time-consuming FPIC process, limited to 3 years under DENR's Use it/Lose it policy. • IP community opposition influenced by anti-mining NGOs, LGUs, and small-scale miners. • Potential project cancellation, investment loss, and regulatory delays. • Ambiguity in policies and guidelines regarding PPAs (Programs, Projects & Activities) may lead to misinterpretations, disagreement, and implementation delays. 	<ul style="list-style-type: none"> • Maintain Close Coordination with NCIP and IP Community: • Hiring an expert to develop and implement a strategic approach. • Continuous relationship-building efforts with IP communities to address concerns and reduce opposition. • Acknowledging and acting within the 3-year FPIC limit under DENR policy.
What are the Opportunity/ies Identified?	Management Approach
<ul style="list-style-type: none"> • Improved Relations: Strengthening relationships with IP communities and NCIP (National Commission on Indigenous Peoples) opens doors to better collaboration • Strategic Advisory: Engaging consultants for FPIC-related strategies helps BC proactively navigate the process. • Reputation Enhancement: Demonstrating respect for indigenous rights can improve corporate reputation and social license to operate. 	<ul style="list-style-type: none"> • Uphold IPs' rights through transparent, inclusive, and culturally sensitive consultations. • Build trust-based relationships with IP communities through ongoing dialogue, community development projects, and clear communication of project impacts and benefits. • Secure long-term community acceptance by aligning development goals with community needs and values. • Adhere strictly to FPIC protocols under Indigenous Peoples Rights Act (IPRA) and DENR guidelines.

Customer Management Customer Satisfaction

Disclosure	Score	Did a third party conduct the customer satisfaction study (Y/N)?
Customer satisfaction	100%	N
What is the impact and where does it occur? What is the organization's involvement in the impact?	Management Approach	
<p>The company has both products and services. Its gold productions are sold and purchased by the Bangko Sentral ng Pilipinas (BSP) based on the prevailing market price. The world market dictates the price of gold.</p> <p>As to the services, the company complied and extended all what is due to the communities. Their desired quantity of PPAs implemented might not have fully satisfied them but all were undertaken based on quality and resiliency standards.</p>	<p>Continued engagements with the Bangko Sentral ng Pilipinas as the buyer of our product and abide by its rules and regulations. Continued enhanced engagements with the clients/recipients of the services. Institutionalized participative approach in all stages of coming up with PPAs. For quality assurance, involved the communities from the planning stage up to implementation and monitoring.</p>	

What are the Risk/s Identified?	Management Approach
Sudden/abrupt reduction of the price of gold in the world market.	Maintained close monitoring of gold prices while constantly engaging with the BSP.
What are the Opportunity/ies Identified?	Management Approach
Selling BC's gold production to BSP directly contributed to the Philippine economy as opposed to selling the product to foreign buyers. Maintained or improved the purity of gold sold to BSP.	Continue selling gold produced to Bangko Sentral ng Pilipinas (BSP) and silver to local market. Provided better service to BSP by selling gold concentrate.

Health and Safety

Disclosure	Quantity	Units
No. of substantiated complaints on product or service health and safety*	0.00	#
No. of complaints addressed	0.00	#
*Substantiated complaints include complaints from customers that went through the organization's formal communication channels and grievance mechanisms as well as complaints that were lodged to and acted upon by government agencies.		

What is the impact and where does it occur? What is the organization's involvement in the impact?	Management Approach
Safety of employees during transport and delivery of gold to Bangko Sentral ng Pilipinas (BSP) in Baguio City.	No fixed schedule of transporting the commodity. Security alert must be imposed.
What are the Risk/s Identified?	Management Approach
There is potential possibility of hold-up and kidnap for ransom during delivery of gold to BSP in Baguio City.	Maintain confidentiality of information on gold production and details. No fixed schedule of transporting the commodity. Security alert imposed. Rotation of security escort during transport and delivery of product to Baguio City.
What are the Opportunity/ies Identified?	Management Approach
Accessibility of market – location of BSP is in Baguio City which is about 15 kms. away from the mine site.	Improve intelligence network and regular coordination with Itogon PNP.

Marketing and labelling

Disclosure	Quantity	Units
No. of substantiated complaints on marketing and labelling* No complaints received in 2024 from our only customer which is the BSP on quality of our products.	0.00	#
No. of complaints addressed. No complaints received/addressed in 2024 from our only customer which is the BSP.	0.00	#
*Substantiated complaints include complaints from customers that went through the organization's formal communication channels and grievance mechanisms as well as complaints that were lodged to and acted upon by government agencies.		

Identification of Impact	Management Approach
There was no determined impact because there are no complaints received/addressed in 2024 from BC's only customer, Bangko Sentral ng Pilipinas (BSP). Likewise, no complaint was received from ILP clients.	For the year under report, the Company did not receive any complaint from BC's customer, BSP, regarding the marketing and labeling of our gold product. Likewise, no complaint was received from ILP clients. If ever complaints arise in the future, the Company will handle/resolve the issues following the Company's policies and procedures.
What are the Risk/s Identified?	Management Approach
There were no determined risks because the Company delivers its product in accordance with the established guidelines of its sole customer, the BSP.	For the year under report, the Company did not receive any complaint from BC's sole customer, BSP, regarding the marketing and labeling of its product. Likewise, no complaint was received from ILP clients. If ever complaints arise in the future, the Company will handle/resolve the issues following the Company's policies and procedures.
What are the Opportunity/ies Identified?	Management Approach
Increased Gold sales will increase BSP's gold reserve.	Benguet Corporation will continue to maintain or improve further on gold production and purity.

Customer privacy

Disclosure	Quantity	Units
No. of substantiated complaints on customer privacy*	0.00	#
No. of complaints addressed	0.00	#
No. of customers, users, and account holders whose information is used for secondary purposes	Limited only to authorized Company engagement.	#
*Substantiated complaints include complaints from customers that went through the organization's formal communication channels and grievance mechanisms as well as complaints that were lodged to and acted upon by government agencies.		

What is the impact and where does it occur? What is the organization's involvement in the impact?	Management Approach
The gold products are sold only to Bangko Sentral ng Pilipinas. Benguet Corporation caters to a government institution as a customer. Thus, the company strives for confidentiality and accountability in all its public disclosures.	<p>Observed the Data Privacy Policy of the company formulated in accordance with the Data Privacy Act of 2012 (R.A. 10173). This assures the confidentiality of customers' information. Moreover, the Company adopted control measures to prevent the occurrence of data breach incidents.</p> <p>Proactively managed risks to ensure the protection of data privacy at the start and throughout the lifecycle of any transaction.</p> <p>Appointment of Data Privacy Officer (DPO) for Baguio Operation.</p>

What are the Risk/s Identified?	Management Approach
<p>1. Loss of trust by either party (BC or customer) due to privacy breach.</p> <p>2. Unauthorized processing which includes but not limited to collection, recording, storage, updating or modification, retrieval, consolidation, use, erasure, or destruction of information/data gathered that may result in financial injury to both the company and the customer.</p>	<p>Security of the data collected from the Bangko Sentral ng Pilipinas is undertaken by limiting access to such information after it's been gathered.</p> <p>Direct and upfront communication with the customers about the information gathered and plans for using it.</p>
What are the Opportunity/ies Identified?	Management Approach
Build stronger relationship with the customer.	Give customers an online form or email address for communicating their problems or concerns. Management undertakes to respond to these messages. Such two-way communication can help build trust and loyalty -- and help avoid potential privacy breaches.

Data Security

Disclosure	Quantity	Units
No case of data breaches, including leaks, thefts, and losses of data.	0.00	# of data breaches
There were no reported data privacy incidents, notifiable data breaches relating to cyber security, data governance, or failure in the internal controls, any substantiated complaints concerning breaches of customer privacy and losses of customer data for the reporting period.		

What is the impact and where does it occur? What is the organization's involvement in the impact?	Management Approach
<p>Benguet Corp has a Data Privacy Policy in place being rolled out to all employees. The penalty for the violation of privacy rights resulting in data breaches are also incorporated in the Employee's Code of Conduct, thus it raises the security and privacy awareness further in the organizational culture.</p> <p>The Company implemented and continuously improved its internal control to minimize the risk of data breaches.</p>	<p>To establish and further reinforce the knowledge about security and data protection, the Data Privacy Policy forms part of the onboarding process of newly hired employees.</p> <p>Moreover, the Company adopts control measures to prevent the occurrence of data breach incidents.</p> <p>BC management also ensures that our stakeholders and those we do business or partner with, including third-party providers, follow the law on data privacy. This year the Company has obtained the seal of registration issued by the NPC as proof of compliance.</p>
What are the Risk/s Identified?	Management Approach
The accelerating cyber-attack and continuous changing threat landscape.	<p>We are using several frameworks to improve our concept of layered security and defense i.e. Microsoft Defender, Microsoft 365 security, anti-malware and similar security frameworks. We continuously follow security alerts and related information from our IT environment to be able to respond timely to any incident.</p> <p>The Company is compliant with the Data Privacy Law of 2016.</p> <p>Please refer to link on Data Privacy Policy http://benquetcorp.com/wp-content/uploads/2018/05P7-Data-Privacy-Policy.pdf</p>

What are the Opportunity/ies Identified?	Management Approach
<p>More opportunities in the field of training to keep abreast of new regulations and compliance management.</p> <p>Opportunity to be certified on ISO 27001:2013.</p>	<p>To ensure that all applicable NPC regulations are followed, our team continuously monitor NPC circulars like the new registration platform that pursues automation of registration process of personal data processing system, notification regarding automated decision-making or profiling, designation of Data Protection Officer.</p> <p>To obtain certification on ISO 27001:2013- Information and Data Security to develop the capabilities of employees engaged with data protection.</p>

UN SUSTAINABLE DEVELOPMENT GOALS

Product or Service Contribution to UN SDGs

Key products and services and its contribution to sustainable development.





SDG No. & Goal	Key Products / Services	Societal Value / Contribution	Potential Negative Impact	Management Approach to Negative Impact
SDG 1: No Poverty	Gold & Silver Production (BGO)	Contributes to national economy, BSP gold reserves, employment, taxes, and local commerce	Land degradation due to small-scale miners; IP migrant influx; illegal squatting	Partner with LGU, MGB, DENR for regulation; enforce camp rules; reduce environmental footprint
SDG 2: Zero Hunger	Gold & Lime Products	Social Development and Management Program (SDMP); Implements livelihood programs, infrastructure development, and food security initiatives; Supports agricultural sustainability and local productivity; Empowers communities through training and capacity building	Potential conflict or resource competition due to program reach	Sustained community-based development project implementation; Engage local communities during planning; Promote transparency and equal access to resources
SDG 3: Good Health and Well-being	Medical missions; Medical services to employees and IP communities	Promotes health and safety among workers and local IP residents; Delivers essential medical services to workers and local IPs; Improves health outcomes in isolated and underserved communities	Poor sanitation; improper PPE disposal	Exposure to hazardous materials; Conduct regular IEC campaigns; Implement robust solid waste and hazardous waste management compliant with RA 9003 and RA 9275; Provide PPE and safety training to workers
SDG 4: Quality Education	Educational scholarships and IT equipment donation	Offers scholarships to indigent but deserving students; Enhances educational access and digital learning capacity in rural areas	Rivalries/envy from neighboring communities; Community tension from perceived favoritism or exclusion	Use objective, community-endorsed criteria for scholarship selection; Promote transparency and community consultation ; Candidate vetting by local officials;


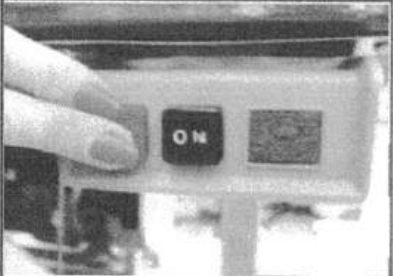

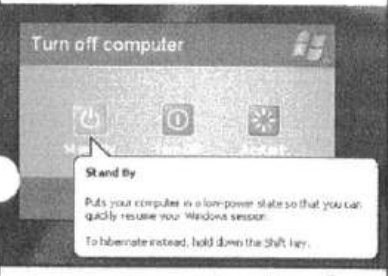
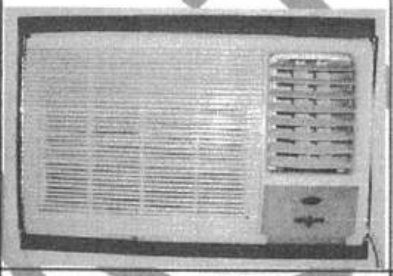


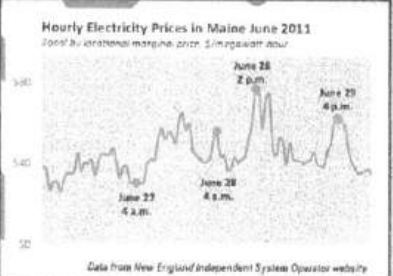

SDG 6: Clean Water and Sanitation	Gold Processing / TSF operations and wastewater treatment	Equitable water access, solid waste segregation, pollution control; Ensures water quality in adjacent river systems; Prevents contamination through strict TSF operation protocol; Promotes community hygiene and water conservation	Tailings leakage, water contamination; Improper ecological solid waste management	Maintain and monitor TSF regularly, stop mill operation if leakage occurs, ISO 14001 compliance; Implement ISO 14001- aligned environmental protocols; Educate communities on waste disposal and sanitation practices
SDG 8: Decent Work & Economic Growth	All Mining & Support Operations	Livelihood generation, employment opportunities, wealth sharing with vulnerable sectors; Provides income-generating opportunities to local residents; Uplifts local economy through procurement and service contracts; Encourages inclusive economic participation	Limited job reach may exclude marginalized sectors; Fluctuations in demand may affect employment stability	Prioritize locals for jobs and contracts; Promote inclusive hiring policies and skill development
SDG 12: Responsible Consumption & Production	Procurement and supply chain management	Practices responsible sourcing and supplier partnerships; Ensures quality and timeliness of critical operational supplies; Encourages sustainable practices in logistics; Support to local suppliers	Substandard or delayed supply delivery; High costs of imported materials; Unstable supply chain affecting productivity	Vet suppliers with risk- based assessment; Require ISO certification and compliance; Develop long-term procurement forecasting and planning; Support capacity-building of local suppliers
SDG 13: Climate Action	Reforestation, Pollution Controls	Maintains reforested areas; Actively sequesters CO2 through tree planting; Minimizes air pollution with scrubbers and emission monitoring	Deforestation, air pollution, landslides, forest fires, underground water depletion	Continue preventive maintenance of equipment; Implement firebreaks and reforestation measures; Collaborate with local communities in disaster preparedness; Engage third-party air quality monitoring firms
SDG 15: Life on Land	Forest Park, Tree Planting and biodiversity programs	Preserves biodiversity through Crosby Forest Park; Promotes ecological tourism and awareness; Maintains reforestation efforts with tree density goals ,	Land encroachment or unsanctioned land use; Loss of tree cover if neglected	Conduct regular forest inspections; Involve employee families in environmental stewardship; Sustain enrichment planting programs
SDG 16: Peace, Justice, and Strong Institutions	Security Operations and enforcement	Maintains peace and order within operational areas; prevents illegal mining & squatting	Disruption from illegal small-scale mining; Social instability from migrant influx	Partner with law enforcement and barangay units; Enforce rules fairly and transparently

SDG 17: Partnerships for the Goals	Employment and engagement with IP co-ops, contractors	Employment of workforce including IPs; Strengthens cooperation with MGB and other government agencies; Builds inclusive local economies thru business for suppliers and co-ops	Legal, financial, and reputational risks from non-compliance; Risk of conflict with unregulated small-scale mining	Maintain ISO 14001:2015 Certification; Align operations with DAO 2015-07; Continue partnerships that support responsible and inclusive development
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LIST OF APPENDICES:

APPENDIX NO.	TITLE
A	Environmental Management System Document No. EMSG-06 (Guidelines on Power Consumption)
B	Certificate of Approval of Annual Environmental Protection and Enhancement Program (AEPEP) given to Benguet Corporation-Acupan Contract Mining Project (ACMP)
B-1	Certificate of Approval of Annual Environmental Protection and Enhancement Program (AEPEP) given to BMC Forestry Corporation-Irisan Lime Project (ILP)
C	DRCS-09 (Summary of Risk and Opportunities)
D	Environmental Management System Document No. EMSG-03 (Guidelines on Diesel, Oil and Grease Handling, Transport and Storage)
E	Environmental Management System Document No. EMSG-12 (Guidelines on Contaminated Water)
F	Report of Greentek Environmental Engineering Services on Source Emission Test Result (BC-ACMP)
F-1	Report of BSI on Source Emission Test Result (BFC-ILP)
F-2	Report of BSI on Source Emission Test Result (BFC-ILP)
G	Ambient Air Quality and Noise Monitoring Report of Greentek Environmental Engineering Services (BC-ACMP)
G-1	Ambient Air Quality and Noise Monitoring Report of Greentek Environmental Engineering Services (BC-ACMP)
G-2	Ambient Air Quality and Noise Monitoring Report of BSI (BFC-ILP)
H	Environmental Management System Document No. EMSG-07-A (Guidelines on Hazardous Waste Management – Used Oil, Oil and Grease, and Contaminated Items)
I	Environmental Compliance Certificate (BC-ACMP)
I-1	Environmental Compliance Certificate (BFC-ILP)
J	Registry of Compliance Obligations
K	Certificate of Approval of Amended 2024 Safety and Health Program (BC-ACMP)
K-1	Certificate of Approval of 2024 Safety and Health Program (BFC-ILP)
L	Certificate of Approval of Annual Social Development and Management Program (ASDMP) of BC-ACMP
L-1	Certificate of Approval of Annual Social Development and Management Program (ASDMP) of BFC-ILP

Document Title	EMS GUIDELINES			Appendix A	 Benguet Corp
Process	Power Conservation				
Document Code	DRCS-12-06_EMSG_PC	Revision No.	01	Effective Date	Jan. 1, 2023
Department	Electrical, All Departments			Page Number	Page 1 of 1
Prepared by:	 GP AYSON		Reviewed by:	 BGO EMS	
			Approved by:	 VB BONGALOS JR.	

INDOORS/OFFICE	Use natural light whenever possible	INDOORS/OFFICE	Turn off lights, machinery, computers, & appliances whenever possible	INDOORS/OFFICE	Unplug electrical appliances and chargers when they are not in use
					
	Avoid leaving computers on standby when leaving the office for the day		Use air-conditioning only when necessary		Shutdown all computers at break, when leaving the office for the day
INDOORS/OFFICE		INDOORS/OFFICE		INDOORS/OFFICE	
	Turn off computer				
	Stand By Puts your computer in a low-power state so that you can quickly resume your Windows session. To hibernate instead, hold down the Shift key.				
INDUSTRIAL AREA	Make sure to turn off outside/outpost lamps first thing in the morning	INDUSTRIAL AREA	Operating big tanks on hours with lower power rates	INDUSTRIAL AREA	Proper maintenance of equipment to maximize power efficiency
					
			Hourly Electricity Prices in Maine June 2011 Data from New England Independent System Operator website		

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Republic of the Philippines

Department of Environment and Natural Resources

MINES AND GEOSCIENCES BUREAU

Cordillera Administrative Region

80 Diego Silang St., Baguio City 2600

Tel. No. 63 74 442 6392; Fax No. 63 74 304 2596; Website: www.car.mgb.gov.ph

E-mail: car@mgb.gov.ph; car_mgb@yahoo.com; mgb.cordillera@gmail.com

Appendix B

**ANNUAL ENVIRONMENTAL PROTECTION AND ENHANCEMENT
PROGRAM (AEPEP)**

CERTIFICATE OF APPROVAL

No. 2024-02-CAR

**BENGUET CORPORATION-ACUPAN CONTRACT MINING PROJECT
PC-ACMP-002-CAR**

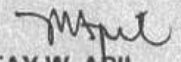
The Mines and Geosciences Bureau - Cordillera Administrative Region (MGB-CAR) as Chair of the Mine Rehabilitation Fund Committee for Benguet Corporation-Acupan Contract Mining Project (MRFC-ACMP) that evaluated and approved the company's 2024 Annual Environmental Protection and Enhancement Program (AEPEP), hereby grants this Certificate of Approval of said AEPEP to **BENGUET CORPORATION-ACUPAN CONTRACT MINING PROJECT (BC-ACMP)** for its Patented Mining Claims-ACMP-002-CAR located at Barangay Virac, Itogon, Benguet after complying substantially with the requirements as mandated under DENR Administrative Order No. 2010-21.

This Certificate is being issued subject to the pertinent provisions of the above-mentioned DAO and to the following conditions:

1. This Certificate is valid only for the Programs/Projects/Activities (P/P/As) stipulated in the submitted 2024 AEPEP with a total budget of **PhP 18,117,248.00** reviewed and approved by the MRFC-BCACMP;
2. The Company shall submit a *quarterly accomplishment report within 30 calendar days after the end of each quarter and annual accomplishment report within 30 calendar days after the end of each calendar year* to MGB-CAR; and
3. Additional conditions may be imposed to implement the approved AEPEP effectively and efficiently should the results of monitoring by the Multipartite Monitoring Team (MMT) for BC-ACMP warrant them.

Non-compliance with the above conditions shall be sufficient ground for the cancellation, revocation or termination of this Certificate or suffer the penalty prescribed in the Penal Provisions of Republic Act No. 7942, the Philippine Mining Act of 1995.

Given this 14th day of December 2023 at MGB-CAR, Baguio City, Philippines.


FAY W. APIL
Regional Director



**"MINING SHALL BE PRO-PEOPLE AND PRO-ENVIRONMENT
IN SUSTAINING WEALTH CREATION AND IMPROVED QUALITY OF LIFE."**

Office of the Regional Director/Finance and Administrative Division – 63 74 442 6392; ICT – 63 74 661 7685; Geosciences Division/Laboratory Section 63 74 304 2500; Mine Management Division - 63 74 304 3068 (Monitoring and Technical Services Section/Mining Tenement Evaluation/Mineral Lands Survey Section); Mine Safety Environment and Social Development Section – 63 74 304 2595; Social Development Section/Environment Section 63 74 304 2530



Republic of the Philippines
 Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
 Cordillera Administrative Region
 80 Diego Silang St., Baguio City 2600
 Tel. No. 63 74 442 6392; Fax No. 63 74 304 2596; Website: www.car.mgb.gov.ph
 E-mail: car@mgb.gov.ph; car_mgb@yahoo.com; mgb.cordillera@gmail.com

ANNUAL ENVIRONMENTAL PROTECTION AND ENHANCEMENT PROGRAM (AEPEP)

CERTIFICATE OF APPROVAL No. 2024-04-CAR

BMC FORESTRY CORPORATION Mineral Processing Permit No. 01C-2022-CAR

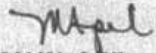
The Mines and Geosciences Bureau - Cordillera Administrative Region (MGB-CAR) as Chair of the Mine Rehabilitation Fund Committee for BMC Forestry Corporation-Irisan Lime Project (MRFC BFC-ILP) that evaluated and approved the company's 2024 Annual Environmental Protection and Enhancement Program (AEPEP), hereby grants this Certificate of Approval of said AEPEP to **BMC FORESTRY CORPORATION-IRISAN LIME PROJECT (BFC-ILP)** for its Mineral Processing Project located at Barangay Irisan, Baguio City under its Mineral Processing Permit No. 01C-2022-CAR, after complying substantially with the requirements as mandated under DENR Administrative Order (DAO) No. 2010-21.

This Certificate is being issued subject to the pertinent provisions of the above-mentioned DAO and to the following conditions:

1. This Certificate is valid only for the Programs/Projects/Activities (P/P/As) stipulated in the submitted 2024 AEPEP with a total budget of PhP 2,182,693.00 reviewed and approved by the MRFC BFC-ILP;
2. The Company shall submit a quarterly accomplishment report within 30 calendar days after the end of each quarter and annual accomplishment report within 30 calendar days after the end of each calendar year to MGB-CAR; and
3. Additional conditions may be imposed to implement the approved AEPEP effectively and efficiently should the results of monitoring by the Multipartite Monitoring Team (MMT) for BFC-ILP warrant them.

Non-compliance with the above conditions shall be sufficient ground for the cancellation, revocation or termination of this Certificate or suffer the penalty prescribed in the Penal Provisions of Republic Act No. 7942, the Philippine Mining Act of 1995.

Given this 18th day of December 2023 at MGB-CAR, Baguio City, Philippines.



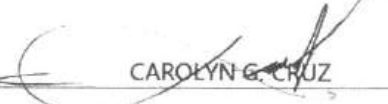

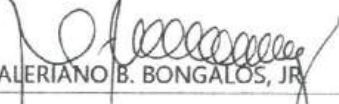

FAY W. APIL
 Regional Director



**"MINING SHALL BE PRO-PEOPLE AND PRO-ENVIRONMENT
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Office of the Regional Director/Finance and Administrative Division - 63 74 442 6392; ICT - 63 74 661 7685; Geosciences Division/Laboratory Section 63 74 304 2500; Mine Management Division - 63 74 304 3068 (Monitoring and Technical Services Section/Mining Tenement Evaluation/Mineral Lands Survey Section); Mine Safety Environment and Social Development Section - 63 74 304 2595; Social Development Section/Environment Section 63 74 304 2530


Appendix C

 BenguetCorp	Document Title	SUMMARY OF RISKS			
	Document Code	DRCS-09_EMS_SR			
	Revision	09	Effective Date	March 9, 2024	
Prepared By:	Reviewed by:		Approved by:		
 CAROLYN G. CRUZ	 BGO EMS		 VALERIANO B. BONGALOS, JR.		

DEPARTMENT	PROCESS	RISK IDENTIFICATION				RISK ASSESSMENT
		RISK CATEGORY	DESCRIPTION	CAUSE	CONSEQUENCE	RISK RATING
Claims	Demolition of structures	Security and Safety	Safety being compromised while performing the said activity.	Hostile environment	Physical safety and attending legal issues	Moderate
ComRel	Implementation, monitoring and validation of approved SDMP Projects, Programs and Activities of host and neighboring Barangays	Operational	Failure to comply with SDMP Programs	LGU's late submission of SDMP Project proposals and approval of budget	May compromise company operations and lead to penalties, and cancellation of permits and/or ECCs	High
Construction	Infrastructure construction	Financial	Failure in implementing the project	No materials to be used	The project will be waiting	Moderate
Finance	Bookkeeping (making entries on various company transactions to come up with financial reports required by management and	Technical & Architectural / Operational/ Technology	Possible loss of data stored in cloud technology	Emergency and/or unscheduled power interruptions will disrupt the operations of our computerized accounting system; and cyber-attack and/or	No access to own computerized accounting system.	High





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 BenguetCorp	Document Title	SUMMARY OF RISKS			
	Document Code	DRCS-09_EMS_SR			
	Revision	09	Effective Date	March 9, 2024	

DEPARTMENT	PROCESS	RISK IDENTIFICATION				RISK ASSESSMENT
		RISK CATEGORY	DESCRIPTION	CAUSE	CONSEQUENCE	RISK RATING
	external users)			password theft (program hacking)		
GeoEx	Geologic Interpretation and Resource Estimation	Operational	Erroneous resource estimation	Inadequate training	If interpretation of geologic data is incorrect, there is a risk of mining unprofitable areas	Moderate
MEPEO	Implementation of environmental programs	Regulatory	Failure to implement the established environmental programs	Delayed approval of funds	Issuance of Notice of Violation (NOV) from the regulatory agencies, and eventual issuance of Cease-and-Desist Order (CDO)	Moderate
				Natural disasters & Pandemic	Imposition of penalties	
				Community resistance		
Procurement	Processing procurement documents, licenses, and permits	Operational	Lengthy process/method or system	inconsistencies of required documents/attachments	delayed approval of the required certificate, license and/or permit of explosives to operate.	Moderate
				change/revise authorize signatory		





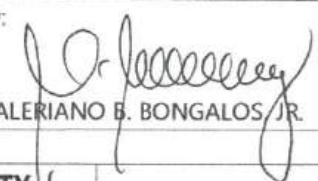


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 BenguetCorp	Document Title	SUMMARY OF RISKS			
	Document Code	DRCS-09_EMS_SR			
	Revision	09	Effective Date	March 9, 2024	

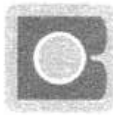


DEPARTMENT	PROCESS	RISK IDENTIFICATION				RISK ASSESSMENT
		RISK CATEGORY	DESCRIPTION	CAUSE	CONSEQUENCE	RISK RATING
Safety	Underground and Surface Inspection	Operational	Failure to conduct full safety underground and surface inspection	Lack of manpower	Higher incident rate	Moderate
	Implementation of Safety Policy	Operational	Failure to implement the Company's Safety Policy	Inappropriate standard PPEs	Higher incident rate	
Special Project	Underdrain Tunnel/Penstock Failure; Piping	Safety and Risk	Structural failure of the stopper boards leading to piping	Structural Failure	Downstream Community being submerged through tailings	Moderate
		Regulatory	Work Stoppage	Non-compliant	Penalties and cease of operations	


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 BenguetCorp	Document Title	SUMMARY OF OPPORTUNITIES			
	Document Code	DRCS-10_EMS_SO			
	Revision	07	Effective Date	March 9, 2024	
Prepared By:  JS REY		Reviewed by:  BGO EMS		Approved by:  VALERIANO B. BONGALOS, JR.	




NO.	DEPARTMENT	PROCESS	DESCRIPTION OF OPPORTUNITY	OPPORTUNITY RATING	ACTION
1	Assay	Assaying	Rendering Assaying services from external sources	Excellent	Opportunity shall be pursued immediately
2	ComRel	Development of SDMP Projects, Programs and Activities of host and neighboring Barangays	The company can create better partnership with the community in implementing environmental programs.	Excellent	Opportunity shall be pursued immediately
		Implementation, monitoring and validation of approved SDMP Projects, Programs and Activities of host and neighboring Barangays	Environmental awareness could be raised through community projects and programs.	Excellent	Opportunity shall be pursued immediately
		Administrative works	Cost saving measures from efficient use of energy, paper and other resource	Excellent	Opportunity shall be pursued immediately
3	Construction & Civil Works	Planning of proposed projects, drafts, and evaluation of project cost for construction/ repair/ rehabilitation projects.		Excellent	Opportunity shall be pursued immediately
4	Electrical	Energy Monitoring	Everyone will be energy conserving conscious and should participate in earth hour	Excellent	Opportunity shall be pursued immediately

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 BenguetCorp	Document Title	SUMMARY OF OPPORTUNITIES			 nqa ISO 14001 ENVIRONMENTAL MANAGEMENT  UKAS ISO 14001 ENVIRONMENTAL MANAGEMENT
	Document Code	DRCS-10_EMS_50			
	Revision	07	Effective Date	March 9, 2024	


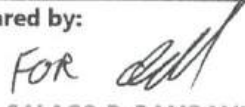

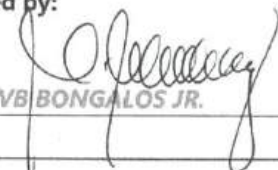
NO.	DEPARTMENT	PROCESS	DESCRIPTION OF OPPORTUNITY	OPPORTUNITY RATING	ACTION
5	GeoEx	Mapping	Extend assistance such as geo-hazard mapping to other private and government entities	Excellent	Opportunity shall be pursued immediately
6	Met Lab	Metallurgical Tests	Optimization of plant operating parameters will result to higher gold production with the least operating cost (reagent and power consumption).	Excellent	Opportunity shall be pursued immediately
7	Mill	Carbon-in-Leach	Usage of other leaching reagents that are environmentally friendly and will produce higher gold recovery.	Excellent	Opportunity shall be pursued immediately
8	Mill Mechanical	Enhancement of the filtering of used hydraulic oil 68 for PMS lubrications.	Design a filtering device to be used for the filtering process of hydraulic oil 68.	Excellent	Opportunity shall be pursued immediately
9	Mines	Drilling and blasting	Worn out drill steel can be recycled and fabricated to pinch bars and claw bars	Excellent	Opportunity shall be pursued immediately
		Maintenance of track rails and cleaning at haulage roadways and drainage canal.	Worn out track rails can be used as ground support in underground	Excellent	Opportunity shall be pursued immediately
10	Safety	Emergency response	The company's Emergency Response Team (ERT) acts as volunteers during rescue operations within and nearby communities	Excellent	Opportunity shall be pursued immediately

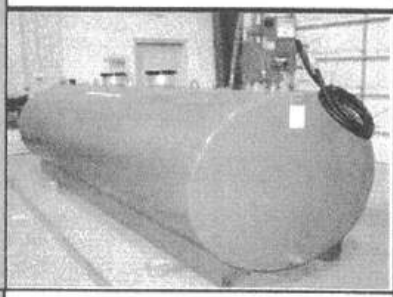

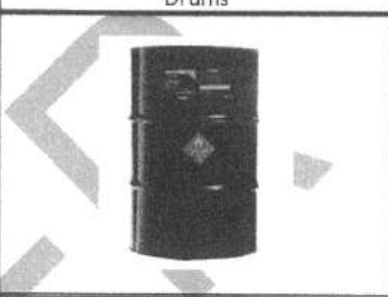
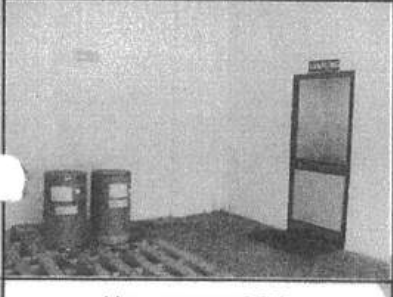

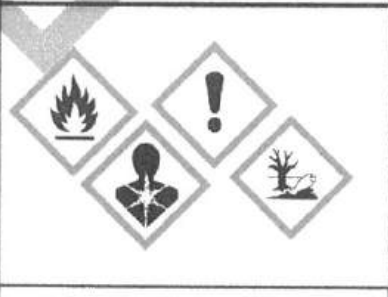

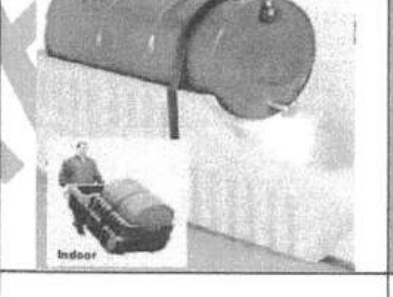
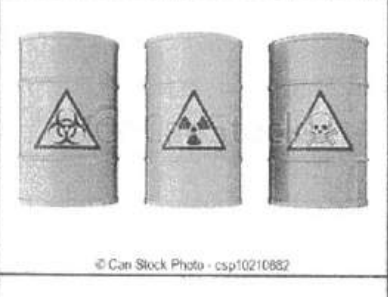
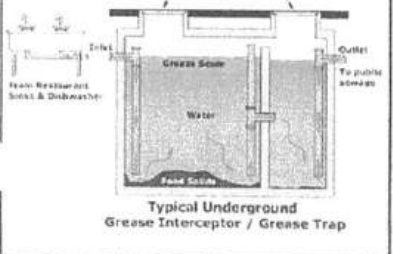



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 BenquetCorp	Document Title	SUMMARY OF OPPORTUNITIES			 ISO 14001 ENVIRONMENTAL MANAGEMENT	 UKAS MANAGEMENT SYSTEMS
	Document Code	DRCS-10_EMS_SO				
	Revision	07	Effective Date	March 9, 2024		

NO.	DEPARTMENT	PROCESS	DESCRIPTION OF OPPORTUNITY	OPPORTUNITY RATING	ACTION
11	Security	Administrative work	Cost saving measures from efficient use of energy, paper and other resources	Excellent	Opportunity shall be pursued immediately
12	Warehouse	Distribution of Inventory lists, Notice of Arrivals, & other documents to concerned department heads & end users (e-mailed instead of duplicating/xeroxing)	Cost saving measures from efficient use of energy, paper & other resources	Excellent	Opportunity shall be pursued immediately




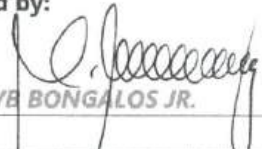

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Document Title	EMS GUIDELINES			 BenguetCorp	
Process	Diesel – Handling, Transport and Storage				
Document Code	DRCS-12-03_MSG_HTSD	Revision No.	01	Effective Date	Jan. 1, 2023
Department	Motorpool, Mine Mechanical, Mill Mechanical			Page Number	Page 1 of 2
Prepared by:	Reviewed by:			Approved by:	
FOR  SALACO B. PAMPANICO			 BGO EMS		
			 VB BONGALOS JR.		

STORAGE	Long Term Storage: Steel Tanks	STORAGE	Short Term/Transport: Plastic Car Buoys	STORAGE	Short Term/Transport: Plastic/Steel Drums
					
STORAGE	Storage 6-12 months at an ambient temp higher than	STORAGE	Required secondary container	STORAGE	Proper GHS label on the containers
					
HANDLING	Use proper PPE	HANDLING	Secondary catchment when refilling/transferring container	HANDLING	Oil-soaked materials are disposed separately
					
OIL RECOVERY	Oil-Water Separator	EMERGENCY	MSDS available	EMERGENCY	Spill Kit Nearby
					



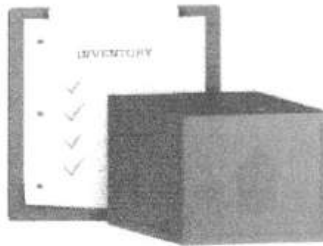
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Document Title	EMS GUIDELINES			 BenguetCorp	
Process	Diesel – Handling, Transport and Storage				
Document Code	DRCS-12-03_MSG_HTSD	Revision No.	01	Effective Date	Jan. 1, 2023
Department	Motorpool, Mine Mechanical, Mill Mechanical			Page Number	Page 2 of 2
Prepared by:	FOR  SALACO B. PAMPANICO			Reviewed by:	 BGO/EMS
			Approved by:  VB BONGALOS JR.		

Use of Oil-Settling Tanks



Monitoring and recording of consumption



Only authorized personnel are allowed to refuel diesel containers

REFUELING



Designated underground refueling stations will be assigned



Use mine cars when transporting diesel underground



All vehicles are required to bring spill kit for emergency spills on site

EMERGENCY


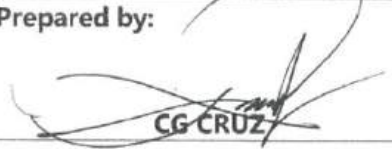






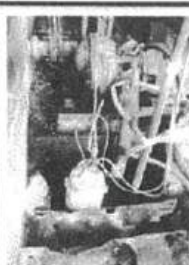


Spill Kit: contains SAND, hand shovel, small dustpan, rags, plastic bag (labeled "Toxic Waste"). After soaking the spill using sand, collect the contaminated sand into a labeled plastic bag. Dispose accordingly




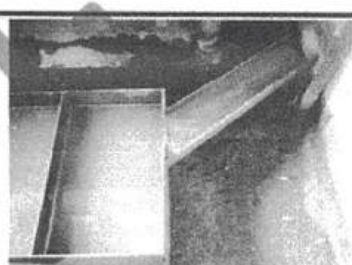
EMERGENCY










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Document Title	EMS GUIDELINES			Appendix E	
Process	Contaminated Water				
Document Code	DRCS-12-12_EMSG_CW	Revision No.	01	Effective Date	Jan. 1, 2023
Department	Mill, Mine, Mill and Mine Mechanical, Motor Pool, Envi			Page Number	Page 1 of 2
Prepared by:	Reviewed by:		Approved by:		
 CG CRUZ	 BGO EMS		 VB BONGALOS JR.		

MINES	Built underground drainage systems and canals to drain run-off water. These canals are drained by pump station near the portal, where a settling dam is installed before being discharged in the river. Some water are pumped to the mill (recycled)
	    


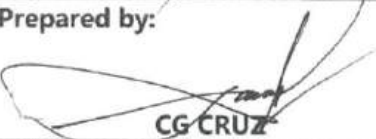

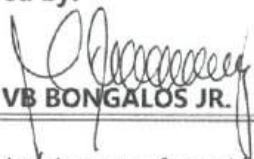
MOTORPOOL	Oil-water separator built in motor pool workshop/garage that "de-contaminates" used water. Collected used oil from separator is stored in a hazard waste container to be disposed appropriately
	   


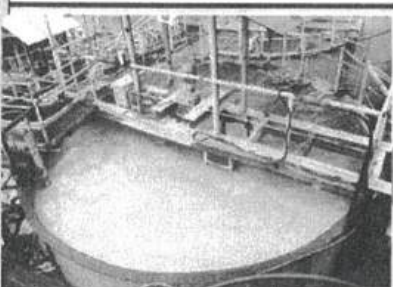


MINE MECHANICAL	Oil-water separator built in mechanical workshop that "de-contaminates" used water. Collected used oil from separator is stored in a hazard waste container to be disposed appropriately
	   

MILL	All discharge (pulp, tails, contaminated water) from the mill (from crushing, grinding to refining and smelting) goes into the Tails Treatment Facility. The solution is treated with SMBS before being pumped to Tails Storage Facility
	  



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Document Title	EMS GUIDELINES			 BenguetCorp	
Process	Contaminated Water				
Document Code	DRCS-12-12_EMSG_CW	Revision No.	01	Effective Date	Jan. 1, 2023
Department	Mill, Mine, Mill and Mine Mechanical, Motor Pool, Envi			Page Number	Page 2 of 2
Prepared by:		Reviewed by:		Approved by:	
 CG CRUZ		 BGO EMS		 VB BONGALOS JR.	

MONITORING	Effluent Monitoring	MONITORING	Monitor tanks to avoid overflow	MAINTENANCE	Regular cleanup of canal/drain
					
MAINTENANCE	Regular check of discharge valves pipes and connections				
					



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SOURCE EMISSION TEST REPORT

PARTICULATE MATTER (PM)

One (1) unit 46.58 m³/min Krypton Dust Collection Facility System

**PARTICULATE MATTER (PM), SULFUR OXIDES (SO_x),
NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO)**

One (1) unit 5,013CFM Verantis Acid Fume Scrubber

Reference No.: GEPC-SST-2406-040

Prepared for:

**BENGUET CORPORATION
ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet**

Sampling Date: June 28 and 29, 2024

Report Date: July 23, 2024

REPORT CERTIFICATION

**BENGUET CORPORATION
ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet**


SOURCE EMISSION TEST REPORT Reference No. GEPC-SST-2406-040

**One (1) unit 46.58 m³/min Krypton Dust Collection Facility System
One (1) unit 5,013CFM Verantis Acid Fume Scrubber**

The sampling performed for this report was carried out under my direction and supervision. The analytical results that were performed by subcontracted, recognized laboratories have been verified and found to be in order.

Thus, I hereby certify, to the best of my knowledge, that this test report is authentic and accurate.

Prepared and Signed By:


ANGELO V. GUEVARRA
QAQC MANAGER
SAT No. 2023-152

Date Signed: July 23, 2024

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B	Field Data Sheets
C	Process Data
D	Analytical Data
E	Equipment and Calibrations Records
F	Test Participants
G	Source Specific Test Plan and Facility Permit

SECTION 1.0

INTRODUCTION

Benguet Corporation - Acupan Contract Mining Project contracted **Greentek Environmental Phils. Co.** to conduct stationary stack emission test on one (1) unit 46.58 m³/min Krypton Dust Collection Facility System and One (1) unit 5,013CFM Verantis Acid Fume Scrubber in their facility located at Balatoc, Virac, Itogon, Benguet. The emission testing involved three runs to measure particulate matter (PM) for the Dust Collection Facility System, while for the Acid Fume Scrubber, it included three runs to measure particulate matter (PM), sulfur oxides (SO_x), nitrogen oxides (NO_x), and carbon monoxide (CO) emissions. The said activity is part of their environmental program and in determination of the facility's compliance as compared to emission limits defined in the Philippine Clean Air Act of 1999 (PCAA) and Implementing Rules and Regulations (IRR). A list of participants in the project is included in Appendix F.

A summary and discussion of the test results are provided in Section 2. The source description, test procedures, and quality assurance activities are described in the subsequent sections. All supporting field data, analytical reports, calibration records, testing participants, test plans, and a copy of the facility permit are provided in the appendices.

SECTION 2.0

SUMMARY OF DISCUSSION

Tables 2-1 and Table 2-2 present the summary of the test results for the sources tested in comparison to the National Emission Standards identified in IRR Part VII Rule XXV Table 2. Detailed descriptions of the specific run information and the example calculations used to calculate the tabular summary are attached in Appendix A. The raw field data used to prepare the run summary information in Appendix A is included in Appendix B. Emissions have been corrected to the standard conditions of 250°C and 760 mmHg on a dry basis (unless otherwise indicated).

The Greentek monitoring logsheets, filled out by the facility's representative, show that the One (1) unit 46.58 m³/min Krypton Dust Collection Facility System was installed in September 2018 while, the One (1) unit 5,013CFM Verantis Acid Fume Scrubber was installed on 2018, when the Philippine Clean Air Act (PCAA) and Implementing of Rules and Regulations (IRR) were already being implemented. The applicable standards under the PCAA/IRR categorize Dust Collector and Acid Fume Scrubber as *new sources: other stationary source* located in an industrial area under the PCAA/IRR standards.

The results of the testing indicate that the average PM concentrations for the Dust Collector Facility System are within the applicable IRR standards. Similarly, the average PM, SO_x, NO_x, and CO concentrations for the Acid Fume Scrubber are within the applicable IRR standards. Particulate matter (PM), sulfur oxides (SO_x), and nitrogen oxides (NO_x) samples were submitted to Ostrea Mineral Laboratories, Inc., while carbon monoxide (CO) samples were submitted to Greentech Laboratory and Allied Services, Inc. An attachment of the laboratory results is included in Appendix D of this report.

A description of any method deviations and quality assurance assessments is included in Sections 4 and 5 of this report. Based on a review of the sampling data, facility operating information, test method description, and quality assurance results, the average of the three test runs is judged to be representative of the source and suitable for comparison to the regulatory limits.

TABLE 2-1

SUMMARY OF TEST RESULTS
46.68 m3/min Krypton Dust Collection Facility System
N 16°21'34" E 120°39'31"
BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet

Run Number	RUN 1	RUN 2	RUN 3		CAA
Sampling Date	28-Jun-24	28-Jun-24	28-Jun-24	Average	Limit
Sampling Time	1323H-1437H	1459H-1615H	1630H-1743H		mg / Ncm
Source Data					
Volumetric Flow Rate (dry std), Ncmh	47	44	46	46	
Volumetric Flow Rate (actual), Ncmh	55	53	55	54	
Moisture Content, %	2.7	3.1	3.6	3.1	
Stack Gas Temperature, °C	35	39	40	38	
Carbon Dioxide Concentration, %	0.0	0.0	0.0	0.0	
Oxygen Concentration, %	20.0	20.0	20.0	20.0	
Process Rate Information					
Kilograms of Dust Collected	30	30	30	30	
% of Capacity during test	100%	100.0%	100.0%	100.0%	
Hours of operation per year	550	550	550	550	
Particulate Matter (PM) Emissions					
O ₂ Corrected Concentration, mg/Ncm	3	4	3	3	200
Mass Emission Rate, kg/hr	0.00917	0.00942	0.00891	0.00917	
Annual Emission Rate, MT/yr*	0.00504	0.00518	0.00490	0.00504	
DENR Classification		Other Stationary Source (New Source)			

* Annual emissions are presented as metric tons (MT) per year based on the reported plant operating hours per year

Remarks:

a. Particulate matter (as PM) Emissions Within the standard of 200 mg/Ncm

Parameters:

a. Particulate matter (PM)

Sampling Method:

USEPA Method 5

Analysis Method:

Gravimetric

TABLE 2-2

SUMMARY OF TEST RESULTS
5,013CFM Verantis Acid Fume Scrubber #2
N 16°21'34" E 120°39'32"
BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet

Run Number	RUN 1	RUN 2	RUN 3	Average	CAA Limit
Sampling Date	29-Jun-24	29-Jun-24	29-Jun-24		
Sampling Time	1050H-1205H	1242H-1358H	1411H-1525H		mg / Ncm
Source Data					
Volumetric Flow Rate (dry std), Ncm	102	105	109	105	
Volumetric Flow Rate (actual), Ncm	117	125	130	124	
Moisture Content, %	3.4	3.3	4.0	3.6	
Stack Gas Temperature, °C	27	39	37	34	
Carbon Dioxide Concentration, %	0.0	0.0	0.0	0.0	
Oxygen Concentration, %	19.0	19.0	19.0	19.0	
Process Rate Information					
Ounces of gold produced	22.88	22.88	22.88	22.88	
% of Capacity during test	100%	100%	100%	100%	
Hours of operation per year	514.85	515	515	515	
Particulate Matter (PM) Emissions					
Concentration, mg/Ncm	65	66	73	68	200
Mass Emission Rate, kg/hr	0.40	0.42	0.47	0.43	
Annual Emission Rate, MT/yr*	0.20	0.21	0.24	0.22	
Sulfur oxides (as SO₂) Emissions					
Concentration, mg/Ncm	200	197	185	194	700
Mass Emission Rate, kg/hr	1.22	1.24	1.21	1.22	
Annual Emission Rate, MT/yr*	0.63	0.64	0.62	0.63	
Nitrogen oxides (as NO_x) Emissions					
Concentration, mg/Ncm	262	253	271	262	500
Mass Emission Rate, kg/hr	1.60	1.59	1.76	1.65	
Annual Emission Rate, MT/yr*	0.83	0.82	0.91	0.85	
Carbon monoxide (CO) Emissions					
Concentration, mg/Ncm	127	132	134	131	500
Mass Emission Rate, kg/hr	0.78	0.83	0.87	0.83	
Annual Emission Rate, MT/yr*	0.40	0.43	0.45	0.43	
DENR Classification	Other Stationary Source (New Source)				

* Annual emissions are presented as metric tons (MT) per year based on the reported plant operating hours per year

Remarks:

- | | |
|--|-----------------------------------|
| a. Particulate matter (as PM) Emissions | Within the standard of 200 mg/Ncm |
| b. Sulfur oxides (as SO ₂) Emissions | Within the standard of 700 mg/Ncm |
| c. Nitrogen oxides (as NO _x) Emissions | Within the standard of 500 mg/Ncm |
| d. Carbon monoxide (CO) Emissions | Within the standard of 500 mg/Ncm |

Parameters:

- a. Particulate matter (PM)
b. Sulfur oxides (as SO₂)
c. Nitrogen oxides (as NO_x)
d. Carbon monoxide (CO)

Sampling Method:

- USEPA Method 5
USEPA Method 6
USEPA Method 7
USEPA Method 10

Analysis Method:

- Gravimetric
Barium-Thion Titration
Phenoldisulfonic Acid
Non-Dispersive Infrared (NDIR)

SECTION 3.0

PROCESS DESCRIPTION AND OPERATION

Benguet Corporation - Acupan Contract Mining Project operates and maintains one (1) unit 46.58 m3/min Krypton Dust Collection Facility System and One (1) unit 5,013CFM Verantis Acid Fume Scrubber in their facility located at Balatoc, Virac, Itogon, Benguet. The sources are a Dust Collector and Acid Fume Scrubber as air pollution control device installed in the facility.

The **46.58 m3/min Dust Collection Facility System** manufactured by **Krypton** operated at 100% load, having a temperature of an average of 38°C and uses electricity to power the dust collector. According to the facility representative, the dust collector collected 30 kilograms of dust throughout the entire day of operation. They also indicated that this Dust Collection Facility System typically operates for an estimated 550 hours per year.

The **5,013CFM Acid Fume Scrubber** manufactured by **Verantis** operated at 100% load, having a temperature of an average of 34°C and consumed 153 liters of kerosene as fuel during sampling. According to the facility representative, the generator set produced 22.88 ounces of gold throughout the entire day of operation. They also indicated that this Acid Fume Scrubber typically operates for an estimated 514.85 hours per year.

The monitoring logsheets, process facility data completed by a Benguet Corporation - Acupan Contract Mining Project facility representative during sampling, and the photos for documentation were collected by Greentek Environmental Phils Co. Personnel are included in Appendix C.

SECTION 4.0

SAMPLING AND ANALYTICAL PROCEDURES

All sampling and analytical procedures were those recommended by the Philippines Department of Environmental and Natural Resources (DENR) and the United States Environmental Protection Agency (EPA). This section provides brief descriptions of the sampling and analytical procedures with the focus primarily on any clarifications, deviations, or modifications to the stated test methods.

The test team utilized the following EPA Reference Methods:

- Method 1: Sample and Velocity Traverse Point Locations
- Method 2: Stack Gas Velocity and Volumetric Flow Rate (S-type Pitot)
- Method 3: Gas Analysis for Determination of Dry Molecular Weight
- Method 4: Determination of Moisture Content in Stack Gases
- Method 5: Determination of Particulate Matter Emissions from Stationary Sources
- Method 6: Determination of Sulfur Dioxide Emissions from Stationary Sources
- Method 7: Determination of Nitrogen Oxide Emissions from Stationary Sources
- Method 10: Determination of Carbon Monoxide Emissions from Stationary Sources

METHODS 1-2 - STACK VELOCITY

A Sampling Points

The number and location of the sampling points were determined according to the procedures outlined in EPA Method 1. The pyrolysis reactors and thermal oil heater have two test ports were present in the same horizontal plane, forming two sampling axes at 90° to each other. A total of 24 points were sampled for pyrolysis reactor and thermal oil heater, with 12 points on each axis. Details of the number and location of sample points are included in the field data sheets in Appendix B.

B Cyclonic Flow Check

A type-S pitot tube assembly, a liquid manometer, and a universal protractor (angle finder) were used to determine the rotation angles at each of the sampling or velocity traverse points. The pitot tube was positioned at each point so that the planes of the face openings of the pitot tube were perpendicular to the cross-sectional plane, and

the rotational angles were determined by rotating the pitot tube until a null reading was obtained on the manometer. When the null angle reading was obtained the yaw angle of the pitot tube was recorded. the test location's average absolute value of the rotation angle was less than 20°, which met the Method 1 criteria.

C Flue Gas Velocity

The flue gas velocity and volumetric flow rate were determined according to the procedures outlined in EPA Method 2. Velocity head measurements (ΔP) were made using type-S pitot tubes conforming to the geometric specifications outlined in EPA Method 2. Accordingly, each has been assigned a coefficient of 0.84. Differential pressures were measured with an inclined manometer. Flue gas temperatures were measured with chrome-alumel thermocouples equipped with digital readouts.

METHOD 3 – FLUE GAS COMPOSITION

The flue gas composition and molecular weight were determined using the EPA method 3. An integrated flue gas sample was collected from each particulate test point at a constant rate into a tedlar bag during EPA Method 5 and 6 sampling run. The sample was collected using a separate sample line attached to the Method 5 probe and using orsat sample pump, separate from the primary Method 5 pump, located in the Method 5-meter console. A small polyethylene knockout, maintained at ambient temperature, was place immediately before the gas sample entered the sample pump to remove any significant moisture. An fyrite analyzer was used to determine the concentration of oxygen and carbon dioxide in the sample. The same bag sample was also used for the carbon monoxide analysis by Method 10.

METHOD 4 – FLUE GAS MOISTURE CONTENT

The moisture content was determined by EPA Method 4 in conjunction with EPA Method 5 and 6, which was discussed in the following section.

METHODS 5/6 – PARTICULATE MATTER AND SULFUR OXIDES

A Sample Collection

Samples were withdrawn isokinetically from the source using an EPA Method 5 sampling train. The sampling train consisted of a stainless-steel nozzle, a heated 316 stainless steel probe with a type-S pitot tube attached, a heated filter, an unheated sample line, four chilled impingers, and a metering console. The particulate sample was collected on a glass fiber filter maintained at a temperature of $120^{\circ}\text{C} \pm 14^{\circ}\text{C}$. The sampling probe, a 316 stainless steel liner that is normally used in Method 5 particulate determinations. The liners were rinsed out prior to sampling and indicated no contamination or degradation. The first two impingers each contained 100 ml of 3 percent hydrogen peroxide, the third remained empty, and the fourth contained pre-weighed silica gel. Three replicate test runs, each approximately 60 minutes in duration of sampling.

B Sample Recovery

Sample recovery was performed inside a clean recovery area. The filter was removed from the filter holder and placed in a petri dish. The volume of water vapor condensed in the impingers and the volume of water vapor collected in the silica gel were summed and entered into moisture content calculations. The nozzle, probe, and front half of the filter holder were rinsed with acetone in a 500ml clear glass. A glass collection flask with a socket was attached to the ball end of the sample probe (opposite the nozzle) to facilitate cleaning the inside of the probe. The interior of the probe and nozzle were brushed repeatedly to remove any adhering PM from the inside surfaces. The brushes and interior surfaces were rinsed again into the flask and then combined with the rinses into the 500ml clear glass bottle.

The impingers were weighed individually, and the contents of impingers 1 to 3 were placed in a 500 ml polyethylene sample bottle. The three impingers connecting glassware were rinsed with distilled deionized (DI) water into the bottle containing the impinger contents. The silica gel was returned to the original container after weighing.

C Sample Analysis

EPA Method 5 analytical procedures were used to analyze the filter and front-half acetone rinse for filterable particulate matter. EPA Method 6 procedures were utilized to determine the mass of sulfur oxides in the impinger contents. Blank samples of the

acetone and peroxide solutions, sufficient to determine potential contamination or bias from the sampling media, were submitted to the laboratory for analysis with the stack samples.

METHOD 7 – NITROGEN OXIDES

A Sample Collection

Nitrogen oxides (composed of both NO and NO₂) were determined for each test run according to EPA Reference Method 7, *"Determination of Nitrogen Oxide Emissions from Stationary Sources"*. The sampling train consisted of an evacuated flask connected to a heated glass probe with glass wool at the tip to function as a filter. The evacuated flask contained 25 mL of the nitrogen oxide-absorbing solution. The flask was evacuated to within 75 mmHg (3 inHg) of absolute pressure or less. The initial flask temperature and evacuated pressure were recorded. The probe was placed in the stack and connected to the flask. After purging the probe, a grab sample was drawn into the flask. The flask was shaken for five minutes. Three flasks were collected for each test run.

B Sample Recovery

After a minimum of 16 hours, the flask was shaken for two minutes, and then the final flask temperature and pressure were measured. The contents were transferred to a polyethylene bottle, and the flask was rinsed as per the test method. The pH was adjusted to between 9 and 12.

C Sample Analysis

The samples were prepared for analysis as per EPA Method 7 and then measured colorimetrically using a spectrophotometer.

METHOD 10 CARBON MONOXIDE

The integrated grab sample that was collected per EPA Method 3 for oxygen and carbon dioxide was also used for EPA Method 10 analysis for carbon monoxide. An integrated flue gas sample was collected from each particulate test point at a constant rate into a Tedlar bag during EPA Method 5 and 6 sampling run. The sample was

analyzed in accordance with EPA Method 10 using the non-dispersive infrared (NDIR) analyzer HORIBA PG-350 S/N: 2JFEHYJ2 at Greentech Laboratory and Allied Services, Inc. Samples were analyzed using the 513 ppm analytical span. The analyzer has a built in sample pump and was filtered prior to introduction to the analyzer. Analytical results were recorded on the CO analytical data sheet in ppm from the analyzer display. The value was recorded several minutes after the sample was first introduced, and a stable concentration reading was observed.

SECTION 5.0

QA/QC PROCEDURES AND RESULTS

The objective of an internal quality assurance and quality control (QA/QC) program is to assure that the precision and accuracy of all data generated are scientifically sound and documented to be "in control". To accomplish this, standardized methods or procedures were used. They must be validated for their intended use, rigorously followed, and data reported with quality indicators (precision, accuracy, completeness, representativeness, etc.).

As a guide, Greentek uses the EPA document Quality Assurance Handbook for Air Pollution Measurement System, Volume III (EPA-600/4-77-027b). The Greentek QA/QC plan has incorporated certain considerations into the production of quality data in all its sampling programs, regardless of the scope and purpose of the testing. These considerations include:

- Planning the individual test programs by preparation and submission of a Source Specific Test Plan to (DENR-EMB (included in Appendix G)
- Using reliable and well-maintained calibrated equipment.
- Using appropriate forms for recording sampling data (Appendix B),
- Using calibration and audit gases traceable to the National Institute of Standards and Technology (NIST),
- Controlling errors by checking data input and performing redundant calculations,
- Analyzing audit materials, and
- Adhering to the established Test Plan.

5.1 Particulate Matter Sampling Procedures

Particulate matter (PM) was determined according to EPA Method 5 in "*Determination of Particulate Emissions from Stationary Sources*". The appropriate performance of this test method includes the performance of EPA Methods 1, 2, 3, and 4. The following items describe the primary quality control measures that The Greentek used to ensure a representative sample that met the method precision and bias criteria, was collected:

- Measurements of the upstream and downstream disturbances (to the velocity at the test location) and selection of the appropriate number of sampling test points to determine a representative stack gas velocity.
- Performance of a cyclonic flow check
- Calibration and QA/QC checks of the dry gas meter, thermocouples, pitot tubes, nozzles, temperature display, and manometer assembly,
- Leak checks of the entire Method 5 sampling train were performed before and after each sampling run. All leak checks and leakage rates were documented on the relevant field test data sheets. The acceptance criteria for the Method 5 train post-sample leak check are a leak rate of $<0.00057 \text{ m}^3/\text{minute}$ at the highest vacuum obtained during the test run.
- Maintenance of the chilled impinger system below 20°C (measured at the silica gel outlet),
- Collection of an integrated Tedlar bag sample for oxygen, carbon dioxide, and carbon monoxide
- Maintenance of the isokinetic sampling rate at 90–110% of the actual gas stream velocity.
- Maintenance of the heating system for the filter and sampling probe at 120°C ($\pm 14^\circ\text{C}$),
- Proper recovery of the sample.
- Accurate gravimetric analysis of samples.
- Collection and analysis of representative “blank” samples.

Equipment calibration procedures are described below.

5.2 Particulate Matter Sampling Equipment

A Barometer

Barometric pressure values for the testing period were recorded from a calibrated digital barometer on-site at the platform level. A digital barometer was calibrated in Swichtek Measurements Systems located at 4th Floor Northridge Plaza, Annex A, 12 Congressional Ave., Bahay Toro, Quezon City, 1100, Philippines. A copy of the barometer calibration form is in Appendix E.

B Probe Nozzle

The probe nozzles used in this test were calibrated initially by the manufacturer and prior to use by the field sampling crew by checking for dimension roundness. This was

done by making three separate measurements using alternative inside diameters and calculating the average. A micrometer with a minimum tolerance of 0.025mm was used for measuring. If a deviation of more than 0.1mm is found between any measurements, the nozzle is either discarded or repaired and re-measured. A copy of the nozzle calibration forms is in Appendix E.

C Pitot Tube

Each pitot tube used in sampling meets the design specifications for Type S pitot tubes in EPA Method 2. Therefore, in accordance with Method 2 procedures, a baseline coefficient (C_p) of 0.84 was assigned to each pitot tube. Calibration at the manufacturer for pitot face-opening alignment included measuring the external tubing diameter (dimension D_t) and the base-to-opening misalignment angles, with all terms as described in Figures 2-2 and 2-3 of EPA Method 2. Pitot tubes were visually inspected at the completion of the test to ensure structural integrity. A copy of the calibration check is included in Appendix E.

D Calibration Meter and Metering System

The meter console dry gas meter calibration was performed in accordance with EPA Method 5, Section 16, using critical orifices. The meter is allowed to warm up and is leak checked using the specifications in Method 5 of no detectable leak for a period of one minute. The dry gas meter is calibrated with five orifices with orifice values that ranged 14.50 to 116.0mm of water. For each critical orifice, the meter coefficient (γ or gamma) and the orifice pressure differential ($\Delta H@$) were calculated. The criterion for the gamma difference for each point is not to exceed ± 0.02 of the average of all the points. The orifice pressure differential that equates to 0.0212 m³/min at standard conditions ($\Delta H@$) was then calculated for each point and averaged. A copy of the metering system calibration is included in Appendix E.

E Post-Test Meter Calibration

Post-test meter calibrations to determine the γ (or Y_{qa}) were conducted on the dry gas meter after the test to check their accuracy against the original pretest calibration. This post-test calibration was made using the alternative procedure defined by the EPA as ALT-009. This procedure is performed on site using the data collected for each of the test runs. It is preferred by EPA over the post-test procedure identified in Method 5 because it 1) eliminates the question of possible meter damage during transport after the emission test; and 2) because the calibration data are available in the field

immediately following the test, it eliminates the costly travel, remobilization, and scheduling of a retest should the meter fail the post-test calibration. A copy of the post-test calibration is included in Appendix E of this test report. A complete copy of EPA ALT-009 is available on the EPA website.

F Thermocouples and Digital Temperature Indicators

Thermocouples were calibrated by comparing them against an ASTM-3F mercury-in-glass thermometer at approximately 0°C (ice water), ambient temperature, and approximately 100°C (boiling water). A post-test calibration was performed in accordance with EPA ALT-011 using a single point calibration against an ASTM mercury-in-glass thermometer in addition to a continuity check of the thermocouple. The continuity check involved verifying that the thermocouple read-out trended in the appropriate direction when exposed to a temperature change. A copy of the original calibration and the ALT-011 post-test QA check is included in Appendix E. A complete copy of EPA ALT-011 is available on the EPA website.

Digital indicators were checked by introducing a series of millivolt signal strengths to the input and comparing the indicator reading with the actual signal strength. Acceptable calibration error does not exceed 1.5 percent when temperatures are expressed in °K.

5.3 Particulate Matter Analysis

The primary quality control procedures involved in the particulate matter analysis include use of a properly calibrated analytical balance, use of appropriately specified sampling media (filters and acetone) and following the Method 5 analytical procedures. The laboratory followed the procedures specified in the method and calibrated the analytical balance using Class S weights. A routine calibration log is maintained at the laboratory with the analytical balance. The acetone probe rinse was taken to dryness at ambient temperature in a laboratory fume hood. Pre- and post-measurements were made until replicate analyses at least 6 hours apart agreed within 0.5 mg. The summary gravimetric analysis data sheet presents the final measurement results, while any intermediate measurements are maintained in a sample log at the laboratory.

5.4 Oxygen and Carbon Dioxide Analysis

The primary quality control procedures involved in the analysis of the oxygen (O₂) and carbon dioxide (CO₂) samples include collection of a representative bag sample, use of fresh absorbing solutions. The Fyrite analyzers are checked against the ambient air for oxygen and exhale breath for carbon dioxide prior to sample analysis. The field staff followed the procedures specified in the method.

The Greentek work plan specified that the Fyrite analysis should be performed within 8 hours from the time the bag were collected, the values are considered valid. The O₂ and CO₂ values are used only in calculating for the molecular weights.

5.5 Sulfur Oxides

This sample procedure for sulfur oxides (SO₂) was combined with EPA Method 5 as described. The primary QA/QC procedures utilized during testing were as follows.

- Use of fresh chemical solutions (mixed daily).
- Proper recovery of the sample.
- Accurate analyses (using barium- thorin titration) of samples.
- Collection and analyses of representative “blank” samples.
- Calibration and QA/QC checks of the sampling system.
- Analysis of audit samples.

The laboratory followed the procedures specified in the method. EPA quality audit samples for SO₂ were analyzed within 30 days of the field samples using the barium chloride titration solution. The results of the laboratory’s audit analyses were within 5% of the audit value as required by the test method. The blank samples from the field test were analyzed with the samples and demonstrated the no contamination was present from the chemical reagents used.

5.6 Nitrogen Oxides

This sample procedure for nitrogen oxides (NO_x) is described in Section 4.5. The primary QA/QC procedures utilized during testing and analysis were as follows:

- Use of fresh chemical solutions
- Proper recovery of the samples
- Accurate analyses (using spectrophotometry) of samples.
- Calibration of the spectrophotometer and verification of linearity

- Calibration and QA/QC checks of the sampling system

The laboratory followed the procedures specified in the method. The spectrophotometer was calibrated on the day the samples were analyzed and verified to be linear over the range to be measured.

If any of the three runs of NO_x results from each set of sample runs are found to be outliers, the said results are discarded, and the final NO_x result is computed from the average of the two remaining good runs. The discarded test trial runs are noted in the nitrogen oxide emission data as part of the Appendix Summary Table in Appendix A.

It should be noted that EPA Method 7 does not clearly specify a certain number of NO_x samples for each run. The three NO_x samples per run are generally practiced, providing a “spare set” in case one of the samples gets spoiled or becomes an outlier.

5.7 Carbon Monoxide

This sample procedure for carbon monoxide (CO) is describe. The primary QA/QC procedures utilized during the testing and analysis were as follows:

- Collection and analyses of representative gas samples
- Maintenance of a leak-free bag prior to sampling.
- Calibration of the CO NDIR instrument prior to analysis
- Analysis of samples within three days of collection.
- Strict acceptance of the span and drift criteria (2% and 10%, respectively).
- Use of EPA Protocol 1 calibration gases (although the method allows use of certified rather than Protocol 1 gas standards for calibration)
- Interference check for carbon dioxide (or use of an ascarite trap to remove CO₂)

The analyst in the field equipment office, where the analyzer is maintained, followed the procedures specified in the method. The CO analyzer met the calibration and the drift requirements in the test method. No audit samples, separate from the calibration gas, are specified in EPA Method 10. An interference check was performed on the CO analyzer prior to any analysis as described in EPA Method 20, to ensure there is no interference from carbon dioxide, oxygen, sulfur oxides and nitrogen oxides. The analyzer QA/QC check performed by the vendor also includes both a linearity verification of the 0-1,000 ppm scale and an interference check for carbon dioxide (for 10% and 22% CO₂). Because the analyzer met the acceptance limit for the interference, no ascarite trap to remove CO₂ was used during the analysis.

“APPENDIX A”

SUMMARY OF RESULTS AND EXAMPLE COMPUTATIONS

APPENDIX TABLE
TEST RESULTS
PARTICULATE MATTER
BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet
46.58 m3/min Krypton Dust Collection Facility System

	RUN NUMBER	RUN 1	RUN 2	RUN 3	
	RUN DATE	28-Jun-24	28-Jun-24	28-Jun-24	AVERAGE
	RUN TIME	1323H-1437H	1459H-1615H	1630H-1743H	
MEASURED DATA					
(Y)	Meter Box, Y	1.0102	1.0102	1.0102	
(Delta H)	Avg Delta H, mm H ₂ O	12.3	11.6	12.9	
(Pbar)	Barometric Pressure, mm Hg	690.4	690.9	691.1	
(Vm)	Meter Volume, m ³	0.7928	0.7672	0.8084	
(Tm)	Avg Meter Temp, °C	35	38	36	
(Pg)	Static Pressure, mm H ₂ O	-3.0	-3.0	-3.0	
(Ts)	Avg Stack Temp, °C	35	39	40	
(Vic)	Water Collected, mg	14.5	16.0	19.5	
(%CO ₂)	Carbon Dioxide, %	0.0	0.0	0.0	0.0
(%O ₂)	Oxygen, %	20.0	20.0	20.0	20.0
(%N ₂)	Nitrogen, %	80.0	80.0	80.0	
(Cp)	Pitot Tube Coefficient	0.84	0.84	0.84	
(sqrtDeltaP)avg	Avg Sqrt Delta P, (mm H ₂ O) ^{1/2}	3.519	3.349	3.527	
(time)	Sample Time, min	72	72	72	
(Dn)	Nozzle Diameter, mm	4.480	4.480	4.480	
CALCULATED DATA					
(An)	Nozzle Area, m ²	1.58E-05	1.58E-05	1.58E-05	
(Vmstd)	Standard Meter Volume, Ncm	0.7055	0.6760	0.7170	
(Ps)	Stack Pressure, mm Hg	690.2	690.7	690.9	
(%H ₂ Omeas)	Moisture (measured), %	2.7	3.1	3.6	3.1
(%H ₂ Osat)	Moisture (at saturation), %	6.1	7.4	8.0	
(%H ₂ O)	Moisture (actual), %	2.7	3.1	3.6	3.1
(Vwstd)	Standard Water Vapor Volume, Ncm	0.020	0.022	0.026	
(Mfd)	Dry Mole Fraction	0.973	0.969	0.964	
(MWd)	Molecular Weight-dry, gm/gm-mole	28.80	28.80	28.80	
(MWs)	Molecular Weight-wet, gm/gm-mole	28.51	28.46	28.42	
(Vs)	Velocity, m/s	12.9	12.4	13.1	12.8
(A)	Stack Area, m ²	0.07	0.07	0.07	
(%EA)	Percent Excess Air, %	126	126	126	126
Qa (act)	Actual Volumetric Flow, acmm	55	53	55	54
Qs (std)	Standard Volumetric Flow, dscmm	47	44	46	46
(I)	Isokinetic Rate, %	93.7	95.2	96.4	
PARTICULATE EMISSIONS DATA					
(mg)	Mass, mg	2	2	2	
(mg/Ncm)	Concentration, mg/Ncm	3	4	3	3
(kg/hr)	Emission Rate, kg/hr	0.01	0.01	0.01	0.01

EXAMPLE CALCULATIONS
BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT
46.58 m3/min Krypton Dust Collection Facility System
RUN 1

VOLUME OF DRY GAS SAMPLED AT STANDARD CONDITIONS

$$Vmstd = Y * 0.392 * Vm * \frac{Pbar + \left(\frac{\Delta H}{273 + Tm} \right)}{\left(\frac{\Delta H}{273 + Tm} \right)}$$

$$Vmstd = 1.0102 * 0.392 * 0.7928 * \frac{690.4 + \left(\frac{12.3}{273 + 35} \right)}{\left(\frac{12.3}{273 + 35} \right)} = 0.7055 \text{ Ncm}$$

VOLUME OF WATER VAPOR AT STANDARD CONDITIONS

$$Vwstd = 0.001358 * Vlc$$

$$Vwstd = 0.001358 * 14.5 = 0.020 \text{ Ncm}$$

PERCENT MOISTURE, BY VOLUME, AS MEASURED IN FLUE GAS

$$\% H_2O = \left(\frac{Vwstd}{Vwstd + Vmstd} \right) * 100$$

$$\% H_2O = \left(\frac{0.020}{0.020 + 0.7055} \right) * 100 = 2.7 \%$$

ABSOLUTE FLUE GAS PRESSURE

$$Ps = Pbar + \frac{Pg}{13.6}$$

$$Ps = 690.4 + \frac{-3.0}{13.6} = 690.2 \text{ mm Hg}$$

DRY MOLE FRACTION OF FLUE GAS

$$Mfd = 1 - \frac{\% H_2O}{100}$$

$$Mfd = 1 - \frac{2.7}{100} = 0.973 \text{ (unitless)}$$

PERCENT EXCESS AIR

$$\% EA = \left(\frac{\% O_2 - 0.5 * \% CO}{0.264 * \% N_2 - \left(\% O_2 - 0.5 * \% CO \right)} \right) * 100 \%$$

$$\% EA = \left(\frac{20 - 0.5 * 0.0}{0.264 * 80 - \left(20 - 0.5 * 0.0 \right)} \right) * 100 \%$$

$$\% EA = 126 \text{ \% excess air}$$

DRY MOLECULAR WEIGHT OF FLUE GAS

$$MWd = \left(\% CO_2 * \frac{44}{100} \right) + \left(\% O_2 * \frac{32}{100} \right) + 100.0 - \% CO_2 - \% O_2 * \frac{28}{100}$$

$$MWd = \left(0.0 * \frac{44}{100} \right) + \left(20.0 * \frac{32}{100} \right) + 100.0 - 0.0 - 20.0 * \frac{28}{100}$$

$$MWd = 28.80 \text{ g/g-mole}$$

WET MOLECULAR WEIGHT OF FLUE GAS

$$MWs = \left(MWd * Mfd \right) + f_{wH_2O} * H_2O / 100$$

$$MWs = \left(28.80 * 0.973 \right) + 18 * \frac{2.7}{100} = 28.51 \text{ g/g-mole}$$

AVERAGE FLUE GAS VELOCITY

$$Vs = 34.97 * Cp * \left(\frac{\Delta P}{Ps} + \frac{273}{MWs} \right)$$

$$Vs = 34.97 * 0.84 * 3.519 * \left(\frac{35}{690.2} + \frac{273}{28.51} \right) = 12.9 \text{ m/s}$$

VOLUMETRIC FLUE GAS FLOW RATE AT ACTUAL CONDITIONS (wet basis)

$$Q_a(\text{act}) = 60 * V_s * A$$

$$Q_a(\text{act}) = 60 * 12.9 * 0.07 = 55 \text{ acmm}$$

VOLUMETRIC FLUE GAS FLOW RATE AT STANDARD CONDITIONS (dry standard basis)

$$Q_s(\text{std}) = 60 * Mfd * V_s * A * \frac{298}{273 + T_s} * \frac{P_s}{P_{std}}$$

$$Q_s(\text{std}) = 60 * 0.973 * 12.9 * 0.07 * \frac{298}{273 + 35} * \frac{690.2}{760} = 47 \text{ dscmm}$$

PERCENT ISOKINETIC OF SAMPLING RATE

$$I = \frac{P_{std}}{T_{std}} * \frac{100}{60} * \frac{T_s + 273}{P_s} * \frac{V_{mstd}}{V_s * Mfd * \text{time} * A_n}$$

$$I = \frac{760}{298} * \frac{100}{60} * \frac{35 + 273}{690.2} * \frac{0.7055}{12.9 * 0.973 * 72 * 0.000015}$$

$$I = 93.7 \%$$

PARTICULATE CONCENTRATION

$$\text{mg/Ncm} = \frac{\text{mg}_{\text{particulate}}}{\text{Ncm}}$$

$$\text{mg/Ncm} = \frac{2.3}{0.7055} = 3.3 \text{ mg/Ncm}$$

PARTICULATE MASS EMISSION RATE

$$\text{kg/hr} = \frac{60}{10^6} * \frac{Q_{\text{std}} \text{ mg}}{\text{Ncm}} * Q_s$$

$$\text{kg/hr} = \frac{60}{10^6} * 3.3 * 47 = 0.009 \text{ kg/hr}$$

APPENDIX SUMMARY TABLE
NITROGEN OXIDES (as NO₂) EMISSIONS DATA
BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itoyon, Benguet
46.58 m³/min Krypton Dust Collection Facility System

Sample Collection Information

Sample Recovery Information

Calculated Results

		Barometric Pressure, Pbar (in Hg):				29.68	Barometric Pressure, Pbar (in Hg):			29.72
Sample ID	Flask Volume (ml)	Evacuated Pressure Pgi (in Hg)	Flask abs. Pressure Initial Pi, Pbar - Pgi (in Hg) ¹	Flask Temp °C	Flask Temp Ti °K	Sample Collection Time ² 24-Hour	Final Pressure Pgf (in Hg)	Flask abs. Pressure Final Pf, Pbar - Pgf (in Hg) ¹	Flask Temp °C	Flask Temp Tf °K
Run 1A	2,212.50	28.33	1.35	32.8	305.8	1142	1.20	28.52	30.5	303.5
Run 1B	2,226.13	28.47	1.21	33.4	306.4	1147	1.16	28.56	30.2	303.2
Run 1C	2,221.18	28.16	1.52	33.5	306.5	1152	1.45	28.27	30.4	303.4

Std. Gas Volume (ml)	Mass Catch Weight, µg (µg)	NOx Concentration, as NO ₂ (mg/Ncm)
1,951	0	0
1,978	0	0
1,929	0	0
Average		0

		Barometric Pressure, Pbar (in Hg):				29.67	Barometric Pressure, Pbar (in Hg):			29.72
Run 2A	2,211.35	28.36	1.31	33.4	306.4	1213	1.29	28.43	30.6	303.6
Run 2B	2,210.08	28.25	1.42	33.6	306.6	1217	1.37	28.35	30.5	303.5
Run 2C	2,208.25	28.51	1.16	32.8	305.8	1221	1.10	28.62	30.2	303.2

Std. Gas Volume (ml)	Mass Catch Weight, µg (µg)	NOx Concentration, as NO ₂ (mg/Ncm)
1,945	0	0
1,932	0	0
1,969	0	0
Average		0

		Barometric Pressure, Pbar (in Hg):				29.66	Barometric Pressure, Pbar (in Hg):			29.72
Run 3A	2,196.25	28.27	1.39	32.7	305.7	1339	0.99	28.73	30.4	303.4
Run 3B	2,206.38	28.41	1.25	33.6	306.6	1342	1.23	28.49	30.3	303.3
Run 3C	2,201.00	28.19	1.47	33.7	306.7	1346	1.4	28.32	30.2	303.2

Std. Gas Volume (ml)	Mass Catch Weight, µg (µg)	NOx Concentration, as NO ₂ (mg/Ncm)
1,949	0	0
1,952	0	0
1,920	0	0
Average		0

APPENDIX TABLE
TEST RESULTS
PARTICULATE MATTER, NITROGEN OXIDES, SULFUR OXIDES AND CARBON MONOXIDE
BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet
5,013CFM Verantis Acid Fume Scrubber #2

	RUN NUMBER	RUN 1	RUN 2	RUN 3	
	RUN DATE	29-Jun-24	29-Jun-24	29-Jun-24	AVERAGE
	RUN TIME	1050H-1205H	1242H-1358H	1411H-1525H	
MEASURED DATA					
(Y)	Meter Box, Y	1.0102	1.0102	1.0102	
(Delta H)	Avg Delta H, mm H ₂ O	16.6	17.6	18.5	
(Pbar)	Barometric Pressure, mm Hg	690.4	690.6	690.9	
(Vm)	Meter Volume, m ³	0.8986	0.9516	0.9536	
(Tm)	Avg Meter Temp, °C	35	38	36	
(Pg)	Static Pressure, mm H ₂ O	-2.0	-2.0	-2.0	
(Ts)	Avg Stack Temp, °C	27	39	37	
(Vic)	Water Collected, mg	20.5	21.0	26.0	
(%CO ₂)	Carbon Dioxide, %	0.0	0.0	0.0	0.0
(%O ₂)	Oxygen, %	19.0	19.0	19.0	19.0
(%N ₂)	Nitrogen, %	81.0	81.0	81.0	
(Cp)	Pitot Tube Coefficient	0.84	0.84	0.84	
(sqrtDeltaP)avg	Avg Sqrt Delta P, (mm H ₂ O) ^{1/2}	2.104	2.200	2.288	
(time)	Sample Time, min	72	72	72	
(Dn)	Nozzle Diameter, mm	6.090	6.090	6.090	
CALCULATED DATA					
(An)	Nozzle Area, m ²	2.91E-05	2.91E-05	2.91E-05	
(Vmstd)	Standard Meter Volume, Ncm	0.7980	0.8381	0.8449	
(Ps)	Stack Pressure, mm Hg	690.2	690.5	690.7	
(%H ₂ Omeas)	Moisture (measured), %	3.4	3.3	4.0	3.6
(%H ₂ Osat)	Moisture (at saturation), %	3.8	7.7	7.0	
(%H ₂ O)	Moisture (actual), %	3.4	3.3	4.0	3.6
(Vwstd)	Standard Water Vapor Volume, Ncm	0.028	0.029	0.035	
(Mfd)	Dry Mole Fraction	0.966	0.967	0.960	
(MWd)	Molecular Weight-dry, gm/gm-mole	28.76	28.76	28.76	
(MWs)	Molecular Weight-wet, gm/gm-mole	28.39	28.41	28.33	
(Vs)	Velocity, m/s	7.6	8.2	8.5	8.1
(A)	Stack Area, m ²	0.26	0.26	0.26	
(%EA)	Percent Excess Air, %	116	116	116	116
Qa (act)	Actual Volumetric Flow, acmm	117	125	130	124
Qs (std)	Standard Volumetric Flow, dscmm	102	105	109	105
(I)	Isokinetic Rate, %	95.1	97.4	94.7	
PARTICULATE EMISSIONS DATA					
(mg)	Mass, mg	52	56	61	
(mg/Ncm)	Concentration, mg/Ncm	65	66	73	68
(kg/hr)	Emission Rate, kg/hr	0.40	0.42	0.47	0.43
SULFUR OXIDES (as SO₂) EMISSIONS DATA					
(mg)	Mass, mg	159	165	156	
(mg/Ncm)	Concentration, mg/Ncm	200	197	185	194
(kg/hr)	Emission Rate, kg/hr	1.22	1.24	1.21	1.22
NITROGEN OXIDES (as NO₂) EMISSIONS DATA					
(mg/Ncm)	Concentration, mg/Ncm	262	253	271	262
(kg/hr)	Emission Rate, kg/hr	1.60	1.59	1.76	1.65
CARBON MONOXIDE EMISSIONS DATA					
(ppm)	Concentration, ppm dry	111	115	117	114
(mg/Ncm)	Concentration, mg/Ncm	127	132	134	131
(kg/hr)	Emission Rate, kg/hr	0.78	0.83	0.87	0.83

EXAMPLE CALCULATIONS
 BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT
 5,013CFM Verantis Acid Fume Scrubber #2
 RUN 1

VOLUME OF DRY GAS SAMPLED AT STANDARD CONDITIONS

$$Vmstd = Y * 0.392 * Vm * \frac{Pbar + \left(\frac{\Delta H}{273 + Tm} \right)}{\left(\frac{\Delta H}{273 + Tm} \right)}$$

$$Vmstd = 1.0102 * 0.392 * 0.8986 * \frac{690.4 + \left(\frac{16.6}{273 + 35} \right)}{\left(\frac{16.6}{273 + 35} \right)} = 0.7980 \text{ Ncm}$$

VOLUME OF WATER VAPOR AT STANDARD CONDITIONS

$$Vwstd = 0.001358 * Vlc$$

$$Vwstd = 0.001358 * 20.5 = 0.028 \text{ Ncm}$$

PERCENT MOISTURE, BY VOLUME, AS MEASURED IN FLUE GAS

$$\% H_2O = \left(\frac{Vwstd}{Vwstd + Vmstd} \right) * 100$$

$$\% H_2O = \left(\frac{0.028}{0.028 + 0.7980} \right) * 100 = 3.4 \%$$

ABSOLUTE FLUE GAS PRESSURE

$$Ps = Pbar + \frac{Pg}{13.6}$$

$$Ps = 690.4 + \frac{-2.0}{13.6} = 690.2 \text{ mm Hg}$$

DRY MOLE FRACTION OF FLUE GAS

$$Mfd = 1 - \frac{\% H_2O}{100}$$

$$Mfd = 1 - \frac{3.4}{100} = 0.966 \text{ (unitless)}$$

PERCENT EXCESS AIR

$$\% EA = \left(\% O_2 - 0.5 * \% CO \right) / \left(0.264 * \% N_2 - \left(\% O_2 - \left(0.5 * \% CO \right) \right) \right) * 100 \%$$

$$\% EA = \left(19 - 0.5 * 0.0 \right) / \left(0.264 * 80.989 - \left(19 - \left(0.5 * 0.0 \right) \right) \right) * 100 \%$$

$$\% EA = 116 \text{ \% excess air}$$

DRY MOLECULAR WEIGHT OF FLUE GAS

$$MWd = \left(\% CO_2 * \frac{44}{100} \right) + \left(\% O_2 * \frac{32}{100} \right) + 100.0 - \% CO_2 - \% O_2 * \frac{28}{100}$$

$$MWd = \left(0.0 * \frac{44}{100} \right) + \left(19.0 * \frac{32}{100} \right) + 100.0 - 0.0 - 19.0 * \frac{28}{100}$$

$$MWd = 28.76 \text{ g/g-mole}$$

WET MOLECULAR WEIGHT OF FLUE GAS

$$MWs = \left(MWd * Mfd \right) + fwtH_2O * H_2O / 100$$

$$MWs = \left(28.76 * 0.966 \right) + 18 * \frac{3.4}{100} = 28.39 \text{ g/g-mole}$$

AVERAGE FLUE GAS VELOCITY

$$Vs = 34.97 * Cp * \left(\frac{\Delta P}{Ps} \right)^{avg} * \frac{T_s + 273}{MWs}$$

$$Vs = 34.97 * 0.84 * 2.104 * \frac{27 + 273}{690.2 * 28.39} = 7.6 \text{ m/s}$$

VOLUMETRIC FLUE GAS FLOW RATE AT ACTUAL CONDITIONS (wet basis)

$$Q_a(\text{act}) = 60 * V_s * A$$

$$Q_a(\text{act}) = 60 * 7.6 * 0.26 = 117 \text{ acmm}$$

VOLUMETRIC FLUE GAS FLOW RATE AT STANDARD CONDITIONS (dry standard basis)

$$Q_s(\text{std}) = 60 * Mfd * V_s * A * \frac{298}{273 + T_s} * \frac{P_s}{P_{std}}$$

$$Q_s(\text{std}) = 60 * 0.966 * 7.6 * 0.26 * \frac{298}{273 + 27} * \frac{690.2}{760} = 102 \text{ dscmm}$$

PERCENT ISOKINETIC OF SAMPLING RATE

$$I = \frac{P_{std}}{T_{std}} * \frac{100}{60} * \frac{T_s + 273}{P_s} * \frac{V_{mstd}}{V_s * Mfd * \text{time} * A_n}$$

$$I = \frac{760}{298} * \frac{100}{60} * \frac{27 + 273}{690.2} * \frac{0.7980}{7.6 * 0.966 * 72 * 0.000029}$$

$$I = 95.1 \%$$

PARTICULATE CONCENTRATION

$$\text{mg/Ncm} = \frac{\text{mg}_{\text{particulate}}}{\text{Ncm}}$$

$$\text{mg/Ncm} = \frac{51.7}{0.7980} = 64.8 \text{ mg/Ncm}$$

PARTICULATE MASS EMISSION RATE

$$\text{kg/hr} = \frac{60}{10^6} * \frac{0.13\% \text{ mg}}{\text{Ncm}} * Q_s$$

$$\text{kg/hr} = \frac{60}{10^6} * 64.8 * 102 = 0.397 \text{ kg/hr}$$

SULFUR DIOXIDE CONCENTRATION

$$\text{mg/Ncm} = \frac{\text{mg}_{\text{SO}_2}}{\text{Ncm}}$$

$$\text{mg/Ncm} = \frac{159}{0.7980} = 200 \text{ mg/Ncm}$$

SULFUR DIOXIDE EMISSION RATE

$$\text{kg/hr} = \frac{60}{10^6} * \frac{0.11\% \text{ mg}}{\text{Ncm}} * Q_s$$

$$\text{kg/hr} = \frac{60}{10^6} * 200 * 102 = 1.2237 \text{ kg/hr}$$

NITROGEN OXIDES (as NO₂) EXAMPLE CALCULATIONS, RUN 1a**1.0 INITIAL ABSOLUTE PRESSURE IN FLASK**

$$P_{\text{mmHg}} = P_{\text{inHg}} * 25.4 \text{ mmHg/in Hg}$$

$$P_i = P_{\text{bar}(i)} - P_{\text{g}(i)}$$

$$P_i = 27.2 - 26.11 = 1.09 \text{ in Hg} = 27.686 \text{ mm Hg}$$

2.0 FINAL ABSOLUTE PRESSURE IN FLASK

$$P_f = P_{\text{bar}(f)} - P_{\text{g}(f)}$$

$$P_f = 27.12 - 1.02 = 26.1 \text{ in Hg} = 662.9 \text{ mm Hg}$$

3.0 VOLUME OF DRY GAS SAMPLED AT STANDARD CONDITIONS USING FLASK

$$V_{sc} = (VF-25) * \left(\frac{P_f}{T_f + 273} - \frac{P_i}{T_i + 273} \right) * 0.392$$

$$V_{sc} = (2226.3 - 25) * \left(\frac{662.9}{304.2} - \frac{27.7}{302} \right) * 0.392 = 1,801 \text{ ml}$$

4.0 CONCENTRATION OF NO_x as NO₂

$$mg/Ncm = (\mu g/Vsc) * 10^6 (1,000 \text{ ml/lL}) * (1,000 \text{ L / Ncm}) * (1mg / 1,000 \mu g)$$

$$mg/Ncm = (439 / 1,801) * 1,000 = 244 \text{ mg/Ncm}$$

NITROGEN OXIDES EMISSION RATE

$$kg/hr = \frac{60}{10^6} * \frac{O_{13\%} \text{ mg}}{Ncm} * Qs$$

$$kg/hr = \frac{60}{10^6} * 243.7 * 102 = 1.493 \text{ kg/hr}$$

CARBON MONOXIDE (CO) CONVERSION, ppm to mg/Ncm (Run 1)

$$CO_{mg/Ncm} = (CO_{ppm} * MW_{CO}) / 24.5 \text{ Liters CO/mole}$$

$$CO_{mg/Ncm} = 111.0 * 28.01 / 24.45 = 127.2 \text{ mg/Ncm}$$

CARBON MONOXIDE EMISSION RATE

$$kg/hr = \frac{60}{10^6} * \frac{O_{13\%} \text{ mg}}{Ncm} * Qs$$

$$kg/hr = \frac{60}{10^6} * 127.2 * 102 = 0.779 \text{ kg/hr}$$

APPENDIX SUMMARY TABLE
NITROGEN OXIDES (as NO₂) EMISSIONS DATA
BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet
5,013CFM Verantis Acid Fume Scrubber #2

Sample Collection Information

Sample Recovery Information

Calculated Results

		Barometric Pressure, Pbar (in Hg):				27.20	Barometric Pressure, Pbar (in Hg):			27.12
Sample ID	Flask Volume (ml)	Evacuated Pressure	Flask abs. Pressure Initial	Flask Temp	Flask Temp	Sample Collection	Final Pressure	Flask abs. Pressure Final	Flask Temp	Flask Temp
		Pgi (in Hg)	Pi, Pbar - Pgi (in Hg) ¹	°C	Ti °K	Time ² 24-Hour	Pgf (in Hg)	Pf, Pbar - Pgf (in Hg) ¹	°C	Tf °K
Run 1A	2,226.30	26.11	1.09	29.2	302.2	1132	1.02	26.10	31.2	304.2
Run 1B	2,247.00	25.79	1.41	28.6	301.6	1137	1.34	25.78	31.6	304.6
Run 1C	2,236.40	25.88	1.32	28.9	301.9	1142	1.25	25.87	31.4	304.4

Std. Gas Volume (ml)	Mass Catch Weight, µg (µg)	NOx Concentration, as NO ₂ (mg/Ncm)
1,801	439	244
1,769	474	268
1,775	485	273
Average		262

		Barometric Pressure, Pbar (in Hg):				27.18	Barometric Pressure, Pbar (in Hg):			27.12
Run 2A	2,221.30	25.98	1.20	28.3	301.3	1324	1.16	25.96	31.0	304.0
Run 2B	2,211.40	25.74	1.44	29.9	302.9	1329	1.41	25.71	32.6	305.6
Run 2C	2,227.20	26.03	1.15	28.7	301.7	1334	1.12	26.00	32.4	305.4

Std. Gas Volume (ml)	Mass Catch Weight, µg (µg)	NOx Concentration, as NO ₂ (mg/Ncm)
1,780	421	236
1,728	480	278
1,783	437	245
Average		253

		Barometric Pressure, Pbar (in Hg):				27.17	Barometric Pressure, Pbar (in Hg):			27.12
Run 3A	2,237.30	25.86	1.31	28.9	301.9	1413	1.27	25.85	32.6	305.6
Run 3B	2,225.00	25.77	1.40	28.8	301.8	1418	1.36	25.76	32.4	305.4
Run 3C	2,220.00	25.59	1.58	28.5	301.5	1423	1.58	25.54	32.6	305.6

Std. Gas Volume (ml)	Mass Catch Weight, µg (µg)	NOx Concentration, as NO ₂ (mg/Ncm)
1,768	471	266
1,746	485	278
1,712	458	268
Average		271

“APPENDIX B”

FIELD DATA SHEETS



METHOD 1

TRAVERSE POINT LOCATIONS

Facility Name	BENJAMIN LOPEZ ACQUINO CONTRACT MINING PROJECT
Town/Province	ITOGON - BENGUET
Source Tested	DUST COLLECTION FACILITY (VQM)
Personnel	DAV, AVL, MRC, AME Date 06/28/24

Type of Stack	Circular <input checked="" type="checkbox"/> Rectangle <input type="checkbox"/>
Ports	No. of ports available 2
	No. of ports used 2
	Port inside dia., cm 10

Dimensions	Far wall to end of port, cm (a)	38.5
	Port length, cm (b)	8.5
Draw a diagram of the test location on the back of the sheet	Stack Dia. or depth, cm (a-b)	30
	Stack width (if rectangle), cm	-
	Equivalent Stack Diameter, cm	-
	Area of stack, m ²	0.071

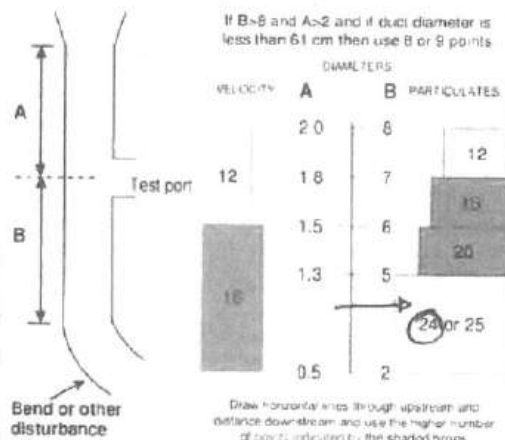
Distance to flow disturbance	Meters	Diameters
Upstream (A)	10.4	2.470
Downstream (B)	1.15	3.830

Minimum # of traverse points required:	
Particulate traverse	24
Velocity traverse	24
# of ports used	2
Number of traverse points used	24

Point #	Fraction of stack diameter	Dist. From inside wall	Port Length	Dist. From edge of port
1	0.021	1.30	8.5	9.8
2	0.047	2.41	8.5	10.5
3	0.118	3.54	8.5	12.0
4	0.177	5.31	8.5	13.8
5	0.250	7.50	8.5	16.0
6	0.356	10.63	8.5	19.2
7	0.649	19.32	8.5	27.8
8	0.750	22.5	8.5	31.0
9	0.823	24.69	8.5	33.2
10	0.882	26.96	8.5	34.96
11	0.933	27.99	8.5	36.5
12	0.979	28.7	8.5	37.2

1. For stacks having dia. less than 61 cm, no traverse points shall be within 1.5cm of the stack walls.
2. For stacks having dia. greater than 61 cm, no traverse point shall be within 2.5cm of the stack walls.

Note: When using 4 points in a circular duct, the probe is marked with only the points for the first half of the full diameter traverse.



Equivalent diameter for rectangular duct:

$$D_e = 2 \times \text{depth} \times \text{width} \div (\text{depth} + \text{width})$$

$$D_e = 2 \times () \times () \div (+) =$$

LOCATION OF POINTS IN CIRCULAR STACK OR DUCTS

	2	4	6	8	10	12
1	0.148	0.067	0.044	0.032	0.026	0.021
2	0.854	0.250	0.145	0.105	0.082	0.067
3		0.750	0.295	0.194	0.146	0.118
4		0.933	0.704	0.323	0.266	0.177
5			0.854	0.677	0.342	0.250
6			0.806	0.658	0.356	0.250
7			0.895	0.774	0.644	0.540
8			0.958	0.854	0.750	0.623
9				0.918	0.823	0.682
10				0.974	0.882	0.750
11					0.933	0.823
12						0.979

LOCATION OF POINTS IN RECTANGULAR STACKS OR DUCTS

	2	3	4	5	6	7	8	9	10	11	12
1	250	167	125	100	833	671	563	456	350	245	142
2	750	500	375	300	250	214	186	167	150	138	125
3		833	525	500	417	357	313	278	250	227	208
4			875	700	563	500	436	389	350	318	292
5				900	750	643	563	500	450	409	375
6					117	736	682	611	550	500	456
7						1000	913	822	740	682	625
8							1000	913	822	740	682
9								1000	913	822	740
10									1000	913	822
11										1000	913
12											1000

ACCEPTABLE MATRICES FOR SQUARE DUCTS

3 x 3	4 x 5	6 x 6
3 x 4	5 x 5	6 x 7
4 x 4	5 x 6	7 x 7

Team Leader / Date: DAVID C. NAVIDAN JR. 06/28/24

QAQC / Date: ANGELO V. GUERRA 06/28/24



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SAT No. 2019-115
SAT No. 2021-93



Revised: 06/28/24



EPA METHOD 1 & 2

GAS VELOCITY and CYCLONIC FLOW CHECK

Facility	PENGUET CORP-ACUPAN CONTRATO MINING PROJECT			Assume Values %BWS = 7.0 MD = 30.0 TM = 35.0
Town/Province	ITOGON, BENGUET			
Source	DUST COLLECTION FACILITY SYSTEM			
Personnel	DLW, AUB, MRC, AMC	Bar. Pressure, inHg	29.18	
Date / Time	06/28/24, 1306	Pitot Coefficient	0.89	

Pitot Tube Leak Check, mmH₂O

230/86

Static Pressure, mmH₂O

-3.0

Measured at which traverse point

A-6

Traverse Point	Velocity Pressure (mmH ₂ O)	Temperature (°C)	Angle Which Yields Null (Degrees)
A-12	15.0	26	10
11	15.0	26	11
10	16.0	26	12
9	16.0	27	16
8	15.0	27	14
7	15.0	27	11
6	15.0	26	12
5	14.0	26	11
4	14.0	26	10
3	15.0	26	10
2	15.0	25	9
1	18.0	25	11
B-12	18.0	26	10
11	19.0	26	10
10	19.0	26	12
9	15.0	28	12
8	15.0	28	14
7	15.0	29	14
6	14.2	29	13
5	14.2	29	12
4	14.2	29	11
3	15.2	30	12
2	15.2	30	12
1	15.2	30	12
Average:	15.0917	27.3	11.9
Ave. V:	3.8826		

Team Leader / Date: DANIEL L. PASILLO JR.

QA/QC DATE: ANGELO V. GUERRA

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SAT No. 2021-03

06/28/24

6/28/24

ENCLOSURE Page 1 of 1



METHOD 3

FYRITE ANALYSIS FIELD DATA

Facility	BENGUET CORP - AQUAMAN CONTRACT MINING PROJECT	Fuel Type	Electricity
Town/Province	ITABON, BENGUET	Fyrite ID	ABF-TU1
Source	DUST COLLECTION FACILITY SYSTEM	Analysis Location	ON-SITE

Run No. <u>1</u>	Bag ID: <u> </u>	Operator (name & sign): <u>DLH</u>		
Run Date <u>06/28/24</u>	Date of Analysis <u>06/28/24</u>	% CO ₂	% O ₂	% N ₂
Run Time	Time of Analysis	Reading (A)	Reading (B)	100-(A+B)
Start <u>1723</u>	Start <u>1730</u>	<u>0</u>	<u>20.0</u>	
		<u>0</u>	<u>20.0</u>	
Stop <u>1737</u>	Stop <u>1743</u>	<u>0</u>	<u>20.0</u>	
Leak check <input checked="" type="checkbox"/>		Average	<u>0</u>	<u>20.0</u>
				<u>80.0</u>

Run No. <u>2</u>	Bag ID: <u> </u>	Operator (name & sign): <u>DLH</u>		
Run Date <u>06/28/24</u>	Date of Analysis <u>06/28/24</u>	% CO ₂	% O ₂	% N ₂
Run Time	Time of Analysis	Reading (A)	Reading (B)	100-(A+B)
Start <u>1759</u>	Start <u>1817</u>	<u>0</u>	<u>20.0</u>	
		<u>0</u>	<u>20.0</u>	
Stop <u>1815</u>	Stop <u>1820</u>	<u>0</u>	<u>20.0</u>	
Leak check <input checked="" type="checkbox"/>		Average	<u>0</u>	<u>20.0</u>
				<u>80.0</u>

Run No. <u>3</u>	Bag ID: <u> </u>	Operator (name & sign): <u>DLH</u>		
Run Date <u>06/28/24</u>	Date of Analysis <u>06/28/24</u>	% CO ₂	% O ₂	% N ₂
Run Time	Time of Analysis	Reading (A)	Reading (B)	100-(A+B)
Start <u>1830</u>	Start <u>1749</u>	<u>0</u>	<u>20.0</u>	
		<u>0</u>	<u>20.0</u>	
Stop <u>1743</u>	Stop <u>1747</u>	<u>0</u>	<u>20.0</u>	
Leak check <input checked="" type="checkbox"/>		Average	<u>0</u>	<u>20.0</u>
				<u>80.0</u>

Team Leader / Date:

DANIEL L. LARIVIERO SR.
06/28/24

QA/QC / Date:

ANGELO V. CUEVARA
06/28/24



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METHOD 4

MOISTURE ANALYSIS DATA SHEET

Facility	Benguet Corp - Acupan Contract Mining Project	Sample Method	5
Town/Province	Itogon, Benguet	Recovery Location	On-site
Source	Dust Collection Facility System	Personnel	AVG, DLN, MRC, AMC

Run Number	1	2	3	
Test Date	6/28/24	6/28/24	6/28/24	
Recovery Date	6/28/24	6/28/24	6/28/24	
Recovered By	AVG	AVG	AVG	
Impinger 1 100mL DI H ₂ O				
Final Weight, g	636.0	632.5	642.5	
Initial Weight, g	629.0	625.5	632.5	
Net Weight, g	7.0	7.0	10.0	
Impinger 2 100mL DI H ₂ O				
Final Weight, g	634.0	630.0	637.5	
Initial Weight, g	632.0	627.0	635.5	
Net Weight, g	2.0	3.0	2.0	
Impinger 3 Empty				
Final Weight, g	509.5	589.5	511.5	
Initial Weight, g	508.5	588.0	509.5	
Net Weight, g	1.0	1.5	2.0	
Impinger 4 200g - 300g Silica Gel				
Final Weight, g	776.0	795.0	781.0	
Initial Weight, g	771.5	790.5	776.5	
Net Weight, g	4.5	4.5	5.5	
Impinger 5				
Final Weight, g				
Initial Weight, g				
Net Weight, g				
Impinger 6				
Final Weight, g				
Initial Weight, g				
Net Weight, g				
Impinger 7				
Final Weight, g				
Initial Weight, g				
Net Weight, g				
Total Catch, g	14.5	16.0	19.5	
Silica Gel Spent, %	5%	5%	5%	
Filter ID #	03245159	12235247	03245145	
Filter Wt.	0.2527	0.2456	0.2533	

Team Leader / Date:

[Signature]
6/28/24

QAQC / Date:

[Signature]
6/28/24



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SAT No. 2021-93





ISOKINETIC FIELD DATA SHEET

METHOD(S) 9

Facility Name	BENGUET COPR - ACUPAN CONTRACT MINING	Run Number	1
Town/Province	ITOGON - BENGUET	Type of APCD Installed	POST-COMBUSTION FILTER
Source	DUST COLLECTION FACILITY SYSTEM	Test Date	06/28/24
Test Personnel	DLN, MLC, MRC, AMIC	Operator Signature	

Filter ID	Tare(s)	Barometric Pressure (in Hg)	Static Pressure (mmHg)	Meterbox			Nozzle		Pilot Tube/Probe		Probe Material
				ID #	Gammis	Delta H@	ID #	Diameter	ID #	Cp	
0319559	0.2573	27.18	-3.0	GMC-01	1.0102	47.66	GMC-01	4.98	GMC-09	0.89	SS
Sample Train Leak Checks											
K Factor	0.987	Vacuum inHg	15.0	Initial		Inlets		Final		Time	%CO ₂
Pilot Leak Checks		Leak Rate, m ³ /m	0							1318	20.0
230/86	Pre-test	Start Volume	421.4110							422.2012	Fyrite System Leak Check
230/87	Post-test	Stop Volume	421.4110							422.2002	Bag ID

Port & Point	Time			DGM Reading (cu. Meter)	Pilot Reading (mmHg)	Delta H calc. (mmHg)	Delta H Actual (mmHg)	Gauge Vacuum (in Hg)	Temperature °C				
	Clock (24-hr)	Test (mins)	Stack						DGM	Probe	Filler	Imp. Exit	
A-12	1323	0	421.4132	15.0	14.8	14.8	2.0	32	32	121	115	10	
11	1326	3	421.4602	15.0	14.8	14.8	2.0	32	32	120	118	15	
10	1329	6	421.4900	15.0	14.8	14.8	2.0	32	32	120	118	13	
9	1332	9	421.5250	15.0	14.8	14.8	2.0	33	33	120	119	11	
8	1335	12	421.5600	15.0	14.8	14.8	2.0	33	33	120	120	11	
7	1338	15	421.5922	15.0	14.8	14.8	2.0	33	34	119	121	11	
6	1342	18	421.6272	15.0	14.8	14.8	2.0	33	34	120	120	9	
5	1344	21	421.6684	14.0	13.6	14.8	2.0	33	34	120	118	9	
4	1347	24	421.7032	14.0	13.8	14.8	2.0	33	34	120	120	10	
3	1350	27	421.7400	12.0	11.8	11.8	2.0	35	35	120	120	12	
2	1353	30	421.7698	12.0	11.8	11.8	2.0	35	35	120	118	12	
1	1356	33	421.8032	12.0	11.8	11.8	2.0	35	36	120	120	12	
B-12	1400	36	421.8384	12.0	11.8	11.8	2.0	37	36	121	121	18	
11	1404	39	421.8674	12.0	11.8	11.8	2.0	37	36	120	120	16	
10	1407	42	421.8764	11.0	10.9	11.0	2.0	37	36	119	121	14	
9	1410	45	421.9296	11.0	10.9	11.0	2.0	37	36	120	120	13	
8	1413	48	421.9548	11.0	10.9	11.0	2.0	37	36	120	121	13	
7	1416	51	421.9904	11.0	10.9	11.0	2.0	37	36	120	122	16	
6	1419	54	422.0222	11.0	10.9	11.0	2.0	37	36	120	120	16	
5	1422	57	422.0584	11.0	10.9	11.0	2.0	36	35	120	118	14	
4	1425	60	422.0924	10.0	9.9	10.0	2.0	36	35	121	122	18	
3	1428	63	422.1202	10.0	9.9	10.0	2.0	36	35	120	122	13	
2	1431	66	422.1462	10.0	9.9	10.0	2.0	36	35	120	122	13	
1	1434	69	422.1764	10.0	9.9	10.0	2.0	36	35	120	122	12	
0	1437	72	422.2060										

Run Time	Total Volume	RMS Delta P
72	0.7728	3.5193

Delta H Ave.	High Vac.	Ta Ave.	Tm Ave.
14.54	2.0	39.9	35.0

Isokinetic %
93.7

Team Leader / Date: DLN 06/28/24

QA/QC Date: ANGILO V. GUAYARRA



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Greentek Environmental Data Co.
SAI No. 2023-02



Greentek Environmental Data Co.
1000 S. Main St., Suite 100
Benguet, Benguet 2400



ISOKINETIC FIELD DATA SHEET

METHOD(S) 5

Facility Name	BENGUET CORP. ANUPAN CONTRACT MINEING PROJECT	Run Number	2
Town/Province	ITOGON, BANGUET	Type of APCD Installed	1255 SCRAPPER
Source	DUST COLLECTION FACILITY SYSTEM	Test Date	06/28/24
Test Personnel	DW, ANB, MZC, SMC	Operator Signature	

Filter ID	Tar(s)	Barometric Pressure (in Hg)	Static Pressure (mmHg)	Meterbox			Nozzle		Pilot Tube/Probe		Probe Material
				ID #	Gamma	Delta Hg	ID #	Diameter	ID #	Cp	
122524	0.149	27.20	-3.0	GAC-01	0102	17.60	6.70	4.95	GP-04	0.89	SS
Sample Train Leak Checks											
K Factor	1.035	Vacuum, inHg	15.0	Initial			Final		Time		%CO ₂
Pilot Leak Checks		Leak Rate, m ³ /m	0								%O ₂
Pre-test	Start Volume	422.2169									
Post-test	Stop Volume	422.2164									
Fyrite System Leak Check											OK
Bag ID											

Port & Point	Time Clock (24-hr)	Test (mins)	DGM Reading (cu. Meter)	Pilot Reading (mmHg)	Delta H calc. (mmHg)	Delta H Actual (mmHg)	Gauge Vacuum (in Hg)	Temperature °C				
								Stack	DGM	Probe	Filter	Imp. Exit
A-17	1454	0	422.7182	12.0	12.4	12.4	2.0	36	36	122	123	16
11	1502	3	422.2530	12.0	12.4	12.4	2.0	36	36	120	122	14
10	1505	6	422.1248	11.6	12.0	12.0	2.0	36	36	119	122	14
9	1508	9	422.3224	11.6	12.0	12.0	2.0	36	36	120	123	14
8	1511	12	422.3522	11.4	12.0	12.0	2.0	36	36	120	119	15
7	1514	15	422.3839	11.0	12.0	12.0	2.0	36	36	120	120	15
6	1517	18	422.4180	11.0	11.4	11.4	2.0	38	38	120	122	14
5	1520	21	422.4564	11.0	11.4	11.4	2.0	38	38	120	118	14
4	1523	24	422.4896	11.0	11.4	11.4	2.0	38	38	120	120	15
3	1526	27	422.5297	11.0	11.4	11.4	2.0	38	38	118	120	14
2	1529	30	422.5578	12.0	12.4	12.4	2.0	38	38	120	120	14
1	1532	33	422.5896	12.0	12.4	12.4	2.0	38	38	120	120	13
A-17	1535	36	422.6060	12.0	12.4	12.4	2.0	38	38	120	120	13
11	1542	39	422.6317	12.0	12.4	12.4	2.0	38	38	118	120	13
10	1545	42	422.6689	12.0	12.4	12.4	2.0	38	38	120	120	14
9	1548	45	422.7112	10.0	10.7	10.4	2.0	40	40	120	118	14
8	1551	48	422.7400	10.0	10.3	10.4	2.0	40	40	120	122	16
7	1554	51	422.7689	10.0	10.3	10.4	2.0	40	40	120	120	16
6	1557	54	422.7986	10.0	10.3	10.4	2.0	40	40	120	118	16
5	1600	57	422.8290	11.0	11.4	11.4	2.0	41	38	120	120	14
4	1603	60	422.8589	11.0	11.4	11.4	2.0	41	38	120	116	13
3	1606	63	422.8870	11.0	11.4	11.4	2.0	41	38	120	120	12
2	1609	66	422.9022	11.0	11.4	11.4	2.0	41	38	118	116	18
1	1612	69	422.9590	11.0	11.4	11.4	2.0	41	38	120	120	13
0	1615	72	422.9859									

Run Time	Total Volume	RMS Delta P
72	0.7672	3.3988

Delta H Ave	High Vac.	Ta Ave.	Tm Ave.
11.63	2.0	38.5	37.9

Isokinetic %
95.2

Team Leader / Date: DANIEL C. O. ANTONIO JR.

QAQC / Date: ANGELO V. GUEVARA

6/28/24



GREEN TEK
Source Calibration Testing Inc.
SAT No. 2250-176
SAT No. 2521-01





ISOKINETIC FIELD DATA SHEET

METHOD(S) 5

Facility Name	BENGUET CURT ALUMINUM CONTRACT MINING INC.	Run Number	3
Town/Province	MUGUJ, BENGUET	Type of APCD Installed	TEST SUPERVISOR
Source	DUST COLLECTION FACILITY SYSTEM	Test Date	06/28/24
Test Personnel	DW. AVILA, MRC. ANC	Operator Signature	

Filter ID	Tarate	Barometric Pressure (in Hg)	Static Pressure (mmHg)	Meterbox			Nozzle		Pilot Tube/Probe		Probe Material
				ID #	Gamma	Delta Hg	ID	Diameter	ID #	Cp	
0328195	0.2533	29.21	-3.0	CMC-01	1.002	47.66	CMC-02	7.98	6.17-04	0.89	SS
Sample Train Leak Checks											
K-Factor	0.027	Vacuum, inHg	15.0	Initial		Interim	Final	Time	% CO ₂	% O ₂	
Pilot Leak Checks		Leak Rate, m/min	0				0	1617	-	-	20.0
710/720	Pre-test	Start Volume	422.9828				422.7991	Fyrite System Leak Check			0.0
720/740	Post-test	Stop Volume	422.5888				422.7991	Bag ID			-

Port & Point	Time Clock (24-Hr)	Test (mins)	DGM Reading (cu. Meter)	Pilot Reading (mmHg)	Delta H static (mmHg)	Delta H Actual (mmHg)	Gauge Vacuum (in Hg)	Temperature °C				
								Stack	DGM	Probe	Filter	Imp. Exit
A-12	1630	0	422.6408	11.0	11.3	11.4	2.0	39	35	121	123	16
11	1633	3	423.0392	11.0	11.3	11.4	2.0	39	35	120	120	19
10	1636	6	423.0602	11.0	11.3	11.4	2.0	39	35	120	120	19
9	1639	9	423.0810	11.0	11.3	11.4	2.0	39	35	120	118	19
8	1642	12	423.1170	13.0	13.3	13.4	2.0	39	35	120	120	16
7	1645	15	423.1580	13.0	13.3	13.4	2.0	39	36	120	118	19
6	1648	18	423.1884	13.0	13.3	13.4	2.0	39	36	120	120	13
5	1651	21	423.2204	13.0	13.3	13.4	2.0	39	36	120	120	13
4	1654	24	423.2590	12.0	12.3	12.4	2.0	40	35	120	120	13
3	1657	27	423.2910	12.0	12.3	12.4	2.0	40	35	120	120	13
2	1700	30	423.3240	12.0	12.3	12.4	2.0	40	35	120	120	13
1	1703	33	423.3560	12.0	12.3	12.4	2.0	40	35	120	118	19
B-12	1706	36	423.3882	12.0	12.3	12.4	2.0	40	36	120	120	15
11	1710	39	423.4214	14.0	14.4	14.4	2.0	40	36	121	121	19
10	1713	42	423.4520	14.0	14.4	14.4	2.0	40	36	120	118	15
9	1716	45	423.4830	14.0	14.4	14.4	2.0	40	36	120	120	19
8	1719	48	423.5276	12.0	12.3	12.4	2.0	40	36	120	120	19
7	1722	51	423.5652	12.0	12.3	12.4	2.0	41	37	120	130	19
6	1725	54	423.6034	12.0	12.3	12.4	2.0	41	37	120	118	19
5	1728	57	423.6306	13.0	13.3	13.4	2.0	41	37	120	120	19
4	1731	60	423.6664	13.0	13.3	13.4	2.0	41	37	120	120	19
3	1734	63	423.7002	13.0	13.3	13.4	2.0	41	37	120	120	13
2	1737	66	423.7362	13.0	13.3	13.4	2.0	42	38	120	120	13
1	1740	69	423.7640	13.0	13.2	13.4	2.0	42	38	120	120	16
0	1743	72	423.7992									

Run Time	Total Volume	RMS Delta P
72	0.8084	3.5273

Delta H Ave.	High Vac.	1s Ave	1m Ave.
12.9	2.0	40.0	36.0

Isokinetic %
96.5

Team Leader / Date: DAVID L. ...

QA/QC Date: ANGELO V. ...



ISO 9001:2015
Certified
Greentek Engineering & Construction Inc.
SAT No. 2024-116
SAT No. 2023-01



6/28/24

METHOD 1

TRAVERSE POINT LOCATIONS

Facility Name	BENBUET CUP-ACUTAN CONTRACT MINING PROJECT
Town/Province	ITOGON BENBUET
Source Tested	ACUTAN CHAMBER NUMBER 2 W/ ACUTAN SURVIVOR
Personnel	DW, ANG, MIG, APR Date 06/29/24

Type of Stack	Circular <input checked="" type="checkbox"/> Rectangle <input type="checkbox"/>
Ports	No. of ports available 2
	No. of ports used 2
	Port inside dia., cm 7.5

Dimensions	Far wall to end of port, cm (a)	67
	Port length, cm (b)	10
Draw a diagram of the test location on the back of the sheet	Stack Dia. or depth, cm (a-b)	57
	Stack width (if rectangle), cm	-
	Equivalent Stack Diameter, cm	-
	Area of stack, m ²	0.299

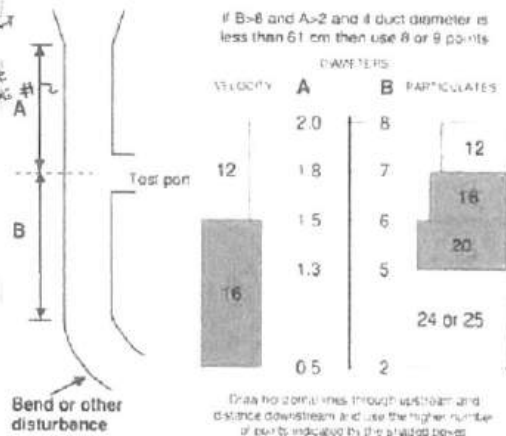
Distance to flow disturbance	Meters	Diameters
Upstream (A)	3.30	4.415
Downstream (B)	1.15	2.020

Minimum # of traverse points required:		
	Particulate traverse	29
	Velocity traverse	29
# of ports used	2	# points/port 12
Number of traverse points used 29		

Point #	Fraction of stack diameter	Dist. From inside wall	Port Length	Dist. From edge of port
1	0.021	1.30	10	11.3
2	0.067	3.81	10	13.8
3	0.118	6.73	10	16.7
4	0.172	10.09	10	20.1
5	0.250	14.25	10	24.3
6	0.356	20.29	10	30.3
7	0.694	36.71	10	46.7
8	0.750	42.75	10	52.8
9	0.823	46.91	10	56.9
10	0.882	50.27	10	60.3
11	0.933	53.20	10	63.2
12	0.979	55.7	10	65.7

* For stacks having dia. bet. 30 to 61 cm, no traverse points shall be within 1.3cm of the stack walls.
* For stacks having dia. greater than 61cm, no traverse point shall be within 2.5cm of the stack walls.

Note: When using 4 points in a circular duct, the probe is marked with only the points for the first half of the full diameter traverse.



Equivalent diameter for rectangular duct:

$$D_e = 2 \times \text{depth} \times \text{width} \div (\text{depth} + \text{width})$$

$$D_e = 2 \times () \times () \div (+) =$$

LOCATION OF POINTS IN CIRCULAR STACK OR DUCTS

Fraction of stack diameter from inside wall						
	2	4	6	8	10	12
1	0.146	0.067	0.044	0.032	0.028	0.024
2	0.854	0.250	0.146	0.105	0.082	0.067
3		0.750	0.296	0.194	0.146	0.118
4		0.933	0.704	0.323	0.266	0.171
5			0.854	0.677	0.342	0.250
6			0.956	0.806	0.658	0.350
7				0.895	0.774	0.640
8				0.958	0.854	0.750
9					0.918	0.820
10					0.974	0.880
11						0.933
12						0.956

LOCATION OF POINTS IN RECTANGULAR STACKS OR DUCTS

Fraction of stack diameter from inside wall												
	2	3	4	5	6	7	8	9	10	11	12	
1	250	167	125	100	83.3	71.4	62.5	55.6	50.0	45.5	42.0	
2		500	333	250	200	166.7	142.9	125.0	111.1	100.0	90.9	
3			500	333	250	200	166.7	142.9	125.0	111.1	100.0	
4				500	333	250	200	166.7	142.9	125.0	111.1	
5					500	333	250	200	166.7	142.9	125.0	
6						500	333	250	200	166.7	142.9	
7							500	333	250	200	166.7	
8								500	333	250	200	
9									500	333	250	
10										500	333	
11											500	
12												500

ACCEPTABLE MATRICES FOR SQUARE DUCTS

3 x 3	4 x 5	6 x 6
3 x 4	5 x 5	6 x 7
4 x 4	5 x 6	7 x 7

Team Leader / Date: DANIEL T. NAVARRO JR. 06/29/24

QAQC / Date: ANGELO J. GUEVARA 06/29/24



DENR ACCREDITED
Source Emission Testing Firm
SAT No. 2019-115
SAT No. 2021-93



8001 Emission Testing
Form E-100 Rev. 01/2018



EPA METHOD 1 & 2

GAS VELOCITY and CYCLONIC FLOW CHECK

Facility	BENGUET WPP-AWITAN CONTRACT MINING PROJECT		Assume Values
Town/Province	ITUBON, BENGUET		
Source	ACIDIFYING CHAMBER #1-2 W/ AND FINE SCRUBBER #1-2		%BWS = 11 2.9/2
Personnel	DW, AIG, MEC, AME, RMC	Bar. Pressure, inHg	27.18
Date / Time	06/29/24, 0920	Pitot Coefficient	0.89

Pitot Tube Leak Check, mmH₂O

270/08

Static Pressure, mmH₂O

- 2.0

Measured at which traverse point

A-6

Traverse Point	Velocity Pressure (mmH ₂ O)	Temperature (°C)	Angle Which Yields Null (Degrees)
A-12	4.0	22	10
11	4.0	22	12
10	4.0	23	12
9	3.6	23	13
8	3.6	23	14
7	3.6	22	10
6	4.0	21	12
5	6.0	21	12
4	6.0	21	14
3	6.2	22	12
2	6.2	22	13
1	6.2	23	11
B-12	3.8	23	12
11	3.8	23	12
10	3.8	24	10
9	3.8	24	9
8	4.0	24	9
7	4.0	26	12
6	4.0	26	12
5	4.6	26	13
4	4.6	21	14
3	5.0	21	14
2	5.0	21	13
1	5.0	21	13
Average:	4.5333	21.9	12.0
Ave. V:	2.1174		

Team Leader / Date:

06/29/24

QA/QC / DATE: ANGELO V. RUEVAKPA

6/29/24



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Source Emission Testing Firm
SAT No. 2019-115
SAT No. 2021-53





METHOD 3

FYRITE ANALYSIS FIELD DATA

Facility	BENIGUIT CORP. AWWWW CONTRACT MINING PROJECT	Fuel Type	FERROSINE
Town/Province	TUGUION, BENIGUIT	Fyrite ID	GDC-T01
Source	AGGREGATING CHAMBER #12 W/AGGREGATE SCREEN	Analysis Location	OP-SITE

Run No. <u>1</u>	Bag ID: <u>BCACH-5-M3/H10-K1</u>	Operator (name & sign): <u>PLN</u>		
Run Date <u>06/29/24</u>	Date of Analysis <u>06/29/24</u>	% CO ₂	% O ₂	% N ₂
Run Time	Time of Analysis	Reading (A)	Reading (B)	100-(A+B)
Start <u>1050</u>	Start <u>1228</u>	<u>0</u>	<u>19.0</u>	
		<u>0</u>	<u>19.0</u>	
Stop <u>1205</u>	Stop <u>1231</u>	<u>0</u>	<u>19.0</u>	
Leak check <input checked="" type="checkbox"/>		Average	<u>0</u>	<u>19.0</u>
				<u>81.0</u>

Run No. <u>2</u>	Bag ID: <u>BCACH-5-M3/H10-K2</u>	Operator (name & sign): <u>PLN</u>		
Run Date <u>06/29/24</u>	Date of Analysis <u>06/29/24</u>	% CO ₂	% O ₂	% N ₂
Run Time	Time of Analysis	Reading (A)	Reading (B)	100-(A+B)
Start <u>1202</u>	Start <u>1402</u>	<u>0</u>	<u>19.0</u>	
		<u>0</u>	<u>19.0</u>	
Stop <u>1358</u>	Stop <u>1405</u>	<u>0</u>	<u>19.0</u>	
Leak check <input checked="" type="checkbox"/>		Average	<u>0</u>	<u>19.0</u>
				<u>81.0</u>

Run No. <u>3</u>	Bag ID: <u>BCACH-5-M3/H10-K3</u>	Operator (name & sign): <u>PLN</u>		
Run Date <u>06/29/24</u>	Date of Analysis <u>06/29/24</u>	% CO ₂	% O ₂	% N ₂
Run Time	Time of Analysis	Reading (A)	Reading (B)	100-(A+B)
Start <u>1411</u>	Start <u>1526</u>	<u>0</u>	<u>19.0</u>	
		<u>0</u>	<u>19.0</u>	
Stop <u>1525</u>	Stop <u>1529</u>	<u>0</u>	<u>19.0</u>	
Leak check <input checked="" type="checkbox"/>		Average	<u>0</u>	<u>19.0</u>
				<u>81.0</u>

Team Leader / Date: DAVID T. NAVARRO JR.

QA/QC / Date: ANGELO V. GUEVARA



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Source Emission Testing Firm
SAT No. 2019-115
SAT No. 2021-05



06/29/24

06/29/24



METHOD 4 MOISTURE ANALYSIS DATA SHEET

Facility	Berguet Corp. - Aupon Contract Mining Project	Sample Method	6
Town/Province	Itogon, Benguet	Recovery Location	On-site
Source	Acidifying Chamber (2) w/ Acid Fume scrubber (2)	Personnel	AVG, DLN, MRC AMC, RMC

Run Number	Moisture Run	1	2	3
Test Date	6/29/24	6/29/24	6/29/24	6/29/24
Recovery Date	6/29/24	6/29/24	6/29/24	6/29/24
Recovered By	AVG	AVG	AVG	AVG
Impinger 1 100ml 3% H ₂ O ₂				
Final Weight, g	639.5	622.0	640.5	623.0
Initial Weight, g	636.5	611.0	629.0	611.5
Net Weight, g	3.0	11.0	11.5	11.5
Impinger 2 100ml 3% H ₂ O ₂				
Final Weight, g	642.0	641.0	644.0	641.5
Initial Weight, g	636.5	638.0	639.5	636.0
Net Weight, g	5.5	3.0	4.5	5.5
Impinger 3 Empty				
Final Weight, g	530.5	532.5	534.5	533.5
Initial Weight, g	528.5	537.5	533.5	530.5
Net Weight, g	2.0	1.0	1.0	3.0
Impinger 4 200g - 300g Silica Gel				
Final Weight, g	776.5	831.0	781.0	836.5
Initial Weight, g	771.0	825.5	776.0	830.5
Net Weight, g	5.5	5.5	5.0	6.0
Impinger 5				
Final Weight, g				
Initial Weight, g				
Net Weight, g				
Impinger 6				
Final Weight, g				
Initial Weight, g				
Net Weight, g				
Impinger 7				
Final Weight, g				
Initial Weight, g				
Net Weight, g				
Total Catch, g	14.0	20.5	21.0	26.0
Silica Gel Spent, %	10%	10%	10%	10%
Filter ID #	-	0424579	0424678	0424561
Filter Wt.	-	0.2482	0.2470	0.2495

Team Leader / Date: DAVID C. P. IVILADO JR.

QA/QC / Date: ANGEL V. GUEVARA



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Source Emission Testing Firm
SAT No. 2019-115
SAT No. 2021-63




06/19/24

6/29/24

ISOKINETIC FIELD DATA SHEET

METHOD(S) 4

Facility Name	PENGUET CORP. ACIDFILL CONTRACT MINING PROJECT	Run Number	MULTIPLE RUNS
Town/Province	IGUON BENGUET	Type of APCD Installed	ACID FUME SCRUBBER
Source	ACIDFILL CHAMBER #2 W/ ACID FUME SCRUBBER	Test Date	Oct 29/29
Test Personnel	DW. AVILA, MRC, INC. / RMC	Operator Signature	

Filter ID	Tare(s)	Barometric Pressure (in Hg)	Static Pressure (mmHg)	Meterbox			Nozzle		Pilot Tube/Probe		Probe Material
				ID #	Gamma	Delta H@	ID#	Diameter	ID #	CP	
-	-	22.19	2.0	GML 011-0102	PT 64	-	-	G0 04	0.89	SS	
Sample Train Leak Checks											Freezes
K Factor	-	Vacuum, inHg	Initial	Interim			Final	Time	%CO ₂	%O ₂	
Pilot Leak Checks	-	Leak Rate, m ³ /m	15.0				2.0	0948	0	19.0	
12/84	Pre-test	Start Volume	423.8006				429.6202	Fynite System Leak Check		012	
23/90	Post-test	Stop Volume	423.8006				429.6202	Bag ID	-	-	

[illegible]

Run Time	Total Volume	RMS Delta P
26	0.8180	2.2361

Delta H Avg.	High Vac	Ts Ave	Tm Ave.
48	2.0	20.7	33.9

Isoclinatic %
—

Team Leader / Date: DAVID L. KANTO 3/2/03

QAQC / Date: ANGELO V. GUBIARRA

6/29/24



DEAR ACCREDITED
Charles Emerson Testing Firm
P.O. Box 2016-176
SAT No. 102630





ISOKINETIC FIELD DATA SHEET

METHOD(S) 5/6

Facility Name	PENGUET CORP. ALUMINUM CENTRAL MINING PROJECT	Run Number	
Town/Province	190000, BENGUET	Type of APCD Installed	Acid Puff Scrubber
Source	ALUMINUM & CHAMBERLAIN #2 W/ACID PUFF SCRUBBER	Test Date	06/29/24
Test Personnel	Mr. AULIN, Mr. AUC, Mr. RMC	Operator Signature	

Filter ID	Time(s)	Barometric Pressure (in Hg)	Static Pressure (mmHg)	Meterbox			Nozzle		Pilot Tube/Probe		Probe Material
				ID #	Gemma	Delta H ₂ O	ID#	Diameter	ID #	CG	
02052902482		27.18	-2.0	6M-01	1.0102	97.66	6M-01	6.09	6M-01	0.89	SS
Sample Train Leak Checks											
		Initial		Interim				Final		Fyrite	
K Factor	7.706	Vacuum, inHg	15.0					2.0	100	%CO ₂	17.0
Pilot Leak Checks		Leak Rate, m ³ /m						0			
220/80	Pre-test	Start Volume		429.6234				425.5234		Fyrite System Leak Check	
220/80	Post-test	Stop Volume		429.6234				425.5234		OK	
Bag ID: BLACK-5-429/410-42											

Port & Point	Time		DGM Reading (cu. Meter)	Pilot Reading (mmHg)	Delta H ₂ O (mmHg)	Delta H ₂ O Actual (mmHg)	Gauge Vacuum (in Hg)	Temperature °C				
	Clock (24-hr)	Test (mins)						Stack	DGM	Probe	Filter	Imp. Exit
A-12	1050	0	429.6234	3.4	12.6	12.6	2.0	20	38	123	117	18
11	1053	3	429.6234	3.4	12.6	12.6	2.0	20	38	123	122	18
10	1056	6	429.7022	3.4	12.6	12.6	2.0	20	38	122	122	17
9	1059	9	429.7302	3.4	12.6	12.6	2.0	20	38	122	120	17
8	1102	12	429.7550	3.4	12.6	12.6	2.0	22	38	122	120	16
7	1105	15	429.7826	5.2	14.3	14.4	2.0	22	38	120	118	16
6	1108	18	429.8052	5.2	14.3	14.4	2.0	23	38	120	120	13
5	1111	21	429.8204	5.8	21.5	21.6	2.0	23	38	120	118	13
4	1114	24	429.9120	5.8	21.5	21.6	2.0	23	38	120	120	13
3	1117	27	429.9610	5.8	21.5	21.6	2.0	23	38	120	118	12
2	1120	30	429.9910	5.8	21.5	21.6	2.0	25	36	120	120	12
1	1123	33	429.9920	5.8	21.5	21.6	2.0	25	36	118	119	15
12-12	1124	36	429.9800	4.4	16.3	16.4	2.0	25	36	120	122	15
11	1132	39	429.1224	4.4	16.3	16.4	2.0	27	38	120	121	14
10	1135	42	429.1622	4.4	16.3	16.4	2.0	28	38	120	118	14
9	1138	45	429.2048	4.4	16.3	16.4	2.0	30	38	120	121	15
8	1141	48	429.2969	4.4	16.3	16.4	2.0	30	38	120	120	14
7	1144	51	429.3672	4.2	15.6	15.6	2.0	32	38	120	118	14
6	1147	54	429.3082	4.2	15.6	15.6	2.0	32	38	120	120	14
5	1150	57	429.3420	4.2	15.6	15.6	2.0	32	38	120	118	15
4	1153	60	429.3746	4.2	15.6	15.6	2.0	34	38	120	120	15
3	1156	63	429.4164	4.0	14.8	14.8	2.0	34	38	120	118	15
2	1159	66	429.4592	4.0	14.8	14.8	2.0	34	38	120	120	14
1	1206	69	429.4870	4.0	14.8	14.8	2.0	34	38	120	118	13
0	1209	72	429.5234									

Run Time	Total Volume	RMS Delta P
72	0.8986	2.1009

Delta H ₂ O Avg.	High Vac.	T _g Avg.	T _m Avg.
16.6	2.0	26.7	25.4

Isokinetic %
55.1

Team Leader / Date: DAVID L. WARDEN JR.
06/29/24

QA/QC / Date: ANGELO V. GUEVARA



QMS APPROVED
QA/QC Director's Reading Pro
SAT No. 2019-15
SAT No. 201-03



6/29/24



ISOKINETIC FIELD DATA SHEET

METHOD(S) 5/6

Facility Name	BENEFIT CORP. AIRPORT CONTRACT MINING PROJECT	Run Number	2
Town/Province	ITABON, BEN GUET	Type of APCD Installed	AUDFUME SCALP 3.4.2
Source	AUDFUME CHAMBER #2 W/ AUDFUME SCALP	Test Date	06/29/24
Test Personnel	DW, AUG, MRC, AMR, RMC	Operator Signature	

Filter ID	Time(s)	Barometric Pressure (in Hg)	Static Pressure (mmHg)	Motorbox			Nozzle		Pilot Tube/Probe		Probe Material
				ID #	Gases	Delta Hg	ID #	Diameter	ID #	Cp	
0195A	0.20m	27.19	-2.0	GMC-01	1.010L	27.66	GMC-01	6.04	GP-04	0.84	SS
Sample Train Leak Checks											
K Factor	3.60m	Vacuum, inHg	15.0	Initial			Final			Time	%CO ₂
Pilot Leak Checks	Leak Rate, m ³ /m		0							0	19.0
720/21	Pre-test	Start Volume	425.5172							426.9805	Fyrite System Leak Check
720/21	Post-test	Stop Volume	425.5172							426.9805	Bag ID

Port & Point	Clock (24-hr)	Time (min)	DGM Reading (cu. Meter)	Pilot Reading (mmHg)	Delta H calc. (mmHg)	Delta H Actual (mmHg)	Gauge Vacuum (in Hg)	Temperature °C				
								Stack	DGM	Probe	Filter	Imp. Exit
A-17	1252	0	425.5288	5.0	17.4	17.4	2.0	38	38	122	122	16
11	1245	3	425.5689	5.0	17.4	17.4	2.0	38	38	120	123	18
10	1248	6	425.6012	5.0	17.4	17.4	2.0	38	38	120	118	16
9	1251	9	425.6372	5.0	17.3	17.4	2.0	38	38	120	122	14
8	1254	12	425.6722	5.0	17.3	17.4	2.0	38	38	115	122	14
7	1257	15	425.7196	5.0	17.3	17.4	2.0	38	38	120	120	15
6	1300	18	425.7527	5.0	17.3	17.4	2.0	38	38	120	120	15
5	1303	21	425.7984	5.2	18.7	18.8	2.0	38	38	120	121	15
4	1306	24	425.8339	5.2	18.7	18.8	2.0	38	39	120	122	14
3	1309	27	425.8700	5.2	18.7	18.8	2.0	39	39	120	120	14
2	1312	30	425.9190	5.0	25.2	25.2	2.0	39	39	120	120	15
1	1315	33	425.9690	5.0	25.2	25.2	2.0	39	39	120	120	15
B-12	1318	36	426.0156	5.0	17.4	18.0	2.0	40	39	108	115	16
11	1325	39	426.0564	5.0	17.9	18.0	2.0	40	39	115	118	14
10	1328	42	426.1002	5.0	17.9	18.0	2.0	40	39	120	120	14
9	1331	45	426.1352	5.0	17.9	18.0	2.0	40	39	120	118	13
8	1334	48	426.1738	4.8	17.3	17.4	2.0	41	38	130	118	13
7	1337	51	426.2084	4.8	17.3	17.4	2.0	41	38	120	120	14
6	1340	54	426.2540	4.8	17.3	17.4	2.0	41	38	120	118	14
5	1343	57	426.2990	4.8	17.3	17.4	2.0	41	37	120	120	13
4	1346	60	426.3400	4.2	15.2	15.2	2.0	40	37	120	120	13
3	1349	63	426.3698	4.2	15.2	15.2	2.0	40	37	120	118	13
2	1352	66	426.4070	4.2	15.2	15.2	2.0	40	37	120	118	12
1	1355	69	426.4490	4.2	15.2	15.2	2.0	40	37	120	120	14
0	1358	72	426.4804									

Run Time	Total Volume	RMS Delta P
72	0.9916	2.001

Delta H Avg.	High Vac.	Ts Avg.	Tm Avg.
7.6	2.0	39.3	38.1

Isokinetic %
92.5

Team Leader / Date: DAVID L. PARRINO

QA/QC / Date: ANGELO V. GUEVARA



GREEN TEK
Environmental Solutions
2017 No. 2015-100
2017 No. 2015-100



06/29/24

06/29/24



ISOKINETIC FIELD DATA SHEET

METHOD(S) 5/C

Facility Name	BENGUET CORP - ANUPAN CONTRACT MINING PROJECT	Run Number	3
Town/Province	ITD604, BENGUET	Type of APCD Installed	MID FUME SCAVENGER
Source	ACID FUMING CHARACTERIZATION / ACID FUME SCAVENGER	Test Date	06/29/24
Test Personnel	DLN, AVL, MRC, JMC, BMC	Operator Signature	

Filter ID	Time(s)	Barometric Pressure (in Hg)	Static Pressure (mmHg)	Mistbox			Nozzle		Pilot Tube/Probe		Probe Manometer
				ID #	Gonima	Delta H (mmHg)	ID #	Diameter	ID #	Cp	
0121 S61	0.2955	27.70	-2.0	GMC-01	1.0/0.2	47.60	4-TT-03	6.09	GP-04	0.84	SI
Sample Train Leak Checks											
K Factor	3.984	Vacuum, inHg	Initial	Interim			Final		Time	%CO ₂	%O ₂
Pilot Leak Checks	Leak Rate, m ³ /hr		0				2.0		1402	0	17.0
Pre-test	Start Volume		426.4909				427.4948		Fume System Leak Check		
Post-test	Stop Volume		426.1840				427.4948		Bag ID BCACMP-CM3, 410-13		

Port & Point	Clock (24-hr)	Time (mins)	DGM Reading (cu. Meter)	Pilot Reading (mmHg)	Delta H calc. (mmHg)	Delta H Actual (mmHg)	Gauge Vacuum (in Hg)	Temperature °C				
								Stack	DGM	Probe	Filter	Imp. Exit
A-12	1411	0	426.4910	3.4	11.9	12.0	2.0	34	34	123	120	16
11	1414	3	426.5234	3.4	11.9	12.0	2.0	34	34	119	120	14
10	1417	6	426.5546	3.4	11.9	12.0	2.0	34	34	122	123	14
9	1420	9	426.5890	3.4	11.9	12.0	2.0	34	34	118	119	15
8	1423	12	426.6204	5.0	12.4	12.4	2.0	36	34	120	120	13
7	1426	15	426.6560	5.0	12.4	12.4	2.0	36	36	120	120	14
6	1429	18	426.6952	5.0	12.4	12.4	2.0	36	36	120	118	13
5	1432	21	426.7303	5.0	12.4	12.4	2.0	38	36	120	120	13
4	1435	24	426.7782	5.0	12.4	12.4	2.0	38	36	118	113	13
3	1438	27	426.8180	5.0	12.4	12.4	2.0	38	36	120	120	12
2	1441	30	426.8600	7.2	25.1	25.2	2.0	39	37	120	120	12
1	1444	33	426.8940	7.2	25.1	25.2	2.0	38	37	120	120	12
B-12	1447	36	426.9414	7.2	25.1	25.2	2.0	38	37	120	120	12
11	1452	39	426.9920	7.2	25.1	25.2	2.0	38	37	120	118	17
10	1455	42	427.0330	6.0	20.9	21.0	2.0	38	37	120	120	16
9	1458	45	427.0769	6.0	20.9	21.0	2.0	38	37	120	118	14
8	1501	48	427.1184	6.0	20.9	21.0	2.0	38	37	120	120	14
7	1504	51	427.1630	6.0	20.9	21.0	2.0	38	37	120	118	14
C	1507	54	427.2069	5.2	18.1	18.2	2.0	39	37	120	120	16
5	1510	57	427.2458	5.2	18.1	18.2	2.0	39	38	120	120	16
4	1513	60	427.2864	5.2	18.1	18.2	2.0	39	38	120	120	14
3	1516	63	427.3309	5.2	18.1	18.2	2.0	39	38	120	122	16
2	1519	66	427.3650	5.0	17.4	17.4	2.0	39	38	120	120	14
1	1522	69	427.4030	5.0	17.4	17.4	2.0	39	38	120	120	14
0	1525	72	427.4446									

Run Time	Total Volume	RMS Delta P
72	0.9536	2.2882

Delta H Ave	High Vac.	Ts Ave.	Tm Ave.
18.5	2.0	37.4	36.4

Isokinetic %
94.7

Team Leader / Date: DAVID L. LUCAS JR. 06/29/24

QA/QC / Date: ANGEL V. GUDARRA 06/29/24



DEAN ACCREDITED
Scales Calibration Testing
SAT No. 2018-115
SAT No. 0021-30





METHOD 7 FLASK SAMPLE AND RECOVERY DATA

Facility DENGUET CORPORATION - ACUDAN CONTRACT MINING
Town/Province BALABAC, VIRAC, ITDION DENAGUET
Source ACIDIFYING CHAMBER NO. 2 W/ACID FUME
Personnel AVD, MRC, DLA, ADC, RMC
Test Date 6/29/24

Absorbing Solution, Volume, ml 25
Heated Probe? (check) Yes ☒ No ☐ "If no, explain in "Remarks"
Filter Used? (check) Yes ☒ No ☐ "If no, explain in "Remarks"
Remarks _____

Run Number	Sample ID (From Sample Label)	Flask ID Number	Flask Volume (mL)	Sample Collection Information					Shaken For 5mins?
				Bar. Pressure (in Hg) Date Performed: <u>6/29/24</u>	Leak Check Q ₁ (inHg/min)	Evacuated Pressure P _{g1} (inHg)	Flask Abs Press Initial P _i , P _{bar} - P _{g1} (inHg)	Flask Temp (°C)	
1	DCACMP-5-M7-R1A	WF 11	2226.50	OK	25.11	1.09	29.2	1132	Yes
	DCACMP-5-M7-R1B	WF 12	2227.50	OK	25.79	1.41	28.6	1137	Yes
	DCACMP-5-M7-R1C	WF 13	2226.40	OK	25.82	1.52	28.9	1142	Yes

Sample Recovery Information				
Bar. Pressure (in Hg) Date: <u>6/29/24</u>	Shaken for 2mins?	Sample Recovery Time ² (24-hour)	Final Pressure P _{g1} (inHg)	Flask Abs Press Initial P _i , P _{bar} - P _{g1} (inHg)
By (in): <u>DLW</u>	Yes	1003	1.02	26.10
	Yes	1006	1.34	29.78
	Yes	1009	1.25	25.87

				Bar. Pressure (in Hg) <u>27.18</u>		System Leak Chk: <u>OK</u>		Pre <input checked="" type="checkbox"/>	Post <input checked="" type="checkbox"/>
				Date Performed: <u>6/29/24</u>		By (initials) <u>ATC</u>			
Run No.	Sample ID	Flask ID	Vol. (mL)	Leak Chk.	(in-Hg)	Temp. (°C)	Time	Shaken	
2	DCACMP-5-M7-R2A	WF 14	2221.50	OK	25.95	1.2	28.9	1324	Yes
	DCACMP-5-M7-R2B	WF 15	2221.40	OK	25.74	1.46	29.9	1329	Yes
	DCACMP-5-M7-R2C	WF 16	2227.20	OK	26.09	1.15	28.7	1334	Yes

Sample Recovery Information				
Bar. Pressure (in Hg) Date: <u>6/29/24</u>	Shaken for 2mins?	Sample Recovery Time ² (24-hour)	Final Pressure P _{g1} (inHg)	Flask Abs Press Initial P _i , P _{bar} - P _{g1} (inHg)
By (in): <u>DLW</u>	Yes	1012	1.16	25.96
	Yes	1015	1.41	25.71
	Yes	1018	1.12	26.0

				Bar. Pressure (inHg) 27.19 Date Performed: 6/29/24		System Leak Check By (In): AMC - LMC		Pre - Post -	
Run No.	Sample ID	Flask ID	Vol. (mL)	Leak Chk. (inHg)	Temp. (°C)	Time	Shakyn		
3	DCACMP - 5 - M7-R3A	WF 17	2227.50	OK	25.86	1.31	28.9	1418	Yes
	DCACMP - 5 - M7-R3B	WF 18	2225.00	OK	25.77	1.4	28.8	1418	Yes
	DCACMP - 5 - M7-R3C	WF 19	2220.10	OK	25.59	1.58	28.5	1423	Yes

Sample Recovery Information				
Bar. Pressure (in Hg) Date: <u>6/29/24</u>	Shaken for 2mins?	Sample Recovery Time ² (24-hour)	Final Pressure P _{g1} (inHg)	Flask Abs Press Initial P _i , P _{bar} - P _{g1} (inHg)
By (in): <u>DLW</u>	Yes	1021	1.27	25.85
	Yes	1024	1.36	25.76
	Yes	1027	1.58	25.54

Source Oxygen % Concentration? 19.0%
Was Additional Oxygen Introduced to the Flask? (circle) No

¹P_{g1}, the initial flask pressure, must be evacuated to within 3 inches of mercury (inHg) of the absolute pressure (Barometric Pressure).
²Additional oxygen should be introduced to the flask if the Source O₂ is below 25.
³Flask must be stand for 16 hours or greater after sampling before recovery can be performed.



DENR ACCREDITED
Source Recovery Testing Firm
SAT No. 2015-11
SAT No. 2014-03



Team Leader / Date: DAVID L. NAVIDAN JR.

QAQC / Date: ANGEL V. GONZALEZ

6/29/24

“APPENDIX C”

PROCESS DATA

GREENTEK MONITORING LOGSHEET

Facility Information

FACILITY NAME
LOCATION
PCO NAME
TELEPHONE/FAX NUMBER
EMAIL ADDRESS
DATE OF SAMPLING
STACK TEST PERSONNEL

Benguet Corporation - Acupan Contract Mining Project
(BC-ACUP Assay Laboratory & Mill Refinery)

Palatoc, Virac, Ilocos, Benguet
Ms. Jemimah R. Galayog
0917 - 136 - 1496
June 28, 2024
AVE, DLN, MPE, ADM

Source Description

SOURCE TESTED (ID or NAME used by Facility)
SOURCE TYPE (Genset, Boiler, etc.)
BRAND (Made by)
RATED CAPACITY (with units: BHp, MW, MT/hr., etc.)
DATE CONSTRUCT STARTED (on source) month/year
DATE OF ANY MODIFICATION (that increased emissions)
HAS THE SOURCE BEEN MOVED (Specify Date)
EXISTING (const. before 11/25/00) or NEW (or modified) SOURCE
OPERATION (estimated hours per year for source)
TYPE OF APCD* (baghouse, ESP, cyclone, scrubber, etc.)
DATE OF APCD INSTALLED
TOTAL STACK HEIGHT (m, ft., etc.)
STACK ORIENTATION

Dust Collection Facility System
(1) Jaw Crusher, (2) Roller Crushers, (2) Pulverizers
Stuntant, BICO
0.06 MT/hr, 0.06 MT/hr, 0.04 MT/hr
✓ SEPT. 2012
N/A
YES / NO If Yes, Date Moved:
EXISTING SOURCE / NEW SOURCE
✓ 550 HRS / YEAR
Dust Scrubber
✓ SEPT. 2012
3m
VERTICAL / HORIZONTAL ✓ w/ w/o Cover

* APCD - Air Pollution Control Device

* This item is critical for determining the standards that apply to the emission point

Fuel Information

TYPE OF FUEL USED, %S (during sampling)
ORIGINAL FUEL USED, %S
DATE FUEL CHANGE?
ACTUAL FUEL CONSUMPTION DURING SAMPLING (liters, kg, etc.)
* Provide Certificate of Fuel Analysis for strict compliance with DENR

Electricity
Electricity
N/A

Process Information

OPERATING RATE DURING TESTING?
IS THE APCD OPERATING DURING SAMPLING?
IS PROCESS LOGSHEET PROVIDED BY THE PLANT?
PRODUCTION OUTPUT DURING SAMPLING

100%
YES / NO
YES / NO
✓ 30 KILOGRAMS

NOTES:

W/ EMB - CAR representative: Earth & Environmental
EMED

Information recorded/gathered by:

ANGELO V. GUBARRA

Name and signature of GEPC personnel on site

Information supplied by:

JEMIMAH R. GALAYOG

Name and signature of facility representative



DENR ACCREDITED
Source Emission Testing Firm
SAT No. 2019-115
SAT No. 2021-93



GREENTEK MONITORING LOGSHEET

Facility Information

FACILITY NAME
LOCATION
PCO NAME
TELEPHONE/FAX NUMBER
EMAIL ADDRESS
DATE OF SAMPLING
STACK TEST PERSONNEL

Benguet Corporation - Aupan contract Mining Project
Balatoc, Itogon, Benguet
Ms. Jemimah R. Gabyang
0917-136-1496
June 29, 2024
AVG, DLN, MPC, AMC, RNC

Source Description

SOURCE TESTED (ID or NAME used by Facility)
SOURCE TYPE (Genset, Boiler, etc.)
BRAND (Made by)
RATED CAPACITY (with units: BHp, MW, MT/hr., etc.)
DATE CONSTRUCT STARTED (on source) month/year
DATE OF ANY MODIFICATION (that increased emissions)
HAS THE SOURCE BEEN MOVED (Specify Date)
EXISTING (const. before 11/25/00) or NEW (or modified) SOURCE
OPERATION (estimated hours per year for source)
TYPE OF APCD* (baghouse, ESP, cyclone, scrubber, etc.)
DATE OF APCD INSTALLED
TOTAL STACK HEIGHT (m, ft., etc.)
STACK ORIENTATION

Acidifying Chamber # 2 w/ Acid Fume
Scrubber

Acid chamber
Fabricated

N/A
2003
N/A

YES / ☒ NO If Yes, Date Moved:

EXISTING SOURCE / ☒ NEW SOURCE

✓ 514.85 HRS.

5013 CFM Verantic Acid Fume Scrubber System No. 2
2013

☒ VERTICAL / HORIZONTAL w/ ☒ w/o Cover

* APCD - Air Pollution Control Device

* This item is critical for determining the standards that apply to the emission point

Fuel Information

TYPE OF FUEL USED, %S (during sampling)
ORIGINAL FUEL USED, %S
DATE FUEL CHANGE?
ACTUAL FUEL CONSUMPTION DURING SAMPLING (liters, kg, etc.)

* Provide Certificate of Fuel Analysis for strict compliance with DENR

KEROSENE

KEROSENE

N/A

✓ 153.1 LITERS

Process Information

OPERATING RATE DURING TESTING?
IS THE APCD OPERATING DURING SAMPLING?
IS PROCESS LOGSHEET PROVIDED BY THE PLANT?
PRODUCTION OUTPUT DURING SAMPLING

100%

YES / NO

YES / ☒ NO

✓ 22.82 02 OF 600

NOTES:

Information recorded/gathered by:

ANGELO N. GUEVARRA

Name and signature of GEPC personnel on site

Information supplied by:

JEMIMAH R. GABYANG

Name and signature of facility representative



DENR ACCREDITED
Source Emission Testing Firm
SAT No. 2019-115
SAT No. 2021-93



Intertek

Total Quality. Assured.



Customer: **CHEVRON PHILIPPINES, INC.**
Location: **Batangas Terminal**

Reference: **0060-0424-CVX**

Sample No.: **BT-0089-04/24**

Date Received: **April 14, 2024**

Date Tested: **April 14, 2024**

Date Released: **April 14, 2024**

Sample Description As Declared:

Product: **Kerosene**
Tank: **110**
Batch Number: **5**
Sample Type: **Composite (U, M, L)**

Sampling Date: **April 14, 2024**

Sampling Time: **2110H**

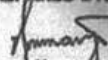
The above sample was tested in accordance with the test method(s) stipulated, with the result(s) as follows:

TEST CONDUCTED	METHOD	UNIT	SPECIFICATION	RESULT
Appearance	Visual Inspection	-	Clear and Bright	Clear and Bright
*Burning Quality	ASTM D187	-	Pass	Pass
Color, Saybolt	ASTM D156	-	+16 Min	+24
Density at 15°C	ASTM D4052	kg/L	Report	0.7934
*Distillation, Recovered Basis				
Initial Boiling Point	ASTM D86	°C	Report	148.0
10% Recovered	ASTM D86	°C	205 Max	168.0
50% Recovered	ASTM D86	°C	Report	194.0
90% Recovered	ASTM D86	°C	Report	240.0
Final Boiling Point	ASTM D86	°C	300 Max	262.0
Flash Point, TCC	ASTM D56	°C	38 Min	39.5
*Smoke Point	ASTM D1322	mm	20 Min	24.0
*Sulfur Content	ASTM D4294	% mass	0.30 Max	0.209

Remarks:

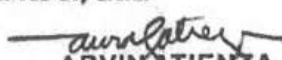
1. The above results are descriptive of the sample tested and will be descriptive of the entire batch if the sample taken is fair and the proper procedures have been followed.
2. *The result indicated is traceable to Certificate of Quality with Report No. YL24-20027053-D (MT San Jack Voyage Number 90015).

PREPARED BY:


Raffy M. Marga
Registered Chemist
PRC License No. 0013859



RECEIVED BY/ DATE:


ARVIN ATIENZA
Lead Operator, Confined
Oil Movements and Shipping

APPROVED BY:

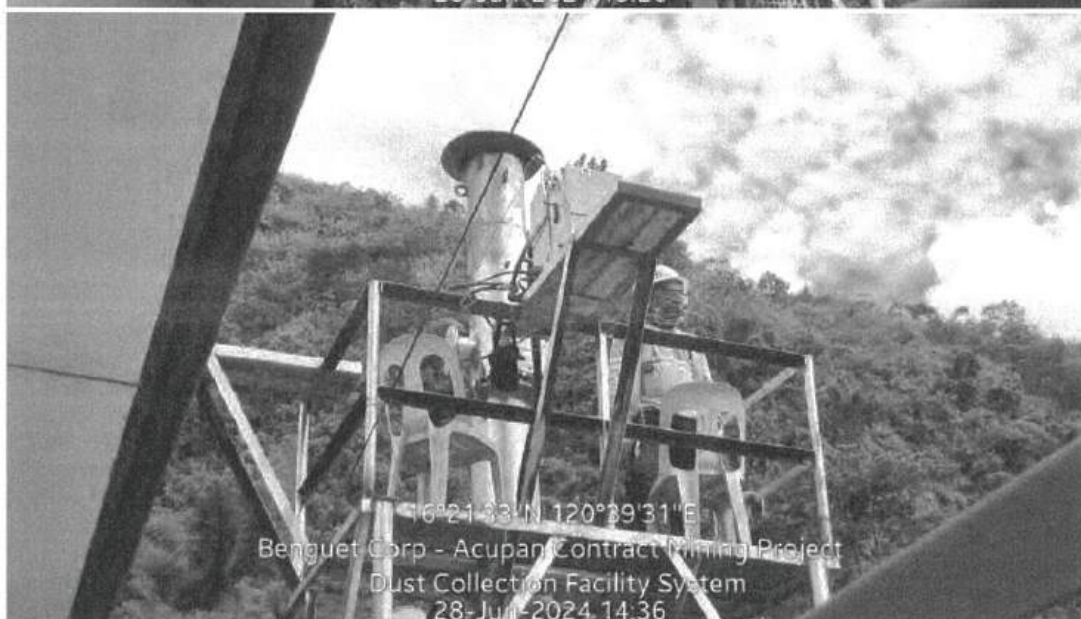
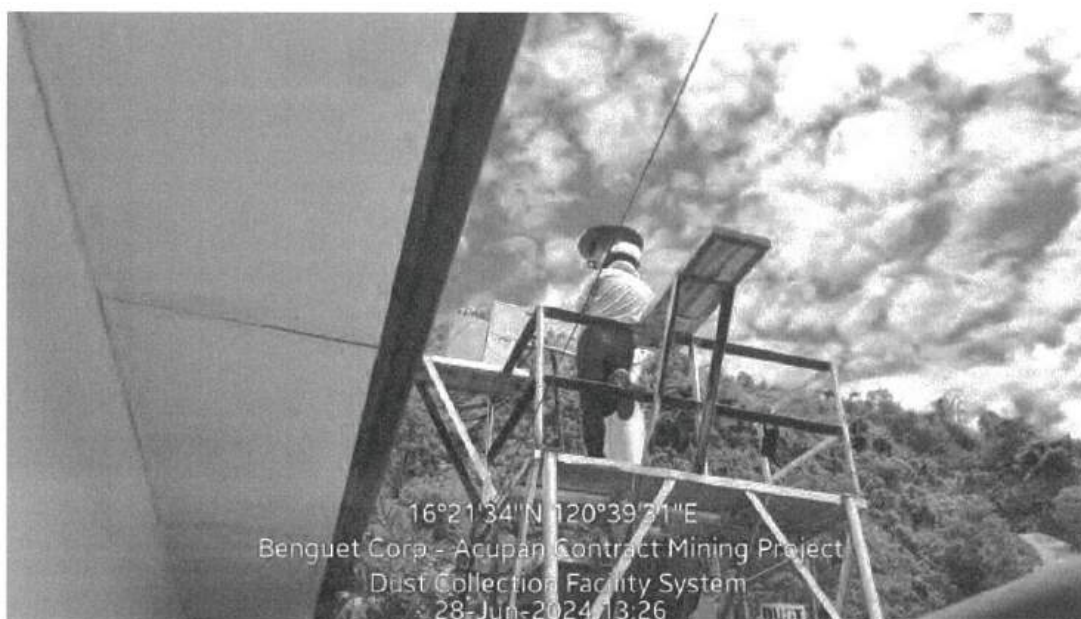
Original Copy Signed
Manuel A. Bringuela, Jr.
Registered Chemist
PRC License No. 0006646

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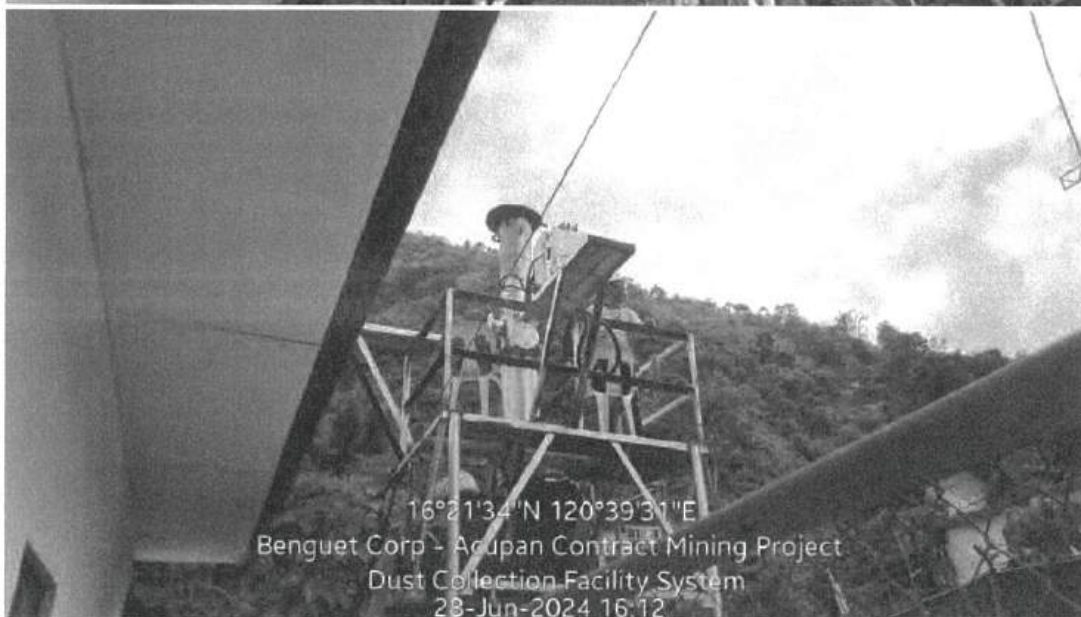
Attention is drawn to the terms and conditions which was agreed and signed upon together with the proposal or test application form.

Intertek Testing Services Philippines, Inc.
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Tel +63 2 8819 5841 to 47 / +63 2 8887 9320 to 23 / +63 2 8894 4151 Fax +63 2 8813 1850
Intertek.com

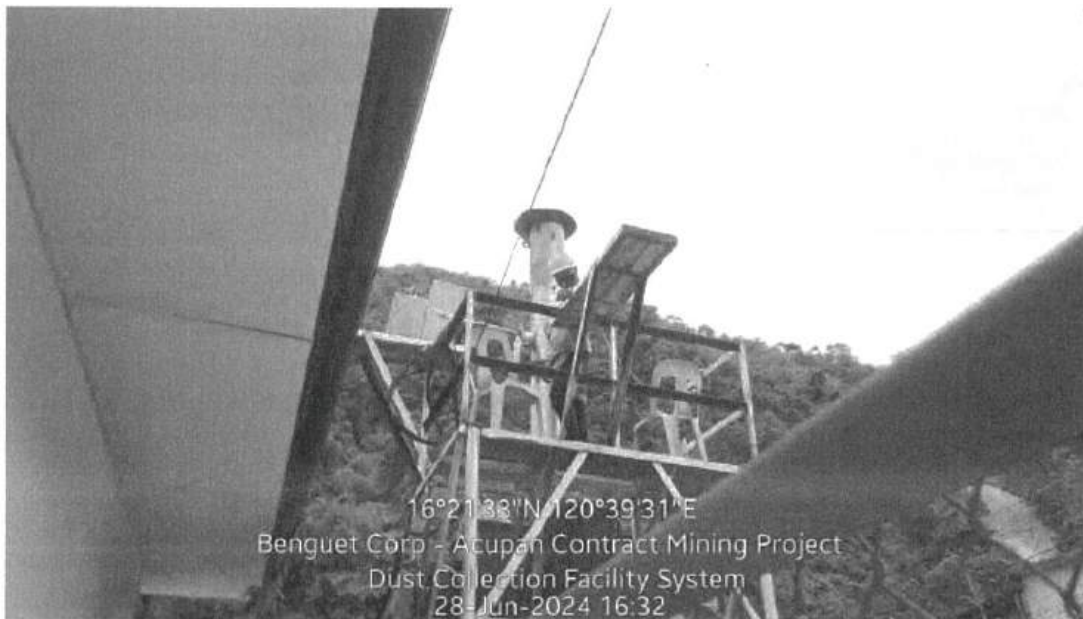
One (1) unit 46.58 m³/min Krypton Dust Collection Facility System
Stack Sampling for Methods 5 – Run 1



One (1) unit 46.58 m³/min Krypton Dust Collection Facility System
Stack Sampling for Methods 5 – Run 2



One (1) unit 46.58 m³/min Krypton Dust Collection Facility System
Stack Sampling for Methods 5 – Run 3



GREENTEK

Environmental Phils.Co.

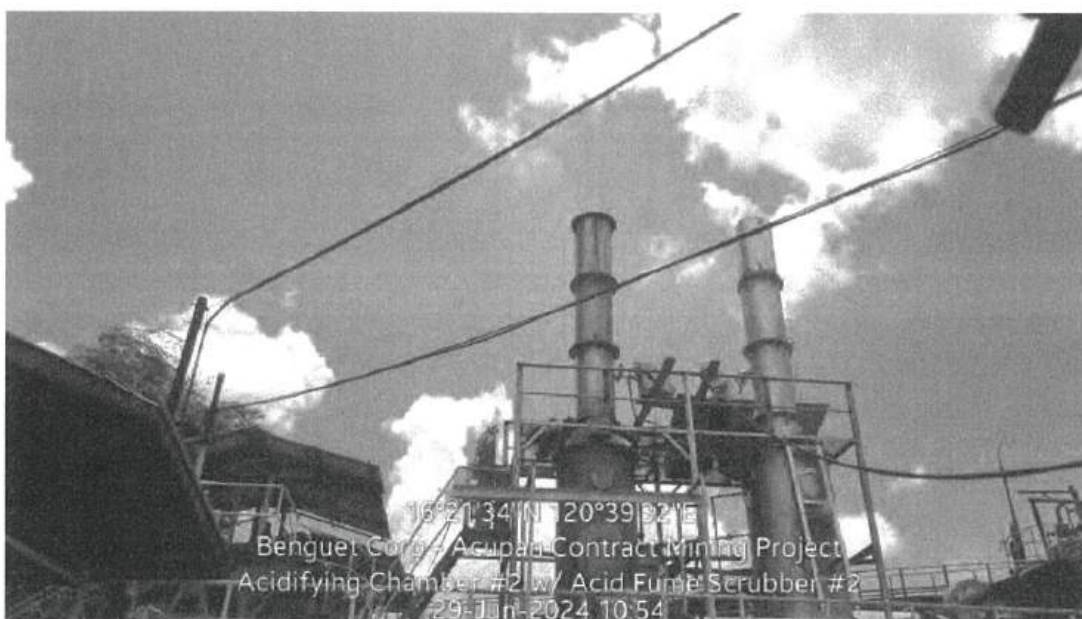
Benguet Corporation – Acupan Contract Mining Project

Reference No.: GEPC-SST-2406-040

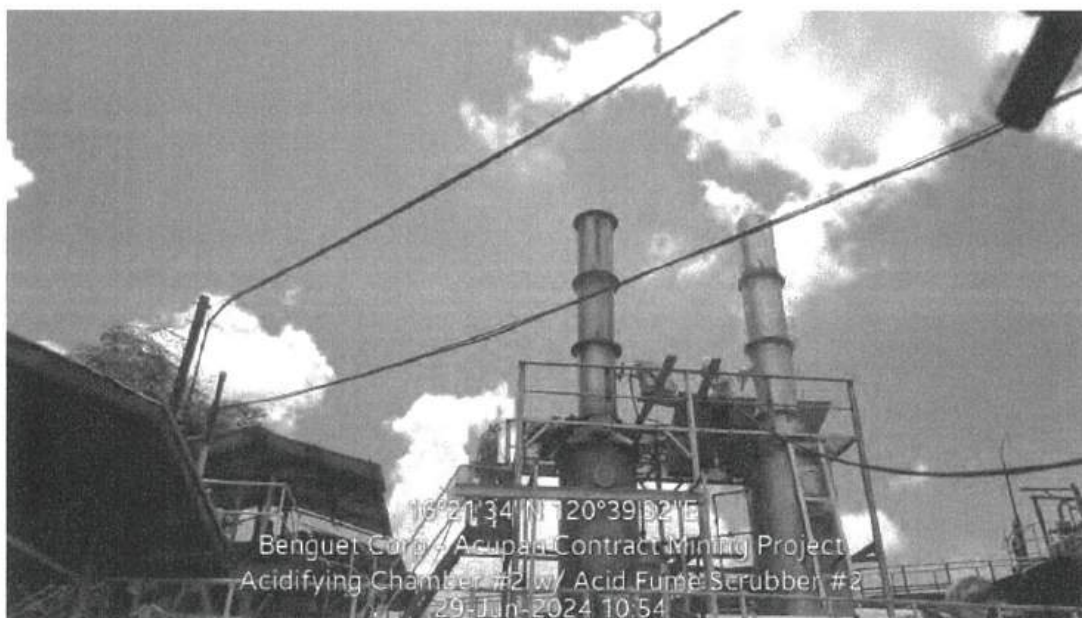
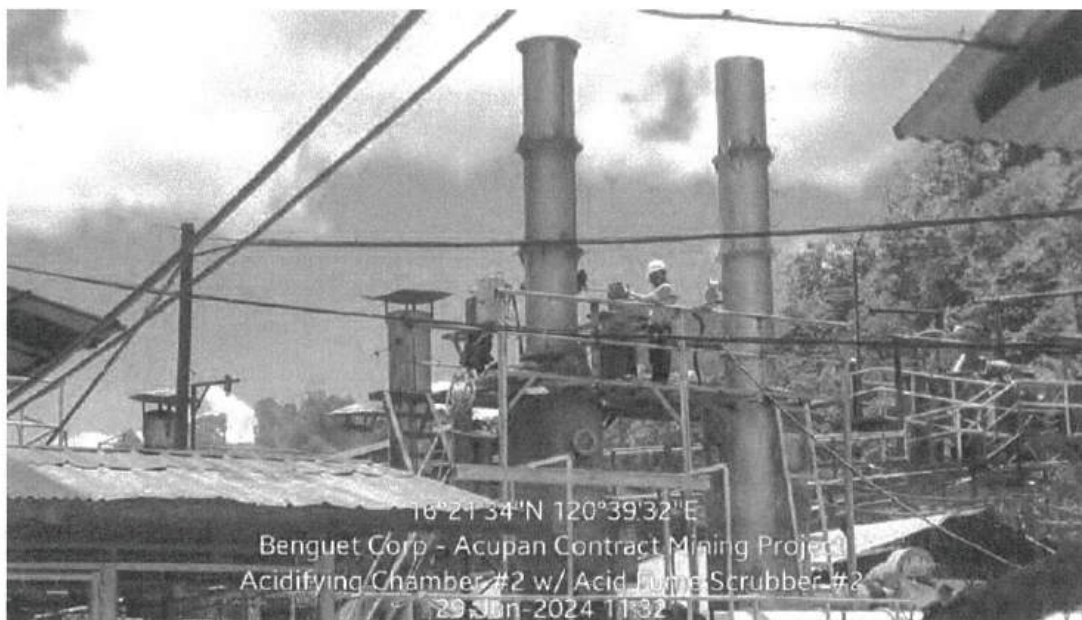
One (1) unit 5,013CFM Verantis Acid Fume Scrubber



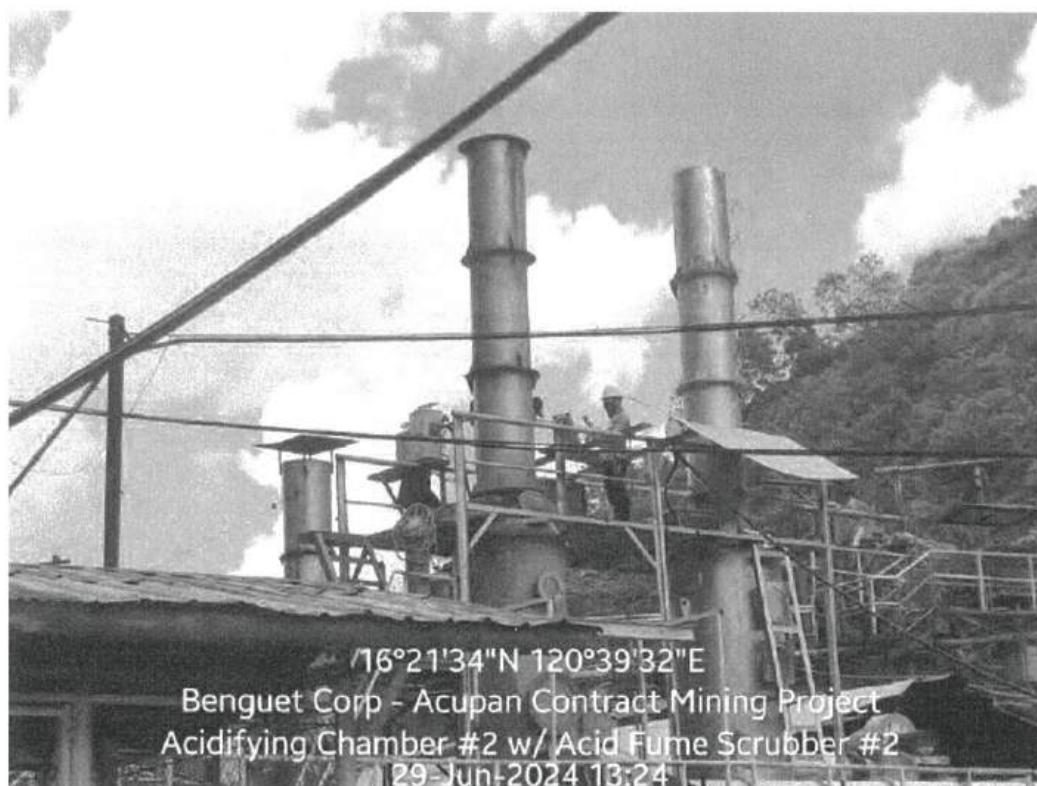
**One (1) unit 5,013CFM Verantis Acid Fume Scrubber
Stack Sampling for Methods 5 – Run 1**



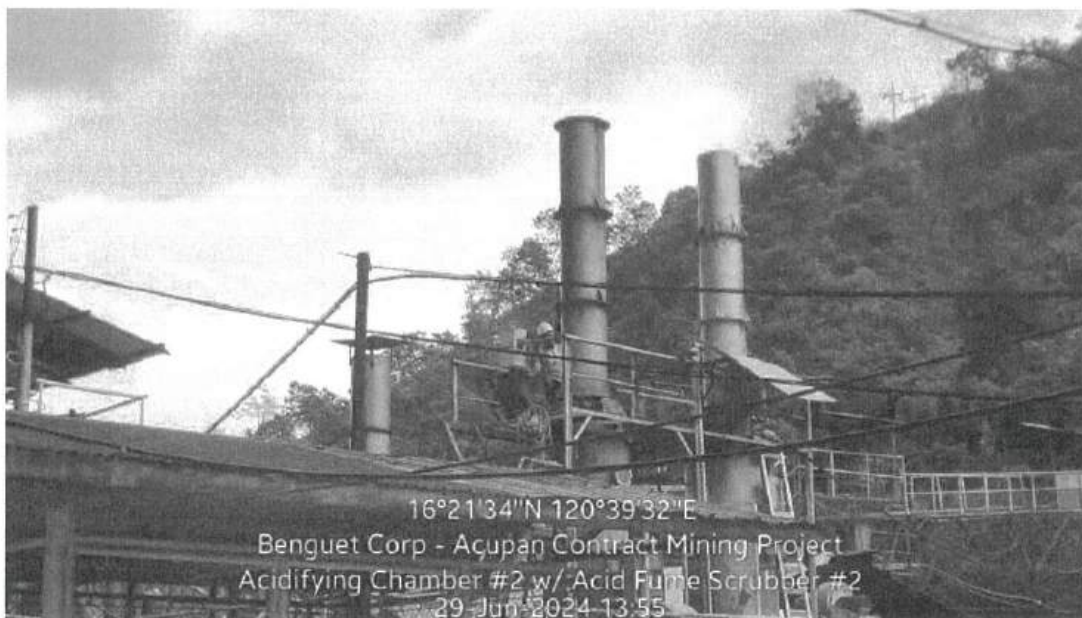
**One (1) unit 5,013CFM Verantis Acid Fume Scrubber
Stack Sampling for Methods 5 – Run 1**



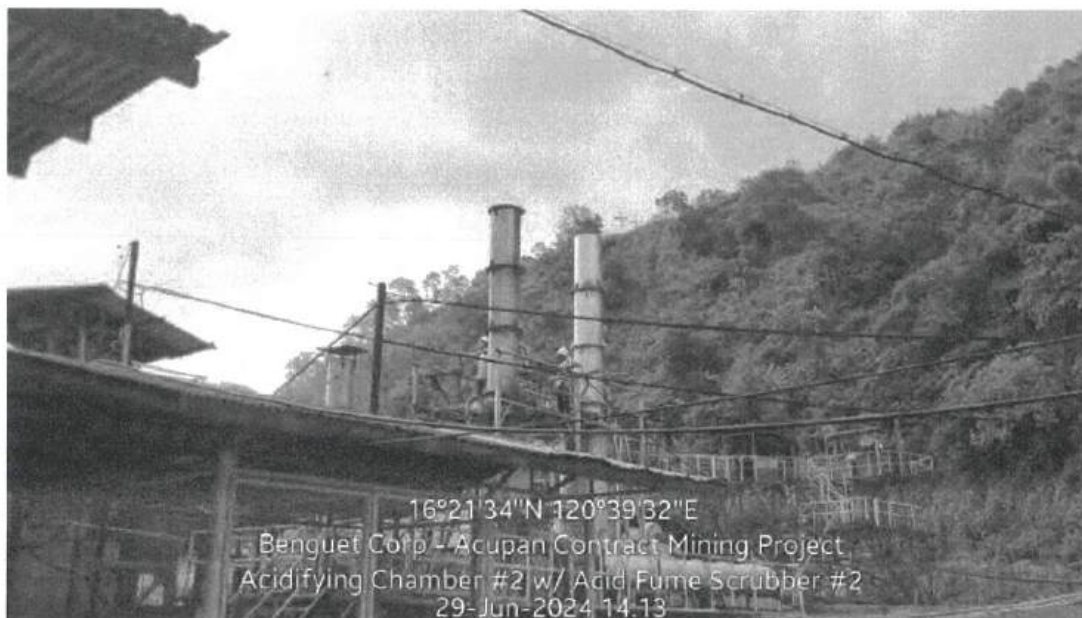
**One (1) unit 5,013CFM Verantis Acid Fume Scrubber
Stack Sampling for Methods 5 – Run 2**



**One (1) unit 5,013CFM Verantis Acid Fume Scrubber
Stack Sampling for Methods 5 – Run 2**



**One (1) unit 5,013CFM Verantis Acid Fume Scrubber
Stack Sampling for Methods 5 – Run 3**



“APPENDIX D”

ANALYTICAL DATA



OSTREA MINERAL LABORATORIES, INC.

Assaying and Environmental Testing Specialist

Barangay Road, Sto. Martin, Bataan, Bataan, Philippines 4024

Telefax : (02) 666-9058, (049) 538-0102, (02) 848-6961

Email : customer.service@ostreafabs.com.ph

USEPA METHOD 5 ANALYTICAL DATA SHEET

Source: 46.58 m3/min Krypton Dust Collection Facility System

RAN No.: B-27924

Date Analyzed: July 5 - 12, 2024

Analytical Balance: KERN & Sohn ABJ 220-4NM

Sensitivity: 0.1mg

SAMPLE ID	Units	Run 1	Run2	Run 3
FILTER ANALYSIS				
Filter ID		03245159	12235247	03245145
Filter appearance/observations		Off white		
Initial weight	g	0.2627	0.2456	0.2533
Final weight	g	0.2552	0.2482	0.2558
Particulate Mass filter, m_f	g	0.0025	0.0026	0.0026
ACETONE RINSE ANALYSIS				
Dried PM rinse appearance		Off white		
Acetone rinse, volume, A_r	mL	65	72	66
Beaker ID		SP29	SP28	SP30
Initial weight, beaker	g	76.7210	76.7441	76.2114
Final weight, beaker	g	76.7211	76.7442	76.2114
Particulate Mass, acetone rinse, m_d	g	0.0001	0.0001	0.0000
ACETONE REAGENT BLANK				
Acetone blank volume, A_b	mL	83	83	83
Acetone blank mass, A_m^*	g	65.2131	65.2131	65.2131
Beaker ID		SP04	SP04	SP04
Initial weight, beaker	g	77.7721	77.7721	77.7721
Final weight, beaker	g	77.7724	77.7724	77.7724
Particulate Mass, blank, m_b	g	0.0003	0.0003	0.0003
$C_b = m_b / A_b$	g/mL	3.61446E-06	3.61446E-06	3.61446E-06
Acetone blank, $W_b = C_b \times A_r$	g	0.0002	0.0003	0.0002
Acetone Residue, <0.001	%	0.0005	0.0005	0.0005

* Density of acetone 0.7857 g/mL

** Acetone residue should be less than 0.001% otherwise apply corresponding correction factor from Total PM.

Acetone residue, % = $m_b / m_f \times 100$

Total PM = $m_f + m_d - W_b$	mg	2.3	2.4	2.3
------------------------------	----	-----	-----	-----

Analyzed by: Kyla S. Diaz

Reviewed by: Kemberly M. Carato

Certified correct by: Mia Cordina F. Referente



OSTREA METAL LABORATORIES, INC.

Analysing and Environmental Testing Specialist

Barangay Road, Bc, Mamplesan, Bikan, Laguna, Philippines 4024

Telefax: (02) 858-9058; (048) 539-0102; (02) 848-6951

Email: customer.service@ostramets.com.ph

USEPA METHOD 5

ANALYTICAL DATA SHEET

Source: 5.013CFM Verantis Acid Fume Scrubber #2

RAN No.: B-27925

Date Analyzed: July 5 - 12, 2024

Analytical Balance: KERN & Sohn ABJ 220-4NM

Sensitivity: 0.1mg

SAMPLE ID	Units	Run 1	Run2	Run 3
FILTER ANALYSIS				
Filter ID		0424S79	0424S78	0424S61
Filter appearance/observations		Gray particulates		
Initial weight	g	0.2482	0.2470	0.2495
Final weight	g	0.2922	0.2970	0.2982
Particulate Mass filter, m_f	g	0.0440	0.0500	0.0487
ACETONE RINSE ANALYSIS				
Dried PM rinse appearance		Gray particulates		
Acetone rinse, volume, A_r	mL	86	69	67
Beaker ID		SP31	SP32	SP33
Initial weight, beaker	g	76.7210	76.7441	76.2114
Final weight, beaker	g	76.7290	76.7500	76.2244
Particulate Mass, acetone rinse, m_a	g	0.0080	0.0059	0.0130
ACETONE REAGENT BLANK				
Acetone blank volume, A_b	mL	83	83	83
Acetone blank mass, A_m^*	g	65.2131	65.2131	65.2131
Beaker ID		SP04	SP04	SP04
Initial weight, beaker	g	77.7721	77.7721	77.7721
Final weight, beaker	g	77.7724	77.7724	77.7724
Particulate Mass, blank, m_b	g	0.0003	0.0003	0.0003
$C_{17} = m_b / A_b$	g/mL	3.61446E-06	3.61446E-06	3.61446E-06
Acetone blank, $W_b = C_{17} \times A_r$	g	0.0002	0.0003	0.0002
Acetone Residue, <0.001	%	0.0005	0.0005	0.0005

* Density of acetone 0.7857 g/mL

** Acetone residue should be less than 0.001% otherwise apply corresponding correction factor from Total PM.

Acetone residue, % = $m_a / m_f \times 100$

Total PM = $m_f + m_a - W_b$	mg	51.7	55.6	51.4
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Analyzed by: Kyla S. Diaz

Reviewed by: Kemberly M. Carala

Certified correct by: Ms. Cristina F. Referente



OSTREA MINERAL LABORATORIES, INC.

Analytical and Environmental Testing Specialist

Batangay Road, Bc, Mampisan, Bifan, Laguna, Philippines 4024

Telephone: (02) 889-9058; (049) 539-0102; (02) 848-8851

Email: customer.service@ostreainbs.com.ph

USEPA METHOD 8 ANALYTICAL DATA SHEET

Source: 5.013CFM Verantis Acid Fume Scrubber #2

RAN No.: B-27925

Date Analyzed: July 8, 2024

SAMPLE ID	Volume, ml						Mass SO ₂ , mg
	Sample V _{soln}	Aliquot V _a	Titrant (T1)	Titrant (T1)	Titrant V _{ave}	Titrant V _{blk}	
Run 1	1000	10	5.4	5.3	5.35	0	159.4
Run 2	1000	10	5.6	5.5	5.55	0	165.3
Run 3	1000	10	5.2	5.3	5.25	0	156.4

$$\text{Mass SO}_2, \text{ mg} = (32.03)(N_{\text{BaCl}_2})(V_{\text{ave}} - V_{\text{blk}}) \left(\frac{V_{\text{anln}}}{V_a} \right)$$

BARIUM CHLORIDE STANDARDIZATION				
Trial No.	Volume, ml H ₂ SO ₄	Normality, H ₂ SO ₄	Volume, ml BaCl ₂	Normality, BaCl ₂
1	25	0.0109	29.1	0.009364
2	25	0.0109	29.2	0.009332
Average				0.0093

Analyzed by: Kyla S. Diaz

Reviewed by: Kemberly M. Carag

Certified correct by: Ma. Cristina F. Referente



OSTREA MINERAL LABORATORIES, INC.

Assaying and Environmental Testing Specialist

Barangay Road, Bo. Marikpapan, Biliran, Laguna, Philippines 4024
Telefax : (02) 689-9058, (049) 539-0102, (02) 848-6951
Email : customer.service@ostrealebs.com.ph

USEPA METHOD 7 ANALYTICAL DATA SHEET

Source: 5.013CFM Verantis Acid Fume Scrubber #2

RAN No.: B-27925

Date Analyzed: July 9, 2024

SAMPLE ID	Sample absorbance, A	Blank adjusted absorbance, A1	Dilution factor, F	Total Mass Nox as NO ₂ in sample, m (ug)
Run 1A	0.245	0.245	1	439
Run 1B	0.265	0.265	1	474
Run 1C	0.271	0.271	1	485
Run 2A	0.235	0.235	1	421
Run 2B	0.268	0.268	1	480
Run 2C	0.244	0.244	1	437
Run 3A	0.263	0.263	1	471
Run 3B	0.271	0.271	1	485
Run 3C	0.256	0.256	1	458

Blank Absorbance 0
Aliquot Factor 2
Calibration Factor 894.95

Total NO₂ / sample, ug = 2 Kc A1 F

Note: If other than 25 ml aliquot is used for analysis, the factor 2 must be replaced by a corresponding factor

Analyzed by: Ayda S. Diaz

Reviewed by: Kemberly M. Carale

Certified correct by: Ma. Cristina F. Renteria

3F. Hizon Building, #29 Quizon Ave., Quizon City, Metro Manila
 Tel. No. (02) 7341-0962 | Mobile No. +693173248175
 Email: greentechlab@yahoo.com

ENVIRONMENTAL LABORATORY
DEPARTMENT
 Doc No. E-001

Certificate of Analysis

Client Name	Greentek Environmental Phils. Co.		
Address	2353 RJ Place Bldg. Unit 3A, Selya St. Pandacan, Manila		
Sample Source	Stack	COA No.	GLAS-24-253
Date of Sampling	June 29, 2024	RAN No.	RAN-24-058
Date of Analysis	July 5, 2024	Laboratory Nos.	A-24-0902 to A-24-0904

Pre-Test Calibration Check				
Time:	Gas Value (ppm)	CO Response (ppm)	%Difference (% span)	Status (≤2% span)
1244H				
Zero Gas	0	0	0	Passed
CO Gas	513	513.2	0.0	Passed

Note: % Difference = (Gas Value - CO Response)/Gas Value x 100

Results				
Parameter	Laboratory No.	Sample ID	Run No.	Result (ppm)
CO Concentration (ppm)	A-24-0902	BCACMP-S	1	111
	A-24-0903		2	115
	A-24-0904		3	117

Post-Test Calibration Check				
Time:	Gas Value (ppm)	CO Response (ppm)	% Drift (% span)	Status (≤10% span)
1532H				
Zero Gas	0	0	0	Passed
CO Gas	513	512.8	0.1	Passed

Note: % Drift = CO response (pre-test) - CO response (post-test)/Gas Value x 100

REMARKS

1. Method of Analysis used: USEPA 40 CFR Appendix A-4 to Part 60 Method 10
2. The gas analyzer used throughout the analysis is HORIBA PG-350 S/N: 2JFEHYJ2.
3. The result values shown are based only upon the samples collected and submitted by Greentek Environmental Phils. Co. on July 5, 2024.
4. The test results shall be reproduced only in full and with approval of the laboratory.

Analyzed by:

 Ruth Kathleen L. Terada
 Laboratory Analyst
 PRC License No. 0001417

Certified by:

 Alma A. Pascual-Ferarez
 Laboratory Head
 PRC License No. 0004984

Approved by:

 Engr. Wilma R. Uyaco
 Managing Director



ENVIRONMENTAL PHILS. CO.

CHAIN OF CUSTODY, RECORD AND SAMPLE LOG

Name of firm: GREENTEK ENVIRONMENTAL PHILS. CO.

Tested by QA/QC & Team Leader: Angelo V. Guevarra

Address: 2353 RJ PLACE BLDG. UNIT 3A, SELYA ST. PANDACAN, MANILA

Type of fuel used by the facility during sampling: ELECTRICITY

Source: 46.58 m³/min Krypton Dust Collection Facility System

Sample ID	Sample ID No. & Description			Sample Date	Sample Type	Type of Container	Analysis Requested
	Sample Method	Run #	Train Fraction				
BCACMP - D - R1	M5	1	FH ACETONE	28-Jun-24	ACETONE	PE BOTTLE	PM
BCACMP - D - M5 - FILTER - R1 Filter Id: 0324S159 Filter Wt: 0.2527	M5	1	FILTER	28-Jun-24	FILTER	PETRI DISH	PM
BCACMP - D - R2	M5	2	FH ACETONE	28-Jun-24	ACETONE	PE BOTTLE	PM
BCACMP - D - M5 - FILTER - R2 Filter Id: 1223S247 Filter Wt: 0.2456	M5	2	FILTER	28-Jun-24	FILTER	PETRI DISH	PM
BCACMP - D - R3	M5	3	FH ACETONE	28-Jun-24	ACETONE	PE BOTTLE	PM
BCACMP - D - M5 - FILTER - R3 Filter Id: 0324S145 Filter Wt: 0.2533	M5	3	FILTER	28-Jun-24	FILTER	PETRI DISH	PM
BCACMP - D - BLANK	M5	1, 2, 3	FH ACETONE	28-Jun-24	ACETONE	PE BOTTLE	PM
BCACMP - D - M5 - FILTER - BLANK Filter ID Filter Wt	M5	1, 2, 3	FILTER	28-Jun-24	FILTER	PETRI DISH	PM

To be assigned by the laboratory staff

RAN# (Request for Analysis Number)

Submitted by:

Janine Devena 07/05/2024
Signature and Date

Received by:

[Signature] 07/05
Signature and Date



ENVIRONMENTAL PHILS. CO.

CHAIN OF CUSTODY, RECORD AND SAMPLE LOG

Name of firm: GREENTEK ENVIRONMENTAL PHILS. CO.

Tested by QA/QC & Team Leader: Angelo V. Guevarra

Address: 2353 RJ PLACE BLDG. UNIT 3A, SELYA ST. PANDACAN, MANILA

Type of fuel used by the facility during sampling: KEROSENE

Source: 5,013 CFM Verantis Acid Fume Scrubber

Sample ID	Sample ID No. & Description			Sample Date	Sample Type	Type of Container	Analysis Requested
	Sample Method	Run #	Train Fraction				
BCACMP - S - R1	M5	1	FH ACETONE	29-Jun-24	ACETONE	PE BOTTLE	PM
BCACMP - S - M5 - FILTER - R1	M5	1	FILTER	29-Jun-24	FILTER	PETRI DISH	PM
Filter Id: 0424579 Filter Wt: 0.2482							
BCACMP - S - R2	M5	2	FH ACETONE	29-Jun-24	ACETONE	PE BOTTLE	PM
BCACMP - S - M5 - FILTER - R2	M5	2	FILTER	29-Jun-24	FILTER	PETRI DISH	PM
Filter Id: 0424578 Filter Wt: 0.2479							
BCACMP - S - R3	M5	3	FH ACETONE	29-Jun-24	ACETONE	PE BOTTLE	PM
BCACMP - S - M5 - FILTER - R3	M5	3	FILTER	29-Jun-24	FILTER	PETRI DISH	PM
Filter Id: 0424581 Filter Wt: 0.2495							
BCACMP - S - BLANK	M5	1 2 3	FH ACETONE	29-Jun-24	ACETONE	PE BOTTLE	PM
BCACMP - S - M5 - FILTER - BLANK	M5	1 2 3	FILTER	29-Jun-24	FILTER	PETRI DISH	PM
Filter ID: Filter Wt:							

To be assigned by the laboratory staff

RAN# (Request for Analysis Number)

Submitted by

JANINE DELGADO 07/05/24
Signature and Date

Received by

Jr 07/05
Signature and Date



ENVIRONMENTAL PHILS. CO.

CHAIN OF CUSTODY, RECORD AND SAMPLE LOG

Name of firm: GREENTEK ENVIRONMENTAL PHILS. CO.

Tested by QAQC & Team Leader: Angelo V. Guevarra

Address: 2353 RJ PLACE BLDG. UNIT 3A, SELYA ST. PANDACAN, MANILA

Type of fuel used by the facility during sampling: KEROSENE

Source: 5,015 CFM Verantia Acid Fume Scrubber

Sample ID	Sample ID No. & Description			Sample Date	Sample Type	Type of Container	Analysis Requested
	Sample Method	Run #	Train Fraction				
BCACMP - S - R1	M6	1	IMPINGER	29-Jun-24	3% H ₂ O ₂	PE BOTTLE	SO _x
BCACMP - S - R2	M6	2	IMPINGER	29-Jun-24	3% H ₂ O ₂	PE BOTTLE	SO _x
BCACMP - S - R3	M6	3	IMPINGER	29-Jun-24	3% H ₂ O ₂	PE BOTTLE	SO _x
BCACMP - S - BLANK	M6	BLANK		29-Jun-24	3% H ₂ O ₂	PE BOTTLE	SO _x

To be assigned by the laboratory staff

RAN# (Request for Analysis Number)

Submitted by:

JANINE DELENA 07/05/2024
Signature and Date

Received by:

Jm 07/05
Signature and Date



ENVIRONMENTAL PHILS. CO.

CHAIN OF CUSTODY, RECORD AND SAMPLE LOG

Name of firm: GREENTEK ENVIRONMENTAL PHILS. CO.

Tested by QAQC & Team Leader: Angelo V. Guevarra

Address: 2353 RJ PLACE BLDG. UNIT 3A, SELYA ST. PANDACAN, MANILA

Type of fuel used by the facility during sampling: KEROSENE

Source: 5.013 CFM Verantis Acid Fume Scrubber

Sample ID	Sample ID No. & Description			Sample Date	Sample Type	Type of Container	Analysis Requested
	Sample Method	Run #	Train Fraction				
BCACMP - S - R1A	M7	1	FLASK	29-Jun-24	Absorbing Solution	PE Bottle	NOx
BCACMP - S - R1B	M7	2	FLASK	29-Jun-24	Absorbing Solution	PE Bottle	NOx
BCACMP - S - R1C	M7	3	FLASK	29-Jun-24	Absorbing Solution	PE Bottle	NOx
BCACMP - S - R2A	M7	1	FLASK	29-Jun-24	Absorbing Solution	PE Bottle	NOx
BCACMP - S - R2B	M7	2	FLASK	29-Jun-24	Absorbing Solution	PE Bottle	NOx
BCACMP - S - R2C	M7	3	FLASK	29-Jun-24	Absorbing Solution	PE Bottle	NOx
BCACMP - S - R3A	M7	1	FLASK	29-Jun-24	Absorbing Solution	PE Bottle	NOx
BCACMP - S - R3B	M7	2	FLASK	29-Jun-24	Absorbing Solution	PE Bottle	NOx
BCACMP - S - R3C	M7	3	FLASK	29-Jun-24	Absorbing Solution	PE Bottle	NOx
BCACMP - S - BLANK	M7	1, 2, 3	FLASK		Absorbing Solution	PE Bottle	NOx

To be assigned by the laboratory staff

RAN# (Request for Analysis Number)

Submitted by:

JANINE DELEÑA

Signature and Date

07/05/24

Received by:

07/05

Signature and Date



Name of firm: GREENTEK ENVIRONMENTAL PHILS. CO.

Tested by QAQC & Team Leader: Angelo V. Guevarra

2353 RJ PLACE BLDG UNIT 3A, SELYA ST PANDACAN, MANILA

Type of fuel used by the facility during sampling: KEROSENE

Source 6.013 CFM Verantis Acid Fume Scrubber

[illegible]

To be assigned by the laboratory staff

RAN# (Request for Analysis Number)

Submitted by:

JANINÉ/ DELENA

Signature and Date

07/05/2024

Received by

Signature and Date

07/05

“APPENDIX E”

EQUIPMENT CALIBRATION RECORDS

METER BOX POST TEST CALIBRATION CHECK
BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT
 Balatoc, Virac, Ilogon, Benguet
 46.58 m3/min Krypton Dust Collection Facility System

Calculate Yqa for each test run using the following equation:

$$Y_{qa} = \frac{\theta}{V_m} \sqrt{\frac{0.00115 T_m}{\Delta H_{@} (P_b + \frac{\Delta H_{avg}}{13.6})} \frac{29}{M_d}} (\sqrt{\Delta H})_{avg}$$

where:

Yqa	dry gas meter calibration check value, dimensionless.
θ	total run time, min.
V _m	total sample volume measured by dry gas meter, dcm.
T _m	absolute average dry gas meter temp., °K.
P _b	barometric pressure, mm Hg.
0.00115	= (760/298)(21.2/1000) ² (mm Hg/°K) m ³ /min ² .
ΔH _{avg}	average orifice meter differential, mm H ₂ O.
ΔH _@	orifice meter calibration coefficient, mm H ₂ O.
M _d	dry molecular weight of stack gas, gm/gm-mole.
29	dry molecular weight of air, gm/gm mole.
13.6	specific gravity of mercury.

After each test run series, do the following:

Average the three or more Yqa's obtained from the test run series and compare this average with the dry gas meter calibration factor, Y.
 The average Yqa must be within 5 percent of Y.

If the average Yqa does not meet the +/- 5 percent criterion, recalibrate the meter over the full range of orifice settings, as detailed in Section 5.3.1 of Method 5. Then follow the procedure in Section 5.3.3 of Method 5.

	RUN 1	RUN 2	RUN 3	Average
Meter Box	GMC 01	GMC 01	GMC 01	
time	72	72	72	
V _m - total	0.7928	0.7672	0.8084	
T _m avg, deg C	35	38	36	
T _m , degrees K	308	311	309	
Barometric, mm Hg	690.4	690.9	691.1	
DH _{avg} , mm H ₂ O	12.3	11.6	12.9	
DH _@ , mm H ₂ O	47.7	47.7	47.7	
M _d stack gas, g/g-mole	28.80	28.80	28.80	
M _d Air, g/g-mole	29.00	29.00	29.00	
Meter Box Gamma	1.0102	1.0102	1.0102	1.0102
QA Gamma	1.0462	1.0569	1.0179	1.0403
Difference:	-3.6%	-4.6%	-0.8%	-3.0%
Average Difference within +/-5%				PASS*

*The difference is based on the average QA gamma of the three test runs

METER BOX POST TEST CALIBRATION CHECK
BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet
5,013CFM Verantis Acid Fume Scrubber #2

Calculate Yqa for each test run using the following equation:

$$Y_{qa} = \frac{\theta}{V_m} \sqrt{\frac{0.00115 T_m}{\Delta H_{@} (P_b + \frac{\Delta H_{avg}}{13.6})} \frac{29}{M_d}} (\sqrt{\Delta H})_{avg}$$

where:

Yqa	dry gas meter calibration check value, dimensionless.
θ	total run time, min.
V _m	total sample volume measured by dry gas meter, dcm.
T _m	absolute average dry gas meter temp., °K.
P _b	barometric pressure, mm Hg.
0.00115	= (760/298)(21.2/1000) ² (mm Hg/°K) m ³ /min ² .
ΔH _{avg}	average orifice meter differential, mm H ₂ O.
ΔH _@	orifice meter calibration coefficient, mm H ₂ O.
M _d	dry molecular weight of stack gas, gm/gm-mole.
29	dry molecular weight of air, gm/gm mole.
13.6	specific gravity of mercury.

After each test run series, do the following:

Average the three or more Yqa's obtained from the test run series and compare this average with the dry gas meter calibration factor, Y.
The average Yqa must be within 5 percent of Y.

If the average Yqa does not meet the +/- 5 percent criterion, recalibrate the meter over the full range of orifice settings, as detailed in Section 5.3.1 of Method 5. Then follow the procedure in Section 5.3.3 of Method 5.

	RUN 1	RUN 2	RUN 3	Average
Meter Box	GMC 01	GMC 01	GMC 01	
time	72	72	72	
V _m - total	0.8986	0.9516	0.9536	
T _m avg, deg C	35	38	36	
T _m , degrees K	308	311	309	
Barometric, mm Hg	690.4	690.6	690.9	
DH _{avg} , mm H ₂ O	16.6	17.6	18.5	
DH _@ , mm H ₂ O	47.7	47.7	47.7	
M _d stack gas, g/g-mole	28.76	28.76	28.76	
M _d Air, g/g-mole	29.00	29.00	29.00	
Meter Box Gamma	1.0102	1.0102	1.0102	1.0102
QA Gamma	1.0710	1.0466	1.0179	1.0451
Difference:	-6.0%	-3.6%	-0.8%	
Average Difference within +/-5%				PASS*

*The difference is based on the average QA gamma of the three test runs



CERTIFICATE OF CALIBRATION
GREENTEK ENVIRONMENTAL PHILS. CO.
DRY GAS METER 5 POINT CALIBRATION

Meter Console Model: XC-S72-OV
Meter Console ID Number: GMC-01
Dry Gas Meter Model: SK25EX
Dry Gas Meter Serial Number: 2344

Pressure Side Leak Check: OK
Vacuum Side Leak Check: OK

Date and Time of Calibration: 07-May-24 1300H
Critical Orifice Model Number: ST 40-73
Theo. Critical Vacuum For Orifice: 15 in Hg
Barometric Pressure: 752.602 mmHg

IMPORTANT!!!

**For the individual dry gas meter calibration factor, Y_i , the allowed variation is 0.02 from the average value.
**For the individual $Dh@$ values, the orifice setting that equates to 21.2 lpm, the allowed variation is 0.2 in (5.1mm) from the average value.
**Acceptable range for the average $Dh@$ value is 45.7 ± 6.4 mmH₂O (1.84 \pm 0.25 inH₂O).

Run No.	Orifice ID No.	Dry Gas Meter Volume (m ³)			Dry Gas Meter Temp T_m (°C)			Amb. Temp. T_{amb} °K	Time min	Orifice Rdg. mmH ₂ O	Pump Vac. in. Hg
		Initial	Final	Diff, V_m	Initial	Final	Ave °K				
1	ST40	332.3020	332.3452	0.0432	30	30	303	298.6	5.0	8.4	15
2	ST48	332.3510	332.4260	0.0750	30	30	303	298.6	6.0	17.0	15
3	ST55	332.4340	332.5522	0.1182	30	30	303	298.4	7.0	30.0	15
4	ST63	332.5640	332.7428	0.1788	30	30	303	298.4	8.0	50.0	15
5	ST73	332.7550	333.0290	0.2740	30	30	303	298.2	9.0	92.0	15

Run No.	Orifice ID No.	K' Factor $\times 10^{-4}$	RESULTS					
			Vmstd dscm	Vcrstd dscm	DGM Calib. Factor Y_i	Variation ($\leq \pm 0.02$)	Dh@ mmH ₂ O	Variation ($\leq \pm 5.1$)
1	ST40	1.9790	0.0421	0.0431	1.0235	-0.013	49.7	-2.0
2	ST48	2.8501	0.0732	0.0745	1.0180	-0.008	48.6	-0.9
3	ST55	3.8204	0.1155	0.1165	1.0092	0.001	47.8	-0.1
4	ST63	5.0531	0.1750	0.1761	1.0065	0.004	45.7	2.0
5	ST73	6.8217	0.2693	0.2676	0.9938	0.016	46.5	1.2

Average -----> 1.0102 Average -----> 47.660

I certify that the above Dry Gas Meter was calibrated in accordance with EPA Method 5, Paragraph 7.2 CFR 40, Part 60, using Critical Orifice as calibration standard. From these results, I assign a value for the following parameters:

As the average value of the individual results.

$Y_i \rightarrow 1.0102$

&

$DH@ \rightarrow 47.660 \text{ mmH}_2\text{O}$

Calibrated by:

Daniel L. Navidad
Team Leader

Noted by:

ANGELO V. GUEVARRA
Angelo V. Guevarra
QA/QC Manager



GREENTEK ENVIRONMENTAL PHILS. CO.
CRITICAL ORIFICE COEFFICIENT CALCULATION

Dry Gas Meter Model Number : SK25EX
 Dry Gas Meter Serial Number : 2344
 Critical Orifice Model Number : ST 40-73
 Critical Orifice Calibration Factor, Yc : 1.0000

Calibration Date and Time : 07-May-24 1300H
 Barometric Pressure : 752.602 in Hg
 Theo. Critical Vacuum For Orifice: 15 in Hg
 Leak Check : OK

Run No.	Orifice ID No.	Dry Gas Meter Volume (m ³)			Dry Gas Meter Temp. T _m (°C)			Amb. Temp. T _{amb} (°K)	Time min.	Orifice Rdg. mmH ₂ O	Pump Vac. in. Hg
		Initial	Final	Diff., V _m	Initial	Final	Ave. °K				
1	ST 40	331.1110	331.1542	0.0432	23	23	296.0	299.5	5	8.40	15
2	ST 40	331.1580	331.2012	0.0432	24	24	297.0	299.5	5	8.40	15
1	ST 48	331.2070	331.2820	0.0750	25	25	298.0	299.5	6	17.0	15
2	ST 48	331.2890	331.3642	0.0752	26	26	299.0	299.5	6	17.0	15
1	ST 55	331.3730	331.4912	0.1182	27	27	300.0	298.9	7	30.0	15
2	ST 55	331.4940	331.6122	0.1182	28	28	301.0	298.9	7	30.0	15
1	ST 63	331.6240	331.8028	0.1788	29	29	302.0	298.6	8	50.0	15
2	ST 63	331.8100	331.9888	0.1788	29	29	302.0	302.0	8	50.0	15
1	ST 73	332.0130	332.2870	0.2740	32	32	305.0	298.4	9	92.0	15
2	ST 73	332.2882	332.5622	0.2740	32	32	305.0	298.4	9	92.0	15


RESULTS

Run No.	Orifice ID No.	K' Factor x 10 ⁻⁴	Average x 10 ⁻⁴	Variation (≤ ± 0.5%)
1	ST 40	1.9823	1.9790	-0.17%
2	ST 40	1.9756	1.9790	0.17%
1	ST 48	2.8511	2.8501	-0.03%
2	ST 48	2.8491	2.8501	0.03%
1	ST 55	3.8267	3.8204	-0.17%
2	ST 55	3.8140	3.8204	0.17%
1	ST 63	5.0388	5.0531	0.28%
2	ST 63	5.0674	5.0531	-0.28%
1	ST 73	6.8217	6.8217	0.00%
2	ST 73	6.8217	6.8217	0.00%

IMPORTANT !!!

- **For valid results, the actual vacuum should be 1 to 2 in. Hg greater than the theoretical critical vacuum.
- **The average value for the K' FACTOR should not vary by more than ±0.5% from the individual results.
- **The times should not differ by more than 3 seconds for each run.
- **The unit for critical orifice coefficient is in m³*K^{0.5}/(mmHg*min).

Calibrated by:


 Daniel L. Mavidad
 Team Leader

Noted by:


 Angelo V. Guevarra
 QA/QC Manager



CERTIFICATE OF CALIBRATION
GREENTEK ENVIRONMENTAL PHIS. CO.
TEMPERATURE DISPLAY CALIBRATION

Meter Console No.:	GMC – 01	Operator:	DLN
Model:	XC – 572 – OV	Calibration Date:	May 07, 2024
Serial No.:	1703043	Calibration Due:	November 6, 2023

TC Channel ID	Reference Temp 1,°C	Temp Reading 1,°C	Criteria	Criteria Met	Reference Temp 1,°C	Temp Reading 1,°C	Criteria	Criteria Met
Probe	0	0	0	YES	50	51	-0.309	YES
Filter	0	0	0	YES	50	51	-0.309	YES
Exit	0	0	0	YES	50	51	-0.309	YES
Stack	0	0	0	YES	50	51	-0.309	YES
Stack	200	198	0.425	YES	250	248	-0.384	YES


TC Channel ID	Reference Temp 1,°C	Temp Reading 1,°C	Criteria	Criteria Met	Reference Temp 1,°C	Temp Reading 1,°C	Criteria	Criteria Met
Probe	100	100	0	YES	150	151	-0.236	YES
Filter	100	100	0	YES	150	151	-0.236	YES
Exit	100	100	0	YES	150	151	-0.236	YES
Stack	100	100	0	YES	150	151	-0.236	YES
Stack	350	348	0.322	YES	450	448	-0.277	YES

Criteria: Percent difference between the Reference temperature and the Average Temperature can be only $\pm 1.5\%$ °K


Equation:
$$\frac{[(\text{Ref. Temp.} + 273) - (\text{Temp. Reading} + 273)] \times 100}{(\text{Ref. Temp.} + 273)}$$

Reference used in calibration					
Type	Model	Serial No.	Calibration Date	Certificate No.	Issuing Lab/Traceability
Thermocouple Simulator	ALTEK Series 22	9330065	August 17, 2023	23-08-106-2	Acculab Calibration Laboratory Inc.

Calibrated by:


Daniel L. Navidad, Jr.
 Team Leader

Checked by:

 5/7/24
Angelo V. Guevarra
 QA/QC Manager

Pitot Number: GP-04A

Date: March 13, 2024

Diagram 1

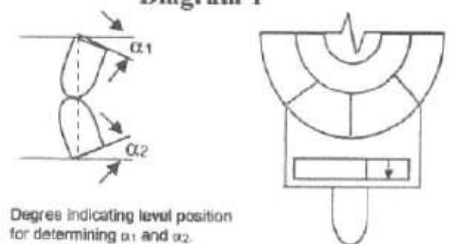


Diagram 2

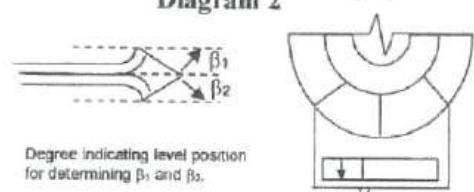
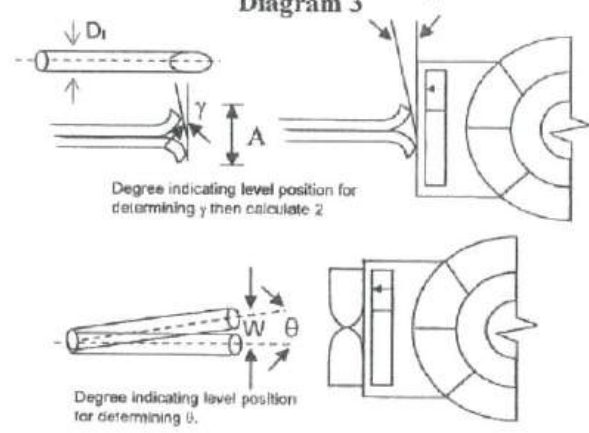


Diagram 3



Level? =	YES
Obstructions? =	NO
Damaged? =	NO
Diagram 1	
$-10^\circ < \alpha_1 < +10^\circ =$	0°
$-10^\circ < \alpha_2 < +10^\circ =$	1°
Diagram 2	
$-5^\circ < \beta_1 < +5^\circ =$	1°
$-5^\circ < \beta_2 < +5^\circ =$	0°
Diagram 3	
$\gamma =$	0°
$\theta =$	0°
$A =$	2.46
$1.05 D_1 < P_a < 1.5 D_1 =$	1.23
$1.05 D_1 < P_b < 1.5 D_1 =$	1.23
$0.48 \text{ cm} \leq D_1 \leq 0.95 =$	0.94
$A \tan \gamma < 0.32 \text{ cm} =$	0
$A \tan \theta < 0.08 \text{ cm} =$	0
$P_a = P_b =$	1.23

Comments: _____

The pitot tube/probe meets or exceeds all specifications criteria and/or applicable design features and is hereby assigned a pitot tube calibration factor of **0.84**.

Equipment used in calibration					
Type	Model	Serial No.	Calibration Date	Certificate No.	Issuing Lab/Traceability
Digital Caliper	Mitutoyo CD-6" ASX	A22099212	July 30, 2023	10 0000.01-8588-1.23	Switchtek Measurement Systems

Calibrated by:

Daniel L. Navidad Jr.
Team Leader

Reviewed by:

Angelo V. Guevarra
QA/QC Manager



CERTIFICATE OF CALIBRATION
GREENTEK ENVIRONMENTAL PHILS. CO.
TEMPERATURE SENSOR CALIBRATION

Thermocouple No. GP-04C
Ambient Temperature: 20.6 °C

Date: March 14, 2024

Reference Point Number	Source (Specify)	Reference Thermometer Temperature °C	Thermocouple Display Temperature °C	Absolute Temperature Difference %
1	COLD WATER	3.4	2.7	0.3
2	TAP WATER	26.8	27.6	-0.3
3	HOT WATER	98.4	100.2	-0.5

Criteria: *Percent difference between the Reference temperature and the Average Temperature can be only $\pm 1.5\%$ °K*

Equation:
$$\frac{[(\text{Ref. Temp.} + 273) - (\text{Temp. Reading} + 273)] \times 100}{(\text{Ref. Temp.} + 273)}$$

Reference used in calibration					
Type	Model	Serial No.	Calibration Date	Certificate No.	Issuing Lab/Traceability
Digital Thermometer	SUPCO	EM02	June 3, 2023	100.10-8227-2.23	Switchtek Measurement Systems

Calibrated by: 
Team Leader

Checked by: 
QAQC Manager

[illegible]

[illegible]







Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Bahay Toro, Quezon City, 1100, Philippines
Tel Nos. 02 4267593 / 9282889 / 9287769 Fax No. 4537694
email Address: admin@switchtek.com.ph
www.switchtek.com.ph



Certificate No.: 100.08-9142-1.23
Identification: GREENTEK ENVIRONMENTAL PHILS., CO
Job: P1
Fin. Acc.: 32
Done: November 28, 2023
Categories: Calibration
Cal Officer:

Calibration of Digital thermometer
Test and Calibration
Certificate of Calibration
Initials: CAC
Men Hours Total cost Type
1 1.0 Certificate

CERTIFICATE OF CALIBRATION - TEMPERATURE

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

Identification: GREENTEK ENVIRONMENTAL PHILS., CO
Address: 2430 LAURA STREET BRGY. 862 PANDAN MANILA, PHILIPPINES

UNIT UNDER TEST (UUT):

Instrument: Digital thermometer
Brand: SUPCO
Model No.: EM02
Serial No.: No record
Location: No record
Range: -40.0 to 200.0 Deg. C
Resolution: 0.1 Deg. C
Calibration Date: November 20, 2023
Calibration Due: November 19, 2024

CALIBRATOR INFORMATION:

Instrument:	Liquid Bath Calibrator	Instrument:	Liquid Bath Calibrator
Brand:	TECHNO	Brand:	TECHNO
Model No:	TB-30	Model No:	TB-30
Serial No:	A275	Serial No:	A275
Instrument:	Standard platinum resistance thermometer	Instrument:	Process meter
Brand:	Heraeus	Brand:	FLUKE
Model No:	SPH-01	Model No:	726
Range:	-40 to 420.0 Deg. C	Serial No:	3266078
Connection:	Four (4) wires	Traceability:	NIST
Traceability:	INMETRO, UKAS		

Environmental Condition:

Condition: DRY/BASIC/NEUTRAL
Relative Humidity: 54.2 ± 5%, 1007 hPa

Ambient Temp. (Deg C): 22.2 ± 2

Calibration Method:

By comparison technique, temperature values were simulated at planned intervals, using fixed point method in reference with a Temperature Bath Calibrator, Multifunction Calibrator, SPRT and ITS-1990. Span and errors were checked and tabulated. Procedures of tests conform to the requirements of ISO/IEC Guide 17025 and NIST.

During calibration the unit under test was found to have a standard error of ± 4.33 Deg. C with a confidence level of not less than 95.0 %.

Uncertainty of measurement is ± 2.41 Deg. C. Calculations were taken using the standard deviation formula.

Results:

REFERENCE READING [°C]	UNIT UNDER TEST READING [°C]	ERROR IN READING [°C]	STANDARD DEVIATION	REMARKS
-30.00	-32.0	-2.000	1.4142	The user should determine the suitability of the instrument for its intended use.
-10.00	-11.0	-1.000	0.7071	
0.00	-1.0	-1.000	0.7071	
10.00	9.8	-0.200	0.1414	
50.00	49.9	-0.100	0.0707	
100.00	97.0	-3.000	2.1213	
150.00	145.0	-5.000	3.5355	
200.00	195.0	-5.000	3.5355	

Remarks:

All data pertain only to the unit described obtained at the time of test. This certificate is not valid without seal and signature. Unauthorized reproduction is prohibited.

Calibrated By: C.A. CASADO
Date: November 20, 2023

Certified By: A.R. CASODOC
Date: November 28, 2023

For information: Proper use of Switchtek Measurement Systems requires that the user must be properly trained in the use of the equipment. Switchtek Measurement Systems is not responsible for any damage or loss of data caused by improper use of the equipment. Switchtek Measurement Systems is not responsible for any damage or loss of data caused by improper use of the equipment. Switchtek Measurement Systems is not responsible for any damage or loss of data caused by improper use of the equipment.

The Internet Computer Worksheets are located at: <http://www.computerworksheets.org>



Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Baheyo Toro, Quezon City, 1100, Philippines
Tel Nos.: 84420560 / 89282869 / 8 9287769 Fax No.: 84537694
email Address: switchtekboilers@yashoo.com



www.switchtek.com.ph

Certificate No.:	100.10-9142-3.23	Calibration of	Digital thermometer w/ dual input
Identification:	GREENTEX ENVIRONMENTAL PHILS., CO	Test and Verification	
Job:	P1	Certificate of Calibration	
Finance:	32	Initials...:	
Done...:	November 28, 2023	Man	Hours
Categories		2	8.0
Cal Officer		Total cost	Type
			Certificate

CERTIFICATE OF CALIBRATION - TEMPERATURE

This test report shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

Issued To: GREENTEX ENVIRONMENTAL PHILS., CO
Address: 2353 RI PLAGE UNIT 3A SELVA STREET BRGY. 860 PANDACAN, MANILA, PHILIPPINES

UNIT UNDER TEST (UUT):

Instrument: Digital thermometer w/ dual input
Brand: FLUKE
Model No.: 52
Serial No.: 5505853
ID code: No record
Meter range: -200.0 to 760.0 Deg. C, type J
-200.0 to 1372.0 Deg. C, type K
Resolution: 0.1 °C
Calibration Date: November 24, 2023
Calibration Due: November 23, 2024

CALIBRATOR INFORMATION:

Instrument: Process meter
Brand: FLUKE
Model No.: 716
Serial No.: 3266078
Traceability: NIST

Environmental Condition:

Condition: DRY/BASIC/NEUTRAL
Relative Humidity: 51.2 ±5%, 1011 hPa

Ambient Temp. (Deg C): 22.3 ±2

Calibration Method:

By comparison technique, the temperature was simulated at planned intervals, using fixed point method in reference with a Temperature Process calibrator and ITS-1990. Procedures of test conform to the requirements of ISO/IEC Guide 17025. Data were gathered and tabulated.

Standard error and uncertainty of measurement were indicated on the attached sheet.

Remarks:

All data pertain only to the unit described obtained at the time of test. This certificate is not valid without seal and signature. Unauthorized reproduction is prohibited.

Calibrated By:

Date:

C.A. CASADO

November 24, 2023

Certified By:

Date:

A.R. BUNDOC

November 28, 2023

Temperature * Pressure * Sound * Gas Detection/Analysis * Flow * Volume * Weight * pH * Po * Conductivity * Resistivity * Conductivity * Voltage * Amperes * Voltmeter * Frequency Counter * Hygrometer * Gas & Liquid Thermometer * Piezo * UV * IR *
* Heat * Valve * Recorder * Thermistor * Torque Wrench * Calorimeter * Caliper * Micrometer * Dynamometer * Refractometer * Moisture * Hydrometer * Capacitance * Inductance Meter * Spring scale * Load * Low Cost meter * Red Test Gauge * Gauge
Block * Roller * Oxygen Meter * Psychrometer * Vibration * Dielectric * VV Meter * Transformer Turns Ratio * Pot Meter * Capacitance * Capacitor



Switchtek Measurement Systems

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4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
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email Address: switchtekboilers@yahoo.com
www.switchtek.com.ph



Certificate No.: 100.10-9142-3.23 Calibration of Digital thermometer w/ dual input
Identification: GREENTEK ENVIRONMENTAL PHILS., CO
Address: 2353 RJ PLACE UNIT 3A SELYA STREET BRGY.860 PANDACAN, MANILA, PHILIPPINES

CERTIFICATE OF CALIBRATION - TEMPERATURE

This test report shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

UNIT UNDER TEST (UUT):

Instrument: Digital thermometer w/ dual input
Brand: FLUKE
Model No.: 52
Serial No.: 5505853
ID code: No record

Calibration Date: November 24, 2023
Calibration Due: November 23, 2024
Calibrated by: C.A. CASADO

TYPE K

Results: T1

REFERENCE READING (°C)	UNIT UNDER TEST READING (°C)	ERROR IN READING (°C)	STANDARD DEVIATION	REMARKS
-10.0	-10.2	-0.200	0.1414	The user should determine the suitability of the instrument for its intended used.
0.0	0.0	0.000	0.0000	
10.0	10.2	0.200	0.1414	
50.0	49.7	-0.300	0.2121	
100.0	100.0	0.000	0.0000	
300.0	300.0	0.000	0.0000	
500.0	499.8	-0.200	0.1414	
700.0	699.8	-0.200	0.1414	
1000.0	999.6	-0.400	0.2828	

Standard error: ± 0.35 °C

Uncertainty: ± 0.22 °C

Results: T2

REFERENCE READING (°C)	UNIT UNDER TEST READING (°C)	ERROR IN READING (°C)	STANDARD DEVIATION	REMARKS
-10.0	-10.4	-0.400	0.2828	The user should determine the suitability of the instrument for its intended used.
0.0	-1.0	-1.000	0.7071	
10.0	10.1	0.100	0.0707	
50.0	49.4	-0.600	0.4243	
100.0	99.7	-0.300	0.2121	
300.0	299.7	-0.300	0.2121	
500.0	499.9	-0.100	0.0707	
700.0	699.6	-0.400	0.2828	
1000.0	999.9	-0.100	0.0707	

Standard error: ± 0.78 °C

Uncertainty: ± 0.46 °C

Temperature* Pressure* Sound* Gas Detector/Analyzer *Flow *Volume* Weight *In *Pa* Conductivity *Resistivity *Conductivity *Voltage *Amps *Res *Capacitor *Frequency Controller *Hygrometer *Gases & Oil-Metal Thermometer
*PH *pH *TDS *Acid *Vapor *Recorder *Thermistor *Torque Wrench *Calibrator *Caliper *Micrometer *Dynamometer *Thermocouple *Welding *Hydrometer *Liquor *Gases & Industrial *Meter *Sizing *Flowmeter *Flow
Chromatometer *Gas Test Gauge *Gauge *RVA *Refractometer *Oxygen Meter *Psychrometer *Ultrasonic *Flowmeter *V-Meter *Transformer *Transducer *Flow *M *Flow Meter *Experiment *Guidance



Temperature Pressure Sound Gas Detector/Analyzer Flow Volume Weight RH PH Conductivity Resistivity Conductivity Voltage Resistance Capacitance Inductance Frequency Power Efficiency Torque & Bl. Motor Protection for Motor
 120V 240V Battery Tester Resistor Tester Oscilloscope Torque Wrench Consumer Lubricant Multimeter Ductometer Hydrometer Inclinometer Air/Water Tester Hygrometer Capacitive & Inductive Meter Schmitt Trigger Meter Low Ohm meter
 Fuel Test Gauge Gauge Block Baler Oxygen Meter Psychrometer Inclinometer Displacement Meter Transducer Turn Radio 40 Pin Meter Loadcell Distortion



Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Bahay Toro, Quezon City, 1100, Philippines
Tel Nos. 02 4267593 / 9282869 / 9287769 Fax No. 4537694
email Address: switchtek@pidsdsl.net

www.switchtek.com.ph



Certificate No.:	100.10-9142-1.23	Calibration of	Thermocouple, TC source calibrator
Identification:	GREENTEK ENVIRONMENTAL PHILS., CO	Test and Verification	
Job:	P1	Certificate of Calibration	
Fin. acc:	32	Initials...:	CAC
Done.....:	November 28, 2023	Men	Hours
Categories	Test and Calibration	2	1.0
Cal Officer		Total cost	Type
		-	Certificate

CERTIFICATE OF CALIBRATION - THERMOCOUPLE TC SOURCE CALIBRATOR

This test report shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

Issued To: GREENTEK ENVIRONMENTAL PHILS., CO
Address: 2353 RJ PLACE UNIT 3A SELYA STREET BRGY. 860 PANDACAN, MANILA, PHILIPPINES

UNIT UNDER TEST (UUT):

Instrument: Thermocouple, TC source calibrator
Brand: ALTEK
Model No.: SERIES 22
Serial No.: 107173
ID code: No record
Ranges: Thermocouple TYPE K
-200 to 1371 Deg. C

CALIBRATOR INFORMATION:

Instrument: Process meter
Brand: FLUKE
Model No.: 726
Serial No.: 3266078
Traceability: NIST

Calibration Date: November 26, 2023
Calibration Due: November 25, 2024

Environmental Conditions:

Condition: DRY/BASIC/NEUTRAL
Relative Humidity: 54.5 ± 5%, 1008 hPa

Ambient Temp. (Deg C): 22.1 ± 2

Calibration Method:

By comparison technique, electrical values/magnitudes were measured at the terminals in milliamperes DC at planned intervals as a function of electrical values. Data gathered were referenced to a Standard Multimeter. Data were gathered and tabulated.

Standard error and uncertainties (u) of measurement were indicated on the attached sheet with a coverage factor of k=2 and with a confidence level of not less than 95%. Calculations were taken using the Standard Deviation Formula.

Remarks:

All data pertain only to the unit described obtained at the time of test. This certificate is not valid without seal and signature.
Unauthorized reproduction is prohibited.

Calibrated By:

Date:

November 26, 2023

Certified By:

Date:

November 28, 2023

Temperature* Pressure* Sound* Gas Detector/Analyzer* Flow* Volume* Weight* RH* PH* Conductivity* Resistivity* Conductivity* Voltage* Amperes* Kilowattmeter* Frequency Controller* Hygrometer* Gauss & B-Field*
Thermometer* PRV* SRV* TRV* Relief Valve* Recorder* Thermostat* Torque Wrench* Calorimeter* Caliper* Micrometer* Dynamometer* Pullbackmeter* Multiplier* Hydrometer* Capacitance & Inductance Meter*
Sphygmomanometer* Low Oil meter* Dial Test Gauge* Gauge Block* Ruler* Oxygen Meter* Pyrometer* Vibration* Dielectric KV Meter* Transformer Turns Ratio* Moisture Meter* Capacitance Displacement



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email Address: switchtek@pldtel.net
www.switchtek.com.ph



Certificate No.: 100.10-9142-1.23 Calibration of Thermocouple, TC source calibrator
Identification: GREENTEK ENVIRONMENTAL PHILS., CO
Address: 2353 RJ PLACE UNIT 3A SELVA STREET BRGY. 860 PANDACAN, MANILA, PHILIPPINES

CERTIFICATE OF CALIBRATION - THERMOCOUPLE TC SOURCE CALIBRATOR

This test report shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

UNIT UNDER TEST (UUT):

Instrument: Thermocouple, TC source calibrator
Brand: ALTEK
Model No.: SERIES 22
Serial No.: 107173
ID code: No record
Ranges: Thermocouple TYPE K
-200 to 1371 Deg. C

Calibration Date: November 26, 2023
Calibration Due: November 25, 2024
Calibrated By: C.A. CASADO

Results:

REFERENCE READING (Deg. C)	UNIT UNDER TEST READING (Deg. C)	ERROR IN READING	SATNDARD DEVIATION
-54.10	-50.000	4.100	2.8991
0.10	0.000	-0.100	0.0707
50.30	50.000	-0.300	0.2121
100.10	100.000	-0.100	0.0707
200.00	200.000	0.000	0.0000
300.00	300.000	0.000	0.0000
399.90	400.000	0.100	0.0707
499.90	500.000	0.100	0.0707
600.00	600.000	0.000	0.0000
700.00	700.000	0.000	0.0000
800.00	800.000	0.000	0.0000
900.00	900.000	0.000	0.0000
1000.00	1000.000	0.000	0.0000

Standard error:± 0.9414 Deg. C

Uncertainty:± 1.1430 Deg. C

Temperature* Pressure* Sound* Gas Detector/Analyzer *Flow *Viscosity* Weight* Bulk *Fit* Conductivity *Resistivity *Frequency* *Voltage* *Amperes* *Exhaustion* *Efficiency* Centrifuge* Hygrometer* Gills & Blotels
Thermometer*PIV*SRV*TRV*Relief Valve*Recorder*Thermostat*Torque Wrench*Calorimeter*Caliper* Micrometer* Densimeter*Refractometer *Multi-tester* Hydrometer* Capacitors & Inductance Meter
Solynhydrometer Low Ohm meter * Dual Test Gauge * Gauge Block* Bulb* Oxygen Meter* Psychrometer* Vibrator* Oscilloscope *V Meter* Transformer Ratio Meter* Pot Meter* Capacitors & Disipation

[illegible]

[illegible]



Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Bakay Toro, Quezon City, 1100, Philippines
Tel Nos.: 84420560 / 89282889 / 89287769 Fax No.: 8453769
email Address: switchtek@switchtek.com.ph
www.switchtek.com.ph



Certificate No.: 100.10-9980-1.24
Identification: GREENTEK ENVIRONMENTAL PHILS., CO
Job:
Fit/acc: P1
Done: 32
Categories: February 2, 2024
Cal Officer: Calibration

Calibration of: Probe Heater Temperature Controller
Test and Calibration
Certificate of Calibration
Initials: CAC
Men: 1
Hours: 1.0
Total cost: 1.0
Type: Certificate

CERTIFICATE OF CALIBRATION - TEMPERATURE

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

Issued To: GREENTEK ENVIRONMENTAL PHILS., CO
Address: 2353 RD PLACE UNIT 3A SELVA STREET BRGY. 260 PANDACAN, MAJILA, PHILIPPINES

UNIT UNDER TEST (UUT):

Instrument: Probe Heater Temperature Controller
Manufacturer: CAL CONTROLS
Model No.: CAL 3200
Serial No.: 69928664089
Code: 2022TCT3A, TEAM 3A
Range: -200 to 1800.0 Deg. C
Resolution: 1 Deg. C
Calibration Date: February 1, 2024
Calibration Due: January 31, 2025

CALIBRATOR INFORMATION:

Instrument: SPRT, Standard Platinum resistance thermometer
Instrument: Process Calibrator
Manufacturer: FLUKE
Model No.: 726
Serial No.: 3266076
Traceability: NIST

Environmental Condition:

Condition: DRY/BASIC/NEUTRAL
Relative Humidity: 55 ±5%, 1011 hPa

Ambient Temp. (Deg C): 23.5 ±2

Calibration Method:

By comparison technique, test temperatures were measured from the unit under test at fixed point method in reference with a Multi-function Calibrator, SPRT, NIST and ITS 1990. Procedures of test conform to the requirements of ISO/IEC Guide 17025. Data were gathered and tabulated.

During calibration the unit under test was found to have a standard error of ± 0.26 °F with a confidence error of not less than 95%. Uncertainty of measurement is ± 0.69 °F. Calculations were taken using the standard deviation formula.

Results:

REFERENCE READING (ACTUAL TEMP.)	UUT SETTING	CORRECTION	STANDARD DEVIATION	REMARKS
°F	°F	°F	°F	
0.00	1	1.000	0.7071	The user should determine the suitability of the instrument of its intended use.
50.00	50	0.000	0.0000	
100.00	100	0.000	0.0000	
150.00	150	0.000	0.0000	
200.00	200	0.000	0.0000	
250.00	250	0.000	0.0000	
300.00	300	0.000	0.0000	

Remarks:

All data pertain only to the unit described contained at the time of test. This certificate is not valid without seal and signature. Unauthorized reproduction is prohibited.

Calibrated By: C.A. CASADO
Date: February 1, 2024

Certified By: A.M. CHANDON
Date: February 2, 2024

Temperature: Probe Heater Temperature Controller, Unit 3A, Selva Street, Brgy. 260, Pandacan, Majila, Quezon City, Philippines. Manufacturer: CAL CONTROLS. Model No.: CAL 3200. Serial No.: 69928664089. Code: 2022TCT3A, TEAM 3A. Range: -200 to 1800.0 Deg. C. Resolution: 1 Deg. C. Calibration Date: February 1, 2024. Calibration Due: January 31, 2025. Standard Error: ± 0.26 °F. Uncertainty of Measurement: ± 0.69 °F. Calculations were taken using the standard deviation formula.

Date Calibrated: March 01, 2024 Graduated Cylinder 1000mL, 500mL, 100mL

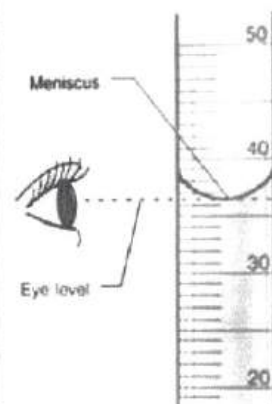
Date of Next Calibration: August 31, 2024 Pipette/Syringe 10mL, 5mL

Flask Measurement with Valve? Yes ☒ No ☐

Temperature(°C): 30.4 - 30.9

Relative Humidity: 80.8% - 80. %

Flask ID / Valve ID	Volume (mL) Trial 1	Volume (mL) Trial 2	Average (mL)
GF-11/V-11	2,226.20	2,226.40	2,226.30
GF-12/V-12	2,247.00	2,247.00	2,247.00
GF-13/V-13	2,236.20	2,236.60	2,236.40
GF-14/V-14	2,221.40	2,221.20	2,221.30
GF-15/V-15	2,227.20	2,227.20	2,227.20
GF-16/V-16	2,211.20	2,211.60	2,211.40
GF-17/V-17	2,237.00	2,237.60	2,237.30
GF-18/V-18	2,225.00	2,225.00	2,225.00
GF-19/V-19	2,220.00	2,220.20	2,220.10



Note: The flask volumes were measured within ± 10 mL. All calibrations are done in a room temperature. Glassware used during calibration are within ± 2.0 mL tolerance for Graduated Cylinder (TC) and ± 0.02 mL tolerance for Pipette (TD).

Reference used in calibration					
Type	Model	Serial No.	Calibration Date	Certificate No.	Issuing Lab/Traceability
Graduated Cylinder	Pyrex 100mL	No. 70075	April 10, 2023	2000.05-8004-3.23	Switchtek Measurement Systems
Graduated Cylinder	Pyrex 500mL	3025	April 11, 2023	2000.05-8004-2.23	Switchtek Measurement Systems
Graduated Cylinder	Pyrex 1000mL	3025	April 11, 2023	2000.05-8004-1.23	Switchtek Measurement Systems
Pipette	Pyrex 5mL	No. 7085	April 12, 2023	2000.07-8004-2.23	Switchtek Measurement Systems
Pipette	Pyrex 10mL	No. 7085	April 12, 2023	2000.07-8004-1.23	Switchtek Measurement Systems

QA/QC Check:

Completeness: ☒ Legibility: ☒ Accuracy: ☒ Specification: ☒ Reasonableness: ☒

Calibrated by: DANIEL L. PAUTAO JR.
 Team Leader

Checked By: ANGEL A. BUEVARRA
 QA/QC Manager



CERTIFICATE OF CALIBRATION
GREENTEK ENVIRONMENTAL PHILS. CO.
NOZZLE CALIBRATION

Date of Calibration: March 13, 2024

Calibration Due: September 12, 2024

Nozzle Box ID: GGN-T1
Nozzle Type: GLASS NOZZLE

Calibrated By: AJRR

Nozzle ID	D ₁ (mm)	D ₂ (mm)	D ₃ (mm)	D (mm)	Average (mm)
GGNT1-01	4.64	4.61	4.62	0.03	4.62
GGNT1-02	4.80	4.80	4.81	0.01	4.80
GGNT1-03	6.40	6.41	6.41	0.01	6.41
GGNT1-04	7.80	7.81	7.83	0.01	7.81
GGNT1-05	9.58	9.57	9.57	0.01	9.57
GGNT1-06	11.10	11.13	11.11	0.02	11.11
GGNT1-07	12.79	12.78	12.80	0.02	12.79

Note:

D₁, D₂, and D₃ = Nozzle Diameter, measured different diameter. Tolerance = 0.0125mm

D = maximum difference in any two measurements. Tolerance = 0.1mm

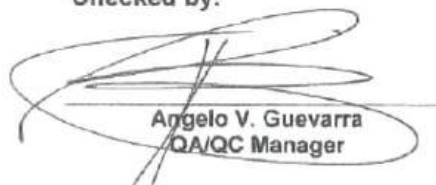
Average = Average of D₁, D₂, and D₃.

Equipment used in calibration					
Type	Model	Serial No.	Calibration Date	Certificate No.	Issuing Lab/Traceability
Digital Caliper	MITUTOYO CD-8" ASX	A22099212	July 30, 2023	10 0000.01-8588-1.23	Switchtek Measurement Systems

Calibrated by:


Daniel L. Navidad Jr.
Team Leader

Checked by:


Angelo V. Guevarra
QA/QC Manager



CERTIFICATE OF CALIBRATION
GREENTEK ENVIRONMENTAL PHILS. CO.
BALANCE CALIBRATION

Date of Calibration: March 13, 2024

Calibration Due: September 12, 2024

Instrument: Top Loading Balance

Brand: Tanita

Instrument ID: Team 1

Model No. KD-321

Environmental Conditions:

Temperature (C°): 20.8 - 22.2

Relative Humidity (%): 47.0


Test Point	Reference Weight (g)	Trial 1 (Reading) (g)	Trial 2 (Reading) (g)	Difference < 0.5g (g)	Remarks
1	10	10	10	0	OK
2	20	20	20	0	OK
3	50	49.9	49.9	0	OK
4	100	100	100	0	OK
5	200	199.8	199.8	0	OK
6	400	400	400	0	OK
7	500	499.5	499.5	0	OK
8	700	699.5	699.5	0	OK
9	800	799.5	799.5	0	OK
10	900	899.5	899.5	0	OK

Note:

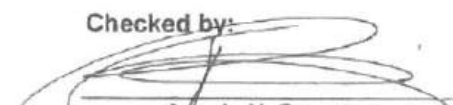
Trial 1 and 2 shall be less than 0.5g difference. The instrument was left standby for a minimum of 30-mins before calibration. Reference weights used for the calibration of this instrument complied with ISO/IEC 17025 against NIST traceable reference standards and its co- equal standards.

Reference used in calibration					
Type	Model	Serial No.	Calibration Date	Certificate No.	Issuing Lab/Traceability
Set of Weights	No Record	G.201501	July 29, 2023	600 01-8588-1.23	Switchtek Measurement Systems

Calibrated by:


Daniel L. Navidad Jr.
Team Leader

Checked by:


Angelo V. Guevarra
QA/QC Manager



CERTIFICATE OF CALIBRATION
GREENTEK ENVIRONMENTAL PHILS. CO.
NOZZLE CALIBRATION

Date of Calibration: March 13, 2024

Calibration Due: September 12, 2024

Nozzle Box ID: GN-T1
Nozzle Type: STAINLESS STEEL

Calibrated By: AJRR


Nozzle ID	D ₁ (mm)	D ₂ (mm)	D ₃ (mm)	D (mm)	Average (mm)
GNT1-01	3.11	3.12	3.11	0.01	3.12
GNT1-02	4.48	4.48	4.49	0.01	4.48
GNT1-03	6.08	6.08	6.10	0.02	6.09
GNT1-04	7.74	7.71	7.73	0.03	7.73
GNT1-05	9.60	9.60	9.59	0.01	9.60
GNT1-06	10.88	10.86	10.89	0.03	10.88
GNT1-07	12.32	12.34	12.33	0.02	12.33

Note:


D₁, D₂ and D₃ = Nozzle Diameter, measured different diameter. Tolerance = 0.0125mm
D = maximum difference in any two measurements. Tolerance = 0.1mm
Average = Average of D₁, D₂ and D₃.

Equipment used in calibration					
Type	Model	Serial No.	Calibration Date	Certificate No.	Issuing Lab/Traceability
Digital Caliper	MITUTOYO CD-6" ASX	A22099212	July 30, 2023	10 0000.01-8588-1.23	Switchtek Measurement Systems

Calibrated by:


Daniel L. Navidad Jr.
Team Leader

Checked by:


Angelo V. Guevarra
QA/QC Manager

“APPENDIX F”

TEST PARTICIPANTS

TEST PARTICIPANTS

BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT

Ms. Jemimah R. Salayog - Pollution Control Officer

DENR EMB REPRESENTATIVE

Mr. Garth Raymundo - EMB CAR EMED Representative

GREENTEK ENVIRONMENTAL PHILS. CO.

Mr. Danilo M. Palaypay, Jr.	-	Technical & QA/QC Manager
Mr. Angelo V. Guevarra	-	Technical Head & QA/QC Manager
Mr. Daniel L. Navidad, Jr.	-	Team Leader / Safety Officer
Mr. Manny R. Cruz	-	Senior Field Technician / Driver
Mr. Anthony M. Cabungcal	-	Field Technician
Mr. Rodel M. Castante	-	Field Technician
Mr. Leo R. Toca	-	On Call Field Technician / Welder



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Visayas Avenue, Diliman, Quezon City



SAT No. 2023 – 151

CERTIFICATE OF ACCREDITATION

Pursuant to DENR Administrative Order No. 26 Series of 2013 of the Department of Environment and Natural Resources having substantially met all the requirements prescribed therein,

GREENTEK ENVIRONMENTAL PHILS. CO.

#2430 Laura St., Pandacan Manila

is hereby duly accredited as

SOURCE EMISSION TESTING FIRM

As such, the following are authorized as:

QA/QC Manager

Danilo M. Palaypay, Jr.

Team Leader

Aaron Jonathan R. Regilme

This certification shall allow the above firm and personnel to conduct stack testing limited to the following methods and parameters:

1. US-EPA Method 1 to 5 – PM
2. US-EPA Method 6/8 – SO₂
3. US-EPA Method 7 – NO_x
4. US-EPA Method 10 – CO

Granted this December 22, 2023 and valid until December 22, 2026

GILBERT C. GONZALES, CESO III

Director and concurrent
Assistant Secretary for Field Operations





Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Visayas Avenue, Diliman, Quezon City



SAT No. 2023 – 152

CERTIFICATE OF ACCREDITATION

Pursuant to DENR Administrative Order No. 26 Series of 2013 of the Department of Environment and Natural Resources having substantially met all the requirements prescribed therein,

GREENTEK ENVIRONMENTAL PHILS. CO.

#2430 Laura St., Pandacan Manila

is hereby duly accredited as

SOURCE EMISSION TESTING FIRM

As such, the following are authorized as:

QA/QC Manager

Angelo V. Guevarra

Team Leader

Daniel L. Navidad, Jr.

This certification shall allow the above firm and personnel to conduct stack testing limited to the following methods and parameters:

1. US-EPA Method 1 to 5 – PM
2. US-EPA Method 6/8 – SO₂
3. US-EPA Method 7 – NO_x
4. US-EPA Method 10 – CO

Granted this December 13, 2023 and valid until December 13, 2026

GILBERT C. GONZALES, CESO III

Director and concurrent
Assistant Secretary for Field Operations



“APPENDIX G”

***SOURCE SPECIFIC TEST PLAN
AND
FACILITY PERMIT***



05 June 2024

ENGR. JEAN C. BORRAMEO
OIC, Regional Director
Environmental Management Bureau
Cordillera Administrative Region
DENR Compound, Gibraltar Road,
Baguio City

Dear Director Borrromeo:

We have contracted **GREENTEK ENVIRONMENTAL PHILS. CO.** to conduct Source Emission Test of the following:

1. ONE (1) UNIT 5,013 CFM VERANTIS ACID FUME SCRUBBER
2. ONE (1) UNIT DUST COLLECTION FACILITY SYSTEM
3. THREE (3) STATIONS AMBIENT AIR (TSP, NO₂, SO₂ & NOISE LEVEL MEASUREMENT)

The facility plant is located at **Benguet Corporation – Acupan Contract Mining Project (BC-ACMP Assay Laboratory and Mill Refinery), Balatoc, Virac, Itogon Benguet.** The purpose of this test is for our compliance to the terms and conditions of the issued Permit to Operate.


We therefore submit the attached source specific test plan which was prepared by **GREENTEK ENVIRONMENTAL PHILS. CO.** for your review and approval that the test will be accepted by EMB for the above purposes.

The proposed date of testing is on **June 28 & 29, 2024**, and each of the unit will be tested with a load of at least 90% of our rated capacity.

Thank you for your consideration on this request.

Respectfully yours,


JEMIMAH R. SALAYOG
Pollution Control Officer


VALERIANO B. BONGALOS JR.
VP / Resident Manager
Benguet Gold Operation



CERTIFIED ISO 14001:2015 Environmental Management System
Balatoc, Itogon, Benguet
PO Box 100 Baguio City, 2600 Philippines
www.benguetcorp.com



2353 RJ Place Bldg. Unit 3A, Selya St. Pandacan, Manila – OA
2430 Laura St. Pandacan, Manila -WO
Telephone no: (028)2446900, (027)5052335
Email address: greentek.services@yahoo.com

SITE SPECIFIC STACK EMISSION TEST PLAN

Facility Name: **BENGUET CORPORATION – ACUPAN CONTRACT MINING PROJECT (BC-ACMP Assay Laboratory and Mill Refinery)**

Facility Address: **Balatoc, Virac, Itogon, Benguet**

Sources to be tested: **1 unit Acid Fume Scrubber & 1 unit Dust Collection Facility System**

INTRODUCTION:

GREENTEK ENVIRONMENTAL PHILS. CO. was contracted by **BENGUET CORPORATION – ACUPAN CONTRACT MINING PROJECT (BC-ACMP Assay Laboratory and Mill Refinery)** to conduct source emission testing at their facility located on the mentioned address.

The purpose of the test is to determine the compliance of the above sources with the emission standards. This test plan is prepared for review and approval by the **DENR-EMB – CAR** so that the results of the emission tests can be used as basis of their Permit to operate compliance to conditions.

The said sources will be tested of the following.

- 1. One (1) unit 5,013 CFM Verantis Acid Fume Scrubber – PM SOX NOX & CO**
 - Particulate Matter (PM), Sulfur Dioxide (Sox), Nitrogen Oxides (NOx), Carbon Monoxide (CO)
- 2. One (1) unit Dust Collection Facility System**
 - Particulate Matter (PM)

The test will be conducted in three (3) runs per unit source.

FACILITY INFORMATION:

The above testing activity will be performed at the facility specified below with the following contact information:

BENGUET CORPORATION – ACUPAN CONTRACT MINING PROJECT (BC-ACMP Assay Laboratory and Mill Refinery)

Contact Person:	JEMIMAH R. SALAYOG POLLUTION CONTROL OFFICER	VALERIANO B. BONGALOS JR. VP/RESIDENT MANAGER BENGUET GOLD OPERATION
Contact Number:	0917-136-1496	

BRIEF DESCRIPTION OF THE SOURCE TO BE TESTED:

BENGUET CORPORATION – ACUPAN CONTRACT MINING PROJECT (BC-ACMP Assay Laboratory and Mill Refinery, is a mining company and has maintains and One (1) unit 5,013 CFM Verantis Acid Fume Scrubber & One (1) unit Dust Collection Facility System.

Emission testing will be conducted with a load of at least 90% for each of the unit source.

TEST METHODOLOGIES:

The sampling will be conducted in three sampling runs per source. The following DENR Standard Procedure (US-EPA Reference Methods) will be used in this stack- sampling program. These procedures are based on the US-EPA 40 CFR 60, Appendix A – Reference Methods for Emission Testing of Stationary Sources:

Method 1	Sample and velocity traverses
Method 2	Stack gas velocity and volumetric flowrate
Method 3	Gas analysis for O ₂ and CO ₂ and dry molecular weight
Method 4	Determination of moisture content
Method 5	Determination of particulate emission
Method 6	Determination of sulfur dioxide emission
Method 7	Determination of nitrogen oxides emission
Method 10	Determination of carbon monoxide emission

Methods 1 to 4 will be conducted in conjunction with Methods 5 and 6 which requires isokinetic emission sampling. **GREENTEK ENVIRONMENTAL PHILS. CO.,** will use stainless steel probe liner and sampling nozzle which is an accepted alternative of the USEPA (DENR approved) methods.

In addition to PM and SO_x sampling, the NO_x testing will be conducted using three samples per test run where one result may be disregarded if they are found to be an outlier from other values. CO samples will be collected in a tedlar bag and will be analyzed using a non-dispersive infra-red analyzer.

The table below describes the implementation of the above sampling procedures:

TABLE 1 – Sampling Matrix

<u>Parameter</u>	<u>Abbr.</u>	<u>Test Method</u>	<u>Test Duration</u>	<u>Notes</u>
Volumetric Flow Rate	VFR	EPA Method 1-4	Minimum of 60 minutes per run (3 Runs)	Performed concurrent with M5 test run
Particulate Matter	PM	EPA Method 5	Minimum of 60 minutes per run (3 Runs)	Performed concurrent with M5 test run
Sulfur Oxides	SO _x (as SO ₂)	EPA Method 6	Minimum of 60 minutes per run (3 Runs)	Performed concurrent with M5 test run
Oxygen	O ₂	EPA Method 3Fyrite	Minimum of 60 minutes per run (3 Runs)	Integrated Tedlar bag sample during M5 test run
Carbon Dioxide	CO ₂	EPA Method 3Fyrite	Minimum of 60 minutes per run (3 Runs)	Integrated Tedlar bag sample during M5 test run
Nitrogen Oxides	NO _x (as NO ₂)	EPA Method 7	Minimum of 60 minutes per run (3 Runs)	Grab Sampling during M5 test run
Carbon Monoxide	CO	EPA Method 10	Minimum of 60 minutes per run (3 Runs)	Integrated Tedlar bag sample during Method 5, same tedlar bag for CO ₂ /O ₂

The facility should operate each unit source continuously during the actual testing. In case the unit is operating intermittently, or the stack test ports did not comply with the Method 1 requirements, only gaseous pollutants will be tested such as SO_x, NO_x and CO including gas analysis of CO₂ and O₂. Three replicate test runs, about 30 minutes in duration shall be performed when the boilers are intermittently.

TEST SCHEDULE AND IMPLEMENTATION PLAN:

Table 2 – Sampling Schedule

<u>Date</u>	<u>Source</u>	<u>Test Run</u>	<u>Notes</u>
June 28 & 29, 2024	One (1) unit 5,013 CFM Verantis Acid Fume Scrubber & One (1) unit Dust Collection Facility System.	Runs 1, 2 & 3	Duration of testing is 7 to 8 hours includes set up to actual test per unit source.

The actual run date and time may vary based on the facility process conditions, weather and testing logistics. The Test Team leader will coordinate the specific run plans with the designated facility representative.

TEST PERSONNEL:

Any of the following persons will be involved in the testing:

Danilo M. Palaypay Jr.	-	QA/QC MANAGER
Aaron Jonathan R. Regilme	-	TEAM LEADER
Angelo V. Guevarra	-	QA/QC MANAGER
Daniel L. Navidad Jr.	-	TEAM LEADER

Sampling Personnel (any of the following)

Manny Cruz	Reynaldo S. Pile
Anthony M. Cabuncal	Ronnie S. Basa
Rodel M. Castante	Kristoffer Camarillo

Prepared by:


DANILO M. PALAYPAY JR.
QA/QC MANAGER


ANGELO V. GUEVARRA
QA/QC MANAGER

SAT NO: 2021-93 / 2023-151

SAT NO: 2023-152



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Cordillera Administrative Region
Baguio City

Permit No. : 2007-POA-B-141105-043
Date issued : March 11, 2020
Validity Period : February 17, 2020 to February 16, 2025

PERMIT TO OPERATE
AIR POLLUTION SOURCE AND CONTROL INSTALLATION

Pursuant to Rule XIX, Part VI, of the Implementing Rules and Regulations of the Clean Air Act (Republic Act 8749), this Permit to Operate is hereby issued to:

BENGUET CORPORATION – ACUPAN CONTRACT MINING PROJECT

Balatoc, Virac, Itogon, Benguet
ECC CAR 1012-174-2110 (Amended)

for the emission, discharge or release of air pollutants from the following facilities/equipment (16.359434, 120.658985) installed at the **Mill Plant Refinery**:

Two (2) units Kerosene-fired Flame Torches of the Acidfying Chamber No. 2 which is connected to the **One (1) unit 5,013 CFM “VERANTIS” Acid Fume Scrubber System (No. 2)**

and are subject to the conditions specified on the attached two (2) pages.

Recommended by:

Approved by:

NESTOR M. DONAAL
OIC-Chief, Clearance & Permitting Division

MA. VICTORIA V. ABRERA
Regional Director

Permit Fee : PhP 1,900.00
 PhP 5,000.00
Filing Fee : PhP 600.00
Pres. Decree 1856 Fee : PhP 10.00
Documentary Stamp Tax: PhP 30.00

O.R. No.: 4702000 Date: January 21, 2020
O.R. No.: 4702496 Date: March 3, 2020
O.R. No.: 4702000 Date: January 21, 2020
O.R. No.: 4702000 Date: January 21, 2020
O.R. No.: 4700883 Date: January 21, 2020

Page 1 of 3
RECORDS UNIT EMB-CAR
ON: 3/11/20
ON: 4/14/20
ON:

20201800

CONDITIONS:

1. This Permit is issued for the permittee to operate **two (2) units Kerosene-fired Flame Torches of the Acidifying Chamber No. 2 which is connected to the one (1) unit 5,013 CFM "VERANTIS" Acid Fume Scrubber System (No.2)** at the permittee's establishment, **Benguet Corporation – Acupan Contract Mining Project, located at Balatoc, Virac, Itogon, Benguet.**
2. This Permit shall be valid until February 16, 2025, as indicated in the *validity period* on page 1 of this Permit, unless suspended or revoked by the Bureau.
3. The Bureau may modify the Permit by amending any existing condition or imposing any new or additional condition during the period of validity, subject to the provisions of DENR Administrative Order No. 2004-26 (Amending Rule XIX of DENR Administrative Order No. 2000-81, the Implementing Rules and Regulations of RA 8749).
4. An application for renewal of this Permit shall be filed not less than thirty (30) days before the expiry date indicated on page 1 of the Permit.
5. Page 1 of this Permit shall be posted in a conspicuous location at the premises and shall be adequately framed or otherwise protected against damage.
6. The operation of any installation, process activity at this establishment that produces, generates, captures, treats, reduces, controls, emits, releases or disperses air pollutants without a valid Permit to Operate, or in a violation of any of the conditions of this Permit, shall be subject to penalties of not less than ten thousand (10,000) pesos and not more than one hundred thousand (100,000.00) pesos, pursuant to Rule LVI of the Implementing Rules and Regulations of RA 8749.
7. The installations, processes or activities at this establishment shall be operated, conducted and managed by the permittee, and the associated plant and equipment shall be properly maintained and operated by the permittee, so that emissions of air pollutants from the establishment, including fugitive or uncontrolled emissions or releases of air pollutants from abnormal or unexpected events, do not cause air pollution in the surrounding air environment or have adverse effects on persons in that environment.
8. Without limiting the generality of the previous condition, the permittee shall ensure that the emissions from the regulated installations or processes comply with:
 - The National Emission Standards for Source Specific Air Pollutants as specified in Rule XXV of the IRRs of RA 8749; and
 - The National Ambient Air Quality Standards for Source Specific Air Pollutants from Industrial Sources/Operations as specified in Rule XXVI of the IRRs of 8749.
9. The permittee shall submit Self-Monitoring Reports to the Bureau on a quarterly basis in accordance with DENR Administrative Order No. 27 (Series of 2003) and any written instructions by the Bureau based on the following schedule:

Quarter	Coverage	Submission	Quarter	Coverage	Submission
First	Jan. – Mar.	1-15 Apr.	Third	Jul. – Sept.	1-15 Oct.
Second	Apr. – Jun.	1-15 Jul.	Fourth	Oct. – Dec.	1-15 Jan.

10. The permittee shall at all times have an appointed or designated Pollution Control Officer (PCO) who shall be the day-by-day contact person between the Bureau and the establishment. The permittee shall ensure that the PCO is familiar with the operations and activities undertaken at the establishment, and the relevant emission sources and air pollution control devices and equipment. The permittee shall give the PCO the authority to implement corrective action in the event of a malfunction, accident, breakdown or other abnormal event that results in emissions that do not comply with emission standards or ambient air quality standards.
11. The permittee shall report in writing to the Bureau any malfunction, accident, breakdown, leak, spill or other abnormal or unexpected event which results in emissions to atmosphere that do not comply with the emission standards or ambient air quality standards, or in any other abnormal or unexpected releases of air pollutants. The report shall indicate the nature of the incident or event, its impact on emissions, the time period involved, and any actions or measures taken to control the emissions or releases, remedy any air pollution problems that may have occurred, and minimize the probability of a reoccurrence of the event the release.
12. The permittee shall at all times allow entry by the Department or the Bureau an access to any part of the establishment to conduct inspections, gather information, test emissions or take samples. The permittee and its personnel shall not obstruct such officers in the performance of these functions, and shall furnish pertinent information or materials requested from them. The permittee shall comply with any lawful instruction or direction given by the Department or the Bureau at all times.
13. The permittee shall not make or allow any alterations or modifications to operations, activities, installations, processes, plan or equipment at the establishment that may substantially change the nature or quantity of the associated emissions without obtaining the approval of the Bureau, including obtaining any necessary Permit to Operate.

W



Environmental Management Service Provider

31 July 2024

Ref. No.: LT-24-241-1-68

MR. FRANCISCO O. FLAVIER
Resident Manager
BMC FORESTRY CORPORATION
Irisan Lime Project.,
Irisan, Baguio City

ATTN: NARHY C. POMILBAN
Pollution Control Officer

Subject: Source Emission Monitoring Report

Dear Mr. Flavier:

We are pleased to submit the final report of the source emission monitoring as a result of our visit to your facility in Irisan, Baguio City on May 28, 2024.

We hope that this report addresses your requirements.

Very truly yours,


EMMANUEL R. ALTAREJOS
Executive Vice President

FRA/mla

2nd Floor, VAG Bldg. Ortigas Ave. Greenhills
San Juan, Metro Manila, Philippines
Tel No. (632) 863-6129 • Fax (632) 727-9831
Email: info@bsienv.com



Department of Environment and Natural Resources (DENR)
ENVIRONMENTAL MANAGEMENT BUREAU

ACCREDITED THIRD PARTY TESTER
Certificate No: SAT NO. 2022-72



OSHIC-DOLE ACCREDITED WEM PROVIDER

SOURCE EMISSION MONITORING REPORT

One (1) Unit 1.08 MT/hr Vertical Shaft Kiln

BMC FORESTRY CORPORATION

Irisan, Baguio City



**DENR SOURCE EMISSION TESTING FIRM
ACCREDITATION NO: SAT NO. 2022-72**

2nd Floor, VAG Building
Ortigas Avenue, Greenhills, San Juan,
Metro Manila, Philippines

SOURCE EMISSION MONITORING REPORT
(May 28, 2024)

BMC FORESTRY CORPORATION
Irisan, Baguio City

Prepared for:

BMC Forestry Corporation
Km. 5, Naguilian Rd., Irisan, Baguio City
Tel. No.: 445-7177

Prepared by:

BSI
2nd Floor VAG Building, Ortigas Avenue
Greenhills, San Juan, Metro Manila
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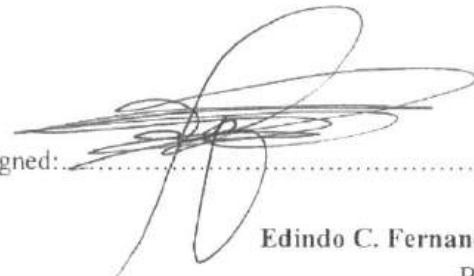
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Emission Test Report Certification

The emission sampling reported herein was performed under the direction and supervision of Mr. Edindo C. Fernando of BSI. The analyses of samples were conducted under the direction and supervision of Mr. Renato M. Gofredo, Jr. of ELARSI, Inc., a DENR-recognized Environmental Laboratory

I certify that the information contained in this report is authentic and accurate to the best of my knowledge.

Signed:



Edindo C. Fernando

BSI

DENR Accredited QA/QC Manager

Date: 07 AUG 2024

1. INTRODUCTION

This report presents the procedures and results of the source emission monitoring conducted on May 28, 2024 at BMC Forestry Corporation situated in Irisan, Baguio City. BSI was commissioned to conduct the monitoring wherein Mr. Halcy Lemon P. Orquina led the team that administered the source emission sampling with Mr. Edindo C. Fernando as QA/QC Manager. Meanwhile, Mr. Francisco O. Flavier, Resident Manager of BMC Forestry Corporation, served as site contact person during sampling.

The pollutants considered for the source emission monitoring were: particulate matter (PM), sulfur oxides (as SO₂), nitrogen oxides (as NO₂) and carbon monoxide (CO) at one (1) unit 1.08 MT/hr vertical shaft kiln exhaust stack. The source was tested for three runs.

1.1 Process Description and Operation

BMC Forestry Corporation – BC ILP is an enterprise in the Philippines, with the main office in Baguio City. It operates in the Crop Production Industry (https://www.emis.com/php/company-profile/PH/Bmc_Forestry_Corporation_en_3256166.html) and a producer and supplier of burnt lime. Its Kiln plant located at Km. 5 Naguilian Road, Irisan, Baguio City operates three (3) vertical shaft kilns, three (3) gas scrubbers, two (2) cyclone dust collectors and one (1) jaw crusher.

One (1) unit of 1.08 MT/hr *Vertical Shaft Kiln No. 2* was operated at 100% operating rate was tested during sampling, and used low sulfur fuel oil as fuel source.

This report covers the source emission monitoring of the vertical shaft kiln no. 2 only.

1.2 Reason for Testing

The purpose of the monitoring was to verify the company's compliance with the source emission standards of the Department of Environment and Natural Resources (DENR) Administrative Order No. 81 Series of 2000 (Implementing Rules and Regulations of the Philippine Clean Air Act of 1999).

1.3 Facility Operating Conditions during the Test

The equipment information and operating conditions of the facility monitored were summarized in *Tables 1* and *2*, respectively.

Table 1. Equipment Information

Stationary Source Information		Vertical Shaft Kiln No. 2
Brand Name		N/A
Rated Capacity		1.08 MT/hr
Year Installed		No information provided
Exhaust Stack	Diameter	40 cm
	Height*	14 m
	Orientation	Vertical
Air Pollution Control Device		Wet Gas Scrubber
GPS Coordinates		16°25'9.012"N; 120°33'28.542"E

*Measured from the ground to the tip of the stack

Table 2. Operating Conditions

Stationary Source Information		Vertical Shaft Kiln No. 2
Load During Sampling		100%
Fuel Used		BFO / IFO
Fuel Sulfur Content		No information provided
Fuel Consumption		No information available
Annual Operating Hours		8760 hours

2. SUMMARY OF RESULTS

Table 3 presents the summary of test results of the vertical shaft kiln no. 2 exhaust stack. The test results were compared with the National Emission Standards identified in IRR Part VII Rule XXV Table 2. A detailed description of the test run information and sample calculations used to derive the values in the tabular summary were attached in *Annex A*.

Three test runs were performed to collect: PM, SO_x (as SO₂), NO_x (as NO₂) and CO at vertical shaft kiln no. 2 exhaust stack. Three trial tests per run were conducted to collect samples of nitrogen oxides (as NO₂). The raw field data used to prepare the summary reports in *Annex A* was included in *Annex B*. Emissions have been corrected to the standard conditions of 25°C and 760 mmHg on dry basis (unless otherwise indicated). Moreover, in accordance with EMB Memorandum Circular No. 2021-15, the pollutant concentrations from the Vertical Shaft Kiln were not corrected with standard oxygen correction factor since the PTO of the unit was issued before the effectivity of the mentioned EMB memorandum.

Table 3. Vertical Shaft Kiln No. 2 Emission Test Results

		Run 1	Run 2	Run 3		
Sampling date		28-May-24	28-May-24	28-May-24		
Begin sampling time		1030H	1300H	1505H		
End sampling time		1135H	1410H	1610H		
Parameter	Units				Average	DENR Standard
Average stack temperature	°C	219.7	264.7	281.7	255.3	
CO ₂ measured in stack gas	%	8.5	8.5	8.5	8.5	
Oxygen measured in stack gas	%	12.0	12.0	12.0	12.0	
Stack gas moisture content	%	6.77	6.94	6.62	6.78	
Flue gas velocity	m/s	15.86	16.42	16.70	16.33	
Actual volumetric flow	m ³ /min	119.6	123.8	125.9	123.1	
Dry volumetric flow at STP	dsm ³ /min	58.0	54.8	54.1	55.6	
Isokinetic flow rate	%	101.1	100.8	101.2		
Particulate matter data						
Concentration	mg/Nm ³	31.9	27.0	20.7	26.5	150
Annual emission rate	tons/yr	1.0	0.8	0.6	0.8	
Sulfur oxides data						
Concentration (as SO ₂)	mg/Nm ³	24.0	16.4	14.5	18.3	1500
Annual emission rate	tons/yr	0.7	0.5	0.4	0.5	
Nitrogen oxides data						
Concentration (as NO ₂) [*]	mg/Nm ³	< 23.6	< 20.4	< 20.3	< 21.4	1000
Annual emission rate	tons/yr	< 0.7	< 0.6	< 0.6	< 0.6	
Carbon monoxide data						
Concentration	mg/Nm ³	121.4	113.4	128.2	121.0	500
Annual emission rate	tons/yr	3.7	3.3	3.6	3.5	

Annual emission rates were based on one (1) year continuous operation.

* Average of three (3) trial tests

2.1 Conclusions

A description of any method deviations and quality assurance assessment was included in *Sections 3 and 4* of this report. Based on a review of the sampling data, facility operating information, test method description and quality assurance results, the concentration values presented in *Table 3* have passed the criteria to be considered as representative emission test results of the source and are suitable for comparison with the regulatory limits.

Under the Implementing Rules and Regulations of the Clean Air Act (CAA), the standards applicable to vertical shaft kiln no. 2 are as “*existing fuel-burning equipment; other stationary source*”.

In conclusion, the test results indicate that the average emissions from vertical shaft kiln no. 2 exhaust stack:

- comply with the applicable standard for PM emissions;
- comply with the applicable standard for SO_x (as SO₂) emissions;
- comply with the applicable standard for NO_x (as NO₂) emissions; and
- comply with the applicable standard for CO emissions.

3. SAMPLING AND ANALYTICAL PROCEDURES

All sampling were undertaken in accordance with US EPA standard methods, viz:

Method 1	Sample and Velocity Traverse Point Locations
Method 2	Stack Gas Velocity and Volumetric Flow Rate (S-type Pitot Tube)
Method 3	Gas Analysis for Determination of Dry Molecular Weight
Method 4	Determination of Moisture Content in Stack Gases
Method 5	Determination of Particulate Matter Emissions from Stationary Sources
Method 6	Determination of Sulfur Dioxide Emissions from Stationary Sources
Method 7	Determination of Nitrogen Oxide Emissions from Stationary Sources
Method 10	Determination of Carbon Monoxide Emissions from Stationary Sources

3.1 Methods 1 and 2 – Traverse Point and Stack Velocity

3.1.1 Sampling points

For the vertical shaft kiln no. 1 exhaust stack, the number and location of the sampling points were determined using the procedures of US EPA Method 1 since the equivalent stack diameter was measured to be greater than 30 cm.

The vertical shaft kiln no. 1 was sampled at a total of twenty-four (24) traverse points. Having two (2) available portholes that are 90° apart, twelve (12) traverse points were sampled for each.

Some of the traverse points of the exhaust stack were less than the criterion of Method 1 for allowable distance from the stack wall of stacks with diameter less than 0.61 meters. These points were relocated 1.3 cm (0.5 in) away from the stack wall.

3.1.2 Cyclonic Flow Check

For each sampling point, the rotation angle was determined using an “S-type” pitot tube assembly, liquid manometer and angle finder in accordance with section 2.4 of US EPA Method 1.

For each test point, the average absolute value of the rotation angle was less than the 20 degrees criterion of Method 1.

3.1.3 Flue Gas Velocity

The procedures of US EPA Method 2 were employed to determine the flue gas velocity and volumetric flow rate using an “S-type” pitot tube in making velocity head measurements (Δp). The “S-type” pitot tube conforms to the geometric specifications of Method 2 and has therefore been assigned a coefficient of 0.84. An inclined manometer built onto the meter console box was used to measure the differential pressures, while flue gas temperatures were measured with chromel-alumel thermocouples equipped with digital readouts.

3.2 Method 3 – Flue Gas Composition

US EPA Method 3 procedures were used to determine the flue gas composition and molecular weight. An “Orsat” sample pump was operated continuously at a constant rate during each Method 5/6 (Modified) sampling run to collect an integrated flue gas sample into a tedlar bag through a separate sample line attached to the probe. Moisture was removed from the sample by passing it through a small impinger charged with silica gel.

The content of each tedlar bag was analyzed using a Fyrite analyzer to determine the concentration of oxygen and carbon dioxide in the sample.

The same bag samples were also used for the carbon monoxide analysis by Method 10.

3.3 Method 4 – Flue Gas Moisture Content

The moisture content of the flue gas was determined using the US EPA Method 4 procedures in conjunction with Method 5/6 (Modified).

3.4 Method 5/6 (Modified) – Particulate Matter and Sulfur Oxides

3.4.1 Sample Collection

A US EPA Method 5/6 (Modified) sampling train was used to extract samples isokinetically from the stack which comprised the following elements:

- a stainless steel nozzle;
- a heated stainless steel probe with “S-type” pitot tube;
- a glass fibre filter maintained at $120^{\circ}\text{C} \pm 14^{\circ}\text{C}$;
- four chilled impingers:
 - 1st and 2nd containing 100 mL 3% H_2O_2 ;
 - 3rd left empty; and
 - 4th containing 200 to 300 grams of silica gel; and
- a metering console.

Each of the impingers was labeled and weighed.

Three test runs were conducted at the available sampling ports. The actual sampling time was 60 minutes per run.

3.4.2 Sample Recovery

Sample recovery was undertaken at the sheltered area near the source of emission. The filter was removed from the filter holder and placed on a petri dish. The volume of water vapor condensed in the impingers was measured to determine the volume of water vapor collected.

The nozzle, probe and front half of the filter holder were rinsed with acetone, and the interior of the probe and nozzle were rinsed and brushed repeatedly to remove any adhering PM from the inside surfaces. All rinses were collected into a 250 mL glass bottle.

The contents of the impingers 1, 2 and 3 were transferred to a 1000 mL polyethylene sample bottle. The glass sample line between the heated filter holder and the first impinger, the first three impingers and connecting glasswares were all rinsed with distilled deionized water and the rinse was added into the sample bottle.

3.4.3 Sample Analysis

The filter and sample bottles, together with the blank samples of acetone and H_2O_2 , were submitted to a DENR-recognized laboratory.

The mass of filterable particulate matter collected on the filter and in the acetone rinse was determined in accordance with US EPA Method 5 analytical procedures.

The mass of sulfur oxides in the impinger contents and rinse water was determined in accordance with US EPA Method 6 analytical procedures.

3.5 Method 7 – Nitrogen Oxides

3.5.1 Sample Collection

The sampling of the flue gas to determine the concentration of nitrogen oxides was undertaken in accordance with US EPA Method 7 using a nominal 2 L glass collection flask containing 25 mL of NO_x absorbing reagent (Sulfuric Acid-Hydrogen Peroxide) connected to a Borosilicate glass probe sufficiently heated to avoid condensation and equipped with a glass wool filter at the end for particulate matter screening.

During the Method 7 testing, a flask was evacuated to an absolute pressure of 76 mmHg (3 inHg) at most less than the barometric pressure, and the initial flask temperature and pressure were recorded. The sampling train was then checked for leakage not exceeding 10 mmHg (0.4 inHg) in 1 min. The probe was inserted into the stack, connected to the flask and after purging the probe, a sample was drawn into the flask. The flask was then shaken for five minutes. This procedure was carried out thrice for three test runs resulting in the collection of nine samples for the exhaust stack.

3.5.2 Sample Recovery

The NO_x flasks were set at least 16 hours, shaken for two minutes and then the final flask temperature and pressure were measured. The contents of each flask were transferred to a leak-free polyethylene bottle and rinsed twice with 5 mL portions of deionized distilled water, and the rinse water was added into the bottle. Prior to analysis, the pH was adjusted to a value within 9 to 12 by adding 1N NaOH.

3.5.3 Sample Analysis

The sample preparation procedures of US EPA Method 7 were applied and each sample was then subjected to colorimetric analysis.

3.6 Method 10 – Carbon Monoxide

3.6.1 Sample Collection

The integrated samples that were collected into tedlar bags were used for the determination of CO in accordance with US EPA Method 10.

3.6.2 Sample Recovery

The tedlar bags were sealed and transported for analysis.

3.6.3 Sample Analysis

The sample was analyzed using a non-dispersive infrared (NDIR) analyzer. The analyzer was flushed with nitrogen and zero setting confirmed. The tedlar bag was attached to the sample input and the gas sample was introduced at a flow rate of about 0.5 L/min by applying gentle pressure to the tedlar bag. The concentration was recorded when the value indicated on the display stabilized.

4. QA PROCEDURES

The US EPA “Quality Assurance Handbook for Air Pollution Measurement Systems: Volume III Stationary Source-Specific Methods” was used as a guide to achieve the quality assurance objectives of producing data that are complete, representative and of known precision and accuracy.

4.1 Particulate Matter and Sulfur Oxides (as SO₂)

4.1.1 Sampling Procedure

US EPA Method 5/6 (Modified) was employed to determine the concentration of particulate matter in the gas stream. This method requires the use of Methods 1 to 4 to determine sampling port locations, sample traverse points within the stack, as well as the flow rate, molecular weight and moisture content of the flue gas.

The quality of the emission test was assured by:

- Ensuring that the test port is located sufficiently distant from both upstream and downstream flow disturbances (such as bends and changes in stack diameter).
- Ensuring that stack gas flow is essentially parallel to the stack walls by conducting a cyclonic flow check.
- Determination of a representative stack gas velocity by the selection of sampling test points appropriate to the stack diameter in accordance with the method.
- Leak testing of the sampling train before and after each sampling run.
- Testing and calibration of the dry gas meter, thermocouples and temperature displays, pitot tubes, nozzles, and manometer assembly.
- Ensuring that the temperature of the impinger system is maintained below 20°C.
- Maintaining the filter and sampling probe temperature at 120°C (±14°C).
- Sampling at between 90 - 110% of the actual gas stream velocity (isokinetic sampling).

The procedure for sampling SO_x (as SO₂) was combined with US EPA Method 5 as described in *Section 3.4*. The quality of the test was assured by:

- The use of freshly-prepared chemical solutions;
- Care in the recovery of the sample;
- Attention to detail in the analysis of samples in accordance with the US EPA Method 6;
- The collection and analysis of representative “blank” samples; and
- Proper calibration and QA/QC checks of all elements of the sampling system.

4.1.2 Sampling Equipment

Copies of various calibration and test certificates were included in *Annex E*.

Barometer

A calibrated digital barometer was used to measure atmospheric pressure at the platform level.

Probe Nozzle

The probe nozzles were calibrated by the manufacturer and were inspected and checked for roundness before use to ensure that they met the specifications of the method.

Pitot Tube

The pitot tube meets the EPA Method 2 design specifications for “S-type” pitot tubes and was therefore assigned a baseline coefficient of 0.84. After each test, the pitot tube was visually inspected for damage.

Metering System

The meter box was leak checked and a calibration was carried out using five (5)-point calibrating orifices in accordance with EPA Method 5.

Post-Test Meter Calibration

A post-test meter calibration was made using the data collected for each of the test runs in accordance with the procedure set out in EPA ALT-009.

Temperature Sensors

An ethanol-filled thermometer with NIST traceable calibration was used to calibrate thermocouples at approximately 0°C in iced water, ambient temperature and approximately 100°C in boiling water. At the completion of each test, the thermocouples were compared to the ethanol-in-glass thermometer at ambient temperature and a continuity check was performed to ensure that the thermocouple read-out trended in the correct direction when subjected to a temperature change.

4.1.3 Analysis

Filters and acetone used in the emission test met the required specifications and Method 5 analytical procedures were employed using a properly calibrated analytical balance.

The mass of sulfur oxides in the impinger contents and rinse water were determined in accordance with US EPA Method 6 analytical procedures.

4.2 Nitrogen Oxides (as NO₂)

The procedure for sampling NO_x (as NO₂) was described in *Section 3.5*. The quality of the test was assured by:

- The use of freshly-prepared chemicals;
- Care in the recovery of the sample;
- Attention to detail in the analysis of samples in accordance with the US EPA Method 7;
- Calibration and verification of linearity of the spectrophotometer; and
- Proper calibration and QA/QC checks of all elements of the sampling system.

4.3 Carbon Monoxide

The procedure for sampling CO was described in *Section 3.6*. The quality of the test was assured by:

- Care in the collection of the gas samples to ensure that they are representative of the emission;
- Maintenance of a leak-free bag at all stages of sampling and analysis;
- Calibration of the analytical instrument prior to analysis; and
- Attention to detail in the analysis of samples in accordance with the US EPA Method 10.

ANNEX A

SOURCE EMISSION MONITORING SUMMARY OF RESULTS

EMISSION TEST RESULTS SUMMARY						
BMC FORESTRY CORP. ILP						
IRISAN, BAGUIO CITY						
VERTICAL SHAFT KILN NO. 2						
		Run 1	Run 2	Run 3		
Sampling date		28-May-24	28-May-24	28-May-24		
Begin sampling time		1030H	1300H	1505H		
End sampling time		1135H	1410H	1610H		
Symbol	Parameter	Units				Average
Y	Meter box gamma	none	0.9884	0.9884	0.9884	
ΔH	Average ΔH	mm H ₂ O	63.5	58.0	52.3	
P_{bar}	Barometric pressure	mm Hg	652.7	651.5	650.5	
V_m	Metered sample gas volume	m ³	1.6272	1.5420	1.5294	
T_m	Average meter temperature	°C	29.8	30.5	29.9	
P_g	Static pressure	mm H ₂ O	10.0	10.0	10.0	
T_s	Average stack temperature	°C	219.7	264.7	281.7	255.3
D_s	Stack diameter	cm	40	40	40	
V_{lc}	Volume of water collected	mL	73.4	71.1	67.0	
%CO ₂	CO ₂ measured in stack gas	%	8.5	8.5	8.5	8.5
%O ₂	Oxygen measured in stack gas	%	12.0	12.0	12.0	12.0
C_p	Pitot tube coefficient	none	0.84	0.84	0.84	
$\sqrt{\Delta P}$	Average of square roots of ΔP	(mm H ₂ O) ^{1/2}	3.350	3.316	3.321	
θ	Sampling run time	min	60	60	60	
D_n	Nozzle diameter	mm	7.89	7.89	7.89	
A_n	Nozzle area	m ²	4.89E-05	4.89E-05	4.89E-05	
$V_{m(stp)}$	Metered gas volume at STP	Nm ³	1.3684	1.2904	1.2799	
P_s	Stack pressure	mm Hg	653.44	652.24	651.24	
B_{ws}	Stack gas moisture content	%	6.77	6.94	6.62	6.78
$V_{w(stp)}$	Water vapour volume at STP	Nm ³	0.100	0.096	0.091	
M_{fd}	Dry mole fraction of flue gas	none	0.932	0.931	0.934	
M_d	Dry molecular weight	g/g-mole	29.84	29.84	29.84	
M_s	Wet molecular weight	g/g-mole	29.04	29.02	29.06	
v_s	Flue gas velocity	m/s	15.86	16.42	16.70	16.33
A_s	Stack area	m ²	0.126	0.126	0.126	
$Q_{a(act)}$	Actual volumetric flow	m ³ /min	119.6	123.8	125.9	123.1
$Q_{s(stp)}$	Dry volumetric flow at STP	ds m ³ /min	58.0	54.8	54.1	55.6
I	Isokinetic flow rate	%	101.1	100.8	101.2	
AOH	Annual operating hours	hrs/yr	8,760	8,760	8,760	
Particulate matter data						
M_{part}	Measured mass	mg	43.6	34.8	26.5	
C_{part}	Concentration	mg/Nm ³	31.9	27.0	20.7	26.5
	Mass emission rate	kg/hr	0.11	0.09	0.07	0.09
	Annual emission rate	tons/yr	1.0	0.8	0.6	0.8
Sulphur oxides data						
M_{SOx}	Measured mass	mg	32.78	21.22	18.57	
C_{SOx}	Concentration	mg/Nm ³	24.0	16.4	14.5	18.3
	Mass emission rate	kg/hr	0.08	0.05	0.05	0.06
	Annual emission rate	tons/yr	0.7	0.5	0.4	0.5
Nitrogen oxides data						
C_{NOx}	Concentration	mg/Nm ³	< 23.6	< 20.4	< 20.3	< 21.4
	Mass emission rate	kg/hr	< 0.08	< 0.07	< 0.07	< 0.07
	Annual emission rate	tons/yr	< 0.7	< 0.6	< 0.6	< 0.6
Carbon monoxide data						
C_{COppm}	Concentration	ppm	106.0	99.0	112.0	
C_{COmg}	Concentration	mg/Nm ³	121.4	113.4	128.2	121.0
	Mass emission rate	kg/hr	0.42	0.37	0.42	0.40
	Annual emission rate	tons/yr	3.7	3.3	3.6	3.5

Notes: *Italics indicates calculated value*

Annual emission rates were based on one (1) year continuous operation.

NITROGEN OXIDES (as NO₂) EMISSIONS DATA
BMC FORESTRY CORP. ILP
IRISAN, BAGUIO CITY
VERTICAL SHAFT KILN NO. 2

RUN 1

Sample Collection								Sample Recovery						Concentration Calculation		
Barometric Pressure, P _{baro} (in Hg) 29.69								Barometric Pressure, P _{baro} (in Hg) 29.70								
Sample ID	Flask ID	Flask Volume	Evacuated Pressure	Initial Absolute Pressure	Flask Temp	Flask Temp	Collection Time	Sample ID	Flask ID	Final Pressure	Final Absolute Pressure	Flask Temp	Flask Temp	Volume at STP	Mass Catch	NO _x Conc
		V _f	P _g	P _i		T _f				P _g	P _i	Temp	T _f	V _{sc}	M _{NO2}	C _{NO2}
		mL	in Hg	(in Hg)	°C	°K				in Hg	in Hg	°C	°K	mL	µg	mg/Nm ³
S1R1T1	BSI T2-F19	2315	23.30	6.39	27.6	300.75	1035H	S1R1T1	BSI T2-F19	0.30	29.40	28.7	301.85	1736.8	< 40.4	< 23.3
S1R1T2	BSI T2-F20	2250	23.20	6.49	28.4	301.55	1045H	S1R1T2	BSI T2-F20	0.50	29.20	28.5	301.75	1667.4	< 40.4	< 24.2
S1R1T3	BSI T2-F21	2310	23.40	6.29	28.3	301.45	1055H	S1R1T3	BSI T2-F21	0.50	29.20	28.1	301.25	1731.0	< 40.4	< 23.3
Date Collected: 28-May-2024								Date Recovered: 29-May-2024						Average < 23.6		

RUN 2

Sample Collection								Sample Recovery						Concentration Calculation		
Barometric Pressure, P _{baro} (in Hg) 26.65								Barometric Pressure, P _{baro} (in Hg) 29.70								
Sample ID	Flask ID	Flask Volume	Evacuated Pressure	Initial Absolute Pressure	Flask Temp	Flask Temp	Collection Time	Sample ID	Flask ID	Final Pressure	Final Absolute Pressure	Flask Temp	Flask Temp	Volume at STP	Mass Catch	NO _x Conc
		V _f	P _g	P _i		T _f				P _g	P _i	Temp	T _f	V _{sc}	M _{NO2}	C _{NO2}
		mL	in Hg	(in Hg)	°C	°K				in Hg	in Hg	°C	°K	mL	µg	mg/Nm ³
S1R2T1	BSI T2-F22	2250	23.20	2.45	27.7	300.85	1304H	S1R2T1	BSI T2-F22	0.40	29.30	28.3	301.45	1973.4	< 40.4	< 20.5
S1R2T2	BSI T2-F23	2235	23.30	2.35	27.8	300.95	1314H	S1R2T2	BSI T2-F23	0.60	29.10	28.2	301.35	1953.5	< 40.4	< 20.7
S1R2T3	BSI T2-F24	2265	23.30	2.35	28.2	301.35	1324H	S1R2T3	BSI T2-F24	0.40	29.30	28.2	301.35	2012.9	< 40.4	< 20.1
Date Collected: 28-May-2024								Date Recovered: 29-May-2024						Average < 20.4		

RUN 3

Sample Collection								Sample Recovery						Concentration Calculation		
Barometric Pressure, P _{baro} (in Hg) 26.61								Barometric Pressure, P _{baro} (in Hg) 29.70								
Sample ID	Flask ID	Flask Volume	Evacuated Pressure	Initial Absolute Pressure	Flask Temp	Flask Temp	Collection Time	Sample ID	Flask ID	Final Pressure	Final Absolute Pressure	Flask Temp	Flask Temp	Volume at STP	Mass Catch	NO _x Conc
		V _f	P _g	P _i		T _f				P _g	P _i	Temp	T _f	V _{sc}	M _{NO2}	C _{NO2}
		mL	in Hg	(in Hg)	°C	°K				in Hg	in Hg	°C	°K	mL	µg	mg/Nm ³
S1R3T1	BSI T2-F25	2250	23.30	2.31	27.0	300.15	1510H	S1R3T1	BSI T2-F25	0.40	29.30	28.5	301.65	1981.9	< 40.4	< 20.4
S1R3T2	BSI T2-F26	2230	23.50	2.11	27.0	300.15	1520H	S1R3T2	BSI T2-F26	0.60	29.10	28.6	301.75	1963.4	< 40.4	< 20.6
S1R3T3	BSI T2-F27	2280	23.50	2.11	27.2	300.35	1530H	S1R3T3	BSI T2-F27	0.50	29.20	28.4	301.55	2016.9	< 40.4	< 20.0
Date Collected: 28-May-2024								Date Recovered: 29-May-2024						Average < 20.3		

SAMPLE CALCULATIONS

BMC FORESTRY CORP. ILP

IRISAN, BAGUIO CITY

VERTICAL SHAFT KILN NO. 2

VOLUME OF DRY GAS SAMPLED AT STANDARD CONDITIONS

$$V_{m(std)} = Y \times 0.3921 \times V_m \times \frac{P_{bar} + (\Delta H - 13.6)}{(273 + T_m)}$$

$$V_{m(std)} = 0.9884 \times 0.3921 \times 1.6272 \times \frac{652.7 + (63.5 - 13.6)}{(273 + 29.8)} = 1.3684 \text{ Nm}^3$$

VOLUME OF WATER VAPOUR AT STANDARD CONDITIONS

$$V_{w(std)} = 0.001356 \times V_{lg}$$

$$V_{w(std)} = 0.001356 \times 73.4 = 0.100 \text{ Nm}^3$$

PERCENT MOISTURE IN FLUE GAS

$$B_{ws} = \frac{V_{w(std)}}{(V_{w(std)} + V_{m(std)})}$$

$$B_{ws} = \frac{0.100}{(0.100 + 1.3684)} = 6.77 \%$$

ABSOLUTE FLUE GAS PRESSURE

$$P_s = P_{bar} + \frac{P_g}{13.6}$$

$$P_s = 652.7 + \frac{10}{13.6} = 653.44 \text{ mm Hg}$$

DRY MOLECULAR WEIGHT OF FLUE GAS

$$M_d = (\%CO_2 \times 0.44) + (\%O_2 \times 0.32) + [(100 - (\%CO_2 + \%O_2)) \times 0.28]$$

$$M_d = (8.5 \times 0.44) + (12.0 \times 0.32) + [(100 - (8.5 + 12.0)) \times 0.28] = 29.84 \text{ g/g mole}$$

WET MOLECULAR WEIGHT OF FLUE GAS

$$M_w = M_d \times (1 - B_{ws}) + \left(\frac{\text{mol. wt.}}{H_2O} \times B_{ws} \right)$$

$$M_w = 29.84 \times (1 - 0.0677) + (18 \times 0.0677) = 29.04 \text{ g/g mole}$$

AVERAGE FLUE GAS VELOCITY

$$v_s = 34.97 \times C_p \times \sqrt{\Delta P} \times \sqrt{\left\{ \frac{T_s + 273}{P_s \times M_s} \right\}}$$

$$v_s = 34.97 \times 0.84 \times 3.350 \times \sqrt{\left\{ \frac{219.7 + 273}{653.4 \times 29.04} \right\}} = 15.86 \text{ m/s}$$

ACTUAL WET FLUE GAS FLOW RATE

$$Q_a = 60 \times v_s \times A_s$$

$$Q_a = 60 \times 15.86 \times 0.126 = 119.6 \text{ m}^3/\text{min}$$

DRY, NORMAL FLUE GAS FLOW RATE

$$Q_s = Q_a \times M_{lg} \times \frac{298}{273 + T_s} \times \frac{P_s}{760}$$

$$Q_s = 119.6 \times 0.932 \times \frac{298}{273 + 219.7} \times \frac{653.4}{760} = 58.0 \text{ dsm}^3/\text{min}$$

SAMPLE CALCULATIONS

BMC FORESTRY CORP. ILP

IRISAN, BAGUIO CITY

VERTICAL SHAFT KILN NO. 2

ISOKINETIC FLOW RATE

$$I = \frac{P_{std}}{T_{std}} \times \frac{100}{60} \times \frac{T_s + 273}{P_s} \times \frac{V_{m(std)}}{V_s \times M_{fg} \times \theta \times A_n}$$

$$I = \frac{760}{298.15} \times \frac{100}{60} \times \frac{219.7 + 273}{853.44} \times \frac{1.3684}{15.86 \times 0.932 \times 60 \times 4.89E-05} = 101.1\%$$

PARTICULATE MATTER CONCENTRATION

$$C_{part} = \frac{M_{part}}{V_{m(std)}}$$

$$C_{part} = \frac{43.6}{1.3684} = 31.9 \text{ mg/Nm}^3$$

SULPHUR OXIDES CONCENTRATION

Concentration of SO_x as SO₂

$$C_{SOx} = \frac{M_{SO2}}{V_{m(std)}}$$

$$C_{SOx} = 24.0 \text{ mg/Nm}^3$$

NITROGEN OXIDES CONCENTRATION

Concentration of NO_x as NO₂

$$C_{NOx} = \frac{M_{NO2}}{V_{te}} \times 1000$$

$$C_{NOx} = 23.3 \text{ mg/Nm}^3$$

CONVERSION OF CO IN ppm TO mg/Nm³

$$C_{CO(mg)} = \frac{C_{CO(ppm)} \times \text{mol wt CO}}{24.5}$$

$$C_{CO(mg)} = \frac{106.0 \times 28.01}{24.5} = 121.4 \text{ mg/Nm}^3$$

ANNEX B

SOURCE EMISSION MONITORING FIELD DATA

MONITORING LOGSHEET

Facility Information

Facility Name
Facility Address
Name of Pollution Control Officer
Maintenance Supervisor / Engineer
Telephone and Fax Number

BMC FORESTRY CORP. ILP
KM. 6 NABUHAN ROAD, IKISAN, BAEVIO CITY
MS. NARHY C. POMILBAN

Source Description

Source Type
Source ID
Manufacturer / Brand of Equipment / Serial No.
Equipment Capacity (BHp,MW,MT/hr)
Date of Installation (month/year)
Date of Modification (that may increase emissions)
Operational Hours per Year (hrs/year)
Operating rate (%)

VERTICAL SHAFT KILN #2
PJ24 241 S1
✓
1.08 MT/HR
✓ 8,760 hrs/year
✓ 100%

Air Pollution Control Device

Is there an Air Pollution Control Device (APCD) attached to the source?

____ YES ____ NO

Type of APCD

Date of Installation

APCD parameters (flowrate,gpm,delta P,etc)

Is the APCD operating during emission sampling

____ YES ____ NO

Fuel Analysis / Information

Type of Fuel used during emission sampling (%S)

Original Fuel used

Date of Fuel change

Daily Fuel Consumption (Liters/day)

Is the Fuel Analysis Available?

Will the company provide the Fuel Analysis

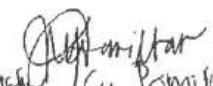
✓ Bunker Fuel Oil / Industrial Fuel Oil
✓ BFO

____ YES ____ NO

____ YES ____ NO

Please attach the following

- Fuel Analysis
- Permit to Operate
- APCD Process Logsheet
- Source Process Logsheet


Narhy C. Pomilban

Signature over printed name of Facility Representative

METHOD 1 - TRAVERSE POINT LOCATIONS

Facility Name	BMC STEEL CORP. LLP
Address	NAKULAN ROAD, IRISAN, BAGUIO
Source	1.08 MT HR. VERTICAL SHAFT KILN #2
Personnel / Date	ECE, HPD, RME, CAS, MSL, JBT

Stack / Ports	Type of Stack	Circular	<input checked="" type="checkbox"/>	Rectangle
	No. of Ports Available			2
	No. of Ports Used			2
	Port Inside Diameter, cm			8

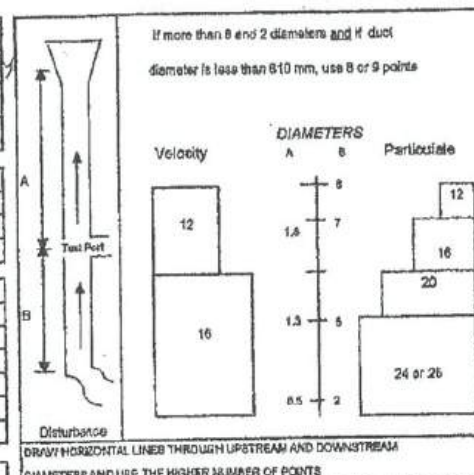
Dimensions	Far Wall to Outside of Port, cm (a)	49
	Port length, cm (b)	9
	Stack Diameter or Depth, cm (a-b)	40
	Stack Width (if rectangle), cm	
	Stack Length (if rectangle), cm	
	Equivalent Stack Diameter, cm	
	Area of Stack, cm ²	

Distance to Flow Disturbances	Distance, cm	Diameters
Upstream (A)	185	9.62
Downstream (B)	140	8.50

Number of Traverse Points	Minimum # Required
Particulate Traverse	24
Velocity Traverse	16
# of Ports used	2
# Points / Port	12
Number of Traverse Points Used	24

Point No.	Fraction of Stack Dia.	Dist. From Inside Wall	Port Length	Dist. From Edge of Port
1	0.021	0.84	9	9.24
2	0.047	2.43	9	11.63
3	0.112	4.72	9	13.72
4	0.177	7.02	9	16.02
5	0.250	10.0	9	19.0
6	0.333	14.24	9	23.24
7	0.444	20.76	9	29.76
8	0.500	30.0	9	39.0
9	0.523	32.94	9	41.94
10	0.527	35.23	9	44.23
11	0.533	37.72	9	46.72
12	0.537	39.16	9	48.16
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Note: when using 4 ports in a circular duct, the probe is inserted with only the points for the first half of the full diameter traverse.



Equivalent Diameter (for rectangular ducts):
$De = 2 \times \text{Depth} \times \text{Width} / (\text{Depth} + \text{Width})$
$De = 2 \times () \times () / () + () =$

LOCATION OF POINTS IN CIRCULAR STACKS OR DUCTS (Fraction of stack diameter from inside wall to traverse point)												
	2	4	6	8	10	12						
1	.148	.097	.044	.023	.012	.001						
2	.254	.260	.148	.109	.082	.067						
3		.360	.289	.194	.140	.118						
4			.333	.204	.123	.086						
5				.254	.177	.125						
6					.200	.150						
7						.146						
8												
9												
10												
11												
12												

LOCATION OF POINTS IN RECTANGULAR STACKS OR DUCTS (Fraction of stack diameter from inside wall to traverse point)												
	2	3	4	5	6	7	8	9	10	11	12	
1	.250	.167	.125	.100	.083	.071	.063	.056	.050	.045	.042	
2	.350	.250	.188	.150	.125	.107	.094	.083	.075	.068	.063	
3		.333	.250	.200	.167	.143	.125	.111	.100	.091	.083	
4			.333	.250	.200	.167	.143	.125	.111	.100	.091	
5				.333	.250	.200	.167	.143	.125	.111	.100	
6					.333	.250	.200	.167	.143	.125	.111	
7						.333	.250	.200	.167	.143	.125	
8							.333	.250	.200	.167	.143	
9								.333	.250	.200	.143	
10									.333	.250	.143	
11										.333	.143	
12											.143	

Notes/Remarks:

Team Leader / Date: HPD, GERVINA / 29 MAY 24

QA/QC / Date: E. C. FERNANDO / 28 MAY 24





ISOKINETIC FIELD DATA SHEET
METHOD(s) 4

Facility Name	BMC	Test Date	5/28/24
Address	Baguio City	Job Number	104-241
Source	S1 /	Year Installed	
Control device		Field Personnel	
Contact Person		Operations Signature	

Filter ID	Tare(s)	Barometric (mm Hg)	Static (mm H ₂ O)	Meterbox			Nozzle		Pilot Tube		Probs		
				ID#	Gamma	Delta H @	ID#	Dia.	ID#	Cp	ID#		
565-884	0.3415	652.2	-10.0	B512	0.9884	93.174			P1-6-RT2	0.84	0.84		
Sample Train Leak Checks												Fyrites	
Run No.			Initial	Interim			Final		Time	%O ₂	%CO ₂		
K Factor		Vacuum, mm Hg	15.0				10.0		09/14/17	12.0	8.0		
Pilot Leak Checks		Leak rate, m ³ /m	0				0		09/30/14	12.0	8.0		
Pretest	198/110	Start Volume	83.2240				83.8440		ORSAT Leak Check				
Post-test	122/140	Stop Volume	83.2240				83.8440		Tedlar Bag ID	5, 114			

Ports & Points	Time		DGM reading (m ²)	Pilot Reading (mm H ₂ O)	Delta H		Gauge	Temperature °C				
	Clock (24-hr)	Test (min)			Calc (mm H ₂ O)	Actual (mm H ₂ O)	Vacuum (mm H ₂ O)	Stack	DGM	Probe	Filter	Imp. Ext.
CA-5	09/04	0	83.2350	12.0		40	6.0	186	24	120	110	18
	09/10	5	83.3390	12.0		40	6.0	186	24	120	110	18
	09/20	10	83.4430	12.0		40	6.0	186	24	120	120	17
	09/30	15	83.5470	12.0		40	6.0	186	24	120	120	17
	09/40	20	83.6510	12.0		40	6.0	186	24	120	124	17
	09/50	25	83.7550	12.0		40	6.0	185	24	117	116	18
PA-5	09/40	30	83.8590									

Run Time	Total Volume	RMS Delta P
30	0.6196	3.464

Delta H Avg	High Vac	TS Stack Avg	Imeter Avg
40	6.0	185.83	24

Team Leader / Date: 5/28/24


QA/QC / Date: 28/05/24







**METHOD 3
FYRITE ANALYSIS DATA SHEET**

Facility	BAL	Fuel Type	FA-12 LSA
Town/Province	Baguio City	Fyrite ID	FIP-12
Test Location	S1	Analysis Location	IN SIN

Run No.	1	Date:	28 May 24	Bag ID	S1B	Operator (Signature)	
Run Time	Time of Analysis	% CO ₂	% O ₂	% N ₂			
		Reading (A)	Value (B-A)	Value (100-C)			
Start	1000H	1138H	8.5	12.0			
		1142H	8.5	12.0			
Stop	1135H	1147H	8.5	12.0			
Leak Check	<input type="checkbox"/>						
Avg		8.5	12.0	79.5			

Run No.	2	Date:	28 May 24	Bag ID	S1B	Operator (Signature)	
Run Time	Time of Analysis	% CO ₂	% O ₂	% N ₂			
		Reading (A)	Value (B-A)	Value (100-C)			
Start	1000H	1414H	8.5	12.0			
		1417H	8.5	12.0			
Stop	1410H	1422H	8.5	12.0			
Leak Check	<input checked="" type="checkbox"/>						
Avg		8.5	12.0	79.5			

Run No.	3	Date:	28 May 24	Bag ID	S1B	Operator (Signature)	
Run Time	Time of Analysis	% CO ₂ Reading (A)	% O ₂ Value (B-A)	% N ₂ Value (100-C)			
Start	1505H	8.5	12.0				
	1617H	8.5	12.0				
Stop	1610H	8.5	12.0				
Leak Check	<input type="checkbox"/>						
Avg		8.5	12.0	79.5			

Team Leader/Date: *[Signature]* 28 May 24 QA/QC/Date: _____



METHOD 4 - MOISTURE ANALYSIS DATA SHEET

Facility	BMC FORESTRY CORPORATION, IRISAN LIME PROJECT (ILP)			
Address	KM 1.5, NAGILIAN ROAD, IRISAN, BAGUIO CITY			
Source	1.08 METER VERTICAL SHAFT KLN NO.2			
Recovery Location	INSITU (SERVICE VEHICLE)			
Run Number	MOISTURE RUN	PM-1	PM-2	PM-3
Test Date	28 MAY 2024	28 MAY 2024	28 MAY 2024	28 MAY 2024
Recovery Date	28 MAY	MAY 2024	MAY 2024	MAY 2024
Recovered By	ECF HPD			
Impinger 1 100 mL	D.I. H ₂ O	3% H ₂ O	3% H ₂ O	3% H ₂ O
Final Weight, g	725.5	741.1	749.3	742.2
Initial Weight, g	719.0	715.5	713.4	714.8
Net Weight, g	11.5	25.4	31.2	27.8
Impinger 2 100 mL	D.I. H ₂ O	3% H ₂ O	3% H ₂ O	3% H ₂ O
Final Weight, g	704.2	723.1	717.4	720.1
Initial Weight, g	694.5	691.4	693.1	692.7
Net Weight, g	9.7	31.5	24.5	27.4
Impinger 3 EMPTY	EMPTY	EMPTY	EMPTY	EMPTY
Final Weight, g	616.8	615.7	610.5	610.4
Initial Weight, g	607.9	610.3	610.0	611.1
Net Weight, g	4.0	5.4	5.5	9.5
Impinger 4 200-300g	SILICA GEL	SILICA GEL	SILICA GEL	SILICA GEL
Final Weight, g	933.9	949.7	949.6	948.0
Initial Weight, g	927.9	933.8	939.7	940.7
Net Weight, g	6.2	10.9	9.9	7.3
Impinger 5				
Final Weight, g				
Initial Weight, g				
Net Weight, g				
Impinger 6				
Final Weight, g				
Initial Weight, g				
Net Weight, g				
Impinger 7				
Final Weight, g				
Initial Weight, g				
Net Weight, g				

Total Catch, g	26.5	73.4	71.1	67.0
Silica Gel Spent, %				

Team Leader / Date: H.P. ORBINA / 28 MAY 24 QA/QC / Date: E.G. FERNANDO / 28 MAY 2024



ISOKINETIC FIELD DATA SHEET
METHOD(s) 5/6

Facility Name	BMC FORESTRY CORP. ILP	Test Date	28 MAY 2024
Address	KM 5 MAGUIAN ROAD, KRISAN, BARING CITY	Job Number	PJ24 241 ST RUN 1
Source	10.8 MT/HR. VERTICAL SHAFT KILN NO. 2	Year Installed	
Control device		Field Personnel	E.C. FERNANDO, MSL, CAC, JBT
Contact Person	MS. NARMY C. POMILAN	Operations Signature	

Filter ID	Tare(s)	Barometric (mm Hg)	Static (mm H ₂ O)	Meterbox			Nozzle		Pilot Tube		Probe
				ID#	Gemma	Delta H @	ID#	Dis.	ID#	Cp	
65-08	0.3410	452.7	70.0	65-12	6.9884	41.124	7.35	7.35	65-10	1.87	SPG-CPT
Sample Train Leak Checks											
Run No.	1		Initial	Interim			Final	Time	%O ₂	%CO ₂	
K Factor	5.672	Vacuum, mm Hg	15.1				12.0	10:34	12.0	2.0	
Pilot Leak Checks		Leak rate, m ³ /m	0				0	10:34	12.0	2.0	
Pretest		Start Volume	83.2508				85.6430	ORSAT Leak Check			
Post-test		Stop Volume	83.9808				85.6430	Tender Bag ID		PJ24241 ST RUN 1	

Ports & Points	Time		DGM reading (m ²)	Pilot Reading (mm H ₂ O)	Delta H		Gauge	Temperature °C					
	Clock (24-hr)	Test (min)			Calc.	Actual	Vacuum	Slack	DGM	Probe	Filter	Imp. Exit	
					(mm H ₂ O)	(mm H ₂ O)	(mm H ₂ O)						
A	12	1630	0	84.0110	10.6	60.12	60	6.0	190	96	116	110	15
	11			84.0738	10.6	60.12	60	6.0	190	96	117	110	14
	10	530	5	84.1426	10.6	60.12	60	6.0	190	96	117	110	10
	9			84.2054	11.0	62.57	62	6.0	200	96	126	118	10
	8	1030	10	84.2712	11.0	62.57	62	6.0	200	96	127	118	16
	7			84.3322	11.0	62.57	62	6.0	205	98	127	117	16
	6	1045	15	84.4090	12.0	63.02	63	8.0	200	98	126	118	19
	5			84.4710	12.0	63.02	63	8.0	220	98	126	116	17
	4	1050	20	84.5368	12.0	63.02	63	8.5	205	99	126	130	11
	3			84.6110	11.0	62.57	62	8.5	220	99	127	118	11
	2	1055	25	84.6764	11.0	62.57	62	8.5	228	99	127	119	11
	1			84.7490	11.0	62.57	62	10	228	99	127	125	12
	0	1100	30	84.8204									
B	10	1100	30	84.8904	11.0	62.57	62	10	220	31	110	119	14
	11			84.9606	11.0	62.57	62	10	220	31	114	125	14
	10	1101	35	84.9632	11.0	62.57	62	10	225	31	125	125	13
	9			85.0422	11.2	63.52	64	10	227	31	126	110	13
	8	1105	40	85.1190	11.2	63.52	64	10	230	31	121	117	14
	7			85.1724	11.2	63.52	64	10	234	32	120	128	13
	6	1110	45	85.2526	12.0	63.02	63	10.5	236	32	117	122	14
	5			85.3246	12.0	63.02	63	10.5	236	32	117	128	14
	4	1115	50	85.3966	12.0	63.02	63	10.5	236	32	116	122	14
	3			85.4674	11.0	62.57	62	10.5	230	33	126	127	14
	2	1120	55	85.5420	11.0	62.57	62	10.5	230	33	120	116	18
	1			85.6220	11.0	62.57	62	10.5	210	33	122	116	14
	0	1130	60	85.6992									

Run Time	Total Volume	RMS Delta P
60	1.6220	8.35

Delta H Avg	High Vac.	TS Stack Avg	Tractor Avg
63.5	10.5	215.67	28.75

Team Leader / Date: H.P. OQUINA / 28 MAY 24

QA/QC / Date: E.C. FERNANDO / 28 MAY 24





Environmental Management Service Provider

ISOKINETIC FIELD DATA SHEET

METHOD(S) 5/6

Facility Name	BMC FORESTRY CORPORATION (ILP)	Test Date	28 MAY 2024
Address	KMS (RISAN ROAD) NAGUIAN, BAGUIO CITY	Job Number	PJ24 241 S1 RUN 2
Source	1.08 M/HR VERTICAL SHAFT R/LN NO. 2	Year Installed	
Control device		Field Personnel	ECE, HPD RME MSE CAS
Contact Person	MS. NARHY C. POMILION	Operations Signature	

Filter ID	Tare(s)	Barometric (mm Hg)	Static (mm H ₂ O)	Meterbox			Nozzle		Pilot Tube		Probe
				ID#	Gamma	Delta H @	ID#	Dia	ID#	Cp	
S65-063	0.3610	651.5	10.0	BSI-22	0.9894	43.1704	1215-9	7.25	PT-GATE	0.89	SPR 4002
Sample Train Leak Checks											
Run No.	2		Initial	Interim			Final		Time	%O ₂	%CO ₂
K Factor	5.24	Vacuum, mm Hg	15.0				14.0		11:09:44	12.0	8.0
Pilot Leak Checks		Leak rate, m ³ /m	0				0		11:47:11	12.0	8.0
Pre-test	10/11/14	Start Volume	85.6500				27.2014		Fyrte System Leak Check		
Post-test	19/11/26	Stop Volume	85.6500				82.2014		Tedlar ID PJ24 241 S1 R1C0		

Ports & Points	Time		DGM reading (m ³)	Pilot Reading (mm H ₂ O)	Delta H		Gauge Vacuum (mm H ₂ O)	Temperature °C				
	Clock (24-hr)	Test (min)			Calc. (mm H ₂ O)	Actual (mm H ₂ O)		Stack	DGM	Probe	Filter	Imp. Exit
A-19	13:04	0	85.6530	10.6	58.26	58	6.0	254	28	145	116	14
11			85.7110	10.6	58.26	58	6.0	254	28	142	119	12
10	13:07	5	85.7740	10.6	58.26	58	6.0	255	28	124	120	10
9			85.8500	11.0	57.35	58	6.0	260	28	123	109	9
8	13:10	10	85.9240	11.0	57.35	58	6.5	260	28	124	119	9
7			85.9960	11.0	57.35	58	8.0	260	28	124	117	9
6	13:12	15	86.0680	11.4	59.44	60	8.0	265	29	124	114	9
5			86.1380	11.4	59.44	60	8.0	265	30	126	116	9
4	13:14	20	86.1994	11.0	57.35	58	8.0	260	30	125	123	9
3			86.2650	11.0	57.35	58	9.0	260	30	117	120	10
2	13:16	25	86.3270	11.0	57.35	58	9.0	263	30	118	126	10
1			86.4088	11.0	57.35	58	9.0	265	32	120	125	9
STOP	13:17	30	86.4704									
B-12	13:43	30	86.9704	10.6	58.26	58	9.0	265	31	112	119	14
11			86.1530	10.4	58.26	58	9.0	268	31	118	114	4
10	13:47	35	86.6119	10.6	58.26	58	9.0	263	31	124	117	60
9			86.1770	11.0	57.35	58	10.0	270	32	122	116	9
8	13:50	40	86.7490	11.0	57.35	58	10.0	270	32	124	117	9
7			86.8119	11.4	59.44	60	10	270	32	123	124	10
6	13:52	45	86.8560	11.4	59.44	60	10	270	32	124	122	10
5			86.9104	11.9	59.44	60	10	270	32	125	122	10
4	14:00	50	86.9600	11.4	59.44	60	10	270	32	121	119	4
3			87.0096	11.0	57.35	58	10	270	32	120	114	4
2	14:02	55	87.1096	11.0	57.35	58	10	269	33	118	115	12
1			87.1920	11.0	57.35	58	10	269	33	117	115	12
END	14:06	60	87.1950									

Run Time	Total Volume	RMS Delta P
60	1.5920	3.314

Delta H Avg	High Vac	TS Stack Avg	Tmeter Avg
58	10	264.14	39.54

Team Leader / Date: H. R. ORQUINA / 28 MAY 24

QA/QC / Date: E. C. FERNANDO / 28 MAY 24



ISOKINETIC FIELD DATA SHEET
METHOD(S) 5/6

Facility Name	BMC FORESTRY CORPORATION (ILP)	Test Date	28 MAY 2024
Address	KM. 5 NAGULAN ROAD, IRISAN, BAGUIO CITY	Job Number	PJ24 241 ST RUN 3
Source	1.00 M ³ /hr VERTICAL SHAFT KILN NO. 2	Year Installed	
Control device		Field Personnel	ECF HORME MOL CAS
Contact Person	MS. NARHY C. DOMILBAN	Operations Signature	

Filter ID	Tare(s)	Barometric (mm Hg)	Static (mm H ₂ O)	Meterbox			Nozzle		Pilot Tube		Probe
				ID#	Gamma	Delta H @	ID#	Dia	ID#	Cp	
S-082	0.3583	60.5	10.0	BSI-T2	0.9884	43.124	T15.4	7.77	17.4116	0.84	Specimen
Sample Train Leak Checks											
Run No	3		Initial	Interim				Final	Time	%O ₂	%CO ₂
K Factor	4.782	Vacuum, mm Hg	15.0					14.0	15.24	12.0	8.0
Pilot Leak Checks		Leak rate, m ³ /m	0					0	15.44	12.0	8.0
Pretest	30/11/50	Start Volume	27.2/10					23.7/50	Fyrite System Leak Check		
Post-test	120/11/8	Stop Volume	52.2/10					88.7/50	Today ID	PJ24 241 ST RUN 3	

Ports & Points	Time		DGM reading (m ³)	Pilot Reading (mm H ₂ O)	Delta H			Temperature °C				
	Clock (24-hr)	Test (min)			Calc. (mm H ₂ O)	Actual (mm H ₂ O)	Gauge Vacuum (mm H ₂ O)	Stack	DGM	Probe	Filter	Imp. Exit
A-12	1504	0	87.2350	10.4	49.73	50	6.0	275	28	127	119	12
11			87.3006	10.4	49.73	50	6.0	275	28	127	117	12
10	1504	5	87.3630	11.0	52.60	52	6.5	280	28	124	117	12
9			87.9280	11.0	52.60	52	6.5	280	28	122	115	10
8	1504	10	87.4404	11.0	52.60	52	7.0	280	28	124	119	10
7			87.5502	11.4	54.0	54	8.0	285	28	124	120	10
6	1504	15	87.6144	11.4	54.0	54	8.0	285	28	126	120	10
5			87.6798	11.4	54.0	54	8.0	285	28	126	120	10
4	1504	20	87.7430	11.4	54.0	54	8.0	285	28	127	117	11
3			87.8104	11.0	52.60	52	9.0	285	29	124	118	11
2	1504	25	87.8746	11.0	52.60	52	9.0	285	29	124	118	11
1			87.9384	11.0	52.60	52	9.0	280	29	126	121	12
STOP	1504	30	87.9460									
B-12	1504	30	87.9960	10.4	50.68	50	8.5	275	30	127	115	12
11			88.0644	10.4	50.68	50	8.5	275	30	127	120	12
10	1504	35	88.1310	11.0	52.60	52	9.0	280	30	127	114	12
9			88.2004	11.0	52.60	52	9.0	280	30	116	117	12
8	1504	40	88.2646	11.0	52.60	52	9.0	280	30	117	118	12
7			88.3260	11.4	54.0	54	9.5	285	32	124	114	10
6	1504	45	88.3846	11.4	54.0	54	9.5	285	32	122	123	13
5			88.4500	11.4	54.0	54	10	285	32	122	117	14
4	1604	50	88.5114	11.0	52.60	52	10	280	33	124	117	14
3			88.5840	11.0	52.60	52	10	285	33	120	117	14
2	1604	55	88.6412	11.0	52.60	52	10	280	33	117	118	12
1			88.7010	11.0	52.60	52	10	280	33	116	117	12
END	1604	60	88.7644									

Run Time	Total Volume	RMS Delta P
00	1.5094	3.321

Delta H Avg	High Vac.	TS Stack Avg	Timer Avg
52.71	10	781.46	7.275

Team Leader / Date

H.P. ORQUINA / 28 MAY 24

QA/QC / Date

E.C. FERNANDO / 28 MAY 2024





Environmental Management Service Provider

METHOD 7 FLASK SAMPLE AND RECOVERY DATA

Facility BMC
 Address Boyer City
 Source S1 / K16
 Personnel LEP, H2O, M2L, PMS, CPS
 Test Date 26 May 201

Absorbing Solution Volume, ml 25
 Heated Probe? (check) Yes 2 No *If No, explain in "Remarks"
 Filter Used? (check) Yes No *If No, explain in "Remarks"
 Remarks

Sample Collection Information										
Barometric Pressure, Pbar (in Hg) <u>25.49 / 25.45 / 25.61</u>										
Date Performed: <u>28 May 24</u> By: <u>SEP, H2O, M2L, PMS</u>										
Sample ID	Run Number	Flask ID Number	Flask Volume (ml)	Leak Check (<0.4"Hg/min)	Evacuated Pressure Pgi (in Hg)	Flask abs. Press Initial Pi, Pbar-Pgi (in Hg) ¹	Flask Temp, Ti (°K)	Sample Collection Time ² 24hour	Shaken for 5min	
P	S16T1	2515A	250	—	23.30	2.39	27.6	300.75	1032H	—
J	12	P20	250	—	23.20	2.49	28.4	301.55	1045H	—
2	5	P21	2310	—	23.40	2.29	28.3	301.48	1055H	—
4	B11	F22	250	—	23.20	2.40	27.7	300.85	1304H	—
—	12	F23	250	—	23.30	2.35	27.8	300.91	1314H	—
2	B3	F24	250	—	23.30	2.35	28.2	301.35	1324H	—
4	B11	F25	250	—	23.30	2.31	27.0	300.10	1506H	—
1	P2	P26	250	—	23.50	2.21	27.0	300.10	1520H	—
	n	P27	250	—	24.30	2.21	27.3	300.35	1530H	—

Sample Collection Information										
Barometric Pressure, Pbar (in Hg) <u>29.70</u>										
Date Performed: <u>29 May 24</u> By: <u>SEP, H2O, M2L, PMS</u>										
Shaken for 2min	Sample Recovered Time ³ 24hour	Final Pressure Pgf (in Hg)	Flask abs. Press Initial Pi, Pbar-Pgi (in Hg)	Flask Temp, Ti (°K)	Flask Temp Tf (°K)	Sample pH Adjusted (9 - 12)				
—	0815H	0.30	29.40	28.7	301.80	—				
—	0820H	0.50	29.20	28.6	301.70	—				
—	0824H	0.50	29.20	28.1	301.70	—				
—	0830H	0.40	29.30	28.3	301.40	—				
—	0835H	0.40	29.10	28.2	301.30	—				
—	0840H	0.40	29.30	28.2	301.50	—				
—	0845H	0.40	29.30	28.5	301.60	—				
—	0850H	0.60	29.10	28.6	301.70	—				
—	0855H	0.50	29.70	28.4	301.50	—				

Source Oxygen Concentration? 3022120

Was additional oxygen introduced to the flask? Yes No

¹Pi = Pbar - Pgi, Flask must be evacuated to within 3 inches of mercury (Hg) of the absolute pressure (barometric pressure).

²Additional oxygen should be introduced to the flask if the source O₂ is below 3%.

³Flask must stand for 16 hours or greater after sampling before recovery can be performed.

Checked By:

QA/QC / Date: E.C. FERNANDO / 29 MAY 24



Department of Environment and Natural Resources (DENR)
 ENVIRONMENTAL MANAGEMENT BUREAU
 ACCREDITED THIRD PARTY TESTER

ANNEX C

PERMIT TO OPERATE AND FACILITY PROCESS DATA



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Cordillera Administrative Region (CAR)
Cordillera Administrative Region DENR Compound, Gibraltar Baguio
City
Tel No: (074) 448-64-40

Permit No: PTO-OL-CAR-2021-09103-R
Application Type: Renewal

Date Issued: 30 Oct 2021
Date Expiration: 30 Oct 2026

PERMIT TO OPERATE Air Pollution Source and Control Installations

Pursuant to Part IV, Rule XIX of the Rules and Regulations of R.A. 8749, authority is hereby granted to:

BMC Forestry Corporation (Irisan Lime Kiln)

Km. 5 Naguilan Road, Irisan, Baguio City, Benguet

subject to the following terms and conditions:

TERMS AND CONDITIONS

1. This Permit is issued for the permittee to operate the following facilities/equipment described below at the permittee's establishment located at the above-mentioned address (geolocation of entrance gate: 16.419336°, 120.557358°):
 - **Air Pollution Source Installations/Equipment:**
 - Three (3) units Vertical Shaft Kiln (Cap.: 1.08 MT/hr; Fuel used: Regular Fuel Oil or Bunker Oil) - for the purpose of calcinations of limestones (geolocation of kiln plant building 16.419198°, 120.557922°);
 - One (1) unit Jaw Crusher (Cap.: 1 MT/hr; With Conveyors) - for the purpose of pulverizing the quicklimes;
 - One (1) unit Lime Storage Silo (Cap.: 90 MT);
 - One (1) unit Aboveground Fuel Storage Tank (Cap.: 60,000 liters; Fuel: Regular Fuel Oil or Bunker Oil; Vertical Cylinder);
 - Seven (7) units Aboveground Fuel Storage Tanks (Cap.: 15,000 liters each; Fuels: Regular Fuel Oil or Bunker Oil; Horizontal Cylinders);
 - One (1) unit Standby Generator Set (Cap.: 200 kW / 250 kVA; Make: SEALEY; Model: SLC250GF; S/N: 151118001; P.F. = 0.8; Silent-type); Alternator/Generator (Make: MBH; Model: XN274G; S/N: 31512006; Cap.: 180 kW / 225 kVA, continuous; P.F. = 0.8) primed by Diesel Engine (Make Chongqing Cummins; Model: NT855-GA; S/N: 41226017; Cap.: 257 kW @ 1800 RPM, max);
 - One (1) unit Standby Generator Set (Cap.: 75 kW; Open-type); Alternator/Generator (Make: Caterpillar) primed by Diesel Engine (Make: Isuzu; Model: E120; S/N: 202587); and
 - One (1) unit Standby Generator Set (Cap.: 200 kW / 250 kVA; Make: DCA; Model: 200DC; S/N: 8221-002; P.F. = 0.8; Open-type); Alternator/Generator (Make: DCA; Model: 200DC; S/N: A73281AC; Cap.: 200 kW / 250 kVA, standby; P.F. = 0.8) primed by Diesel Engine (Make: Cummins; Model: NT-855-G; S/N: 30104629) - all generator sets are installed in the Powerhouse with geolocation of 16.419050°, 120.557808°; and
 - **Air Pollution Control Facilities:**
 - Three (3) units Gas Scrubber Systems (Cap.: 66 m3/min; Wet-type; 1-unit scrubber is exclusively connected to 1-unit shaft kiln); and
 - One (1) unit Dust Collector and Scrubber System (Cap.: 505.84 m3/min; composed of 1-unit 12,850 CFM Cyclone Dust Collector interconnected to 1-unit 5,000 CFM Cyclone Dust Collector with their bottom open and submerged on Water-bed Scrubber) - for the purpose of controlling the airborne particulates/dusts from the sorting, crushing and loading areas (geolocation: 16.419132°, 120.557396°).
2. This Permit shall be valid until **SEPTEMBER 10, 2026** (PLEASE DISREGARD THE EXPIRATION DATE INDICATED ABOVE) unless suspended or revoked by the Bureau.
3. The Bureau may modify the Permit by amending any existing condition or imposing any new or additional condition from the date of issuance (as indicated above) until its expiration on **SEPTEMBER 10, 2026**, subject to the provisions of Rule XIX of the Implementing Rules and Regulations (IRR) of the Republic Act No. 8749.

Filing Fee	: Php 600.00	O.R. No.: 1809914 & 1810468	Date : Oct. 11, 2021
Permit Fee	: Php 47300.00	O.R. No.: 1809914 & 1810468	Date : Oct. 11, 2021
PD1856	: Php 10.00	O.R. No.: 1809914 & 1810468	Date : Oct. 11, 2021
Documentary Stamp Tax	: Php 30.00	O.R. No.: 1809914 & 1810468	Date : Oct. 11, 2021



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4. An application for renewal of this Permit shall be filed not less than thirty (30) days before the expiry date the expiry date - **SEPTEMBER 10, 2028**.
5. This Permit shall be posted in a conspicuous location at the premises and shall be adequately framed or otherwise protected against damage.
6. The operation of any installation, process activity at this establishment that produces, generates, captures, treats, reduces, controls, emits, releases or disperse air pollutants without a valid Permit to Operate, or in violation of any of the conditions of this Permit, shall be subject to penalties pursuant to Rule LVI of the IRR of RA 8749.
7. The installations, processes or activities at this establishment shall be operated, conducted and managed by the permittee, and the associated plant and equipment shall be maintained and operated by the permittee, so that emissions of air pollutants are kept to a practicable minimum. The permittee shall be responsible for ensuring that any emissions of air pollutants from abnormal or unexpected events, do not cause air pollution in the surrounding air environment or have adverse effects on persons in that environment.
8. Without limiting the generality of the previous condition, the permittee shall ensure that the emissions from the permitted installations or processes comply with:
 - the National Emission Standards for Source Specific Air Pollutants as specified in Rule XXV of the IRR of RA 8749; and
 - the National Ambient Air Quality Standards for Source Specific Air Pollutants from Industrial Sources/Operations as specified in Rule XXVI of the IRR of RA 8749.
9. The permittee shall submit Self-Monitoring Reports to the Bureau on a quarterly basis in accordance with DENR Administrative Order No. 27 (Series of 2003) and any written instructions by the Bureau based on the following schedule:

Quarter	Coverage	Submission	Quarter	Coverage	Submission
First	Jan. - Mar.	1-15 Apr.	Third	Jul. - Sep.	1-15 Oct.
Second	Apr. - Jun.	1-15 Jul.	Fourth	Oct. - Dec.	1-15 Jan.
10. The permittee shall at all times has an accredited Pollution Control Officer (PCO) who shall be the day-by-day contact person between the Bureau and the establishment. The permittee shall ensure that the PCO is familiar with the operations and activities undertaken at the establishment, and the relevant emission sources and air pollution control devices and equipment. The permittee shall give the PCO the necessary authority to take or to direct corrective action in the event of a malfunction, accident, breakdown or other abnormal event that results in excessive emissions or emissions that do not comply with relevant Permit conditions, emission standards or ambient air quality standards.
11. The Permittee shall seek accreditation of his/her appointed/designated PCO pursuant to Section 8 of DAO 2014-02 (Revised Guidelines for Pollution Control Officer Accreditation).
12. In case of the resignation or termination of the services of the PCO, the Managing Head shall appoint/designate a new PCO. He/she shall inform, in writing, the concerned EMB Regional Office within fifteen (15) days and seek accreditation for the new PCO within thirty (30) days from the date of resignation or termination.
13. The permittee shall report in writing to the Bureau any malfunction, accident, breakdown, leak, spill or other abnormal or unexpected event which results in emissions to atmosphere that do not comply with relevant Permit conditions, emission standards or ambient quality standards, or in any other abnormal or unexpected releases of air pollutants. The report shall indicate the nature of the incident or event, its impact on emissions, the time period involved, and any actions or measures taken to control the emissions or releases, remedy any air pollution problems that may have occurred, and minimize the probability of reoccurrence of the event or the release.
14. The permittee shall at all times allow authorized or accredited officers of the Department or the Bureau entry to the establishment and access to any part of the establishment to conduct inspections, gather information, test emissions or take samples. The permittee and its personnel shall not obstruct such officers in the performance of these functions, and shall furnish any information or materials requested by them that is reasonable for them to have. The permittee shall obey any lawful instruction or direction given by the Department or the Bureau at all times.

Filing Fee	: Php 600.00	O.R. No.: 1809914 & 1810468	Date : Oct. 11, 2021
Permit Fee	: Php 47300.00	O.R. No.: 1806614 & 1810468	Date : Oct. 11, 2021
PD1856	: Php 10.00	O.R. No.: 1809914 & 1810468	Date : Oct. 11, 2021
Documentary Stamp Tax	: Php 30.00	O.R. No.: 1809914 & 1810468	Date : Oct. 11, 2021



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15. The permittee shall not make or allow any alterations or modifications to operations, activities, installations, processes, plant or equipment at the establishment that might substantially change the nature or quantity of the associated emissions without obtaining the approval of the Bureau, including the obtaining of any necessary Permit to Operate.

SPECIFIC CONDITION

16. The permittee shall conduct emission testing for the three (3) units Vertical Shaft Kilns through a DENR accredited third party Source Emission Testing Firm twice each year for each year of operation with three (3) sampling runs to verify its compliance pursuant to Memorandum Circular No. 2007-003 (Policy on Compliance and Permitting for Industrial Facilities Relating to Air Quality). However, considering that each kiln is operated in a period of six (6) to eight (8) months, each kiln shall be subjected to two (2) emission testing within that period. The Test Reports will be a part of the requirements for the renewal of this Permit.

Recommended by:


ENGR. MARIE/PINA L. RODAS
OIC-Chief, Clearance & Permitting Division

Approved by:


MA. VICTORIA V. ABRERA
Regional Director

Filing Fee	: Php 600.00	Q.R. No. : 1809914 & 1810488	Date : Oct. 11, 2021
Permit Fee	: Php 47300.00	Q.R. No. : 1809914 & 1810468	Date : Oct. 11, 2021
PD1858	: Php 10.00	Q.R. No. : 1809914 & 1810468	Date : Oct. 11, 2021
Documentary Stamp Tax	: Php 30.00	Q.R. No. : 1809914 & 1810468	Date : Oct. 11, 2021



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Annex

Fuel Burning					
ID	APSI	Capacity	Brand name	Type of Fuel	APCD
130795	Vertical Shaft Kiln No. 1	1.08 MT/hr/equipment	N/A	Regular Fuel Oil	Gas Scrubber No. 1 (66.0 m ³ /min)
130797	Vertical Shaft Kiln No. 2	1.08 MT/hr/equipment	N/A	Regular Fuel Oil	Gas Scrubber No. 2 (66.0 m ³ /min)
130799	Vertical Shaft Kiln No. 3	1.08 MT/hr/equipment	N/A	Regular Fuel Oil	Gas Scrubber No. 3 (66.0 m ³ /min)
140793	Standby Generator Set	250.0 kVA	DCA/CUMMINS	Diesel	--
140794	Standby Generator Set	200.0 kW	SEALEY/Cummins	Diesel	--
140795	Standby Generator Set	75.0 kW	Caterpillar/Isuzu	Diesel	--

Non Fuel Burning					
ID	APSI	Capacity	Brand name	Material	APCD
130801	Jaw Crusher	1.0 MT/hr/equipment	N/A		Dust Collector Collector System (505.84 m ³ /min)
140796	Lime Storage Silo	90.0 MT	N/A		--
140797	Aboveground/Overhead Fuel Storage Tank	60000.0 Liters	N/A		--
140800	Aboveground/Overhead Fuel Storage Tank	15000.0 Liters	N/A		--
140801	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		--
140802	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		--
140803	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		--
140804	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		--
140805	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		--
140806	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		--

APCD-APSI Mapping			
ID	APCD	Connected APSIs (<name> (Id))	Connected APCDs (<name> (Id))
19030	Gas Scrubber No. 1 (1)	Vertical Shaft Kiln No. 1 (4)	--
19907	Gas Scrubber No. 2 (8)	Vertical Shaft Kiln No. 2 (5)	--
19908	Gas Scrubber No. 3 (9)	Vertical Shaft Kiln No. 3 (6)	--
19909	Dust Collector Collector System (10)	Jaw Crusher (7)	--

Filing Fee

: Php 600.00

O.R. No. : 1809914 & 1810468

Date : Oct. 11, 2021

Permit Fee

: Php 47300.00

O.R. No. : 1809914 & 1810468

Date : Oct. 11, 2021

PD1856

: Php 10.00

O.R. No. : 1809914 & 1810468

Date : Oct. 11, 2021

Documentary Stamp Tax

: Php 30.00

O.R. No. : 1809914 & 1810468

Date : Oct. 11, 2021



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April 13, 2024

ENGR. JEAN C. BORRAMEO

OIC, Regional Director
DENR – Environmental Management Bureau
Cordillera Administrative Region (CAR)
DENR Compound, Gibraltar Road, Baguio City

Dear Director Borrromeo:

We are pleased to submit the **BMC Forestry Corporation – Irisan Lime Project's CY 2024 First Quarter Self-Monitoring Report (SMR).**

For your information and perusal.

Thank you.

Respectfully yours,

BMC FORESTRY CORPORATION

By:


NARHY C. POMILBAN
Pollution Control Officer

Approved by:


FRANCISCO O. FLAVIER
Resident Manager/Managing Head

P.O Box 105 Irisan, Baguio City *Tel No (074) 445 – 7180
email: f.flavier@yahoo.com, npomilban@benquet.com

MODULE 1: GENERAL INFORMATION

Reference No. :26831

Year :2024 Quarter: 1

Name of Plant : BMC FORESTRY CORPORATION – IRISAN LIME PROJECT

Notes :

The Plant/Project has a land area of 18,541 square meters covered by MPP No. 01C-2022-CAR issued by MGB-CAR on March 22, 2022, renewable for five years. The Company maintains its stockyard of about 12,000 metric tons of raw feed for a year of processing. The Plant's projected production is 19,420 MT per year as per the Company's ECC-OL-CAR-2016-0058 issued by EMB-CAR on September 15, 2016. Total production for the first quarter of CY 2024 is 1,620.475 MT. The Plant has three (3) kilns; each kiln is designed to produce 20 metric tons per day. Stack#1 is in operation for the first quarter of CY 2024. Discharge Permit for the Settling Tank with DP No. DP-CAR-23-01505 which is valid until February 13, 2024 was renewed and was issued with DP No. DP-CAR-24-02323 valid until February 13, 2023.

DENR Permits/Licenses/Clearances

Environmental Laws	Permits	Date Issued	Expiry Date
RA 9275			
DP No. 0	DP-CAR-22-06621	2022-09-10	2024-09-10
DP No. 1	DP-CAR-23-05923	2023-06-09	2024-06-09
DP No. 2	DP-CAR-23-05924	2023-06-09	2024-06-09
DP No. 3	DP-CAR-23-05925	2023-06-09	2024-06-09
DP No. 4	DP-CAR-24-02323	2024-02-13	2026-02-13
PD 1586			
ECC/CNC No	ECC-OL-CAR-2016-0058	2016-09-15	
RA 6969			
DENR Registry ID	OL-GR-CAR-11-008852	2021-04-13	2000-01-01
Transporter Registration	N/A	2000-01-01	2000-01-01
TSD Registration	N/A	2000-01-01	2000-01-01
CCO Registry	N/A	2000-01-01	2000-01-01
Importation Clearance No	N/A	2000-01-01	2000-01-01
Permit to Transport	N/A	2000-01-01	2000-01-01
Small Quantity Importation	N/A	2000-01-01	2000-01-01
Priority Chemical List	N/A	2000-01-01	2000-01-01
PMPIN	N/A	2000-01-01	2000-01-01
RA 8749			
PO No	PTO-OL-CAR-2021-09103-R	2021-10-30	2023-10-30
PO No	PTO-OL-CAR-2022-02437-R	2022-03-25	2027-03-25

Operation

	Operating hours/day	Operating days/week	# of shift/day
Average	24 hours/day	7 days/week	3 shifts/day
Maximum	24 hours/day	7 days/week	3 shifts/day

Operation/Production/Quality

Average Daily Production Output	17 807
Total Water Consumption this Quarter cm3	181
Total Output this Quarter	1,620 475
Total Electric Consumption	53466

MODULE 2: RA 6969

A. CCO Report

CCO Item No.	CCO Substance	Common Name/IUPAC/CAS Index Name	CAS No.	Trade Name	Intended Use	Quantity Issued (in CCO)
No records found						

For importers only

CCO Item No.	Importation Clearance No.	Quantity Issued (in IC)	Quantity Imported	Date of Arrival	Port of Entry	Country of Origin	Country of Manufacture	Total Quantity Requested (annual)	Total Quantity Received (annual)
No records found									

For Distributors (importers/non-importers)

CCO Item No.	Name of Client	License No.	Quantity	Date of Distribution	Country of Origin	Country of Manufacture	Total Quantity Distributed
No records found							

For non-importer users

CCO Item No.	Name of Distributor	Quantity	Date of Purchase	Total Quantity Purchased from Distributor
No records found				

For Producers

CCO Item No.	Average Daily Production Output	Total Output this Quarter	Quantity of Stock Inventory (Start of Quarter)	Quantity of Stock Inventory (End of Quarter)
No records found				

CCO Item No.	Name of Buyer	Quantity	Date of Purchase	Total Quantity Sold
No records found				

Used in Production (please fill up only if chemical/substance is not main product)

CCO Item No.	Average Daily Production Output	Total Output this Quarter	Average Quantity Used per month	Total Quantity Used this Quarter
No records found				

Describe any changes in Production/Process/Operations

Stock Inventory/Waste Chemical Generated

CCO Item No.	Average Quantity of Waste Chemical Generated per month	Total Quantity of Waste Chemical Generated this Quarter	Quantity of Stock Inventory(Start of quarter)	Quantity of Stock Inventory(End of quarter)
No records found				

Other Information

Manner of Handling Hazardous Wastes	Changes in Safety Management System	Chemical Substitute Plan

B. Hazardous Wastes Generator

HW Generation

HW No.	HW Class	HW Nature	HW Cataloguing	Quantity	Unit	Quantity	Unit
D407	Mercury and mercury compounds	Solid	Toxic (T)	0.00025		0.008	
I104	oil-contaminated materials	Solid	T/F	0.059		0.023	
J201	Containers previously containing toxic chemical substances	Solid	Toxic (T)	0.0014		0.008	
M506	waste electrical and electronic equipment	Solid	Toxic (T)	0.001		0.0035	
I101	Used industrial oil	Liquid	T/F	0		0.017	

Waste Storage, Treatment and Disposal(please fill-up one table per HW)

HW Details

HW No.: D407

Qty of HW Treated :0.00

Unit :

Storage

Name : ILP Hazardous Waste Storage Facility

Method : Provided with secondary containment (drums) to prevent breakage with proper label and placard.

Transporter

Name :

Date :

Treater

Name :

Method :

Date :

Disposal

ID :

Name:

Method:

HW Details

HW No.: I104

Qty of HW Treated :0.00

Unit :

Storage

Name : ILP Hazardous Waste Storage Facility

Method : Provided with secondary containment (drums) to prevent leakage with proper label and placard.

Transporter

Treater Name : Date :
 Disposal Name : Method : Date :
 ID : Name: Method:

HW Details HW No.: J201 Qty of HW Treated :0.00 Unit :

Storage Name : ILP Hazardous Waste Storage Facility Method :Provided with secondary containment (drums) to prevent leakage with proper label and placard.
 Transporter Name : Date :
 Treater Name : Method : Date :
 Disposal ID : Name: Method:

HW Details HW No.: M506 Qty of HW Treated :0.00 Unit :

Storage Name : ILP Hazardous Waste Storage Facility Method :Provided with secondary containment (drums) to prevent breakage with proper label and placard.
 Transporter Name : Date :
 Treater Name : Method : Date :
 Disposal ID : Name: Method:

HW Details HW No.: I101 Qty of HW Treated : Unit :

Storage Name : Method :Immediately mixed with RFO in the RFO tank for calcination.
 Transporter Name : Date :
 Treater Name : Method : Date :
 Disposal ID : Name: Method:

On-site self Inspection of Storage Area

Date Conducted	Premises/Area Inspected	Findings and Observations	Corrective Action Taken
2024-02-03	ILP Hazardous Wastes Storage Facility	Storage Facility Wastes are properly stored with proper label and placard	

2024-02-03	ILP Hazardous Wastes Storage Facility	Storage Facility Wastes are properly stored with proper label and placard	
2024-03-23	ILP Hazardous Wastes Storage Facility	Storage Facility Wastes are properly stored with proper label and placard	
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--			
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C. Hazardous Wastes Treater/Recycler

HW Stored and/Untreated as of End of Quarter

Type of Waste	HW Number	Wastes Generator	Date of Transport	Transport Permit/Date of Issue	Quantity	Type of Storage Container/# of Containers	Time Table for Treatment
---------------	-----------	------------------	-------------------	--------------------------------	----------	---	--------------------------

HW Treated and/or Recycled as of End of Quarter

Type of Waste	HW Number	Wastes Generator	Date of Transport	Transport Permit/Date of Issue	Quantity	Type of Treatment of Recycling Process	Quantity of Recycled or Treated Product
---------------	-----------	------------------	-------------------	--------------------------------	----------	--	---

Residual Wastes Generated from the Treatment and/or Recycling Operation

Type of Waste	HW Number	Process by which the Waste is Generated	Quantity	Type of Storage Containers/# Number of Containers	Disposal Option	Time Table for Disposal
---------------	-----------	---	----------	---	-----------------	-------------------------

MODULE 3: RA 9275

Water Pollution Data

Domestic wastewater (cubic meters/day)	0.892	Process wastewater (cubic meters/day) :	1.064
Cooling water (cubic meters/day)	0.0065	Others :	
Wash water, equipment (cubic meters/day)	0.0264	Wash water, floor (cubic meters/day) :	

Record Cost of Treatment

	Month 1	Month 2	Month 3
Person employed, (# of employess)	1	1	1
Person employed, (cost)	900.00	731.25	787.50
Cost of Chemicals used by WTP	N/A	N/A	N/A
Utility Costs of WTP(electricity & water)	N/A	N/A	N/A
Administrative and Overhead Costs	4,196.70	N/A	N/A
Cost of operating in-house laboratory	N/A	N/A	N/A
New/Additional investment in WTP (description)	N/A	N/A	N/A
Costs of New/Add Investments	N/A	N/A	N/A

WTP Discharge Location

Outlet Number	Location of the Outlet	Name of Receiving water body
1	Oil-water separator system	Asin-Gallano River
2	Dust settling tank discharge compartment	Asin-Gallano River

Detailed Report of Wastewater Characteristics for Conventional Pollutants

Outlet No.	DATE	Effluent Flow Rate (m3/day)	BOD (mg/L)	TSS (mg/L)	Color	Ph	Oil & Grease (mg/L)	Temp Rise (C)	Unit
1	2024-02-26			0.00		7.95	0.41		
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								

Detailed Report of Wastewater Characteristics for Other Pollutants

Outlet No.	DATE	Effluent Flow Rate							
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[illegible]

MODULE 4: R.A. 8749 (Air Pollution)

Summary of APSE/APCF

Process Equipment	Location	# of hours of operation for the quarter
hawk burner	Kiln Plant	2,208 HOURS

Fuel Burning Equipment	Location	Fuel Used (indicate % if mixed composition)	Quantity Consumed for the quarter	# of hours of operations for the quarter
hawk burner	Kiln No. 1	RFO	301.1735	2,208 HOURS
One (1) unit SEALEY/CUMMINS"	Power house	Diesel	0.1405	8.30

Pollution Control Facility	Location	# of hours of operation for the quarter
Wet gas scrubber	Kiln Vertical Shaft in the Kiln Plant	2,208 HOURS
Dust Collector and Scrubber System	Kiln Plant	2,208 HOURS

Record Cost of Treatment

	Month 1	Month 2	Month 3
--	---------	---------	---------

Detailed Report of Air Emission Characteristics

[illegible]

MODULE 5: P.D. 1586

Ambient Air Quality Monitoring (if required as part of ECC conditions)

Station Description	DATE	Noise Level (dB)	CO (mg/Ncm)	NOx (ng/Ncm)	Particulates (mg/Ncm)	(mg/Ncm)	(mg/Ncm)	(mg/Ncm)	(mg/Ncm)
N/A	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								

Ambient Water Quality Monitoring (if required as part of ECC conditions)

Station Description	DATE	/	/	/	/	/	/	/	/
N/A	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								
	2000-01-01								

Other ECC Conditions

ECC Condition/s	Status of Compliance	Actions Taken
Voluntary cease its operation in the event of any malfunction in any of the appurtenant facilities until the time that said damages are rehabilitated or restored. Further, the proponent shall immediately inform the EMBCAR of said damages and of remedial measures undertaken.	No	No malfunctioning of operation facilities during the monitoring period in review.
Uncalcined limestone/discards shall be prevented from deposition to and along drainage/natural waterways and water bodies, and shall be disposed – off properly in an appropriate/designated disposal site(s) which shall be maintained in a stable and non-polluting condition.	Yes	Uncalcined limestone is maintained in a stable condition located at the Kiln stockpile area far from the drainage canal. 35.730 MT was donated to a constituent of Purok 12, Irisan for the backfill of their vacant lot and to Nurich Vitameal Corporation in Calasiao, Pangasinan for manufacturing organic fertilizers for the first quarter.
Timely construction of adequate engineered earth retaining structures along affected and	No	Ripraps were already established along the slopy/unstable areas in the kiln feed

geologically unstable areas, especially in the stockyard of limestone, to protect adjacent properties/environment.		stockpile area. There is no additional construction of retaining structures this first quarter of CY 2024.
The proponent shall plant at least 50 indigenous tree species along the periphery of the project site to serve as buffer for dust and noise and improvement of aesthetics and in the support of the National Greening Program and climate change initiatives of the government.	Yes	The Company established four (4) packets of Plantation Areas with an area of 3,711 square meters that serves as a buffer zone and carbon..... being enhanced and maintained yearly. These four packets of plantation areas were planted with Benguet coffees and Benguet Pine trees.
The legal requirements pursuant to RA 6969 or the Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990, RA 8749 or the Philippine Clean Air Act of 1999, RA 9003 or the Ecological Solid Waste Management Act of 2000 and RA 9275 or the Philippine Clean Water Act of 2004 shall be secured whenever applicable. Compliance with said requirements shall be coordinated with the Clearance and Permitting Division (CPD) of EMB-CAR, DENR.	Yes	Discharge Permit for the Settling Tank with DP No. DP-CAR-23-01505 which is valid until February 13, 2024 was renewed and was issued with DP No. DP-CAR-24-02323 valid until February 13, 2023.
The proponent shall secure regularly necessary permit(s)/clearances/authority from concerned national and local offices relative to project implementation.	Yes	A business permit for the operation covering CY 2024 was secured at the Mayor's Office on January 29, 2024 valid until December 31, 2024.
The proponent shall allow entry of EMB-CAR personnel into the project site at all times to conduct monitoring and to validate project's compliance with the ECC conditions stipulated therein and EMP Mitigating Measures.	Yes	EMB Personnel visited the site in 2024 first quarter MMT monitoring on February 27, 2024.
The proponent shall submit to EMB-CAR within fifteen (15) days after every quarter a Self-Monitoring Report (SMR) and a Compliance Monitoring Report (CMR) semiannually.	Yes	Religiously submitting reports. The Company submitted the 2023 fourth quarter SMR on January 15, 2024 and 2023 second semester CMR on January 23, 2024.
The proponent shall cause the implementation of any undertaking which may be imposed by EMB-CAR as a result of Technical Conference/s called relative to environmental issues arising from the implementation of the project.	No	No technical conference during the monitoring period in review.
Limestone feed materials shall be sourced out from the Company's permitted quarry areas and/or other sources sanctioned by government authorities. Violation of this condition shall automatically cause the cancellation/revocation of this ECC or imposition of fine.	Yes	A supply agreement between the Company and Timber & Lime Multi-Purpose Cooperative (TLMC), as a supplier of the feed materials was signed on October 17, 2022 valid for two (2) years for the delivery of limestone feed materials. This agreement is registered at MGB-CAR with Certificate of Registration 102522-CAR-44622.
Project development shall be in accordance with the submitted documents. Major modifications and/or expansion shall be subject to a new Environmental Impact Assessment (EIA) requirement.	No	No modification or expansion, to date.
Any transfer of project ownership carries the same conditions and restriction in this ECC for which a written notification to the EMB-CAR shall be made by the transferee/transferor within fifteen (15) days from such transfer.	No	No transfer of ownership, to date.
The project shall undergo the requirements specified in the implementing guidelines of the Department Administrative Order No. 2003-30 if the project construction has stopped for a period of five (5) years.	No	The project operation has not stopped, to date.

Environmental Management Plan/Program

Enhancement/Mitigation Measures/s	Status of Compliance	Actions Taken
Enhance planting at the vacant spaces within the project area boundaries where applicable.	Yes	Continuous enrichment and maintenance of the four (4) packets onsite Company's plantation areas with a total area of 0.3711 hectares with planted Benguet Pine trees, Benguet coffees and lemon.
Enhance the implementation of solid waste management at source (e.g. segregation, reuse, recycling or composting)	Yes	Maintained sorting waste bins (for recyclables, residuals, and biodegradables) placed in the different areas of the Plant site. A composting area also is being maintained for the generated biodegradable waste.
Enhance and maintain the Materials Recovery Facility (MRF).	Yes	Recyclables/reusable materials were stored neatly in their respective storage compartment. Collected materials are being brought to private junk shops at every end of the quarter
Coordinate with the City/Barangay for regular collection of solid waste generation.	Yes	The Company complies with the schedule set by the Barangay for the waste collection which is scheduled every Friday of the week at 5:00 AM. The residual wastes were sorted at source
Regular maintenance of the concrete bund within the perimeter of the Fuel tanks location, Oil-water separator and storage room for hazardous materials.	Yes	1. Increased the height of the 16 linear meters (circular) bund wall from 0.50 meters high to 1 meter high. A catchment in case of an oil spill from the RFO tank pipe was constructed with a bund wall leading to the oil-water separator system. The bund wall near the OWS was also improved. 2. Provided ventilation and safety signages for the hazardous waste storage facility. The hazardous waste drums compartment was lifted.
Disposal of Hazardous wastes through accredited transporter and treater.	No	No hauling of HW this quarter in review.
Reuse of changed oils from the standby generator sets.	No	No changed oil this quarter in review.
Regular inspection and maintenance of the septic tanks and the wastewater settling basins.	Yes	1. Regular inspections were being done. A small volume of accumulated dust settled in the bottom of the tank, hence, no removal of the suspended solids for the first quarter. 2. Regular maintenance of the OWS.
Effluent Monitoring	Yes	1. No discharge from the septic tanks during the monitoring period. 2. No discharge from the dust-settling tanks during the first quarter of CY 2024. 3. Regular maintenance of the OWS. Removed oil was stored in the 1104 drum container in the hazardous waste storage facility. A discharge of 2 cubic meters from the OWS was recorded for the first quarter. Conducted a water sampling for the effluent on February 26, 2024 and results of analyses were within the DENR Standards.
Regular inspection and maintenance of existing canal that traverse the project area that includes removal of debris and other materials that may obstruct water flow	Yes	Removal of the leaves/materials and regular cleaning of the sump in the drainage canal. The sump was constructed to catch debris before traversing into the Barangay drainage canal to prevent clogging.
Properly operate and maintain all emission sources	Yes	The wet gas scrubber within the vertical shaft is being regularly maintained.
Install, when applicable, appropriate air pollution control device/s.	No	No installed air pollution control device/s this quarter.
Control vehicle speed to lessen suspension of road dust.	Yes	Limestone delivery trucks and RFO delivery trucks' speeds were in control at all times.
Conduct water spraying during dry days	Yes	Implemented sprinkling seven (7) times for January, six (6) times for February, and three (3) times for March.
Cover delivery/hauling vehicles that may generate dust.	Yes	Open trucks of the customers were always equipped with cover (canvas/tolda) to prevent suspension of dust in the atmosphere.
Monitoring of ambient air quality and source emission.	No	No conducted test this quarter.
Properly operate and maintain all sources of	Yes	Regular maintenance of power house as one

noises.		source of noise pollution.
Install, when applicable, appropriate noise control device/s.	Yes	The roots blower in the power house was enclosed to lessen the generation of noise.
Monitoring of ambient noise level.	Yes	No conducted test this quarter
Prioritize hiring of qualified local residents.	No	No hiring this quarter.
Regular coordination with LGU.	Yes	Regularly coordination with the LGU by the Community Relations Officer for issues and concerns concerning the Operation and the Social Development and Management Program of the Company. Also, Irisan LGU is a member of the BF-ILP MMT and was present during the 2024 first quarter MMT monitoring on February 27, 2024.
Promptly payment of local taxes.	Yes	Payment of taxes to BIR monthly and City for the Business Permit.
Provide appropriate traffic/warning signs.	No	
Maintain parking spaces within the project area.	Yes	Parking space in front of the admin building is always available.

Solid Waste Characterization/Information

	Recyclable	Biodegradable	Residual
Average Quantity Generated (tons/ month)	0.113		0.08
Total Quantity Generated (tons/ quarter)	0.339		0.240
Average Quantity Collected (tons/ month)	0.113		0.08
Total Quantity Collected (tons/quarter)	0.339		0.240
Entity in charge of collection			Baguio City garbage collection truck

Brief Description of Solid Waste Management Plan (e.g., waste reduction, segregation, recycling)

Segregation is initially done at the garbage bins at the admin office, bunkhouse/staff house, and kiln plant wherein biodegradable is segregated from non-biodegradable. Recyclable materials (pet bottles and cans) and reusable materials (paper and cartoon) were stored at the MRF of the Company and were bought by private junk shops. Residuals (non-bio) are disposed of in line with the Barangay ordinance. Wastes were being brought out to the designated collecting area in the Purok as per schedule being collected by the City truck waste every Friday. There is also a designated area for composting the biodegradable waste in the Campsite. The composted materials will be used in fertilizing the coffees/lemon in the Plantation Areas.

MODULE 6: OTHERS

Accidents & Emergency Records

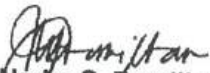
Date	Area/Location	Findings & Observation	Actions Taken	Remarks
2000-01-01				
2000-01-01				
2000-01-01				

Personnel/Staff Training

Date Conducted	Course/Training Description	# of Personnel Trained
2024-03-7	Fire Safety Orientation	30
2000-01-01		
2000-01-01		

I hereby certify that the above information are true and correct.

Done this 12th day of April 2024, in BAGUIO CITY,
BENGUET.


Narhy C. Pomilban
Name/Signature of PCO
COA No. 2023-CAR-14263 New


Francisco O. Flavier
Name/Signature of Managing Head

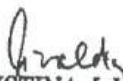
SUBSCRIBED AND SWORN before me, a Notary Public, this day of

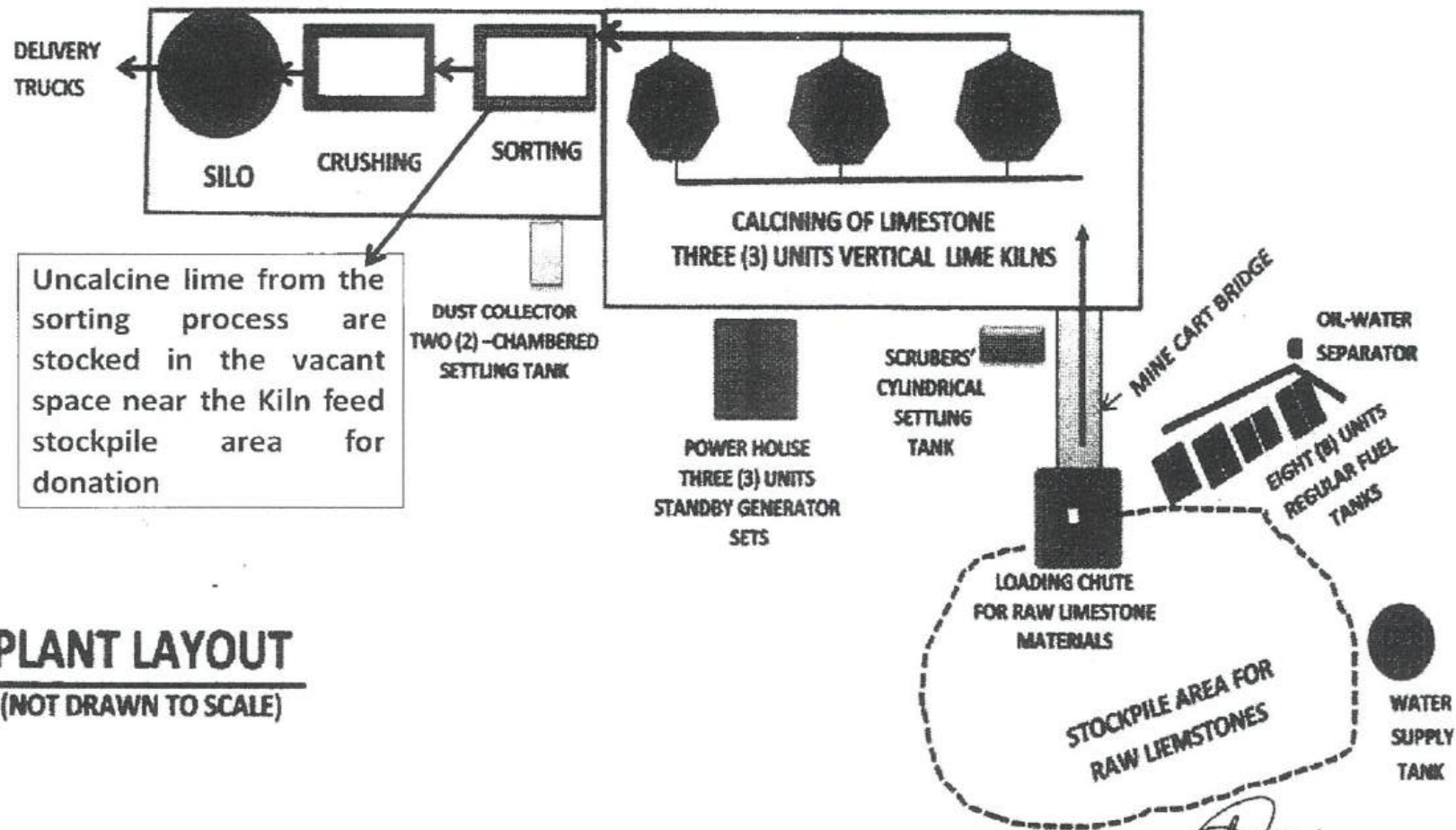
, affiants exhibiting to me their PTR:

Name	CTR No.	Issued at	Issued on
FRANCISCO O. FLAVIER	TIN 103-481-016	Baguio City	
NARHY C. POMILBAN	TIN 314-977-920	Baguio City	

SUBSCRIBED AND SWORN to
before me this APR 12, 2024 in
the City of Baguio, Philippines.

Doc. No. 364 ;
Page No. 33 ;
Book No. 59 ;
Series of 24 .


CRISTINA I. VALDEZ
Notary Public in Baguio City
Until December 31, 2024
NA-T34-N0-22-11
PTR O.R. No. 6222400; December 19, 2023; Baguio City
IBP OR No. 331194; December 12, 2023; Manila
Roll No. 61811; April 25, 2023; Manila
MCLE Compliance Certificate No. Y10-CA-21828
Until 06-14-2025
Rm. 2B, Sacred Heart Building, Diego Silang St., Baguio City



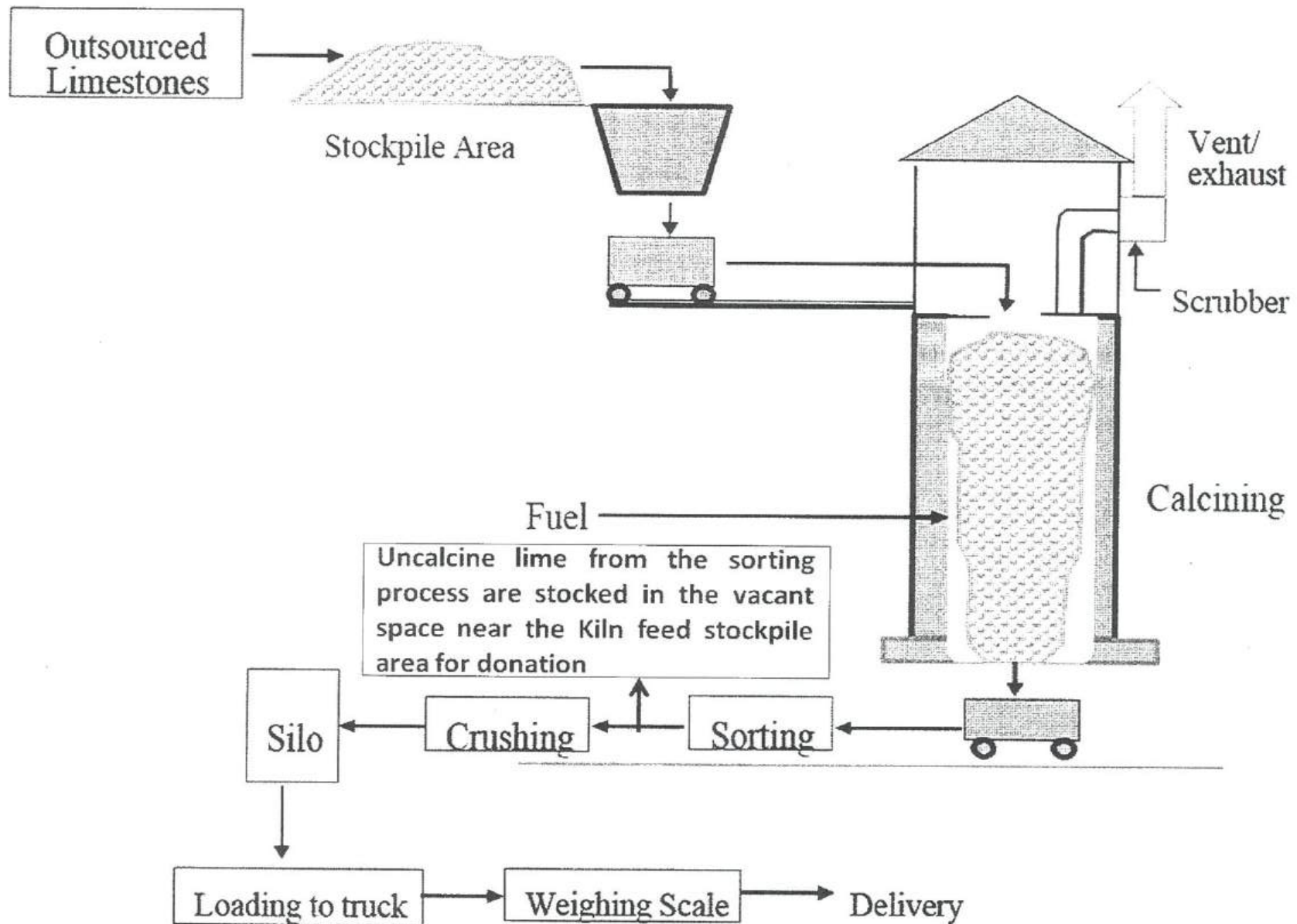
PLANT LAYOUT

(NOT DRAWN TO SCALE)

PROJECT : IRISAN LIME KILNS
 LOCATION : KM.5, IRISAN, BAGUIO CITY
 PROPONENT : BMC FORESTRY CORPORATION

Francis O. Flavier
FRANCIS O. FLAVIER
 OPERATIONS MANAGER

TANDY L. RAQUIT
 SE 00841 valid until 2/14/17
 CE 22806 valid until 2/14/17



Petroleum Products and Trucking Services Provider

CERTIFICATE OF ANALYSIS (Special Low Sulfur Fuel Oil)

PROPERTY	METHOD (ASTM)	RESULT
Specific Gravity at 15°C	D 1298	0.81 kg/l
SI - Kinematic Viscosity @ 50°C	D 445	5.261
SI - Flash Point, PMMC	D 93B	40.0°C
SI - Pour Point	D 97	27°C
Ash from Petroleum Products	D 482	0.003 % (m/m)
SI - Total Sulfur Content	D 4294	0.107 % (m/m)
Water & Sediment in Fuel Oils by Centrifuge Method	D 1796 (Modified)	0.20 % (v/v)
SI - Sediment by Extraction	D 473	0.03 % (m/m)
High Heating Value, BTU/lb	D 4868	19558
Low Heating Value, BTU/lb	D 4868	18350
SI - Determination of Ni, V & Fe by AAS - Acid Decomposition Method Vanadium	D 6863 (Method A)	9.0 ppm (m/m)
SI - Na, Ni, V in Crude Oils & Residual Fuels by AAS Sodium	D 5863 (Method B)	11 ppm (m/m)
SI - Carbon Residue - Micro Method	D 4530 (Method A)	0.64 % (m/m)
Water Content	D 96	0.1 % (v/m)
end of analysis		

For your reference.



Certificate of Analysis: MK22-00020.002

Date: 12/05/2023
MAXFUEL PETROLEUM PRODUCTS TRADING
Sitio Maglanque, Concepcion, San Simon Pampanga

The sample(s) to which the findings recorded herein (the "Findings") relate was/were drawn and / or provided by the Customer or by a third party acting at the Customer's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) were said to be extracted.

This laboratory is accredited under ISO/IEC 17025. The results reported herein have been performed in accordance with the laboratory's term of accreditation except calibration/levels marked with an asterisk (*) in this report which are not within the scope of accreditation for our laboratory.

CUSTOMER ORDER NUMBER	PO No. 05	SGS ORDER NO.:	2002943
CUSTOMER ID:	Requested by Mrs. Maude Uy		
LOCATION:	Not Indicated	PRODUCT DESCRIPTION:	IFO-100
SAMPLE SOURCE:	As Supplied		
SAMPLE TYPE:	As submitted	SAMPLED BY:	Client
SAMPLED:	—	RECEIVED:	11/05/2023
ANALYSED:	12/05/2022	COMPLETED:	12/05/2023
PROPERTY	METHOD	RESULT	UNIT
Relative Density (SG) at 15.0/15.0 °C	ASTM D1298	0.8954	—
Kinematic Viscosity at 40 °C (104 °F)	ASTM D445	46.43	mm ² /s
Flash Point by PMCC	ASTM D93B	175.0	°C
High Heating Value (HHV)	ASTM D4868	19176	Btu/lb
Lower Heating Value (LHV)	ASTM D4868	18021	Btu/lb
Ash from Petroleum Products	ASTM D462		
Ash		0.860	% (m/m)
Total Sulfur Content *	ASTM D4294	0.300	% (m/m)
Water Content	ASTM D95	0.2	% (v/m)
** End of Analytical Results **			

This document is only valid in its entirety and your attention is drawn to the Terms and Conditions on Page 1 of this report.

REPORTED BY:

Laboratory No. 88879850, Expiry: 12/14/2024
PTR No. 0060751, Renewal: 01/15/2022, Validity:

DIANA GEE T. EUMEN
Lab Analyst I

1402202215500000008130

CERTIFIED BY:

Laboratory No. 8807546, Expiry: 12/14/2024
PTR No. 0011493, Renewal: 05/11/2022, Validity:

REY MANINGO
Laboratory Manager

3/F Alegria Building, 2229 Chino Roces Avenue, Makati City 1231, Philippines web: www.sgs.com

MONITORING LOGSHEET

Facility Information

Facility Name
Facility Address
Name of Pollution Control Officer
Maintenance Supervisor / Engineer
Telephone and Fax Number

BMC FORESTRY CORP. ICP
KM. 6 NAAGILAN ROAD, IKISAN, BAEVIO CITY
MS. NARHY C. POMILBAN

Source Description

Source Type
Source ID
Manufacturer / Brand of Equipment / Serial No.
Equipment Capacity (BHp,MW,MT/hr)
Date of Installation (month/year)
Date of Modification (that may increase emissions)
Operational Hours per Year (hrs/year)
Operating rate (%)

VERTICAL SHAFT KILN #2
PJ24 241 S1
✓
1.08 MT/HR
✓ 8,700 hrs/year
✓ 100%

Air Pollution Control Device

Is there an Air Pollution Control Device (APCD) attached to the source?

YES NO

Type of APCD

Date of Installation

APCD parameters (flowrate,gpm,delta P,etc)

Is the APCD operating during emission sampling

YES NO

Fuel Analysis / Information

Type of Fuel used during emission sampling (%S)

Original Fuel used

Date of Fuel change

Daily Fuel Consumption (Liters/day)

Is the Fuel Analysis Available?

Will the company provide the Fuel Analysis

✓ Bunker Fuel Oil / Industrial Fuel Oil
✓ BFO

YES NO

YES NO

Please attach the following

- Fuel Analysis
- Permit to Operate
- APCD Process Logsheet
- Source Process Logsheet

Narhy C. Pomilban
Narhy C. Pomilban

Signature over printed name of Facility Representative

ANNEX D

ANALYTICAL DATA



Unit 201-204 & 406 Rizalina Annex Bldg. 1677 Quezon Avenue, Quezon City
Tel. No. 8927-77-15 Fax No. 8929-4824 Email: info@elarsi.com

CLIENT	: BSI	Lab. Report No.	: 241930-SA
ADDRESS	: 2 nd Flr., VAG Bldg Ortigas Ave. Greenhills San Juan, Metro Manila	Date/Time Sampled	: 05-28-24 1800H
Contact Number	: 8863-6129	Date Received	: 05-31-24
Nature of Sample/s	: Stationary Source Emission	Date Analyzed	: 05-31-24 to 06-10-24
No. of Sample/s Submitted	: Three (3)	Date Reported	: 06-10-24

[R E P O R T O F A N A L Y S E S]

Sample No.	Sample ID	PM (with acetone rinse), mg ^d	Analysis Date/Time
ES-2408629	PJ 24 241 S1R1	43.6	06-07-24 0850H
ES-2408630	PJ 24 241 S1R2	34.8	06-07-24 0850H
ES-2408631	PJ 24 241 S1R3	26.5	06-07-24 0850H

^d - Method 5 / Gravimetric

Reference:
CFR 40 Part 60 Revised as of July 1, 2000

Analyzed By:

JOCELYN T. PAMITTAN, RChT
Laboratory Chemical Technician
PRC Lic. No. 0005410

Checked By:

JEMMA D. JACINTO, RCh
Laboratory Supervisor
PRC Lic. No. 0010872

Certified Correct By:

RENATO M. GOFREDO, JR., RCh
Laboratory Manager
PRC Lic. No. 0009824

Test results reflect the quality of the samples as received.

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C.R. No. 006/2021



PAB ACCREDITED
TESTING LABORATORY
PNS ISO/IEC 17025:2017
LA-2023-436A

Page 1 of 1 Page/s

EI_HRAFORM_10



Particulate Matter (PM) (METHOD 5) ANALYTICAL DATA SHEET (EI-APA-15)

Project No.: 974 241 Lab Report No.: 241930-5h
Nature of Sample: SSE Date Received: 05-21-24
Analytical Balance: EI-EQPTREC-242 Date Analysis Started: 06-03-24 0850 H
Sensitivity: 0.1 mg Date Analysis Finished: 06-10-24 0455 H
Detection Limit: 0.1 mg Temperature (°C): _____
Relative Humidity (%): _____

	Units				
Sample ID		P2M 241 S1H	P2M 241 S1B	P2M 241 S1C	Blank
Sample No.		ES-2408629	ES-2408630	ES-2408631	-

Filter Analysis

Filter ID		605 085	605 086	605 087	-
Filter Appearance		brown	brown	brown	-
Initial Weight	g	0.3610	0.3610	0.3588	-
Final Weight	g	0.3964	0.3891	0.3779	-
Particulate Mass Filter, m_f	mg	35.4	28.1	19.1	-

Acetone Rinse Analysis

Dried PM Rinse Appearance		gray	gray	gray	clear
Acetone Rinse Volume, V_r	ml	112	72	71	100
Beaker ID		PH19	PH20	62	PH08
Initial Weight, Beaker	g	110.0628	109.4554	113.6054	111.94284
Final Weight, Beaker	g	110.0710	109.4621	113.6128	111.94344
Particulate Mass, Acetone Rinse, m_r	mg	2.2	6.7	7.4	20.1

Acetone Reagent Blank

Acetone Blank Volume, V_b	ml	100	100	100	100
Beaker ID		PH08	PH08	PH08	PH08
Initial Weight, Beaker	g	111.9438	111.9438	111.9438	111.9438
Final Weight, Beaker	g	111.9434	111.9434	111.9434	111.9434
Blank Residue Mass, m_b	mg	0.0000	0.0000	0.0000	0.0000
$C_b = m_b / V_b$	mg/ml	0.0000	0.0000	0.0000	0.0000
Acetone Blank, $W_b = C_b \times V_r$	mg	0.0000	0.0000	0.0000	0.0000
Max Blank Corr. Allowed, W_m^*	mg	0.0600	0.0657	0.0578	0.0757
Acetone Blank Value Used **	mg	0.0000	0.0000	0.0000	0.0000

* Maximum Acetone Blank is 0.001% A, mass. $W_m^* = V_r \times 0.7857 \times 0.00001$ (where 0.7857 g/ml is acetone density @ 25°C)

** Maximum Mass of Acetone Blank Correction should be less than 0.001% of the Ar mass, otherwise use, W_m^* .

Total PM = $m_f + m_r - W_b$	mg	43.6	34.8	26.5	20.1
or Total PM = $m_f + m_r - W_m^*$					ND (Not Detected)

Analyzed by JRV
Date & Time 06-10-24 1004

Checked by JDJ
Date & Time 6/10/24 1504

Approved by Rmg
Date & Time 6/10/24 6 PM



Unit 201-204 & 406 Rizalina Annex Bldg. 1677 Quezon Avenue, Quezon City
Tel. No. 8927-77-15 Fax No. 8929-4824 Email: info@elarsi.com

CLIENT : BSI
ADDRESS : 2nd Flr., VAG Bldg Ortigas Ave. Greenhills
San Juan, Metro Manila
Contact Number : 8863-6129
Nature of Sample/s : Stationary Source Emission
No. of Sample/s Submitted : Three (3)
Lab. Report No. : 241931-SA
Date/Time Sampled : 05-28-24 1800H
Date Received : 05-31-24
Date Analyzed : 06-11-24
Date Reported : 06-12-24

[REPORT OF ANALYSES]

Sample No.	Sample ID	SO ₂ , mg ^a	Analysis Date/Time
ES-2408632	PJ 24 241 S1R1	32.78	06-11-24 1300H
ES-2408633	PJ 24 241 S1R2	21.22	06-11-24 1300H
ES-2408634	PJ 24 241 S1R3	18.57	06-11-24 1300H

^a - Method 6 / Barium - Thonn Titration

Reference:
CFR 40 Part 60 Revised as of August 3 2017

Analyzed By:

CHYLA DREXIE C. MORADA, RChT
Laboratory Chemical Technician
PRC Lic. No. 0009323

Checked By:

JEMMA D. JACINTO, RCh
Laboratory Supervisor
PRC Lic. No. 0010872

Certified Correct By:

RENATO M. GOFREDO, JR., RCh
Laboratory Manager
PRC Lic. No. 0009824

Test results reflect the quality of the samples as received.

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SOx (METHOD 6/METHOD 8) ANALYTICAL DATA SHEET (EI-APA-14)

Project No. : P3 24 241
 Nature of Sample : SPF
 N BaCl₂ used : 0.01006g 2782
 IPA (used for titration) : 415406
 Detection Limit/s : SO₂ (2.70 mg)
SO₃ (3.27 mg) ; H₂SO₄ (4.00 mg)

Lab Report No. : 24931 - SA

Date Received: 31 MAY 2024

Date Analysis Started: 1 JUN 2024 1300H

Date Analysis Finished: 11 JUN 2024 1500H

Computations:

IPA Check (Abs @ 352nm)	IPA LOT No. 415400
Blank 0.00	IPA 0.004

$$\text{Mass H}_2\text{SO}_4 \text{ (mg)} = \left[\frac{49.04 (N_{\text{NaOH}}) (V_{\text{NaOH}} - V_{\text{Blank}}) V_{\text{H}_2\text{SO}_4}}{V_1} \right]$$

$$\text{Mass SO}_2 \text{ (mg)} \left\{ \frac{(32.03) (N_{\text{BaCO}_3}) (V_{\text{H}_2\text{O}} - V_{\text{BaCO}_3}) V_{\text{SO}_2}}{V_s} \right\}$$

$$\text{Mass SO}_3 \text{ (mg)} = \text{mass H}_2\text{SO}_4 \text{ (mg)} \times \frac{\text{MW SO}_3 (80.061)}{\text{MW H}_2\text{SO}_4 (98.076)}$$

where	V_{sch}	sample volume	V_{ave}	average volume of titrant used for sample
	V_s	volume aliquot		
	V_{titrant}	volume of titrant used for IPA blank		

ND (Not Detected)

[illegible]

REMARKS:

Reagent & Standard Code/s:

0.0100 N Barium Standard Solution

Thorin Indicator:

Isopropanol Brand/Lot#

Analyzed by cem

Checked by [Signature]
Date & Time 6/11/24 18:34

Checked by RmG
Date & Time 6/11/24 6 PM



REAGENTS STANDARDIZATION for SOx ANALYSIS (EI-APA-14)

Project No: 01 24 24
Lab Report No. 24131-09

Date Received: 31 MAY 2024
Date & Time Analysis Started: 11 JUN 2024 1200H

Date & Time Analysis Finished: 11 JUN 2024 1800H

Computations:

Standardization of 0.0100 ± 0.0002 N BaCl2:				
Trial No.	Volume (ml)	Normality (N)	Volume (ml)	Normality (N)
	H ₂ SO ₄	H ₂ SO ₄	BaCl ₂	BaCl ₂
1	25	0.00974486533	24.7	0.01006560378
2	25	0.00974486533	24.5	0.01014777197
			average	0.01010668768

$$N_{BaCl_2} = \frac{N_{H_2SO_4} V_{H_2SO_4}}{V_{BaCl_2}}$$

Standardization of 0.0100 ± 0.0002 N H2SO4:				
Trial No.	Volume (ml)	Normality (N)	Volume (ml)	Normality (N)
	NaOH	NaOH	H ₂ SO ₄	H ₂ SO ₄
1	25.2	0.00980751373	25	0.009885971464
2	25.5	0.00980751373	25	0.0098036616
			average	0.00974486533

$$N_{H_2SO_4} = \frac{N_{NaOH} V_{NaOH}}{V_{H_2SO_4}}$$

Standardization of NaOH:				
Trial No.	Weight (g)	Weight (g)	Volume (ml)	Normality (N)
	NaOH	KHP	NaOH	NaOH
1	40	0.1005	50.2	0.00980751373
2	40	0.1006	50.2	0.009812389306
			average	0.00980751373

$$N_{NaOH} = \frac{\text{Weight of KHP}}{0.20423 \times V_{NaOH}}$$

Analyzed by ccm Checked by 181
Date & Time 11 JUN 2024 1800H Date & Time 6/11/24 1800H

Approved by RWG
Date & Time 6/11/24 6PM



Unit 201-204 & 406 Rizalina Annex Bldg. 1677 Quezon Avenue, Quezon City
Tel. No. 8927-77-15 Fax No. 8929-4824 Email: info@elarsi.com

CLIENT	: BSI	Lab. Report No.	: 241932-SA
ADDRESS	: 2 nd Flr., VAG Bldg Ortigas Ave. Greenhills	Date/Time Sampled	: 05-28-24 1800H
	: San Juan, Metro Manila	Date Received	: 05-31-24
Contact Number	: 8863-6129	Date Analyzed	: 06-10-24
Nature of Sample/s	: Stationary Source Emission	Date Reported	: 06-11-24
No. of Sample/s Submitted	: Ten (10)		

[R E P O R T O F A N A L Y S E S]

Sample No.	Sample ID	NO _x (as NO ₂), mg ^a	Analysis Date/Time
ES-2408635	PJ 24 241 S1R1T1	< 0.0404	06-10-24 0900H
ES-2408636	PJ 24 241 S1R1T1	< 0.0404	06-10-24 0900H
ES-2408637	PJ 24 241 S1R1T1	< 0.0404	06-10-24 0900H
ES-2408638	PJ 24 241 S1R2T1	< 0.0404	06-10-24 0900H
ES-2408639	PJ 24 241 S1R2T1	< 0.0404	06-10-24 0900H
ES-2408640	PJ 24 241 S1R2T1	< 0.0404	06-10-24 0900H
ES-2408641	PJ 24 241 S1R3T1	< 0.0404	06-10-24 0900H
ES-2408642	PJ 24 241 S1R3T1	< 0.0404	06-10-24 0900H
ES-2408643	PJ 24 241 S1R3T1	< 0.0404	06-10-24 0900H
ES-2408644	PJ 24 241 S1 Blank	< 0.0404	06-10-24 0900H

^a - Method 7 / Phenoldisulfonic Acid

Reference
CFR 40 Appendix A-4 Part 50 as of May 31, 2023

Analyzed By:

CHYLA DREXIE C. MORADA, RChT
Laboratory Chemical Technician
PRC Lic. No. 0009323

Checked By:

JEMMA D. JACINTO, RCh
Laboratory Supervisor
PRC Lic. No. 0010872

Certified Correct By:

RENATO M. GORREDO, JR., RCh
Laboratory Manager
PRC Lic. No. 0009824

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EL_HRAFORM_10



STANDARD CALIBRATION for NOx ANALYSIS (EI-APA-10)

Project No.: 24-34
Lab Report No.: 24932-5A
Spectrophotometer: EIQPTREC-399
Wavelength (nm): 408 nm

Date Received:
Date Analysis Started:
Date Analysis Finished:

31 MAY 2024
10 JUN 2024 CECOH
10 JUN 2024 TCCOH

Note: Wavelength is varies based on the optimum wavelength determination every 6 months.

Calibration Number	Standard Actual Concentration (µg)	Measured Absorbance	Corrected Absorbance a	Calculated Concentration (µg) b	Concentration (% difference) c
Blank	0	0.024			
1	100	0.151	0.127	118.83	1.7
2	200	0.293	0.255	198.44	0.78
3	300	0.410	0.354	300.38	-0.13
4	400	0.539	0.515	400.77	-0.19
QC	200	0.268	0.244	189.88	5.00

Computations:

- a = Corrected absorbance for A1 through A4 is blank corrected
- b = Corrected absorbance x Kc
- c = Concentration, % difference should be less than 7%

$$\text{Calibration Factor (Kc)} = \frac{a_1 + 2a_2 + 3a_3 + 4a_4}{a_1^2 + a_2^2 + a_3^2 + a_4^2} \times 100 = 778.108391575204$$

$$\% \text{ difference} = \frac{\text{actual concentration} - \text{calculated concentration}}{\text{actual concentration}} \times 100$$

REMARKS:

Reagent & Standard Code/s:

1N NaOH
Phenoldisulfonic Acid Reagent
Conc. H₂SO₄

Ammonium Hydroxide
Std. KNO₃ Solution
Working Std. KNO₃ Solution

Prepared by: RCM

Approved by: Rung

Reviewed by: (D)



Project No. :	PJ 24 241
Nature of Sample :	SSE
Aliquot Factor :	2
Calibration Factor (K_c) :	772.783245054
Detection Limit :	0.0404 mg

[illegible]
$$m = 2 K_c A' F / 10^3$$

Analyzed by 2000
Date&Time 15 JUN 2004 16:00

Checked by JU
Date&Time 6/10/19 13:54

Approved by RNG
Date & Time 6/10/2019 6pm



Environmental Management Service Provider

CO MEASUREMENT DATA

Tedlar Bag Samples

Facility:	BMC FORESTRY CORPORATION	Analysis Date:	May 31, 2024
Sample Date:	May 28, 2024	Analyzed By:	JOSE ARJAY M. SANTIAGO
Collected By:	ECF, HPO, RME, MSL, JBT	Signature:	

CO Analyzer Manufacturer	FUJI ELECTRIC CO., LTD.
Analyzer Model	ZPAABBY2 / N2C0833
Analyzer Range Setting, ppm	0 - 1000
Analyzer Span Value, ppm	800

Pre-Measurement Calibration					
Time	Cylinder No.	Gas Value (ppm)	CO response (ppm)	% Difference* (% span)	Status (≤ 2% span)
0800H					
Zero Gas	N2 240403	0	0	0.0000	Passed
Certified Gas 1	D962229	200	201	-0.1250	Passed
Certified Gas 2	D962122	500	499	0.1250	Passed
Certified Gas 3	D962087	800	800	0.0000	Passed

*((Gas Value- CO Response)/Span Value)x 100%

CO Tedlar Bag Samples					
Time	Tedlar Bag ID No.	CO (ppm)	Time	Tedlar Bag ID No.	CO (ppm)
0900H	PJ24-241 SIR1	106			
0910H	PJ24-241 SIR2	99			
0920H	PJ24-241 SIR3	112			

Post-Measurement Calibration Drift Check					
Time	Gas Value (ppm)	Pre-Meas CO Response (ppm)	Post-Meas CO Response (ppm)	% Drift** (% span)	Status ¹ (≤ 10 % span)
1800H					
Zero Gas	0	0	0	0.0000	Passed
Certified Gas 1	200	201	198	0.3750	Passed
Certified Gas 2	500	499	495	0.5000	Passed
Certified Gas 3	800	800	797	0.3750	Passed

**((CO Resp from the Pre-Meas Cal-Co Resp for the Post-Meas)/Span Value) x 100%

QA/QC Check: Completeness ☒ Legibility ☒ Accuracy ☒ Specifications ☒ Reasonableness ☒ Over 8 hours ☒

Checked By:
JANS CHOLO E. CHUA
Signature Over Printed Name

QA/QC/Date:
EDINDO C. FERNANDO
Signature Over Printed Name

ANNEX E

EQUIPMENT CALIBRATION CERTIFICATES

METER BOX POST-TEST CALIBRATION CHECK

USEPA Approved Alternative Method ALT-009

BMC FORESTRY CORP. ILP
IRISAN, BAGUIO CITY
VERTICAL SHAFT KILN NO. 2

Meter Box #: 2

Calibration	Date	ΔH_{avg}	Y
5-point orifice calibration	18-Jan-24	43.1764	0.9884

Calculate Y_{qa} for each test run using the following equation:

$$Y_{\text{qa}} = \frac{\theta}{V_m} \sqrt{\frac{0.0011503 T_m}{\Delta H_{\text{avg}} \left(P_b + \frac{\Delta H_{\text{avg}}}{13.6} \right)}} \times \frac{29}{M_d} \times (\sqrt{\Delta H})_{\text{avg}}$$

where:

Y_{qa}	dry gas meter calibration check, value dimensionless.
θ	total run time, min.
V_m	total sample volume measured by dry gas meter, m^3 .
T_m	absolute average dry gas meter temp., $^{\circ}\text{K}$.
P_b	barometric pressure, mm Hg.
0.0011503	$=(760/298) (0.75 \times 0.0238)^2 (\text{mm Hg}/^{\circ}\text{K}) (\text{m}^3/\text{min})^2$
ΔH_{avg}	average orifice meter differential, mm H_2O .
ΔH_{qb}	orifice meter calibration coefficient, mm H_2O .
M_d	dry molecular weight of stack gas, gm/gm mole.
29	dry molecular weight of air, gm/gm mole.
13.6	specific gravity of mercury.

After each test run series, do the following:

Average the three or more values of Y_{qa} obtained from the test run series and compare this average with the dry gas meter calibration factor, Y. The average Y_{qa} must be within $\pm 5\%$ of Y.

If the average Y_{qa} does not meet the $\pm 5\%$ criterion, recalibrate the meter over the run full range of orifice settings, as detailed in Method 5. Then follow the subsequent procedure in Method 5.

METER BOX POST-TEST CALIBRATION CHECK				
		Run 1	Run 2	Run 3
Meter Box		Meter Box #: 2	Meter Box #: 2	Meter Box #: 2
Time, min	θ	60.0	60.0	60.0
Total volume, dry m^3	V_m	1.6272	1.5420	1.5294
Average meter temp, $^{\circ}\text{C}$		29.79	30.54	29.88
Average meter temp, $^{\circ}\text{K}$	T_m	302.94	303.69	303.03
Barometric pressure, mm Hg	P_b	652.70	651.50	650.50
ΔH_{avg} , mm H_2O		63.500	58.000	52.250
ΔH_{qb} , mm H_2O		43.1764		
Mol. wt. of stack gas, g/g-mole	M_d	29.84	29.84	29.84
QA gamma	Y_{qa}	1.0147	1.0261	0.9819
Average Y_{qa}		1.0076		
Meter box gamma	Y	0.9884		
Difference to be within 5%		1.9% - PASS		



Environmental Management Service Provider

TEAM NO.2: HPO - CRITICAL ORIFICE

DETERMINATION OF ORIFICE COEFFICIENT 'K'

Console Model Number		XC672-QC6V	Date	18-Jan-24		Time	0845H		Std Temp	298.15 °K				
Console Serial Number			1404036		Barometric Pressure				755.9 mm Hg		Std Press	760 mm Hg		
DGM Model Number			G1.6		Theoretical Critical Vacuum				357mm Hg or 14in Hg		K _i	0.3858		
DGM Serial Number			2012-014438		Calibration Technician				HPO		Previous calibration	1.0000		
Metering Console							Critical Orifice							
Run #	Elapsed Time	DGM Orifice ΔH	Volume		Outlet Temp		Orifice ID	Ambient Temp		Critical Vacuum	Actual Vacuum 1-2in or 25-50mm > Critical	Coeff. x10 ⁴	Diff %	
			Initial	Final	Initial	Final		Initial	Final					
			V _{in} m ³	V _{out} m ³	t _{in} °C	t _{out} °C		t _{amb} °C	t _{amb} °C					
1	5	10	0.3140	0.3616	24.0	24.0	40	27.3	27.2	15	17	2.14490	0.21	
2	5	10	0.3616	0.4090	24.0	24.0	40	27.2	27.2	15	17	2.13571	0.21	
Average												2.14030		
1	5	20	0.4150	0.4847	24.0	24.0	48	27.2	27.5	15	17	3.14432	0.02	
2	5	20	0.4847	0.5544	24.0	24.0	48	27.5	27.6	15	17	3.14536	0.02	
Average												3.14484		
1	5	32	0.5620	0.6528	24.0	24.0	55	27.6	27.5	15	17	4.10232	0.02	
2	5	32	0.6528	0.7438	24.0	25.0	55	27.5	27.5	15	17	4.10411	0.02	
Average												4.10321		
1	5	54	0.7550	0.8722	25.0	25.0	63	27.5	27.5	15	17	5.28812	0.09	
2	5	54	0.8722	0.9892	25.0	25.0	63	27.4	27.4	15	17	5.27821	0.09	
Average												5.28317		
1	5	94	0.9980	1.1577	25.0	25.0	73	27.2	27.2	15	16	7.23002	0.08	
2	5	94	1.1577	1.3174	25.0	24.0	73	27.2	27.2	15	16	7.24217	0.08	
Average												7.23609		

Calibrated By:

Halcy Lemon P. Orquina
Signature over Printed Name

Checked By:

Jays Cholo E. Chua
Signature over Printed Name

QA/QC:

Edindo C. Fernando
Signature over Printed Name

Date:

18 January 2024





Environmental Management Service Provider

TEAM NO.2: HPO - CRITICAL ORIFICE

USING FIVE CRITICAL ORIFICES

Console Model Number		XC572-QC6V		Date	18-Jan-24		Time	1005H		Std Temp	298 °K	
Console Serial Number		1404036		Barometric Pressure		755.9 mm Hg		Std Press		760 mm Hg		
DGM Model Number		G16		Theoretical Critical Vacuum		357mm Hg or 14in Hg		K _i		0.3858		
DGM Serial Number		2012-014438		Calibration Technician		HPO		Previous calibration		1 0000		

Metering Console							Critical Orifice					
Elapsed Time θ min	DGM Orifice ΔH P _{cr} mm H ₂ O	Volume			Outlet Temp.		Serial #	Coef. x10 ⁴ K' metric units	Ambient Temp.		Critical Vacuum in Hg or mm Hg	Actual Vacuum 1-2in or 25-50mm > Critical
		Initial V _{cr} m ³	Final V _{ref} m ³	Dif V _{cr} >0.14m ³	Initial t _{cr} °C	Final t _{ref} °C			Initial t _{amb} °C	Final t _{amb} °C		
17.0	8.0	1.3380	1.5040	0.166	25.0	25.0	40	2.14030	27.1	27.6	15.0	17.0
11.0	20.0	1.5170	1.6732	0.156	25.0	25.0	48	3.14484	27.6	26.8	15.0	17.0
9.0	32.0	1.6824	1.8484	0.166	25.0	25.0	55	4.10321	26.8	26.3	15.0	17.0
7.0	54.0	1.8560	2.0212	0.165	25.0	25.0	63	5.28317	26.3	26.4	15.0	17.0
5.0	94.0	2.0410	2.2016	0.161	25.0	25.0	73	7.23609	26.4	26.4	15.0	16.0

Standardized Data				Dry Gas Meter				
Dry Gas Meter		Critical Orifice		Calibration Factor		Flowrate	ΔH _g	
V _{std} m ³	Q _{std} m ³ /min	V _{cr} m ³	Q _{cr} m ³ /min	Value Y	Var'n ΔY ±2%	Std & Corr Q _{std/corr} m ³ /min	0.0212 m ³ /min ΔH _g mm H ₂ O	Variation ΔΔH _g ±5 mm Hg
0.1625	0.0096	0.1587	0.0093	0.9762	-1.24	0.0093	39.9299	-3.2
0.1532	0.0139	0.1509	0.0137	0.9854	-0.30	0.0137	46.3219	3.1
0.1630	0.0181	0.1613	0.0179	0.9898	0.14	0.0179	43.5437	0.4
0.1625	0.0232	0.1616	0.0231	0.9942	0.58	0.0231	44.4826	1.3
0.1586	0.0317	0.1581	0.0316	0.9966	0.82	0.0316	41.6038	-1.6
Y Average				0.9884		ΔH _g Average		43.1764

I certify that the above Dry Gas Meter was calibrated in accordance with USEPA Method 5.

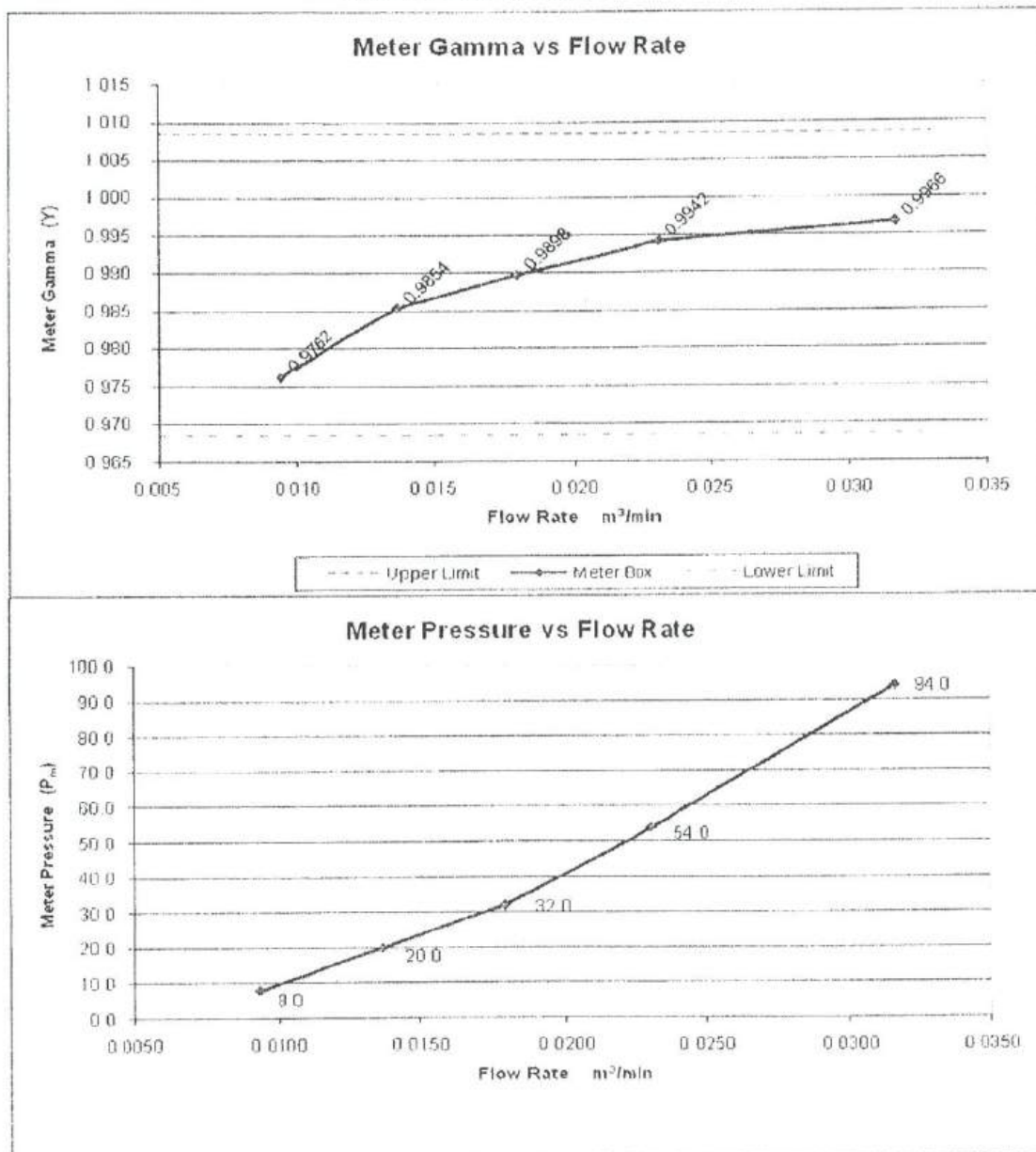
Signature: HALCY LEMON P. ORQUINA / JANS CHOLO E. CHUA / EDINDO C. FERNANDO Date: 18-Jan-24





Environmental Management Service Provider

TEAM NO. 2 - CRITICAL ORIFICE
USING FIVE CRITICAL ORIFICES



Calibrated By:

Haley Lomon P. Orquina
Signature over Printed Name

Checked By:

Jans Cholo E. Chua
Signature over Printed Name

QA/QC:

Ediardo C. Fernando
Signature over Printed Name

Date:

18 January 2024





Environmental Management Service Provider

TEMPERATURE DISPLAY CALIBRATION

Meter Console No.	BSI - T2	Personnel	HPO, RCG
Reference Calibration Maker	PIE	Pretest	OK
Model	520B	Posttest	OK
Serial No.	223734	Date	18 January 2024

TC CHANNEL ID	Reference Temp. 1, °C	Temp. Reading 1, °C	Criteria	Criteria Met	Reference Temp. 2, °C	Temp. Reading 1, °C	Criteria	Criteria Met
PROBE	0	0	0	Y	50	49	0.310	Y
FILTER	0	0	0	Y	50	49	0.310	Y
EXIT	0	0	0	Y	50	49	0.310	Y
AUX	0	0	0	Y	50	49	0.310	Y
STACK	0	0	0	Y	50	48	0.619	Y
STACK	0	0	0	Y	250	247	0.574	Y

TC CHANNEL ID	Reference Temp. 3, °C	Temp. Reading 1, °C	Criteria	Criteria Met	Reference Temp. 4, °C	Temp. Reading 1, °C	Criteria	Criteria Met
PROBE	100	99	0.268	Y	150	148	0.473	Y
FILTER	100	99	0.268	Y	150	148	0.473	Y
EXIT	100	99	0.268	Y	150	149	0.236	Y
AUX	100	99	0.268	Y	150	149	0.236	Y
STACK	100	99	0.268	Y	150	149	0.236	Y
STACK	350	349	0.161	Y	450	447	0.415	Y

CRITERIA: Percent difference between the Reference Temperature and the average Temperature can be only $\pm 1.5\%$ K.

EQUATION: $\frac{[(\text{Ref. Temp.} + 273) - (\text{Temp. Reading} + 273)] \times 100}{(\text{Ref. Temp.} + 273)}$


Calibrated By:


Halcy Lemon P. Orquina
Signature over Printed Name

Checked By:


Jans Cholo E. Chua
Signature over Printed Name

QA/QC:


Edmundo C. Fernando
Signature over Printed Name

Date:

18 January 2024






Environmental Management Service Provider

TEMPERATURE SENSOR CALIBRATION DATA SHEET

Date	18 January 2024	Thermocouple No.	TMC – T2
Personnel	HPO, MSL	Reference	Alcohol Thermometer

Date	Reference Point Number	Source (Specify)	Reference Thermometer Temp., °C	Thermocouple Display Temp., °C	Absolute Temperature Difference, %
18 Jan 2024	1	HOT WATER	99.8	100	0.2
	2	AMBIENT	28.1	28	0.1
	3	ICE WATER	2.2	2	0.2
30 Jun 2023	1	HOT WATER	99.2	99	0.2
	2	AMBIENT	28.1	28	0.1
	3	ICE WATER	2.2	2	0.2
11 Jan 2023	1	HOT WATER	99.2	99	0.2
	2	AMBIENT	28.1	28	0.1
	3	ICE WATER	2.2	2	0.2


Calibrated By:


Haley Lemon P. Orquina
Signature over Printed Name

Checked By:


Jans Cholo E. Chua
Signature over Printed Name

QA/QC:


Edindo C. Fernando
Signature over Printed Name

Date:

18 January 2024





Environmental Management Service Provider

POST TEST THERMOCOUPLE CALIBRATION CHECK

EPA Approved Alternative Method (Alt-011)
Single Point Calibration

Thermocouple ID	TMC- T2	Probe / Pitot Tube ID	SPA-6FT-2 / PT-6FT-2
Personnel	HPO, RCG	Date	18 January 2024


Sensor	Calibrated By:	Reference Temp. °C ¹	Thermocouple Temp. °C	Difference ² (within $\pm 1^{\circ}\text{C}$)	Continuity Check ³	PASS / FAIL
PROBE	HPO	30.2	30	0.2	OK	PASSED
FILTER	HPO	30.1	30	0.1	OK	PASSED
STACK	HPO	30.1	30	0.1	OK	PASSED
EXIT	HPO	30.1	30	0.1	OK	PASSED
OVEN	HPO	30.2	30	0.2	OK	PASSED
AUX.	HPO	30.2	30	0.2	OK	PASSED

¹ Reference Thermometer is mercury-in-glass and ASTM certified, unless otherwise noted.

² After each test run series, check the accuracy (and, hence, the calibration) of each thermocouple system at ambient temperature. The temperature of the thermocouple and reference thermometers shall agree with $\pm 1^{\circ}\text{C}$.

³ The continuity check involves subjecting the tip of the thermocouple to a change in temperature to check the crimps, loose connections. Thermocouples with crimps and loose connections will not immediately respond to temperature changes, and those with wrong connections will show an opposite change in temperature.


Calibrated By:


Haley Lemon P. Orquina
Signature over Printed Name

Checked By:


Jans Cholo E. Chua
Signature over Printed Name

QA/QC:


Edinno C. Fernando
Signature over Printed Name

Date:

18 January 2024





Environmental Management Service Provider

TYPE-S PITOT TUBE CALIBRATION

PITOT TUBE ID	PT-6FT-2	Probe Assembly ID	SPA-6FT-2
Calibrated by:	HPO, RCG	Date Calibrated	18 January 2024

PARAMETER	VALUE	ALLOWABLE RANGE
Assembly Level	YES	YES
Holes Damaged	NO	NO
Obstructed	NO	NO
$\alpha 1$	0	$-10^{\circ} < \alpha 1 < +10^{\circ}$
$\alpha 2$	0	$-10^{\circ} < \alpha 2 < +10^{\circ}$
$\beta 1$	1	$-5^{\circ} < \beta 1 < +5^{\circ}$
$\beta 2$	0	$-5^{\circ} < \beta 2 < +5^{\circ}$
Y	1	
θ	1	
A	0.935	For 1/4" OD, 0.526 to 0.750" For 3/8" OD, 0.788 to 1.125"
Z = A sin Y	0.016	Z = ≤ 0.125 "
W = A sin θ	0.016	W = ≤ 0.031 "
P _A	0.418	For 1/4" OD, 0.263 to 0.375" For 3/8" OD, 0.394 to 0.563"
P _B	0.433	For 1/4" OD, 0.263 to 0.375" For 3/8" OD, 0.394 to 0.563"
P _A - P _B	-0.015	-0.063 to 0.063"
D _T	0.320	0.188 to 0.375"

Where: $\alpha 1$ & $\alpha 2$ = angles between the pitot tube opening and the horizontal plane when viewed from the end

$\beta 1$ & $\beta 2$ = angles between the pitot tube opening and the horizontal plane when viewed from the side

Y = the angle measured when calculating the difference in length between the two pitot tube legs

θ = the angle measured when calculating the distance that the pitot tubes are rotated

A = the distance between the tips of the pitot tube opening

Z = The difference in length between the two pitot tube legs

W = the distance that the pitot tube legs are rotated

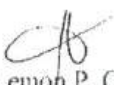
P_A & P_B = vertical distance between each pitot tube opening plane & the center line of the pitot tube

D_T = the tube external diameter

Certification

I certify that the Type S pitot tube meets or exceeds all specifications, criteria and / or applicable design features and is hereby assigned a pitot tube calibration factor (Cp) of 0.84.


Calibrated By:


Haley Lemon P. Orquina
Signature over Printed Name

Checked By:


Jans Cholo E. Chua
Signature over Printed Name

QA/QC:


Edingo C. Fernando
Signature over Printed Name

Date:

18 January 2024





Environmental Management Service Provider


NOZZLE CALIBRATION SHEET

Date	18 January 2024	Personnel	HPO, RCG
Nozzle Box ID	NS – T2	Nozzle Type	Stainless Steel


ID	D ₁ (mm)	D ₂ (mm)	D ₃ (mm)	D (mm)	Average (mm)
T2 NS-1	3.04	3.06	3.02	0.04	3.04
T2 NS-2	4.09	4.09	4.09	0.00	4.09
T2 NS-3	5.90	5.90	5.87	0.02	5.89
T2 NS-4	7.90	7.88	7.90	0.01	7.89
T2 NS-5	9.36	9.37	9.36	0.01	9.36
T2 NS-6	10.86	10.90	10.90	0.04	10.89
T2 NS-7	12.50	12.50	12.50	0.00	12.50

D = Maximum difference in any two measurements. Tolerance = 0.1 mm ; Average = Average of D_{1,2,3}


Calibrated By:


Halcy Lemon P. Orquina
Signature over Printed Name

Checked By:


Jans Cholo E. Chua
Signature over Printed Name

QA/QC:


Edindo O. Fernando
Signature over Printed Name

Date:

18 January 2024





Environmental Management Service Provider

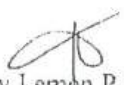
FLASK CALIBRATION SHEET

Date	18 January 2024	Personnel	HPO, RCG
FLASK BOX ID	T2- M7 Flask-C	Flask Type	Glass

FLASK ID	1 st Volume(mL)	2 nd Volume(mL)	3 rd Volume(mL)	Average Volume (mL)
BSI T2 – F19	2315	2310	2320	2315
BSI T2 – F20	2250	2250	2250	2250
BSI T2 – F21	2308	2310	2312	2310
BSI T2 – F22	2247	2253	2250	2250
BSI T2 – F23	2235	2230	2240	2235
BSI T2 – F24	2286	2286	2283	2285
BSI T2 – F25	2250	2250	2250	2250
BSI T2 – F26	2228	2232	2230	2230
BSI T2 – F27	2280	2280	2280	2280

*Note: The flask volumes are measured within +/- 10mL. All calibrations are at room temperature.


Calibrated By:


Halcy Lemon P. Orquina
Signature over Printed Name

Checked By:


Jans Chol6 E. Chua
Signature over Printed Name

QA/QC:


Edindo C. Fernando
Signature over Printed Name

Date:

18 January 2024





Environmental Management Service Provider

DIGITAL BALANCE CALIBRATION

Digital Balance ID	DB - T2	Personnel	HPO, MSL
Manufacturer	AND CO. LTD.	Date	18 January 2024
Model	EJ-1500	Calibration Standard	1000g
Serial Number	BA2826513	Type	Weights (1500g max)

Eccentricity Test		Repeatability Test	
Test Load	1000g	When Loaded up to 1500g (Using 1000g & 500g standard weights)	
Position	Balance Indication	Trial	Balance Indication
1	1000.0	1	1549.9
2	1000.0	2	1549.9
3	1000.0	3	1549.9
4	999.9	4	1549.9
5	1000.0	5	1549.9
Test Results	0.1	Standard Deviation	0

Linearity Test				
Nominal Load	Unit under Test Reading	Deviation from Nominal	Coverage Factor	UE at 95% C.L
Weights	g	g	k	g
0	0	0	2	0
200g	199.9	0.1	2	0.16
500g	500	0	2	0
1000g	1000	0	2	0
1500g	1499.9	0.1	2	0.16

¹Acceptable EPA Method 4 tolerance must be less than 0.5 gram.

²Acceptable EPA Method 5 tolerance must be less than 0.5 gram.

Equipment Description	Equipment ID	Traceability Reference
Standard Weight	1254	08-09-2022-BSI-T2

Calibrated By:

Haley Lemon P. Orquiza
Signature over Printed Name

Checked By:

Jans Cholo E. Chua
Signature over Printed Name

QA/QC:

Edindo C. Fernando
Signature over Printed Name

Date:

18 January 2024





Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Bahay Toro, Quezon City, 1100, Philippines
Tel Nos. 02 4267593 / 9282869 / 9287769 Fax No. 4537694
email Address: admin@switchtek.com.ph
www.switchtek.com.ph



Certificate No:	4000.23-8979-4.23	Calibration of	3 IN1 (Anemometer, Barometer, %RH)			
Identification:	BERKMAN SYSTEMS INCORPORATED	Test and Verification	Certificate of Calibration			
Job:	PI	Initials..:	CAC			
Fin. acc:	32					
Done...:	December 5, 2023					
Categories	Calibration	Men	Hours	Total cost	Type	
Cal Officer		2	1.00	-	Certificate	

CERTIFICATE OF CALIBRATION - 3 IN 1 (ANEMOMETER, BAROMETER, % RH)

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

Issued to: BERKMAN SYSTEMS INCORPORATED
Address: Suite 208 VAO Bldg., Ortigas Avenue, Greenhills, San Juan, Metro Manila, Philippines

UNIT UNDER TEST (UUT):

Instrument: 3 IN1 (Anemometer, Barometer, %RH)
Brand: LUTRON
Model No.: ABH-4225
Serial No.: AJ.79434
Range: Velocity (0-30.0 m/s)
Temp. (0-50 Deg. C)
Humidity (10 to 95%)
Dewpoint (-25.3 to 48.9 Deg. C)
10.0 to 999.9 hPa
Resolution: Velocity (0-30.0 m/s)/0.1 m/s
Temp. (0-50 Deg. C)/0.1 Deg. C
Humidity (10 to 95%)/0.1 %RH
Dewpoint (-25.3 to 48.9 Deg. C)/0.01 Deg. C
Barometric (10.0 to 999.9 hPa) /0.1

CALIBRATOR INFORMATION:

Instrument: Temperature and Humidity chamber
Model No.: XB-0TS-3A
Serial No.: 20130803
Traceability: CNAS
Instrument: Rotating Vane Anemometer
Manufacturer: LUTRON
Model No.: AM-4204M
Serial No.: Q432206
Range: 0 to 30.0 m/s
0 to 50.0 °C
Calibrated Against: UKAS, thru Laser Doppler Anemometer
Instrument: Barigo, Precision Barometer
Calibrated Against: NIST

Calibration Date: December 4, 2023
Calibration Due: December 3, 2024

Environmental Condition:

Condition: DRY/BASIC/NEUTRAL
Relative Humidity: 52.2 ±5%, 1010 hPa

Ambient Temp. (Deg C): 23 ±2

Calibration Method:

By comparison technique, unit under test was tested in reference with a Rotating vane anemometer, precision barometer, Standard Temperature and Humidity calibrator. Procedures of calibration and test conform to the requirements of NPL, NIST and ISO/IEC Guide 17025. Data were gathered and plotted against an ideal curve. Standard error and uncertainty of measurement are written on the attached sheet.

Remarks:

All data pertain only to the unit described obtained at the time of test. This certificate is not valid w/out seal and signature. Unauthorized reproduction is prohibited.

Calibrated By: C.A. CASADO
Date: December 4, 2023

Certified By: KRIZAN DOG
Date: December 5, 2023





Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Bahay Toro, Quezon City, 1100, Philippines
Tel Nos. 02 4267593 / 9282869 / 9287769 Fax No. 4537694
email Address: admin@switchtek.com.ph
www.switchtek.com.ph



Certificate No.: 4000.23-8979-4.23 Calibration of 3 INI (Anemometer, Barometer, %RH)
Identification: BERKMAN SYSTEMS INCORPORATED
Address: Suite 208 VAG Bldg., Ortigas Avenue, Greenhills, San Juan, Metro Manila, Philippines

CERTIFICATE OF CALIBRATION - 3 IN 1 (ANEMOMETER, BAROMETER, % RH)

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

UNIT UNDER TEST (UUT):

Instrument: 3 INI (Anemometer, Barometer, %RH)
Brand: LUTRON
Model No.: ABH-4225
Serial No.: AJ.79434
Range: Velocity (0-30.0 m/s)
Temp. (0-50 Deg. C)
Humidity (10 to 95%)
Dewpoint (-25.3 to 48.9 Deg. C)
10.0 to 999.9 hPa
Resolution: Velocity (0-30.0 m/s)/0.1 m/s
Temp. (0-50 Deg. C)/0.1 Deg. C
Humidity (10 to 95%)/0.1 %RH
Dewpoint (-25.3 to 48.9 Deg. C)/0.01 Deg. C
Barometric (10.0 to 999.9 hPa) /0.1

Calibration Date: December 4, 2023
Calibration Due: December 3, 2024
Calibrated By: C.A. CASADO

MODE: THERMOHYGROMETER

Results:

Barometric

REFERENCE READING (hPa)	UNIT UNDER TEST READING (hPa)	ERROR IN READING (hPa)	STANDARD DEVIATION	REMARKS
1015	1007	8.00	5.6569	The user should determine the suitability of the instrument for its intended use
1010	1004	6.00	4.2426	
1000	993	7.00	4.9497	

Standard error: ± 8.57 hPa

Uncertainty: ± 7.87 hPa

Velocity

REFERENCE READING (m/s)	UNIT UNDER TEST READING (m/s)	ERROR IN READING (m/s)	STANDARD DEVIATION	REMARKS
0.00	0.00	0.00	0.0000	The user should determine the suitability of the instrument for its intended use
5.20	5.10	0.10	0.0787	
9.55	9.40	0.15	0.1061	
15.10	14.90	0.20	0.1414	

Standard error: ± 0.16 m/s

Uncertainty: ± 0.59 m/s

Making our world more productive

CERTIFICATE NUMBER : 90168754/D962229
REVISION NUMBER :
REVISION DATE :



CERTIFIED STANDARD

Certificate of Analysis

Material Number : S802100-AE-C6		Customer Tag :	
Customer	: LINDE PHILIPPINES INC.	PO Number	: 9300463129
Job Card	: 90168754	Order Date	: 08-Nov-2021
Certification Date	: 29-Nov-2021	SO Number	: 128002321
CYLINDER NUMBER		Vcode	: GM34242/10A/S BS4
D962229			

SPECIFICATION

Component	Requested Concentration	Certified Concentration	Unit	Certified Uncertainty (% +/-)
NITROGEN			Balance	
CARBON MONOXIDE	200	200	ppm	2

The Certified uncertainty is relative unless specified "abs" as absolute with a confidence level of 95% (coverage factor K=2).

CYLINDER 10L ALUM
VALVE BS4 BRASS

Content 1,494 M3 Pressure 150 Bar(a)
Shelf Life 36 Month UN Number 1956 Reference Temperature 20°C
Recommended Storage and Usage Temperature 10 to 40°C Min. Usage Pressure 5 BAR G

TRACEABILITY

Category Traceability Type Traceable To Reference Procedure
PROCESS WEIGHT National Metrology Centre(NMC) ISO6142:2001

METHOD OF CERTIFICATION

Method Gravimetric

INSTRUMENTATION

Method of Analysis
LS71704

REMARKS

Certified By



Checked By



Product filled gravimetrically using high-load high-accuracy, weight traceable to National Metrology Centre (NMC) standards. Linde Gas Singapore has obtained a corporate License complying to ISO 9001 standard.

Linde Gas Singapore Pte. Ltd.
50 Jurong Island Highway
Singapore 627817
Phone : 65 6867 8993
Fax : 65 6896 7745
Telex No. 199403 LSGE

Singapore Branch
Jurong Industrial Estate
Singapore 618759
Phone : 65 6867 3992 Fax : 65 6851 3612
www.linde.com.sg

Making our world more productive

CERTIFICATE NUMBER : 90168756/D962122
REVISION NUMBER :
REVISION DATE :



Certificate of Analysis

Material Number : S823400-AE-C6

Customer Tag :

Customer : LINDE PHILIPPINES INC.
Job Card : 90168756
Certification Date : 22-Nov-2021

PO Number : 9300463129
Order Date : 08-Nov-2021
SO Number : 128002321
Vcode : GM34553/10A/S BS4

CYLINDER NUMBER

D962122

SPECIFICATION

Component	Requested Concentration	Certified Concentration	Unit	Certified Uncertainty (% +/-)
NITROGEN			Balance	
CARBON MONOXIDE	500	500	ppm	2

The Certified uncertainty is relative unless specified "abs" as absolute with a confidence level of 95% (coverage factor K=2).

CYLINDER 10L ALUM
VALVE BS4 BRASS

Content 1.470 M3 Pressure 150 Bar(a) Reference Temperature 20°C
Shelf Life 36 Month UN Number 1956 Min. Usage Pressure 5 BAR G
Recommended Storage and Usage Temperature 10 to 40°C

TRACEABILITY

Category
PROCESS

Traceability Type
WEIGHT

Traceable To Reference Procedure
National Metrology Centre(NMC) ISO6142:2001

METHOD OF CERTIFICATION

Method Gravimetric

INSTRUMENTATION

Method of Analysis

REMARKS

Certified By



Checked By



Product filled gravimetrically using high-load high-accuracy, weight traceable to National Metrology Centre (NMC) standards. Linde Gas Singapore has obtained a corporate License complying to ISO 9001 standard.

Making our world more productive
CERTIFICATE NUMBER : 90168755/D962087
REVISION NUMBER :
REVISION DATE :



Certificate of Analysis

Material Number : S803400-AE-C6

Customer Tag :

Customer : LINDE PHILIPPINES INC.
Job Card : 90168755
Certification Date : 22-Nov-2021

PO Number : 9300463129
Order Date : 08-Nov-2021
SO Number : 128002321
Vcode : GM23712

CYLINDER NUMBER

D962087

SPECIFICATION

Component	Requested Concentration	Certified Concentration	Unit	Certified Uncertainty (% +/-)
NITROGEN			Balance	
CARBON MONOXIDE	800	800	ppm	2

The Certified uncertainty is relative unless specified "abs" as absolute with a confidence level of 95% (coverage factor K=2).

CYLINDER : 10L AL
VALVE : BS4 BRASS

Content : 1.494 M3
Shelf Life : 36 Month
Recommended Storage and Usage Temperature : 10 to 40°C
Pressure : 150 Bar(a)
UN Number : 1956
Reference Temperature : 20°C
Min. Usage Pressure : 5 BAR G

TRACEABILITY

Category
PROCESS

Traceability Type
WEIGHT

Traceable To : National Metrology Centre(NMC)
Reference Procedure : ISO6142:2001

METHOD OF CERTIFICATION

Method : Gravimetric

INSTRUMENTATION

Method of Analysis

REMARKS



Product filled gravimetrically using high-load high-accuracy, weight traceable to National Metrology Centre (NMC) standards. Linde Gas Singapore has obtained a corporate License complying to ISO 9001 standard.

ANNEX F

DENR ACCREDITATION



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Visayas Avenue, Diliman, Quezon City



SAT No. 2022-72

CERTIFICATE OF ACCREDITATION

Pursuant to DENR Administrative Order No. 26 Series of 2013 of the Department of Environment and Natural Resources having substantially met all the requirements prescribed therein,

BERKMAN SYSTEMS INCORPORATED (BSI)

208 VAG Building, Ortigas Ave.,
Greenhills, San Juan City, Metro Manila

is hereby duly accredited as

SOURCE EMISSION TESTING FIRM

As such, the following are authorized as:

QA/QC Manager
Edindo C. Fernando

Team Leader
Halcey Lemon P. Orquina

This certification shall allow the above firm and personnel to conduct stack testing limited to the following methods and parameters:

1. US-EPA Method 1 to 5 - PM
2. US-EPA Method 6/8 - SO₂
3. US-EPA Method 7 - NO_x
4. US-EPA Method 10 - CO

Granted this 14th day of July 2022 and valid until July 14, 2025.


ENGR. WILLIAM P. CUÑADO
Director

Digitally signed by Cuñado William Purgatorio
DN: cn=Cuñado William Purgatorio,
serialNumber=001006000462A,
ou=Environmental Management Department,
o=Department of the Environment and
Natural Resources, c=Philippines



ANNEX G

TEST PARTICIPANTS

TEST PARTICIPANTS

BMC FORESTRY CORPORATION

Mr. Jovelino C. Catacutan - Pollution Control Officer

BSI

Mr. Halcy Lemon P. Orquina - DENR Accredited Team Leader / Field Engineer

Mr. Romeo M. Elsisura - Field Technician

Mr. Marvin S. Llarena - Field Technician

Mr. Christian A. Soleta - Outsource Technician

Mr. Jimuel B. Torellino - Sampling Aide/Driver

Mr. Edindo C. Fernando - DENR Accredited QA/QC Manager

ANNEX H

TEST PLAN



May 6, 2024

ENGR. JEAN C. BORRAMEO

OIC, Regional Director

DENR – Environmental Management Bureau

Cordillera Administrative Region (CAR)

DENR Compound, Gibraltar Road, Baguio City

CC : ENGR. RAUL G. CUBANGAY

OIC Chief, Environmental Monitoring and Enforcement Division

Subject: Test Plan for BMC Forestry Corporation – Irisan Lime Project

Dear Director Borrromeo:

We are pleased to submit the test plan for our proposed Source Emission Test to be conducted by Berkman Systems, Inc., an accredited third-party tester at **BMC Forestry Corporation – Irisan Lime Project** located at **Km.5, Naguilan Road, Irisan, Baguio City**.

We hope this addresses your requirements.

Thank you.

Very truly yours,

BMC FORESTRY CORPORATION

By:

NARHY C. POMILBAN

Pollution Control Officer

Noted by:

FRANCISCO O. FLAVIER

Resident Manager



Environmental Management Service Provider

BSI-2022-72-24-025

May 9, 2024

ENGR. JEAN C. BORROMEO

OIC, Regional Director

CC : ENGR. RAUL G. CUBANGAY

Chief, Environmental Monitoring and Enforcement Division

ENVIRONMENTAL MANAGEMENT BUREAU

CORDILLERA ADMINISTRATIVE REGION (CAR)

DENR Forestry Compound, Pacdal District

Baguio City, Benguet

Subject: Test Plan for BMC Forestry Corporation - Irisan Lime Project

Dear Dir. Borromeo:

We are pleased to submit the test plan for our proposed Source Emission Monitoring to be conducted at BMC Forestry Corporation - Irisan Lime Project located at Km.5, Naguillian Road, Irisan, Baguio City.

We hope that this addresses your requirements.

Very truly yours,

BSI


EDINDO C. FERNANDO
Field Operations Manager
DENR Accredited QA/QC Manager
SAT No. 2022-72

2nd Floor, VAG Bldg, Ortigas Ave., Greenhills
San Juan City, Metro Manila, Philippines
Tels. (632) 863-6129 - Fax (632) 727-8831
Email: info@bsienv.com.ph



Department of Environment and Natural Resources (DENR)
ENVIRONMENTAL MANAGEMENT BUREAU
ACCREDITED THIRD PARTY TESTER
Certificate No: SAT NO. 2022-72



Environmental Management Service Provider

BSI-2022-72-24-025

SOURCE SPECIFIC TEST PLAN

This document is the Source Specific Test Plan of **BSI** (Formerly **Berkman Systems, Inc.**) that describes the emission testing that will be completed at BMC Forestry Corporation - Irisan Lime Project located at Km.5, Naguilian Road, Irisan, Baguio City.

Section A: FACILITY INFORMATION

BMC Forestry Corporation - Irisan Lime Project
Irisan, Baguio City

Contact Person: **Narhy C. Pomilban**
Pollution Control Officer

Telephone: (074) 445-7180

Section B: PRODUCTION INFORMATION AND FACILITY REQUIREMENTS

The plant should operate the **one (1) unit of 1.08 MT/hr Vertical Shaft Kiln** set for at 90% or greater of permitted capacity during testing. The Implementing Rules and Regulations of the Philippine Clean Air Act specify that the operating capacity during emission testing shall be the basis for setting the maximum allowable operating capacity during permit application.

The facility must provide the following items:

- The client shall provide an on-site single phase **220VAC/60Hz**-power supply.
- The client shall provide at least **two (2)** sampling portholes based on the existing stack diameter and pipe length. Sampling platforms should be installed or constructed properly for the safety of the sampling personnel.
- Copy of latest Permit to Operate (**PTO**)
- Schematic diagram of the process
- Copy of the latest certificate of fuel analysis and delivery receipt.
- Copy of engine log sheet during sampling
- Photo documentation and Video coverage will be taken by the accredited sampling personnel during sampling activity.



Section C: SOURCE INFORMATION

The test will be at **one (1) unit of 1.08 MT/hr Vertical Shaft Kiln** set for 3 sampling runs and **3 stations of 24 hours Ambient air** with parameters PM₁₀, SO₂, NO₂ and noise to be conducted on May 27 to 31, 2024.

Parameters to be tested and duration – see Table 1.

TABLE 1 – TEST METHODOLOGY

Particulars	Parameter	Sampling Methodology	No. of Test runs/Duration	Notes
one (1) unit of 1.08 MT/hr Vertical Shaft Kiln	Volumetric Flow Rate (VFR)	EPA Method 1-4	3 one-hour run/ exhaust	Performed concurrent with PM test
	Oxygen / Carbon Dioxide	EPA Method 3 By Fyrite Method	3 runs / exhaust	Integrated Tedlar bag sample during M5 test
	Particulate Matter (PM)	EPA Method 5	3 one-hour run/ exhaust	Performed with Method 5 set-up
	Sulfur Oxides (SO _x)	EPA Method 6 modified	3 one-hour run/ exhaust	Simultaneous with Method 5
	Nitrogen Oxide (NO _x)	EPA Method 7	3 runs / exhaust	Three grab sample flasks collected per run
	Carbon Monoxide (CO)	EPA Method 10 By NDIR	3 runs / exhaust	Integrated Tedlar bag sample during M5 test

Section D: QUALITY ASSURANCE / QUALITY CONTROL PROCEDURES

Normal QA/QC procedures described in the Methods will be strictly followed.



Section E: SAMPLING DATE

May 28 to 29, 2024

The sampling team leader will coordinate the specific run plans with the abovementioned Plant representative. The sampling team will be at the Plant on or before 9:00 AM of the sampling date.


Section F: SAMPLING PERSONNEL

The proposed sampling team shall consist of the following personnel:

Team:

- | | |
|----------------------------|------------------------------------|
| 1. Halcy Lemon P. Orquina | - Accredited Team Leader |
| 2. Edindo C. Fernando | - QA/QC Manager |
| 3. Ruel P. Abando | - Accredited Team Leader (back up) |
| 4. Jose Arjay M. Santiago | - QA/QC Manager (back up) |
| 5. Romeo M. Elsisura | - Field Technician |
| 6. Marvin S. Larena | - Field Technician |
| 7. Kariel G. Cabel | - Field Technician |
| 8. Christian A. Soleta | - Field Technician |
| 9. Jimuel B. Torrelino | - Driver / Technician |
| 10. Joseph Dandy A. Quilet | - Driver / Technician |

Signed:

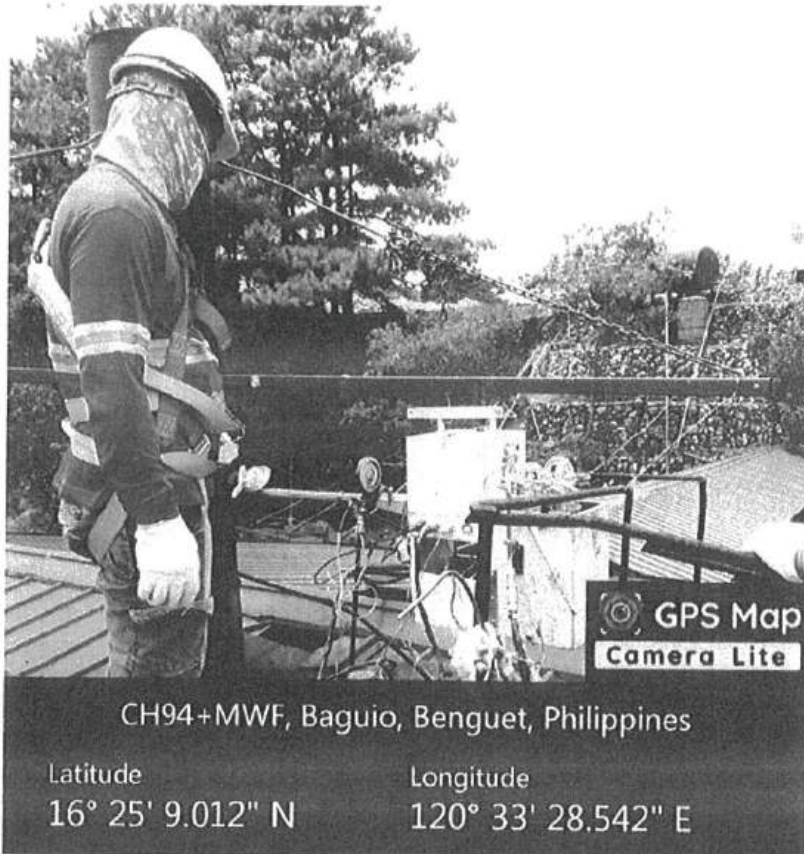

EDINDO C. FERNANDO
 Field Operations Manager
 DENR Accredited QA/QC Manager
 SAT No. 2022-72



ANNEX I

PHOTO DOCUMENTATION

PHOTO DOCUMENTATION



Vertical Shaft Kiln No. 2



Source Emission Monitoring
BMC FORESTRY CORPORATION
Irisan, Baguio City
May 28, 2024



BERKMAN SYSTEMS INC.
Environmental Management Service Provider

22 January 2025

Ref. No.: LT-24-566-1-72

MR. NARHY C. POMILBAN
Pollution Control Officer
BMC FORESTRY CORPORATION
Km. 5, Naguilian Rd., Irian, Baguio City

Subject: Source Emission Monitoring Report

Dear Mr. Pomilban:

We are pleased to submit the final report of the source emission monitoring as a result of our visit to your facility in Irian, Baguio City on December 13, 2024.

We hope that this report addresses your requirements.

Very truly yours,


EMMANUEL R. ALTAREJOS
Executive Vice President

ERA/jdm



SOURCE EMISSION MONITORING REPORT

One (1) Unit 1.08 MT/hr Vertical Shaft Kiln

BMC FORESTRY CORPORATION

Irisan, Baguio City



**DENR SOURCE EMISSION TESTING FIRM
ACCREDITATION NO: SAT NO. 2022-72**

2nd Floor, VAG Building
Ortigas Avenue, Greenhills, San Juan,
Metro Manila, Philippines

SOURCE EMISSION MONITORING REPORT
(December 13, 2024)

BMC FORESTRY CORPORATION
Irisan, Baguio City

Prepared for:

BMC Forestry Corporation
Km. 5, Naguilian Rd., Irisan, Baguio City
Tel. No.: (074) 445-7180

Prepared by:

BSI
2nd Floor VAG Building, Ortigas Avenue
Greenhills, San Juan, Metro Manila
Tel. No.: (02) 863 6129; Fax. No.: (02) 727 9831

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ANNEX H	TEST PLAN
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Emission Test Report Certification

The emission sampling reported herein was performed under the direction and supervision of Mr. Edindo C. Fernando of BSI. The analyses of samples were conducted under the direction and supervision of Mr. Renato M. Gofredo, Jr. of ELARSI, Inc., a DENR-recognized Environmental Laboratory

I certify that the information contained in this report is authentic and accurate to the best of my knowledge.

Signed:.....

Edindo C. Fernando

BSI

DENR Accredited QA/QC Manager

Date: 24 January 2025

1. INTRODUCTION

This report presents the procedures and results of the source emission monitoring conducted on December 13, 2024 at BMC Forestry Corporation situated in Irisan, Baguio City. BSI was commissioned to conduct the monitoring wherein Mr. Halcy Lemon P. Orquina led the team that administered the source emission sampling with Mr. Edindo C. Fernando as QA/QC Manager. Meanwhile, Mr. Narhy C. Pomilban, Pollution Control Officer of BMC Forestry Corporation, served as site contact person during sampling.

The pollutants considered for the source emission monitoring were: particulate matter (PM), sulfur oxides (as SO₂), nitrogen oxides (as NO₂) and carbon monoxide (CO) at one (1) unit 1.08 MT/hr vertical shaft kiln exhaust stack. The source was tested for three runs.

1.1 Process Description and Operation

BMC Forestry Corporation – BC ILP is an enterprise in the Philippines, with the main office in Baguio City. It operates in the Crop Production Industry (https://www.emis.com/php/company-profile/PH/Bmc_Forestry_Corporation_en_3256166.html) and a producer and supplier of burnt lime. Its Kiln plant located at Km. 5 Naguilian Road, Irisan, Baguio City operates three (3) vertical shaft kilns, three (3) gas scrubbers, two (2) cyclone dust collectors and one (1) jaw crusher.

One (1) unit of 1.08 MT/hr *Vertical Shaft Kiln No. 2* was operated at a minimum of 95% operating rate was tested during sampling, and used low sulfur fuel oil/regular fuel oil as fuel source.

This report covers the source emission monitoring of the vertical shaft kiln no. 2 only.

1.2 Reason for Testing

The purpose of the monitoring was to verify the company's compliance with the source emission standards of the Department of Environment and Natural Resources (DENR) Administrative Order No. 81 Series of 2000 (Implementing Rules and Regulations of the Philippine Clean Air Act of 1999).

1.3 Facility Operating Conditions during the Test

The equipment information and operating conditions of the facility monitored were summarized in *Tables 1* and *2*, respectively.

Table 1. Equipment Information

Stationary Source Information		Vertical Shaft Kiln No. 2
Brand Name		N/A
Rated Capacity		1.08 MT/hr
Year Installed*		August 1940
Exhaust Stack	Diameter	36 cm
	Height**	8.5 m
	Orientation	Vertical
Air Pollution Control Device*		Wet Gas Scrubber
GPS Coordinates		16° 25 ' 9.11"N; 120° 33' 28.52"E

*Based from previous sampling records

**Measured from the ground to the tip of the stack

Table 2. Operating Conditions

Stationary Source Information	Vertical Shaft Kiln No. 2
Minimum Load During Sampling	95%
Fuel Used	LSFO/Regular Fuel Oil
Fuel Sulfur Content	No Fuel Analysis Provided
Fuel Consumption	No Information Provided
Annual Operating Hours	No Information Provided

2. SUMMARY OF RESULTS

Table 3 presents the summary of test results of the vertical shaft kiln no. 2 exhaust stack. The test results were compared with the National Emission Standards identified in IRR Part VII Rule XXV Table 2. A detailed description of the test run information and sample calculations used to derive the values in the tabular summary were attached in *Annex A*.

Three test runs were performed to collect: PM, SO_x (as SO₂), NO_x (as NO₂) and CO at vertical shaft kiln no. 2 exhaust stack. Three trial tests per run were conducted to collect samples of nitrogen oxides (as NO₂). The raw field data used to prepare the summary reports in *Annex A* was included in *Annex B*. Emissions have been corrected to the standard conditions of 25°C and 760 mmHg on dry basis (unless otherwise indicated). Moreover, the emissions are not applicable for the corrected oxygen factor since the source is not included in the list of equipment under DENR EMB Memorandum Circular No. 2021-15.

Table 3. Vertical Shaft Kiln No. 2 Emission Test Results

		Run 1	Run 2	Run 3		
Sampling date		13-Dec-24	13-Dec-24	13-Dec-24		
Begin sampling time		1010H	1145H	1330H		
End sampling time		1115H	1250H	1435H		
Parameter	Units				Average	DENR Standard
Average stack temperature	°C	292.5	292.9	297.5	294.3	
CO ₂ measured in stack gas	%	6.8	6.7	6.8	6.8	
Oxygen measured in stack gas	%	13.7	14.3	13.7	13.9	
Stack gas moisture content	%	6.86	6.66	6.43	6.65	
Flue gas velocity	m/s	17.25	17.24	17.42	17.30	
Actual volumetric flow	m ³ /min	105.3	105.3	106.4	105.7	
Dry volumetric flow at STP	dsm ³ /min	44.5	44.6	44.8	44.6	
Isokinetic flow rate	%	102.0	99.9	100.1		
Particulate matter data						
Concentration	mg/Nm ³	16.9	18.6	30.8	22.1	150
Annual emission rate	tons/yr	0.4	0.4	0.7	0.5	
Sulfur oxides data						
Concentration (as SO ₂)	mg/Nm ³	2.3	1.5	< 1.5	1.9*	1500
Annual emission rate	tons/yr	0.1	0.04	< 0.03	0.04*	
Nitrogen oxides data						
Concentration (as NO ₂) **	mg/Nm ³	13.5	13.0	14.0	13.5	1000
Annual emission rate	tons/yr	0.3	0.3	0.3	0.3	
Carbon monoxide data						
Concentration	mg/Nm ³	28.6	29.8	17.2	25.2	500
Annual emission rate	tons/yr	0.7	0.7	0.4	0.6	

Annual emission rates were based on one (1) year continuous operation.

* Average of detected values.

** Average of three (3) trial tests

Emissions are not applicable for the corrected oxygen factor since the source is not included in the list of equipment under DENR EMB Memorandum Circular No. 2021-15.

2.1 Conclusions

A description of any method deviations and quality assurance assessment was included in Sections 3 and 4 of this report. Based on a review of the sampling data, facility operating information, test method description and quality assurance results, the concentration values presented in Table 3 have passed the criteria to be considered as representative emission test results of the source and are suitable for comparison with the regulatory limits.

Under the Implementing Rules and Regulations of the Clean Air Act (CAA), the standards applicable to vertical shaft kiln no. 2 are as *“existing fuel-burning equipment; other stationary source”*.

In conclusion, the test results indicate that the average emissions from vertical shaft kiln no. 2 exhaust stack:

- comply with the applicable standard for PM emissions;
- comply with the applicable standard for SO_x (as SO₂) emissions;
- comply with the applicable standard for NO_x (as NO₂) emissions; and
- comply with the applicable standard for CO emissions.

3. SAMPLING AND ANALYTICAL PROCEDURES

All sampling were undertaken in accordance with US EPA standard methods, viz:

Method 1	Sample and Velocity Traverse Point Locations
Method 2	Stack Gas Velocity and Volumetric Flow Rate (S-type Pitot Tube)
Method 3	Gas Analysis for Determination of Dry Molecular Weight
Method 4	Determination of Moisture Content in Stack Gases
Method 5	Determination of Particulate Matter Emissions from Stationary Sources
Method 6	Determination of Sulfur Dioxide Emissions from Stationary Sources
Method 7	Determination of Nitrogen Oxide Emissions from Stationary Sources
Method 10	Determination of Carbon Monoxide Emissions from Stationary Sources

3.1 Methods 1 and 2 – Traverse Point and Stack Velocity

3.1.1 Sampling points

For the vertical shaft kiln no. 2 exhaust stack, the number and location of the sampling points were determined using the procedures of US EPA Method 1 since the equivalent stack diameter was measured to be greater than 30 cm.

The vertical shaft kiln no. 2 was sampled at a total of twenty-four (24) traverse points. Having two (2) available portholes that are 90° apart, twelve (12) traverse points were sampled for each.

Some of the traverse points of the exhaust stack were less than the criterion of Method 1 for allowable distance from the stack wall of stacks with diameter less than 0.61 meters. These points were relocated 1.3 cm (0.5 in) away from the stack wall.

3.1.2 Cyclonic Flow Check

For each sampling point, the rotation angle was determined using an “S-type” pitot tube assembly, liquid manometer and angle finder in accordance with section 2.4 of US EPA Method 1.

For each test point, the average absolute value of the rotation angle was less than the 20 degrees criterion of Method 1.

3.1.3 Flue Gas Velocity

The procedures of US EPA Method 2 were employed to determine the flue gas velocity and volumetric flow rate using an “S-type” pitot tube in making velocity head measurements (Δp). The “S-type” pitot tube conforms to the geometric specifications of Method 2 and has therefore been assigned a coefficient of 0.84. An inclined manometer built onto the meter console box was used to measure the differential pressures, while flue gas temperatures were measured with chromel-alumel thermocouples equipped with digital readouts.

3.2 Method 3 – Flue Gas Composition

US EPA Method 3 procedures were used to determine the flue gas composition and molecular weight. An “Orsat” sample pump was operated continuously at a constant rate during each Method 5/6 (Modified) sampling run to collect an integrated flue gas sample into a tedlar bag through a separate sample line attached to the probe. Moisture was removed from the sample by passing it through a small impinger charged with silica gel.

The content of each tedlar bag was analyzed using a Fyrite analyzer to determine the concentration of oxygen and carbon dioxide in the sample.

The same bag samples were also used for the carbon monoxide analysis by Method 10.

3.3 Method 4 – Flue Gas Moisture Content

The moisture content of the flue gas was determined using the US EPA Method 4 procedures in conjunction with Method 5/6 (Modified).

3.4 Method 5/6 (Modified) – Particulate Matter and Sulfur Oxides

3.4.1 Sample Collection

A US EPA Method 5/6 (Modified) sampling train was used to extract samples isokinetically from the stack which comprised the following elements:

- a stainless steel nozzle;
- a heated stainless steel probe with “S-type” pitot tube;
- a glass fibre filter maintained at $120^{\circ}\text{C} \pm 14^{\circ}\text{C}$;
- four chilled impingers:
 - 1st and 2nd containing 100 mL 3% H_2O_2 ;
 - 3rd left empty; and
 - 4th containing 200 to 300 grams of silica gel; and
- a metering console.

Each of the impingers was labeled and weighed.

Three test runs were conducted at the available sampling ports. The actual sampling time was 60 minutes per run.

3.4.2 Sample Recovery

Sample recovery was undertaken at the sheltered area near the source of emission. The filter was removed from the filter holder and placed on a petri dish. The volume of water vapor condensed in the impingers was measured to determine the volume of water vapor collected.

The nozzle, probe and front half of the filter holder were rinsed with acetone, and the interior of the probe and nozzle were rinsed and brushed repeatedly to remove any adhering PM from the inside surfaces. All rinses were collected into a 250 mL glass bottle.

The contents of the impingers 1, 2 and 3 were transferred to a 1000 mL polyethylene sample bottle. The glass sample line between the heated filter holder and the first impinger, the first three impingers and connecting glasswares were all rinsed with distilled deionized water and the rinse was added into the sample bottle.

3.4.3 Sample Analysis

The filter and sample bottles, together with the blank samples of acetone and H_2O_2 , were submitted to a DENR-recognized laboratory.

The mass of filterable particulate matter collected on the filter and in the acetone rinse was determined in accordance with US EPA Method 5 analytical procedures.

The mass of sulfur oxides in the impinger contents and rinse water was determined in accordance with US EPA Method 6 analytical procedures.

3.5 Method 7 – Nitrogen Oxides

3.5.1 Sample Collection

The sampling of the flue gas to determine the concentration of nitrogen oxides was undertaken in accordance with US EPA Method 7 using a nominal 2 L glass collection flask containing 25 mL of NO_x absorbing reagent (Sulfuric Acid-Hydrogen Peroxide) connected to a Borosilicate glass probe sufficiently heated to avoid condensation and equipped with a glass wool filter at the end for particulate matter screening.

During the Method 7 testing, a flask was evacuated to an absolute pressure of 76 mmHg (3 inHg) at most less than the barometric pressure, and the initial flask temperature and pressure were recorded. The sampling train was then checked for leakage not exceeding 10 mmHg (0.4 inHg) in 1 min. The probe was inserted into the stack, connected to the flask and after purging the probe, a sample was drawn into the flask. The flask was then shaken for five minutes. This procedure was carried out thrice for three test runs resulting in the collection of nine samples for the exhaust stack.

3.5.2 Sample Recovery

The NO_x flasks were set at least 16 hours, shaken for two minutes and then the final flask temperature and pressure were measured. The contents of each flask were transferred to a leak-free polyethylene bottle and rinsed twice with 5 mL portions of deionized distilled water, and the rinse water was added into the bottle. Prior to analysis, the pH was adjusted to a value within 9 to 12 by adding 1N NaOH.

3.5.3 Sample Analysis

The sample preparation procedures of US EPA Method 7 were applied and each sample was then subjected to colorimetric analysis.

3.6 Method 10 – Carbon Monoxide

3.6.1 Sample Collection

The integrated samples that were collected into tedlar bags were used for the determination of CO in accordance with US EPA Method 10.

3.6.2 Sample Recovery

The tedlar bags were sealed and transported for analysis.

3.6.3 Sample Analysis

The sample was analyzed using a non-dispersive infrared (NDIR) analyzer. The analyzer was flushed with nitrogen and zero setting confirmed. The tedlar bag was attached to the sample input and the gas sample was introduced at a flow rate of about 0.5 L/min by applying gentle pressure to the tedlar bag. The concentration was recorded when the value indicated on the display stabilized.

4. QA PROCEDURES

The US EPA “Quality Assurance Handbook for Air Pollution Measurement Systems: Volume III Stationary Source-Specific Methods” was used as a guide to achieve the quality assurance objectives of producing data that are complete, representative and of known precision and accuracy.

4.1 Particulate Matter and Sulfur Oxides (as SO₂)

4.1.1 Sampling Procedure

US EPA Method 5/6 (Modified) was employed to determine the concentration of particulate matter in the gas stream. This method requires the use of Methods 1 to 4 to determine sampling port locations, sample traverse points within the stack, as well as the flow rate, molecular weight and moisture content of the flue gas.

The quality of the emission test was assured by:

- Ensuring that the test port is located sufficiently distant from both upstream and downstream flow disturbances (such as bends and changes in stack diameter).
- Ensuring that stack gas flow is essentially parallel to the stack walls by conducting a cyclonic flow check.

- Determination of a representative stack gas velocity by the selection of sampling test points appropriate to the stack diameter in accordance with the method.
- Leak testing of the sampling train before and after each sampling run.
- Testing and calibration of the dry gas meter, thermocouples and temperature displays, pitot tubes, nozzles, and manometer assembly.
- Ensuring that the temperature of the impinger system is maintained below 20°C.
- Maintaining the filter and sampling probe temperature at 120°C ($\pm 14^\circ\text{C}$).
- Sampling at between 90 - 110% of the actual gas stream velocity (isokinetic sampling).

The procedure for sampling SO_x (as SO₂) was combined with US EPA Method 5 as described in *Section 3.4*. The quality of the test was assured by:

- The use of freshly-prepared chemical solutions;
- Care in the recovery of the sample;
- Attention to detail in the analysis of samples in accordance with the US EPA Method 6;
- The collection and analysis of representative “blank” samples; and
- Proper calibration and QA/QC checks of all elements of the sampling system.

4.1.2 Sampling Equipment

Copies of various calibration and test certificates were included in *Annex E*.

Barometer

A calibrated digital barometer was used to measure atmospheric pressure at the platform level.

Probe Nozzle

The probe nozzles were calibrated by the manufacturer and were inspected and checked for roundness before use to ensure that they met the specifications of the method.

Pitot Tube

The pitot tube meets the EPA Method 2 design specifications for “S-type” pitot tubes and was therefore assigned a baseline coefficient of 0.84. After each test, the pitot tube was visually inspected for damage.

Metering System

The meter box was leak checked and a calibration was carried out using five (5)-point calibrating orifices in accordance with EPA Method 5.

Post-Test Meter Calibration

A post-test meter calibration was made using the data collected for each of the test runs in accordance with the procedure set out in EPA ALT-009.

Temperature Sensors

An ethanol-filled thermometer with NIST traceable calibration was used to calibrate thermocouples at approximately 0°C in iced water, ambient temperature and approximately 100°C in boiling water. At the completion of each test, the thermocouples were compared to the ethanol-in-glass thermometer at ambient temperature and a continuity check was performed to ensure that the thermocouple read-out trended in the correct direction when subjected to a temperature change.

4.1.3 Analysis

Filters and acetone used in the emission test met the required specifications and Method 5 analytical procedures were employed using a properly calibrated analytical balance.

The mass of sulfur oxides in the impinger contents and rinse water were determined in accordance with US EPA Method 6 analytical procedures.

4.2 Nitrogen Oxides (as NO₂)

The procedure for sampling NO_x (as NO₂) was described in *Section 3.5*. The quality of the test was assured by:

- The use of freshly-prepared chemicals;
- Care in the recovery of the sample;
- Attention to detail in the analysis of samples in accordance with the US EPA Method 7;
- Calibration and verification of linearity of the spectrophotometer; and
- Proper calibration and QA/QC checks of all elements of the sampling system.

4.3 Carbon Monoxide

The procedure for sampling CO was described in *Section 3.6*. The quality of the test was assured by:

- Care in the collection of the gas samples to ensure that they are representative of the emission;
- Maintenance of a leak-free bag at all stages of sampling and analysis;
- Calibration of the analytical instrument prior to analysis; and
- Attention to detail in the analysis of samples in accordance with the US EPA Method 10.



ANNEX A

SOURCE EMISSION MONITORING SUMMARY OF RESULTS

EMISSION TEST RESULTS SUMMARY						
BMC FORESTRY CORP. ILP						
IRISAN, BAGUIO CITY						
VERTICAL SHAFT KILN NO. 2						
			Run 1	Run 2	Run 3	
Sampling date			13-Dec-24	13-Dec-24	13-Dec-24	
Begin sampling time			1010H	1145H	1330H	
End sampling time			1115H	1250H	1435H	
Symbol	Parameter	Units				Average
Y	Meter box gamma	none	0.9754	0.9754	0.9754	
ΔH	Average ΔH	mm H ₂ O	59.9	57.2	58.7	
P _{bar}	Barometric pressure	mm Hg	654.3	654.7	654.3	
V _m	Metered sample gas volume	m ³	1.5500	1.5208	1.5350	
T _m	Average meter temperature	°C	24.8	25.0	25.8	
P _g	Static pressure	mm H ₂ O	8.6	8.6	8.6	
T _s	Average stack temperature	°C	292.5	292.9	297.5	294.3
D _s	Stack diameter	cm	36	36	36	
V _{lc}	Volume of water collected	mL	71.3	67.7	65.6	
%CO ₂	CO ₂ measured in stack gas	%	6.8	6.7	6.8	6.8
%O ₂	Oxygen measured in stack gas	%	13.7	14.3	13.7	13.9
C _p	Pilot tube coefficient	none	0.84	0.84	0.84	
$\sqrt{\Delta P}$	Average of square roots of ΔP	(mm H ₂ O) ^{1/2}	3.393	3.392	3.415	
θ	Sampling run time	min	60	60	60	
D _n	Nozzle diameter	mm	7.89	7.89	7.89	
A _n	Nozzle area	m ²	4.89E-05	4.89E-05	4.89E-05	
V _{m(std)}	Metered gas volume at STP	Nm ³	1.3104	1.2854	1.2936	
P _s	Stack pressure	mm Hg	654.93	655.33	654.93	
B _{ws}	Stack gas moisture content	%	6.86	6.66	6.43	6.65
V _{w(std)}	Water vapour volume at STP	Nm ³	0.097	0.092	0.089	
M _{fd}	Dry mole fraction of flue gas	none	0.931	0.933	0.936	
M _d	Dry molecular weight	g/g-mole	29.64	29.64	29.64	
M _s	Wet molecular weight	g/g-mole	28.84	28.87	28.89	
V _s	Flue gas velocity	m/s	17.25	17.24	17.42	17.30
A _s	Stack area	m ²	0.102	0.102	0.102	
Q _{s(act)}	Actual volumetric flow	m ³ /min	105.3	105.3	106.4	105.7
Q _{s(std)}	Dry volumetric flow at STP	ds m ³ /min	44.5	44.6	44.8	44.6
I	Isokinetic flow rate	%	102.0	99.9	100.1	
AOH	Annual operating hours	hrs/yr	8,760	8,760	8,760	
Particulate matter data						
M _{part}	Measured mass	mg	22.1	23.9	39.8	
C _{part}	Concentration	mg/Nm ³	16.9	18.6	30.8	22.1
	Mass emission rate	kg/hr	0.05	0.05	0.08	0.06
	Annual emission rate	tons/yr	0.4	0.4	0.7	0.5
Sulphur oxides data						
M _{SOx}	Measured mass	mg	3.02	1.95	< 1.9	
C _{SOx}	Concentration	mg/Nm ³	2.3	1.5	< 1.5	1.9*
	Mass emission rate	kg/hr	0.01	0.004	< 0.004	0.01*
	Annual emission rate	tons/yr	0.1	0.04	< 0.03	0.04*
Nitrogen oxides data						
C _{NOx}	Concentration	mg/Nm ³	13.5	13.0	14.0	13.5
	Mass emission rate	kg/hr	0.04	0.03	0.04	0.04
	Annual emission rate	tons/yr	0.3	0.3	0.3	0.3
Carbon monoxide data						
C _{COppm}	Concentration	ppm	25.0	26.0	15.0	
C _{COmg}	Concentration	mg/Nm ³	28.6	29.8	17.2	25.2
	Mass emission rate	kg/hr	0.08	0.08	0.05	0.07
	Annual emission rate	tons/yr	0.7	0.7	0.4	0.6

Notes: *Italics indicates calculated value*

Annual emission rates were based on one (1) year continuous operation.

*Average of detected values only.

NITROGEN OXIDES (as NO₂) EMISSIONS DATA
BMC FORESTRY CORP. ILP
IRISAN, BAGUIO CITY
VERTICAL SHAFT KILN NO. 2

RUN 1

Sample Collection							Sample Recovery						Concentration Calculation		
Barometric Pressure, P _{bar} (in Hg) 25.76							Barometric Pressure, P _{bar} (in Hg) 25.90								
Sample ID	Flask ID	Flask Volume	Evacuated Pressure	Initial Absolute Pressure	Flask Temp	Flask Temp	Sample ID	Flask ID	Final Pressure	Final Absolute Pressure	Flask Temp	Flask Temp	Volume at STP	Mass Catch	NO _x Conc
		V _f	P _g	P _i		T _i			P _f	P _i	Temp	T _i	V _{st}	M _{NO2}	C _{NO2}
		mL	in Hg	(in Hg)	°C	°K			in Hg	in Hg	°C	°K	mL	µg	mg/Nm ³
S1R1T1	BSI T2-F1	2230	24.30	1.46	28.3	301.45	S1R1T1	BSI T2-F1	0.30	25.60	25.6	298.75	1775.4	26.8	15.1
S1R1T2	BSI T2-F2	2230	24.30	1.46	28.6	301.75	S1R1T2	BSI T2-F2	0.50	25.40	25.4	298.55	1762.1	26.8	15.2
S1R1T3	BSI T2-F3	2250	24.20	1.56	29.0	302.15	S1R1T3	BSI T2-F3	0.40	25.50	25.5	298.65	1777.7	18.3	10.3
Date Collected 13-December-2024							Date Recovered 14-December-2024						Average 13.5		

RUN 2

Sample Collection							Sample Recovery						Concentration Calculation		
Barometric Pressure, P _{bar} (in Hg) 25.78							Barometric Pressure, P _{bar} (in Hg) 25.90								
Sample ID	Flask ID	Flask Volume	Evacuated Pressure	Initial Absolute Pressure	Flask Temp	Flask Temp	Sample ID	Flask ID	Final Pressure	Final Absolute Pressure	Flask Temp	Flask Temp	Volume at STP	Mass Catch	NO _x Conc
		V _f	P _g	P _i		T _i			P _f	P _i	Temp	T _i	V _{st}	M _{NO2}	C _{NO2}
		mL	in Hg	(in Hg)	°C	°K			in Hg	in Hg	°C	°K	mL	µg	mg/Nm ³
S1R2T1	BSI T2-F4	2230	24.10	1.68	29.2	302.35	S1R2T1	BSI T2-F4	0.40	25.50	25.5	298.65	1753.0	31.0	17.7
S1R2T2	BSI T2-F5	2230	24.30	1.48	29.2	302.35	S1R2T2	BSI T2-F5	0.50	25.40	25.4	298.55	1760.8	21.1	12.0
S1R2T3	BSI T2-F6	2250	24.50	1.28	29.6	302.75	S1R2T3	BSI T2-F6	0.60	25.30	25.3	298.45	1764.8	16.9	9.5
Date Collected 13-December-2024							Date Recovered 14-December-2024						Average 13.0		

RUN 3

Sample Collection							Sample Recovery						Concentration Calculation		
Barometric Pressure, P _{bar} (in Hg) 25.75							Barometric Pressure, P _{bar} (in Hg) 25.90								
Sample ID	Flask ID	Flask Volume	Evacuated Pressure	Initial Absolute Pressure	Flask Temp	Flask Temp	Sample ID	Flask ID	Final Pressure	Final Absolute Pressure	Flask Temp	Flask Temp	Volume at STP	Mass Catch	NO _x Conc
		V _f	P _g	P _i		T _i			P _f	P _i	Temp	T _i	V _{st}	M _{NO2}	C _{NO2}
		mL	in Hg	(in Hg)	°C	°K			in Hg	in Hg	°C	°K	mL	µg	mg/Nm ³
S1R3T1	BSI T2-F7	2230	24.40	1.35	29.0	302.15	S1R3T1	BSI T2-F7	0.60	25.30	25.3	298.45	1763.5	21.1	12.0
S1R3T2	BSI T2-F8	2240	24.40	1.35	28.7	301.85	S1R3T2	BSI T2-F8	0.50	25.40	25.4	298.55	1778.2	35.2	19.8
S1R3T3	BSI T2-F9	2250	24.50	1.25	28.7	301.85	S1R3T3	BSI T2-F9	0.40	25.50	25.5	298.65	1800.3	18.3	10.2
Date Collected 13-December-2024							Date Recovered 14-December-2024						Average 14.0		

SAMPLE CALCULATIONS

BMC FORESTRY CORP. ILP

IRISAN, BAGUIO CITY

VERTICAL SHAFT KILN NO. 2

VOLUME OF DRY GAS SAMPLED AT STANDARD CONDITIONS

$$V_{m(std)} = Y \times 0.3921 \times V_m \times \frac{P_{bar} + (\Delta H \div 13.6)}{(273 + T_m)}$$

$$V_{m(std)} = 0.9754 \times 0.3921 \times 1.55 \times \frac{654.3 + (59.9 \div 13.6)}{(273 + 24.8)} = 1.3104 \text{ Nm}^3$$

VOLUME OF WATER VAPOUR AT STANDARD CONDITIONS

$$V_{w(std)} = 0.001356 \times V_c$$

$$V_{w(std)} = 0.001356 \times 71.3 = 0.097 \text{ Nm}^3$$

PERCENT MOISTURE IN FLUE GAS

$$B_{ws} = \frac{V_{w(std)}}{(V_{w(std)} + V_{m(std)})}$$

$$B_{ws} = \frac{0.097}{(0.097 + 1.3104)} = 6.86 \%$$

ABSOLUTE FLUE GAS PRESSURE

$$P_s = P_{bar} + \frac{P_g}{13.6}$$

$$P_s = 654.3 + \frac{8.6}{13.6} = 654.93 \text{ mm Hg}$$

DRY MOLECULAR WEIGHT OF FLUE GAS

$$M_d = (\%CO_2 \times 0.44) + (\%O_2 \times 0.32) + [(100 - (\%CO_2 + \%O_2)) \times 0.28]$$

$$M_d = (6.8 \times 0.44) + (13.7 \times 0.32) + [(100 - (6.8 + 13.7)) \times 0.28] = 29.64 \text{ g/g mole}$$

WET MOLECULAR WEIGHT OF FLUE GAS

$$M_s = M_d \times (1 - B_{ws}) + \left(\frac{\text{mol. wt.}}{H_2O} \times B_{ws} \right)$$

$$M_s = 29.64 \times (1 - 0.0686) + (18 \times 0.0686) = 28.84 \text{ g/g mole}$$

AVERAGE FLUE GAS VELOCITY

$$V_s = 34.97 \times C_p \times \sqrt{\Delta P} \times \sqrt{\left\{ \frac{T_s + 273}{P_s \times M_s} \right\}}$$

$$V_s = 34.97 \times 0.84 \times 3.393 \times \sqrt{\left\{ \frac{292.5 + 273}{654.9 \times 28.84} \right\}} = 17.25 \text{ m/s}$$

ACTUAL WET FLUE GAS FLOW RATE

$$Q_s = 60 \times V_s \times A_s$$

$$Q_s = 60 \times 17.25 \times 0.102 = 105.3 \text{ m}^3/\text{min}$$

DRY, NORMAL FLUE GAS FLOW RATE

$$Q_d = Q_s \times M_d \times \frac{298}{273 + T_s} \times \frac{P_s}{760}$$

$$Q_d = 105.3 \times 0.931 \times \frac{298}{273 + 292.5} \times \frac{654.9}{760} = 44.5 \text{ dsm}^3/\text{min}$$

SAMPLE CALCULATIONS

BMC FORESTRY CORP. ILP

IRISAN, BAGUIO CITY

VERTICAL SHAFT KILN NO. 2

ISOKINETIC FLOW RATE

$$I = \frac{P_{std}}{T_{std}} \times \frac{100}{60} \times \frac{T_s + 273}{P_s} \times \frac{V_{m(std)}}{V_s \times M_{fd} \times \theta \times A_n}$$

$$I = \frac{760}{298.15} \times \frac{100}{60} \times \frac{292.5 + 273}{654.93} \times \frac{1.3104}{17.25 \times 0.931 \times 60 \times 4.89E-05} = 102.0\%$$

PARTICULATE MATTER CONCENTRATION

$$C_{part} = \frac{M_{part}}{V_{m(std)}}$$

$$C_{part} = \frac{22.1}{1.3104} = 16.9 \text{ mg/Nm}^3$$

SULPHUR OXIDES CONCENTRATION

Concentration of SO_x as SO₂

$$C_{SOx} = \frac{M_{SO2}}{V_{m(std)}}$$

$$C_{SOx} = 2.3 \text{ mg/Nm}^3$$

NITROGEN OXIDES CONCENTRATION

Concentration of NO_x as NO₂

$$C_{NOx} = \frac{M_{NO2}}{V_{sc}} \times 1000$$

$$C_{NOx} = 15.1 \text{ mg/Nm}^3$$

CONVERSION OF CO IN ppm TO mg/Nm³

$$C_{CO(mg)} = \frac{C_{CO(ppm)} \times \text{mol. wt. CO}}{24.5}$$

$$C_{CO(mg)} = \frac{25.0 \times 28.01}{24.5} = 28.6 \text{ mg/Nm}^3$$

ANNEX B

SOURCE EMISSION MONITORING FIELD DATA

201

202

203

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205

206

MONITORING LOGSHEET

Facility Information

Facility Name BMC FORESTRY CORP. BC ILP
Facility Address KM. 5 NAGUIHAN ROAD, IRISAN, BAGUIO CITY
Name of Pollution Control Officer MS. NARHY C. POMILBAN
Maintenance Supervisor / Engineer _____
Telephone and Fax Number 445-7180 / 09306480332

Source Description

Source Type VERTICAL SHAFT KILN EXHAUST STACK NO.
Source ID PJ24 566 S1
Manufacturer / Brand of Equipment / Serial No. ✓
Equipment Capacity (BHP, MW, MT/hr) 2.00 MT/hr
Date of Installation (month/year) _____
Date of Modification (that may increase emissions) _____
Operational Hours per Year (hrs/year) _____
Operating rate (%) 95%

Air Pollution Control Device

Is there an Air Pollution Control Device (APCD) attached to the source? YES NO
Type of APCD ✓ Wet Gas Scrubber
Date of Installation _____
APCD parameters (flowrate, gpm, delta P, etc) _____
Is the APCD operating during emission sampling YES NO

Fuel Analysis / Information

Type of Fuel used during emission sampling (%) ✓ KFO
Original Fuel used ✓ KFO
Date of Fuel change _____
Daily Fuel Consumption (Liters/day) _____
Is the Fuel Analysis Available? YES NO
Will the company provide the Fuel Analysis YES NO

Please attach the following

- Fuel Analysis
- Permit to Operate
- APCD Process Logsheet
- Source Process Logsheet

Narhy C. Pomilban
Signature over printed name of Facility Representative
PCO

METHOD 1 - TRAVERSE POINT LOCATIONS

Facility Name	BMC FORESTRY CORP. BC - ILP
Address	KM. 5, NAGUILAN ROAD, TRISAN, BANGALIPAYAN
Source	1.08 MT/hr. VERTICAL SHAFT KILN NO.
Personnel / Date	E.C. HPO MRL CAS JBT / 13 DEC. 2024

Stack / Ports	Type of Stack	Circular	<input checked="" type="checkbox"/>	Rectangle	<input type="checkbox"/>
	No. of Ports Available	2			
	No. of Ports Used	2			
	Port inside Diameter, cm	10			

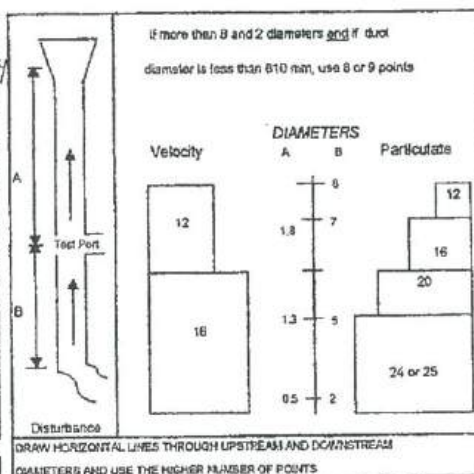
Dimensions	Far Wall to Outside of Port, cm (a)	46
	Port length, cm (b)	10
	Stack Diameter or Depth, cm (a-b)	36
	Stack Width (if rectangle), cm	
	Stack Length (if rectangle), cm	
	Equivalent Stack Diameter, cm	
Area of Stack, cm ²		

Distance to Flow Disturbances	Distance, cm	Diameters	
	Upstream (A)	184	5.117
	Downstream (B)	95	2.637

Number of Traverse Points	Particulate Traverse	Minimum # Required
	Velocity Traverse	20
		10
# of Ports used	2	# Points / Port
		12
Number of Traverse Points Used		
24		

Point No.	Fraction of Stack Dia.	Dist. From Inside Wall	Port Length	Dist. From Edge of Port
1	0.021	0.750	10	10.750
2	0.067	2.482	10	12.482
3	0.113	4.208	10	14.208
4	0.159	6.372	10	16.372
5	0.205	8.9	10	18.9
6	0.350	12.816	10	22.816
7	0.644	23.184	10	33.184
8	0.750	27	10	37.0
9	0.833	29.628	10	39.628
10	0.889	31.752	10	41.752
11	0.937	32.535	10	43.535
12	0.979	35.244	10	45.244
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Note: when using 4 ports in a circular duct, the probe is marked with only the points for the first half of the full diameter traverse.



Equivalent Diameter (for rectangular ducts):

$$De = 2 \cdot \text{Depth} \cdot \text{Width} / (\text{Depth} + \text{Width})$$

$$De = 2 \cdot () \cdot () / () + () =$$

LOCATION OF POINTS IN CIRCULAR STACKS OR DUCTS
(Fraction of stack diameter from inside wall to traverse point)

	2	4	6	8	10	12
1	.148	.067	.044	.032	.026	.021
2	.254	.250	.148	.105	.082	.067
3		.750	.295	.104	.148	.119
4			.933	.704	.323	.226
5				.654	.677	.342
6				.556	.606	.653
7					.665	.774
8					.958	.854
9						.919
10						.974
11						.992
12						.999

LOCATION OF POINTS IN RECTANGULAR STACKS OR DUCTS
(Fraction of stack diameter from inside wall to traverse point)

	2	3	4	5	6	7	8	9	10	11	12
1	.250	.167	.125	.100	.083	.071	.063	.056	.050	.045	.042
2	.750	.500	.375	.300	.250	.214	.188	.167	.150	.136	.125
3		.833	.625	.500	.417	.367	.313	.278	.250	.227	.208
4			.875	.709	.593	.500	.438	.389	.350	.316	.292
5				.800	.750	.643	.563	.500	.450	.409	.375
6					.917	.700	.628	.511	.450	.400	.358
7						.929	.813	.722	.650	.591	.542
8							.938	.833	.750	.682	.628
9								.944	.850	.775	.704
10									.950	.864	.782
11										.955	.875
12											.958

Notes/Remarks:

adjusted pt

Elevation = 2.5m

Team Leader / Date:

H.P. ORTIZ / 13 DEC. 24

QA/QC Date:

E.C. FERNANDO / 13 DEC. 24



EPA METHODS 1 & 2

GAS VELOCITY and CYCLONIC FLOW CHECK

Facility	BMC FORESTRY CORP. BC-117	Thermocouple ID	TMC-T2
Town/Province	NAGUILAN RD. IRISAN, BAGUIO CITY	Manometer ID	M1D-T2
Source	4.08 MT/HR. VERTICAL SHAFT KILN	P barometer, mm Hg	654.1
Personnel	ECE HPO MSL CAS JAT	Pitot ID	PT-T2-CF
Date	13 DECEMBER 2024	Pitot Coefficient	0.84

Pitot Tube Leak Check

120/122

Static Pressure, mm H₂O

8.6

Measured at which Traverse Pt

3 A-S

Traverse Point	Velocity Pressure (mm H ₂ O)	Temperature (Degrees C)	Angle Which Yields Null (degrees)
A - 12	11.0	250	12
11	11.0	250	12
10	11.6	257	12
9	11.6	257	12
8	12	260	12
7	12	260	12
6	12	260	12
5	12	260	12
4	11.4	257	12
3	11.6	257	12
2	11.0	250	12
1	11.0	250	12
B - 12	11.0	250	12
11	11.0	250	12
10	11.6	257	12
9	11.4	257	12
8	12.0	260	12
7	12.0	260	12
6	12.0	260	12
5	12.0	260	12
4	11.6	257	12
3	11.6	257	12
2	11.0	250	12
1	11.0	250	12
Average	12.32	257.5	12

Note:

12.32 = 15.0 * 0.84 = 12.6
 12.6 = 5.15 * 2.45 = 12.6
 12.6 = 6.0 * 2.1 = 12.6
 12.6 = 7.89 * 1.6 = 12.6
 12.6 = 5.25 * 2.4 = 12.6

Team Leader/Date: H.P. BROWNA / 13 DEC 24 QA/QC / Date: E.C. FERNANDO / 13 DEC 2024




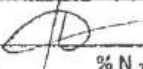



METHOD 3

FYRITE ANALYSIS DATA SHEET

Facility	BMC FORESTRY CORPORATION BC-ILP	Fuel Type	
Town/Province	KM-5, NAGUILIAN ROAD, IRISAN, BAGUIO CITY	Fyrite ID	FB-T2
Test Location	108 MT/hr. VERTICAL SHAFT KILN NO. 2	Analysis Location	INSITU

Run No.	1	Date:	13 DEC, 2024	Bag ID	PJ24 566 SIR1	Operator (Signature)	
Run Time	Time of Analysis	% CO ₂	% O ₂	% N ₂			
		Reading (A)	Value (B-A)	Value (100-C)			
Start	1210L	1120L	7.0	13.5			
	1127L	7.0	13.5				
Stop	1115H	1127H	6.5	14.0			
Leak Check	<input type="checkbox"/>						
Avg		6.83	13.67	79.5			

Run No.	2	Date:	13 DEC. 2024	Bag ID	PJ24 566SIR2	Operator (Signature)	
Run Time	Time of Analysis	% CO ₂	% O ₂	% N ₂			
		Reading (A)	Value (B-A)	Value (100-C)			
Start	1145H	7.0	14.0				
	1302L	7.0	14.0				
Stop	1250H	6.0	15.0				
Leak Check	<input type="checkbox"/>						
Avg		6.67	14.33	79.0			

Run No.	3	Date:	13 DEC. 2024	Bag ID	PJ24 566SIR3	Operator (Signature)	
Run Time	Time of Analysis	% CO ₂	% O ₂	% N ₂			
		Reading (A)	Value (B-A)	Value (100-C)			
Start	1300L	1405	7.0	13.1			
	1407	6.5	13.5				
Stop	1428L	7.0	14.0				
Leak Check	<input checked="" type="checkbox"/>						
Avg		6.83	13.67	79.5			

Team Leader/Date: H.P. ORQUINA / 13 DEC 2024

QA/QC / Date: E.C. FERNANDO / 13 DEC 2024



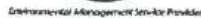
METHOD 4 - MOISTURE ANALYSIS DATA SHEET

Facility	BMC FORESTRY CORPORATION BC-1LP			
Address	KM.5 NAGUILAN ROAD, IRISAN, BAGUIO CITY			
Source	1.08 MT/HR, VERTICAL SHAFT KILN No. 2			
Recovery Location	SERVICE VEHICLE (INSITU)			
Run Number	% MOISTURE	PM-1	PM-2	PM-3
Test Date	13 DEC. 2024	13 DEC. 2024	13 DEC. 2024	13 DEC. 2024
Recovery Date	DEC. 2024	DEC. 2024	DEC. 2024	DEC. 2024
Recovered By	ECHPO MSL CAS JBT	ECHPO MSL CAS JBT	ECHPO MSL CAS JBT	ECHPO MSL CAS JBT
Impinger 1 100 mL	D.I. H ₂ O	3% H ₂ O	3% H ₂ O	3% H ₂ O
Final Weight, g	727.2	757.4	752.5	754.0
Initial Weight, g	717.4	714.8	713.8	715.0
Net Weight, g	10.2	42.6	38.7	39.0
Impinger 2 100 mL	D.I. H ₂ O	3% H ₂ O	3% H ₂ O	3% H ₂ O
Final Weight, g	710.5	717.4	622.2	717.4
Initial Weight, g	699.7	707.6	699.6	705.6
Net Weight, g	10.3	10.3	12.6	12.0
Impinger 3 EMPTY	EMPTY	EMPTY	EMPTY	EMPTY
Final Weight, g	607.8	613.9	613.0	615.7
Initial Weight, g	605.8	609.3	606.3	610.7
Net Weight, g	2.0	5.6	6.7	5.0
Impinger 4 200-300 g	SILICA GEL	SILICA GEL	SILICA GEL	SILICA GEL
Final Weight, g	815.7	824.0	834.2	843.8
Initial Weight, g	811.5	815.7	824.0	834.2
Net Weight, g	4.2	3.3	10.2	9.6
Impinger 5				
Final Weight, g				
Initial Weight, g				
Net Weight, g				
Impinger 6				
Final Weight, g				
Initial Weight, g				
Net Weight, g				
Impinger 7				
Final Weight, g				
Initial Weight, g				
Net Weight, g				

Total Catch, g	31.1	71.3	67.7	65.6
Silica Gel Spent, %				

Team Leader / Date: H.P. TRAYANA / 13 DEC. 24

QA/QC/Date: E.C. FERNANDO / 13 DEC. 2024



METHOD(s) 4

Department of Environment and Natural Resources (DENR)
ENVIRONMENTAL MANAGEMENT BUREAU
ACCREDITED THIRD PARTY TESTER



Environmental Management Service Provider

ISOKINETIC FIELD DATA SHEET

METHOD(s) 5/6

Facility Name	BMC FORESTRY CORPORATION EC-ILP	Test Date	13 DECEMBER 2024
Address	RM. 5, NAGUILIAN ROAD, IRISAN, BAGUIO CITY	Job Number	PJ24-S66-BMC-SIR1
Source	1.08 MTHR. VERTICAL SHAFT KILN NO. 2	Year Installed	
Control device	CYCLONE DUST COLLECTOR	Field Personnel	FERRER, MSL C. S. JBT
Contact Person	MS. NARTHY C. DOMILBAN	Operators Signature	

Filter ID	Tare(s)	Barometric (mm Hg)	Static (mm H ₂ O)	Meterbox			Nozzle		Pitot Tube		Probe
				ID#	Gamma	Delta H @	ID#	Dia.	ID#	Cp	
		604.3	8.6	BSI-T2	0.9954	46.4705	NS-T2-4	4.3°	PT-T2-4F	0.81	SPL-T2-4F
Sample Train Leak Checks											
Run No.	S1 RUN 1		Initial	Interim			Final		Time	%O ₂	%CO ₂
Factor	5.204	Vacuum, mm Hg	15.0				13		1031	14.0	7.0
Pitot Leak Checks		Leak rate, m ³ /m	0				0		11084	14.5	7.0
Pre-test	116/120	Start Volume	313.7730				315.7740		ORSAT Leak Check		
Post-test	124/114	Stop Volume	310.7730				317.7740		Tedlar Bag ID PJ24-S66-SIR1C0		

Ports & Points	Time		DGM reading (m ³)	Pitot Reading (mm H ₂ O)	Delta H		Gauge Vacuum (mm H ₂ O)	Temperature °C				
	Clock (24-hr)	Test (min)			Calc. (mm H ₂ O)	Actual (mm H ₂ O)		Stack	DGM	Probe	Filter	Imp. Exit
3-12	1010	0	313.7730	11.2	52.24	53	6.0	290	24	111	117	19
11			313.7730	11.2	52.24	53	6.0	290	24	112	120	19
10	1015	5	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
9			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
8	1020	10	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
7			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
6	1025	15	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
5			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
4	1030	20	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
3			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
2	1035	25	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
1			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
JOP	1040	30	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
3-12	1045	35	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
11			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
10	1050	40	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
9			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
8	1055	45	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
7			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
6	1100	50	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
5			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
4	1105	55	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
3			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
2	1110	60	313.7730	11.2	52.24	53	6.0	290	24	117	120	17
1			313.7730	11.2	52.24	53	6.0	290	24	117	120	17
END	1115	60	313.7730	11.2	52.24	53	6.0	290	24	117	120	17

Run Time	Total Volume	RMS Delta P
60	1.5500	3.993

Delta H Avg	High Vac.	TS Stack Avg	Tmeter Avg
51.97	7.0	292.1	20.93

Team Leader / Date: H.P. ORSOLANA / 13 DEC 24

QA/QC / Date: E.C. FERNANDO / 13 DEC 2024



ISOKINETIC FIELD DATA SHEET
METHOD(s) 5/6

Facility Name	BMC FORESTRY CORPORATION BC ILP	Test Date	13 DECEMBER 2024
Address	KM-9, NAGUIBAN ROAD, LILIAN, BAGUIO CITY	Job Number	RJ24 566 S1 RUN 2
Source	1.08 MT HR. VERTICAL SHAFT KLIN NO. 2	Year Installed	
Control device	CYCLONE DUST COLLECTOR	Field Personnel	EEF HERNANDEZ GAS JBT
Contact Person	MR. NATHAN C. POMILBAN	Operators Signature	

Filter ID	Tare(s)	Barometric (mm Hg)	Static (mm H ₂ O)	Meterbox			Nozzle		Pitot Tube		Probe	
				ID#	Gamma	Delta H @	ID#	Dia.	ID#	Cp	ID#	
		1054.7	8.4	BSI-T2	0.9754	46.4705	NS-T2-9	7.39	PT-T2-4FT	0.84	SM-T2-4FT	
Sample Train Leak Checks												Fyntes
Run No.	S1 RUN 2		Initial	Interim			Final	Time	%O ₂	%CO ₂		
K Factor	4.920	Vacuum, mm Hg	15.0				11.2	1158.4	14	3		
Pitot Leak Checks		Leak rate, m ³ /m	0				0	1122.4	14	3		
Pretest	11/37/18	Start Volume	315.20 50				314.22 10	ORSAT Leak Check		OK		
Post-test	12/4/20	Stop Volume	315.20 50				316.82 10	Tedlar Bag ID		RJ24 566 S1R2 CO		

Ports & Points	Time		DGM reading (m ³)	Pitot Reading (mm H ₂ O)	Delta H		Gauge Vacuum (mm H ₂ O)	Temperature °C					
	Clock (24-hr)	Test (min)			Calc. (mm H ₂ O)	Actual (mm H ₂ O)		Stack	DGM	Probe	Filter	Imp. Exit	
A-12	11:45	0	315.20 18	11.0	54.12	54	6.0	240	24	117	117	17	
11			315.35 02	11.0	54.12	54	6.0	240	24	118	119	17	
10	11:50	5	315.41 12	11.0	54.12	54	6.0	240	24	118	120	17	
9			315.47 46	11.6	57.27	58	6.0	240	24	118	120	17	
8	11:55	10	315.54 32	12.0	59.09	60	6.0	240	24	118	120	17	
7			315.60 12	12.0	59.09	60	6.0	240	24	118	120	17	
6	12:00	15	315.66 12	12.0	59.09	60	6.0	240	24	118	120	17	
5			315.72 12	12.0	59.09	60	6.0	240	24	118	120	17	
4	12:05	20	315.79 50	11.6	57.27	58	6.0	240	24	117	120	17	
3			315.85 68	11.6	57.27	58	6.0	240	24	117	120	17	
2	12:10	25	315.91 22	11.0	54.12	54	7.0	240	24	116	117	16	
1			315.97 10	11.0	54.12	54	7.0	240	24	116	117	16	
STOP	12:15	30	316.04 38										
B-12	12:15	35	316.10 38	11.0	54.12	54	7.0	240	24	116	117	16	
11			316.16 19	11.0	54.12	54	7.0	240	24	116	117	16	
10	12:20	40	316.22 12	11.6	57.27	58	7.0	240	24	116	120	17	
9			316.28 80	11.6	57.27	58	7.0	240	24	116	120	17	
8	12:25	45	316.34 32	12.0	59.09	60	7.0	240	24	116	120	17	
7			316.40 12	12.0	59.09	60	7.0	240	24	116	120	17	
6	12:30	50	316.46 42	12.0	59.09	60	7.0	240	24	116	120	17	
5			316.52 04	12.0	59.09	60	7.0	240	24	116	120	17	
4	12:35	55	316.58 20	11.6	57.27	58	7.0	240	24	116	120	17	
3			316.64 14	11.6	57.27	58	7.0	240	24	116	120	17	
2	12:40	55	316.70 82	11.0	54.12	54	7.0	240	24	115	116	17	
1			316.76 28	11.0	54.12	54	7.0	240	24	115	116	17	
END	12:45	60	316.82 16										

Run Time	Total Volume	RMS Delta P
60	1.52 03	3.99 23

Delta H Avg	High Vac.	TS Stack Avg	Tmeter Avg
57.17	7.0	292.92	25.0

Team Leader / Date: H.P. ORQUINA / 13 DEC 24QA/QC / Date: E.C. FERNANDO / 13 DEC 24



ISOKINETIC FIELD DATA SHEET

METHOD(s) 5/6

Facility Name	BMC FORESTRY CORPORATION BC-1LP	Test Date	13 DECEMBER 2024
Address	K.N.S. NAGUILIAN ROAD, IRISAN, BAGUO CITY	Job Number	P124-566-S1-RUN3
Source	1.08 MT/HR. VERTICAL SHAFT KILN NO. 2	Year Installed	
Control device	CYCLONE DUST COLLECTOR	Field Personnel	ECF HPT MSL CAS JBT
Contact Person	MS. NARHY C. POMILBAN	Operations Signature	

Filter ID	Tare(s)	Barometric (mm Hg)	Static (mm H ₂ O)	Meterbox			Nozzle		Pilot Tube		Probe
				ID#	Gamma	Delta H @	ID#	Dia.	ID#	Cp	
		654.3	8.6	B51-T2	0.9754	46.4405	NS-12.4	7.85	P-12-4FT	0.84	SPI-12-4FT
Sample Train Leak Checks											
Run No.	S1-RUN3		Initial	Interim				Final	Fyrilas		
K Factor	5.05	Vacuum, mm Hg	15.0					11.0	Time	%O ₂	%CO ₂
Pilot Leak Checks		Leak rate, m ³ /m	0					0	14/24	14	7
Pre-test		Start Volume	316.8350					312.9393	GRSAT Leak Check		
Post-test		Stop Volume	318.8350					318.8393	Tedlar Bag ID P124-566-S1-RUN3		

Ports & Points	Time		DGM reading (mm ²)	Pilot Reading (mm H ₂ O)	Delta H	Delta H	Gauge	Temperature °C				
	Clock (24-hr)	Test (min)			Calc.	Actual	Vacuum	Stack	DGM	Probe	Filter	Imp. Exit
					(mm H ₂ O)	(mm H ₂ O)	(mm H ₂ O)					
A-12	1300	0	316.8448	11.4	57.5	58	6.0	295	25	170	116	15
11			316.9250	11.4	57.7	58	6.0	295	25	170	116	15
10	1304	5	316.9652	11.6	58.58	58	6.0	295	25	171	116	15
9			316.8264	11.6	58.12	58	6.0	290	25	170	116	15
8	1404	10	317.0466	12.0	60.6	60	6.0	300	25	170	116	15
7			317.1578	12.0	60.6	60	6.0	300	25	170	116	15
6	1414	15	317.2172	12.0	60.6	60	6.0	300	25	171	116	15
5			317.2280	12.0	60.6	60	6.0	300	25	171	116	15
4	1424	20	317.3792	11.6	58.58	58	7.0	300	25	171	116	15
3			317.4008	11.4	58.8	58	7.0	295	25	170	117	15
2	1432	25	317.5700	11.4	57.57	58	7.0	295	25	171	117	15
1			317.5818	11.4	57.57	58	7.0	295	25	171	117	15
STOP	1400	30	317.5918									
B-12	1454	10	317.0912	11.4	57.57	58	7.0	295	25	171	117	15
11			317.6530	11.4	57.7	58	7.0	295	25	171	117	15
10	1404	35	317.3234	11.6	58.58	58	7.0	295	25	171	117	15
9			317.3840	11.6	58.58	58	7.0	300	25	170	116	15
8	1414	40	317.0442	12.0	60.6	60	7.0	300	25	170	116	15
7			317.9156	12.0	60.6	60	7.0	300	25	171	117	15
6	1424	45	317.9758	12.0	60.6	60	7.0	300	25	170	116	15
5			318.0360	12.0	60.6	60	7.0	300	25	171	117	15
4	1434	50	318.0972	11.6	58.58	58	7.0	300	25	171	117	15
3			318.1676	11.6	58.58	58	7.0	295	25	171	117	15
2	1436	55	318.2388	11.4	57.57	58	7.0	295	25	171	117	15
1			318.3090	11.4	57.57	58	7.0	295	25	171	117	15
END	1432	00	318.3792									

Run Time	Total Volume	RMS Delts P
60	1.5350	3.415

Delta H Avg	High Vac.	TS Stack Avg	Tmeter Avg
58.67	8.0	297.5	25.7

Team Leader / Date: H.P. OVERTINA / 13 DEC 24

QA/QC / Date: E.C. FERNANDO / 13 DEC 24





Environmental Management Service Provider

METHOD 7 FLASK SAMPLE AND RECOVERY DATA

Facility BMC FORESTRY CORPORATION BC-ILP
 Address KM. 5, NAGUILAN ROAD, IRISAN, BAGUIO CITY
 Source 1.08 MT/hr. VERTICAL SHAFT KILN No. 2
 Personnel ECF HPO MSL CAS LBT
 Test Date 18 DECEMBER

Absorbing Solution Volume, ml 25 mL
 Heated Probe? (check) Yes ☒ No ☐ *If No, explain in "Remarks"
 Filter Used? (check) Yes ☒ No ☐ *If No, explain in "Remarks"
 Remarks _____

Sample Collection Information										
Barometric Pressure, Pbar (in Hg) <u>25.76 / 25.78 / 25.75</u>										
Date Performed: <u>18 DECEMBER 2024</u> By: <u>ECF HPO MSL CAS JBT</u>										
Run Number	Sample ID	Flask ID Number	Flask Volume (ml)	Leak Check (<0.4"Hg/min)	Evacuated Pressure Pgi (in Hg)	Flask abs. Press Initial Pi, Pbar-Pgi (in Hg)	Flask Temp °C	Flask Temp. Tf (°K)	Sample Collection Time ² 24hour	Shaken for 5min
P	R1	T1	BS (125)	7730	—	24.30	1.46	28.3	30.4	1230h
J		T2	F2	7740	—	24.30	1.46	28.4	30.1	1240h
2		T3	F3	7750	—	24.20	1.56	29.0	30.1	1250h
4	R2	T1	F3	7740	—	24.10	1.67	29.2	30.3	1300h
-		T2	F4	7730	—	24.20	1.48	29.2	30.3	120h
5		T3	F4	7750	—	24.50	1.28	29.6	30.7	1230h
6	R3	T1	F7	7730	—	24.40	1.38	29.0	30.1	1300h
6		T2	F2	7740	—	24.40	1.38	28.7	30.1	1400h
S1		T3	F4	7750	—	24.50	1.28	29.7	30.1	1410h

Sample Collection Information							
Barometric Pressure, Pbar (in Hg) <u>25.79</u>							
Date Performed: <u>18 DEC 24</u> By: <u>ECF, HPO, MSL, LAC</u>							
Shaken for 2min	Sample Recovered Time ³ 24hour	Final Pressure Pgf (in Hg)	Flask abs. Press Initial Pi, Pbar-Pgi (in Hg)	Flask Temp °C	Flask Temp Tf °K	Sample pH Adjusted (9 - 12)	
—	0900h	0.3	25.6	30.1	303.25	—	
—	0900h	0.50	25.4	31.2	309.35	—	
—	0910h	0.4	25.5	31.6	307.75	—	
—	0915h	0.4	25.5	30.7	303.85	—	
—	0930h	0.5	25.4	30.8	303.95	—	
—	0930h	0.6	25.3	31.1	304.25	—	
—	0935h	0.6	25.3	31.2	304.35	—	
—	0940h	0.5	25.4	30.7	303.85	—	
—	0945h	0.4	25.5	30.1	303.25	—	

Source Oxygen Concentration? 21.02/40

Was additional oxygen introduced to the Flask?

Yes ☐ No ☒¹Pi = Pbar - Pgi, Flask must be evacuated to within 3 inches of mercury (Hg) of the absolute pressure (barometric pressure).²Additional oxygen should be introduced to the flask if the source O₂ is below 3%³Flask must stand for 16 hours or greater after sampling before recovery can be performed.

Checked By:

E.C. FERNANDO
H.P. ORQUINA 18 DEC 2024Department of Environment and Natural Resources (DENR)
ENVIRONMENTAL MANAGEMENT BUREAU
ACCREDITED THIRD PARTY TESTER

ANNEX C

PERMIT TO OPERATE AND FACILITY PROCESS DATA



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Cordillera Administrative Region (CAR)
Cordillera Administrative Region DENR Compound, Gibraltar Baguio
City
Tel No: (074) 446-64-40

Permit No: PTO-OL-CAR-2021-09103-R
Application Type: Renewal

Date Issued: 30 Oct 2021
Date Expiration: 30 Oct 2026

PERMIT TO OPERATE Air Pollution Source and Control Installations

Pursuant to Part IV, Rule XIX of the Rules and Regulations of R.A. 8749, authority is hereby granted to:

BMC Forestry Corporation (Irisan Lime Kiln)

Km. 5 Naguilian Road, Irisan, Baguio City, Benguet

subject to the following terms and conditions:

TERMS AND CONDITIONS

1. This Permit is issued for the permittee to operate the following facilities/equipment described below at the permittee's establishment located at the above-mentioned address (geolocation of entrance gate: 16.419336°, 120.557358°):
 - **Air Pollution Source Installations/Equipment:**
 - Three (3) units Vertical Shaft Kiln (Cap.: 1.08 MT/hr; Fuel used: Regular Fuel Oil or Bunker Oil) - for the purpose of calcinations of limestones (geolocation of kiln plant building 16.419198°, 120.557922°);
 - One (1) unit Jaw Crusher (Cap.: 1 MT/hr; With Conveyors) - for the purpose of pulverizing the quicklimes;
 - One (1) unit Lime Storage Silo (Cap.: 90 MT);
 - One (1) unit Aboveground Fuel Storage Tank (Cap.: 60,000 liters; Fuel: Regular Fuel Oil or Bunker Oil; Vertical Cylinder);
 - Seven (7) units Aboveground Fuel Storage Tanks (Cap.: 15,000 liters each; Fuels: Regular Fuel Oil or Bunker Oil; Horizontal Cylinders);
 - One (1) unit Standby Generator Set (Cap.: 200 kW / 250 kVA; Make: SEALEY; Model: SLC250GF; S/N: 151118001; P.F. = 0.8; Silent-type); Alternator/Generator (Make: MBH; Model: XN274G; S/N: 31512006; Cap.: 180 kW / 225 kVA, continuous; P.F. = 0.8) primed by Diesel Engine (Make Chongqing Cummins; Model: NT855-GA; S/N: 41226017; Cap.: 257 kW @ 1800 RPM, max);
 - One (1) unit Standby Generator Set (Cap.: 75 kW; Open-type); Alternator/Generator (Make: Caterpillar) primed by Diesel Engine (Make: Isuzu; Model: E120; S/N: 202587); and
 - One (1) unit Standby Generator Set (Cap.: 200 kW / 250 kVA; Make: DCA; Model: 200DC; S/N: 8221-002; P.F. = 0.8; Open-type); Alternator/Generator (Make: DCA; Model: 200DC; S/N: A73281AC; Cap.: 200 kW / 250 kVA, standby; P.F. = 0.8) primed by Diesel Engine (Make: Cummins; Model: NT-855-G; S/N: 30104629) - all generator sets are installed in the Powerhouse with geolocation of 16.419050°, 120.557809°; and
 - **Air Pollution Control Facilities:**
 - Three (3) units Gas Scrubber Systems (Cap.: 66 m3/min; Wet-type; 1-unit scrubber is exclusively connected to 1-unit shaft kiln); and
 - One (1) unit Dust Collector and Scrubber System (Cap.: 505.84 m3/min; composed of 1-unit 12,850 CFM Cyclone Dust Collector interconnected to 1-unit 5,000 CFM Cyclone Dust Collector with their bottom open and submerged on Water-bed Scrubber) - for the purpose of controlling the airborne particulates/dusts from the sorting, crushing and loading areas (geolocation: 16.419132°, 120.557396°).
2. This Permit shall be valid until **SEPTEMBER 10, 2026** (PLEASE DISREGARD THE EXPIRATION DATE INDICATED ABOVE) unless suspended or revoked by the Bureau.
3. The Bureau may modify the Permit by amending any existing condition or imposing any new or additional condition from the date of issuance (as indicated above) until its expiration on **SEPTEMBER 10, 2026**, subject to the provisions of Rule XIX of the Implementing Rules and Regulations (IRR) of the Republic Act No. 8749.

Filing Fee : Php 600.00
Permit Fee : Php 47300.00
PD1856 : Php 10.00

O.R. No.: 1809914 & 1810468
O.R. No.: 1809914 & 1810468
O.R. No.: 1809914 & 1810468

Date : Oct. 11, 2021
Date : Oct. 11, 2021
Date : Oct. 11, 2021

4. An application for renewal of this Permit shall be filed not less than thirty (30) days before the expiry date the expiry date - SEPTEMBER 10, 2026.
5. This Permit shall be posted in a conspicuous location at the premises and shall be adequately framed or otherwise protected against damage.
6. The operation of any installation, process activity at this establishment that produces, generates, captures, treats, reduces, controls, emits, releases or disperse air pollutants without a valid Permit to Operate, or in violation of any of the conditions of this Permit, shall be subject to penalties pursuant to Rule LVI of the IRR of RA 8749.
7. The installations, processes or activities at this establishment shall be operated, conducted and managed by the permittee, and the associated plant and equipment shall be maintained and operated by the permittee, so that emissions of air pollutants are kept to a practicable minimum. The permittee shall be responsible for ensuring that any emissions of air pollutants from abnormal or unexpected events, do not cause air pollution in the surrounding air environment or have adverse effects on persons in that environment.
8. Without limiting the generality of the previous condition, the permittee shall ensure that the emissions from the permitted installations or processes comply with:
 - the National Emission Standards for Source Specific Air Pollutants as specified in Rule XXV of the IRR of RA 8749; and
 - the National Ambient Air Quality Standards for Source Specific Air Pollutants from Industrial Sources/Operations as specified in Rule XXVI of the IRR of RA 8749.
9. The permittee shall submit Self-Monitoring Reports to the Bureau on a quarterly basis in accordance with DENR Administrative Order No. 27 (Series of 2003) and any written instructions by the Bureau based on the following schedule:

Quarter	Coverage	Submission	Quarter	Coverage	Submission
First	Jan. - Mar.	1-15 Apr.	Third	Jul. - Sep.	1-15 Oct.
Second	Apr. - Jun.	1-15 Jul.	Fourth	Oct. - Dec.	1-15 Jan.
10. The permittee shall at all times has an accredited Pollution Control Officer (PCO) who shall be the day-by-day contact person between the Bureau and the establishment. The permittee shall ensure that the PCO is familiar with the operations and activities undertaken at the establishment, and the relevant emission sources and air pollution control devices and equipment. The permittee shall give the PCO the necessary authority to take or to direct corrective action in the event of a malfunction, accident, breakdown or other abnormal event that results in excessive emissions or emissions that do not comply with relevant Permit conditions, emission standards or ambient air quality standards.
11. The Permittee shall seek accreditation of his/her appointed/designated PCO pursuant to Section 8 of DAO 2014-02 (Revised Guidelines for Pollution Control Officer Accreditation).
12. In case of the resignation or termination of the services of the PCO, the Managing Head shall appoint/designate a new PCO. He/she shall inform, in writing, the concerned EMB Regional Office within fifteen (15) days and seek accreditation for the new PCO within thirty (30) days from the date of resignation or termination.
13. The permittee shall report in writing to the Bureau any malfunction, accident, breakdown, leak, spill or other abnormal or unexpected event which results in emissions to atmosphere that do not comply with relevant Permit conditions, emission standards or ambient quality standards, or in any other abnormal or unexpected releases of air pollutants. The report shall indicate the nature of the incident or event, its impact on emissions, the time period involved, and any actions or measures taken to control the emissions or releases, remedy any air pollution problems that may have occurred, and minimize the probability of reoccurrence of the event or the release.
14. The permittee shall at all times allow authorized or accredited officers of the Department or the Bureau entry to the establishment and access to any part of the establishment to conduct inspections, gather information, test emissions or take samples. The permittee and its personnel shall not obstruct such officers in the performance of these functions, and shall furnish any information or materials requested by them that is reasonable for them to have. The permittee shall obey any lawful instruction or direction given by the Department or the Bureau at all times.

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 PD1856 : Php 10.00

O.R. No. : 1809914 & 1810468
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 O.R. No. : 1809914 & 1810468

Date : Oct. 11, 2021
 Date : Oct. 11, 2021
 Date : Oct. 11, 2021

15. The permittee shall not make or allow any alterations or modifications to operations, activities, installations, processes, plant or equipment at the establishment that might substantially change the nature or quantity of the associated emissions without obtaining the approval of the Bureau, including the obtaining of any necessary Permit to Operate.

SPECIFIC CONDITION

16. The permittee shall conduct emission testing for the three (3) units Vertical Shaft Kilns through a DENR accredited third party Source Emission Testing Firm twice each year for each year of operation with three (3) sampling runs to verify its compliance pursuant to Memorandum Circular No. 2007-003 (Policy on Compliance and Permitting for Industrial Facilities Relating to Air Quality). However, considering that each kiln is operated in a period of six (6) to eight (8) months, each kiln shall be subjected to two (2) emission testing within that period. The Test Reports will be a part of the requirements for the renewal of this Permit.

Recommended by:


ENGR. MARIE PINA L. RODAS
OIC-Chief, Clearance & Permitting Division

Approved by:


MA. VICTORIA V. ABRERA
Regional Director

Filing Fee : Php 600.00
Permit Fee : Php 47300.00
PD 1856 : Php 10.00

O.R. No. : 1809914 & 1810468
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Date : Oct. 11, 2021
Date : Oct. 11, 2021
Date : Oct. 11, 2021

Annex

Fuel Burning					
ID	APSI	Capacity	Brand name	Type of Fuel	APCD
130795	Vertical Shaft Kiln No. 1	1.08 MT/hr/equipment	N/A	Regular Fuel Oil	Gas Scrubber No. 1 (66.0 m ³ /min)
130797	Vertical Shaft Kiln No. 2	1.08 MT/hr/equipment	N/A	Regular Fuel Oil	Gas Scrubber No. 2 (66.0 m ³ /min)
130799	Vertical Shaft Kiln No. 3	1.08 MT/hr/equipment	N/A	Regular Fuel Oil	Gas Scrubber No. 3 (66.0 m ³ /min)
140793	Standby Generator Set	250.0 kVA	DCA/CUMMINS	Diesel	---
140794	Standby Generator Set	200.0 kW	SEALEY/Cummins	Diesel	---
140795	Standby Generator Set	75.0 kW	Caterpillar/Isuzu	Diesel	---

Non Fuel Burning					
ID	APSI	Capacity	Brand name	Material	APCD
130801	Jaw Crusher	1.0 MT/hr/equipment	N/A		Dust Collector Collector System (505.84 m ³ /min)
140796	Lime Storage Silo	90.0 MT	N/A		---
140797	Aboveground/Overhead Fuel Storage Tank	60000.0 Liters	N/A		---
140800	Aboveground/Overhead Fuel Storage Tank	15000.0 Liters	N/A		---
140801	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		---
140802	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		---
140803	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		---
140804	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		---
140805	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		---
140806	Aboveground/Overhead Fuel Storage Tank	15000.0 liters	N/A		---

APCD-APSI Mapping			
ID	APCD	Connected APSIs (<name> (id))	Connected APCDs (<name> (id))
19030	Gas Scrubber No. 1 (1)	Vertical Shaft Kiln No. 1 (4)	---
19907	Gas Scrubber No. 2 (8)	Vertical Shaft Kiln No. 2 (5)	---
19908	Gas Scrubber No. 3 (9)	Vertical Shaft Kiln No. 3 (6)	---
19909	Dust Collector Collector System (10)	Jaw Crusher (7)	---

Filing Fee : Php 600.00
 Permit Fee : Php 47300.00
 PD1856 : Php 10.00

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Date : Oct. 11, 2021
 Date : Oct. 11, 2021
 Date : Oct. 11, 2021

MONITORING LOGSHEET

Facility Information

Facility Name BMC FORESTRY CORP, BC ILP
Facility Address KM.5 NAGUILAN ROAD, IKISAN, BAGUIO CITY
Name of Pollution Control Officer MS. NARHY C. POMILBAN
Maintenance Supervisor / Engineer _____
Telephone and Fax Number 445-7180 / 09306480332

Source Description

Source Type VERTICAL SHAFT KILN EXHAUST STACK NO.
Source ID PJ24 556 S1
Manufacturer / Brand of Equipment / Serial No. ✓
Equipment Capacity (BHp,MW,MT/hr) 2.00 MT/HR
Date of Installation (month/year) _____
Date of Modification (that may increase emissions) _____
Operational Hours per Year (hrs/year) _____
Operating rate (%) 95%

Air Pollution Control Device

Is there an Air Pollution Control Device (APCD) attached to the source? _____ YES _____ NO
Type of APCD ✓ Wet Gas Scrubber
Date of Installation _____
APCD parameters (flowrate,gpm,delta P,etc) _____
Is the APCD operating during emission sampling _____ YES _____ NO

Fuel Analysis / Information

Type of Fuel used during emission sampling (%) ✓ KFO
Original Fuel used ✓ KFO
Date of Fuel change _____
Daily Fuel Consumption (Liters/day) _____
Is the Fuel Analysis Available? _____ YES _____ NO
Will the company provide the Fuel Analysis _____ YES _____ NO

Please attach the following

- Fuel Analysis
- Permit to Operate
- APCD Process Logsheet
- Source Process Logsheet

Narhy C. Pomilban
Signature over printed name of Facility Representative
PCO

ANNEX D

ANALYTICAL DATA



Unit 201-204 & 406 Rizalina Annex Bldg. 1677 Quezon Avenue, Quezon City
Tel. No. 8927-77-15 Fax No. 8929-4824 Email: info@elarsi.com

CLIENT	BSI	Lab. Report No.	244456-SA
ADDRESS	2 nd Flr., VAG Bldg Ortigas Ave. Greenhills San Juan, Metro Manila	Date/Time Sampled	12-13-24 1100H
Contact Number	8863-6129	Date Received	12-16-24
Nature of Sample/s	Stationary Source Emission	Date Analyzed	12-18-24 to 12-23-24
No. of Sample/s Submitted	Three (3)	Date Reported	12-23-24

[R E P O R T O F A N A L Y S E S]

Sample No.	Sample ID	PM (with acetone rinse), mg ^a	Analysis Date/Time
ES-2420808	PJ 24 566 S1R1	22.1	12-18-24 0830H
ES-2420809	PJ 24 566 S1R2	23.9	12-18-24 0830H
ES-2420810	PJ 24 566 S1R3	39.8	12-18-24 0830H

^a - Method 5 / Gravimetric

Reference:
CFR 40 Part 60 Revised as of December 20, 2020

Note: Date and time of sampling for Air Quality samples were provided by client.

Analyzed By:

CHYLA DREXIE C. MORADA, RChT
Laboratory Chemical Technician
PRC Lic. No. 0009323

Checked By:

JENMA B. JACINTO, RCh
Laboratory Supervisor
PRC Lic. No. 0010872

Certified Correct By:

RENATO M. GOFREDO, JR., RCh
Laboratory Manager
PRC Lic. No. 0009824



DENR
RECOGNIZED
LABORATORY
C.R. No. 005/2024



PAB ACCREDITED
TESTING LABORATORY
PNS ISO/IEC 17025:2017
LA-2023-436A

Test results reflect the quality of the samples as received.

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Page 1 of 1 Page/s

EL_HRAFORM_10

REAGENTS STANDARDIZATION for SO_x ANALYSIS (EI-APA-14)

Project No. : PJ 24566
Lab Report No. 244452-5A

Date Received: 12/16/24
Date & Time Analysis Started: 12/17/24 1300H
Date & Time Analysis Finished: 12/17/24 1400H

Computations:

Standardization of 0.0100 ± 0.0002 N BaCl ₂ :				
Trial No.	Volume (ml)	Normality (N)	Volume (ml)	Normality (N)
	H ₂ SO ₄	H ₂ SO ₄	BaCl ₂	BaCl ₂
1	25	0.009974085	24.5	0.01009601
2	25	0.0099074085	24.3	0.010191807
			Average	0.010151204

$$N_{BaCl_2} = \frac{(N_{H_2SO_4})(V_{H_2SO_4})}{V_{BaCl_2}}$$

Standardization of 0.0100 ± 0.0002 N H ₂ SO ₄ :				
Trial No.	Volume (ml)	Normality (N)	Volume (ml)	Normality (N)
	NaOH	NaOH	H ₂ SO ₄	H ₂ SO ₄
1	24.7	0.010027744	25	0.0099074085
2	24.7	0.010027744	25	0.0099074085
			Average	0.0099074085

$$N_{H_2SO_4} = \frac{(N_{NaOH})(V_{NaOH})}{V_{H_2SO_4}}$$

Standardization of NaOH:				
Trial No	Weight (g)	Weight (g)	Volume (ml)	Normality (N)
	NaOH	KHP	NaOH	NaOH
1	40.0012	0.1004	49.1	0.010012730
2	40.0012	0.1003	48.9	0.010043208
			Average	0.010027744

$$N_{H_2SO_4} = \frac{\text{Weight of KHP}}{(0.20423)(V_{NaOH})}$$

Analyzed by JCB / CM
Date & Time 12/17/24 1300H

Approved by RMG
Date & Time 12/20/24 5PM

Checked by UOI
Date & Time 12/17/24 1400H

SOx (METHOD 8/METHOD 8) ANALYTICAL DATA SHEET (EPA-14)

Lab Report No. : 24457-JA
Date Received: 12/16/24
Date Analysis Started: 12/17/24
Date Analysis Finished: 12/17/24

where: V_{std} = sample volume
 V_a = volume aliquot
 $V_{\text{FA blank}}$ = volume of titrant used for FA blank
 V_{eq} = average volume of titrant used for sample

Page 1 of 1



ELARSI, INC.

Unit 201-204 & 406 Rizalina Annex Bldg. 1677 Quezon Avenue, Quezon City
Tel. No. 8927-77-15 Fax No. 8929-4824 Email: info@elarsi.com

CLIENT	BSI	Lab. Report No.	244458-SA
ADDRESS	2 nd Flr., VAG Bldg Ortigas Ave. Greenhills San Juan, Metro Manila	Date/Time Sampled	12-13-24 1100H
Contact Number	8863-6129	Date Received	12-16-24
Nature of Sample/s	Stationary Source Emission	Date Analyzed	12-21-24 to 12-27-24
No. of Sample/s Submitted	Ten (10)	Date Reported	12-27-24

[R E P O R T O F A N A L Y S E S]

Sample No.	Sample ID	NO _x (as NO ₂) mg ^a	Analysis Date/Time
ES-2420814	PJ 24 566 S1R1T1	0.0268	12-21-24 0900H
ES-2420815	PJ 24 566 S1R1T2	0.0268	12-21-24 0900H
ES-2420816	PJ 24 566 S1R1T3	0.0183	12-21-24 0900H
ES-2420817	PJ 24 566 S1R2T1	0.0310	12-21-24 0900H
ES-2420818	PJ 24 566 S1R2T2	0.0211	12-21-24 0900H
ES-2420819	PJ 24 566 S1R2T3	0.0169	12-21-24 0900H
ES-2420820	PJ 24 566 S1R3T1	0.0211	12-21-24 0900H
ES-2420821	PJ 24 566 S1R3T2	0.0352	12-21-24 0900H
ES-2420822	PJ 24 566 S1R3T3	0.0183	12-21-24 0900H
ES-2420823	PJ 24 566 S1 Blank	< 0.0078	12-21-24 0900H

^a - Method 7 / Phenoldisulfonic Acid

Reference

CFR 40 Appendix A-4 Part 60 as of May 31, 2023

Note: Date and time of sampling for "As Received" samples were provided by client

Analyzed By:

CHYLA DREXIE C. MORADA, RChT
Laboratory Chemical Technician
PRC Lic. No. 0009323

Checked By:

JEMMA B. JACINTO, RCh
Laboratory Supervisor
PRC Lic. No. 0010872

Certified Correct By:

RENATO M. GOFREDO, JR., RCh
Laboratory Manager
PRC Lic. No. 0009824

Test results reflect the quality of the samples as received.

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Environmental Management Service Provider

CO MEASUREMENT DATA

Tedlar Bag Samples

Facility:	BMC FORESTRY CORPORATION	Analysis Date:	December 16, 2024
Sample Date:	December 13, 2024	Analyzed By:	JOSE ARJAY M. SANTIAGO
Collected By:	ECF, HPO, MSL, JBT	Signature:	

CO Analyzer Manufacturer:	FUJI ELECTRIC CO., LTD.
Analyzer Model Serial Number:	ZPAABBY2 / N2C0833
Analyzer Range Setting, ppm:	0 - 1000
Analyzer Span Value, ppm:	800

Pre-Measurement Calibration					
Time	Cylinder No.	Gas Value (ppm)	CO response (ppm)	% Difference* (% span)	Status (≤ 2% span)
0800H					
Zero Gas	N2 240403	0	0	0.0000	Passed
Certified Gas 1	D962229	200	201	-0.1250	Passed
Certified Gas 2	D962122	500	499	0.1250	Passed
Certified Gas 3	D962087	800	800	0.0000	Passed

*((Gas Value - CO Response) / Span Value) x 100%

CO Tedlar Bag Samples					
Time	Tedlar Bag ID No.	CO (ppm)	Time	Tedlar Bag ID No.	CO (ppm)
0900H	PJ24-566 S1R1	25			
0910H	PJ24-566 S1R2	26			
0920H	PJ24-566 S1R3	15			

Post-Measurement Calibration Drift Check					
Time	Gas Value (ppm)	Pre-Meas CO Response (ppm)	Post-Meas CO Response (ppm)	% Drift** (% span)	Status ¹ (≤ 10 % span)
1800H					
Zero Gas	0	0	0	0.0000	Passed
Certified Gas 1	200	201	198	0.3750	Passed
Certified Gas 2	500	499	495	0.5000	Passed
Certified Gas 3	800	800	797	0.3750	Passed

**((CO Resp from the Pre-Meas Cal-Co Resp for the Post-Meas)/Span Value) x 100%

QA/QC Check: Completeness ☒ Legibility ☒ Accuracy ☒ Specifications ☒ Reasonableness ☒ Over 8 hours

Checked By: **JANS CHOLO E. CHUA**
Signature Over Printed Name

QA/QC/Date: **EDINDO C. FERNANDO**
Signature Over Printed Name



ANNEX E

EQUIPMENT CALIBRATION CERTIFICATES

METER BOX POST-TEST CALIBRATION CHECK

USEPA Approved Alternative Method ALT-009

BMC FORESTRY CORP. ILP

IRISAN, BAGUIO CITY

VERTICAL SHAFT KILN NO. 2

Meter Box #: 2

Calibration	Date	ΔH_{\oplus}	Y
5-point orifice calibration	25-Nov-24	46.4705	0.9754

Calculate Y_{qa} for each test run using the following equation:

$$Y_{qa} = \frac{\theta}{V_m} \sqrt{\frac{0.0011503 T_m}{\Delta H_{\oplus} \left(P_b + \frac{\Delta H_{avg}}{13.6} \right)}} \times \frac{29}{M_d} \times (\sqrt{\Delta H})_{avg}$$

where:

Y_{qa}	dry gas meter calibration check, value dimensionless.
θ	total run time, min.
V_m	total sample volume measured by dry gas meter, m^3 .
T_m	absolute average dry gas meter temp., $^{\circ}K$.
P_b	barometric pressure, mm Hg.
0.0011503	$= (760/298) (0.75 \times 0.0238)^2$ (mm Hg/ $^{\circ}K$) (m^3/min) ²
ΔH_{avg}	average orifice meter differential, mm H_2O .
ΔH_{\oplus}	orifice meter calibration coefficient, mm H_2O .
M_d	dry molecular weight of stack gas, gm/gm mole.
29	dry molecular weight of air, gm/gm mole.
13.6	specific gravity of mercury.

After each test run series, do the following:

Average the three or more values of Y_{qa} obtained from the test run series and compare this average with the dry gas meter calibration factor, Y. The average Y_{qa} must be within $\pm 5\%$ of Y.

If the average Y_{qa} does not meet the $\pm 5\%$ criterion, recalibrate the meter over the run full range of orifice settings, as detailed in Method 5. Then follow the subsequent procedure in Method 5.

METER BOX POST-TEST CALIBRATION CHECK				
		Run 1	Run 2	Run 3
Meter Box		Meter Box #: 2	Meter Box #: 2	Meter Box #: 2
Time, min	θ	60.0	60.0	60.0
Total volume, dry m^3	V_m	1.5500	1.5208	1.5350
Average meter temp, $^{\circ}C$		24.83	25.00	25.75
Average meter temp, $^{\circ}K$	T_m	297.98	298.15	298.90
Barometric pressure, mm Hg	P_b	654.30	654.70	654.30
ΔH_{avg} , mm H_2O		59.917	57.167	58.667
ΔH_{\oplus} , mm H_2O		46.4705		
Mol. wt. of stack gas, g/g-mole	M_d	29.64	29.64	29.64
QA gamma	Y_{qa}	0.9917	0.9872	0.9925
Average Y_{qa}		0.9905		
Meter box gamma	Y	0.9754		
Difference to be within 5%		1.5% - PASS		



Environmental Management Service Provider

TEAM NO. 2 - CRITICAL ORIFICE

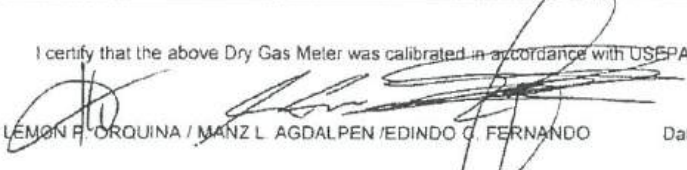
USING FIVE CRITICAL ORIFICES

Console Model Number	XC572-QC6V	Date	25-Nov-24	Time	1300H	Std Temp	298 °K
Console Serial Number	1404036	Barometric Pressure		755.9 mm Hg	Std Press		760 mm Hg
DGM Model Number	G16	Theoretical Critical Vacuum		357mm Hg or 14in Hg	K _i	0.3858	
DGM Serial Number	2012-014438	Calibration Technician			HPO	Previous calibration	
0.9873							

Metering Console							Critical Orifice					
Elapsed Time	DGM Orifice ΔH	Volume			Outlet Temp.		Serial #	Coef. x10 ⁴	Ambient Temp.		Critical Vacuum	Actual Vacuum
		Initial	Final	Dif	Initial	Final			Initial	Final		
0 min	P _{atm} mm H ₂ O	V _{ini} m ³	V _{fin} m ³	V _{in} >0.14m ³	t _{in} °C	t _{out} °C		K' metric units	t _{amb} °C	t _{amb} °C	in Hg or mm Hg	1-2in or 25-50mm > Critical
17.0	10.0	300.1000	300.2640	0.164	25.0	25.0	40	2.09977	27.1	27.6	15.0	17.0
11.0	20.0	300.2750	300.4312	0.156	25.0	25.0	48	3.10938	27.6	26.8	15.0	17.0
9.0	32.0	300.4388	300.6048	0.166	25.0	25.0	55	4.05110	26.8	26.3	15.0	16.0
7.0	54.0	300.6102	300.7768	0.167	25.0	25.0	63	5.20716	26.3	26.4	15.0	16.0
5.0	94.0	300.7850	300.9456	0.161	25.0	25.0	73	7.14867	26.4	26.4	15.0	16.0

Standardized Data				Dry Gas Meter				
Dry Gas Meter		Critical Orifice		Calibration Factor		Flowrate	ΔH _g	
V _{m(scd)}	Q _{m(scd)}	V _{cr(scd)}	Q _{cr(scd)}	Value	Var'n	Std & Corr	0.0212 m ³ /min	Variation
m ³	m ³ /min	m ³	m ³ /min	Y	ΔY ±2%	Q _{m(scdcorr)} m ³ /min	ΔH _g mm H ₂ O	ΔΔH _g ±5.1mm Hg
0.1606	0.0094	0.1557	0.0092	0.9692	-0.64	0.0092	51.8778	4.4
0.1532	0.0139	0.1492	0.0136	0.9743	-0.11	0.0136	47.3852	0.9
0.1630	0.0181	0.1592	0.0177	0.9772	0.19	0.0177	44.6711	-1.8
0.1639	0.0234	0.1592	0.0227	0.9717	-0.38	0.0227	45.7906	-0.7
0.1586	0.0317	0.1561	0.0312	0.9845	0.94	0.0312	42.6276	-3.8
Y Average				0.9754		ΔH _g Average		46.4705

I certify that the above Dry Gas Meter was calibrated in accordance with USEPA Method 5

Signature:  HALCY LEMON P. ORQUINA / MANZ L. AGDALPEN / EDINDO C. FERNANDO Date: 25-Nov-24





Environmental Management Service Provider

TEAM NO. 2 - CSE AND JUDGE
DETERMINATION OF ORIFICE COEFFICIENT K'

Console Model Number		XC572-QC6V		Date	25-Nov-24		Time	0915H		Std Temp	298.15 °K		
Console Serial Number		1404036		Barometric Pressure				755.9 mm Hg		Std Press	760 mm Hg		
DGM Model Number		G1.6		Theoretical Critical Vacuum				357mm Hg or 14in Hg		K _i	0.3858		
DGM Serial Number		2012-014438		Calibration Technician				HPO		Previous calibration	0.9873		
Metering Console								Critical Orifice					
Run	Elapsed Time 0 min	DGM Orifice ΔH P _m mm H ₂ O	Volume		Outlet Temp		Orifice ID	Ambient Temp		Critical Vacuum in Hg or mm Hg	Actual Vacuum 1-2in or 25-50mm > Critical	Coeff. x10 ⁴ K'	Diff % < ±0.5
			Initial	Final	Initial	Final		Initial	Final				
			V _{in} m ³	V _{out} m ³	t _{in} °C	t _{out} °C		t _{amb} °C	t _{amb} °C				
1	5	10	299.1000	299.1472	24.0	24.0	40	27.3	27.2	15	17	2.00986	0.00
2	5	10	299.1472	299.1944	24.0	24.0	40	27.2	27.2	15	17	2.09969	0.00
Average												2.09977	
1	5	20	299.1980	299.2676	24.0	24.0	48	27.2	27.5	15	17	3.09993	0.30
2	5	20	299.2676	299.3376	24.0	24.0	48	27.5	27.6	15	17	3.11878	0.30
Average												3.10935	
1	5	32	299.3400	299.4308	24.0	24.0	55	27.6	27.5	15	17	4.05022	0.02
2	5	32	299.4308	299.5218	24.0	25.0	55	27.5	27.5	15	17	4.05193	0.02
Average												4.05110	
1	5	54	299.5300	299.6472	25.0	25.0	63	27.5	27.5	15	16	5.22096	0.26
2	5	54	299.6472	299.7638	25.0	25.0	63	27.4	27.4	15	16	5.19337	0.26
Average												5.20716	
1	5	94	299.7710	299.9308	25.0	25.0	73	27.2	27.2	15	16	7.14266	0.08
2	5	94	299.9308	300.0906	25.0	24.0	73	27.2	27.2	15	16	7.15467	0.08
Average												7.14867	

Calibrated By:

Halcy Lemon P. Orquina
Signature over Printed Name

Checked By:

Manz L. Agdalpen
Signature over Printed Name

QA/QC:

Edindo C. Fernando
Signature over Printed Name

Date:

25 November 2024

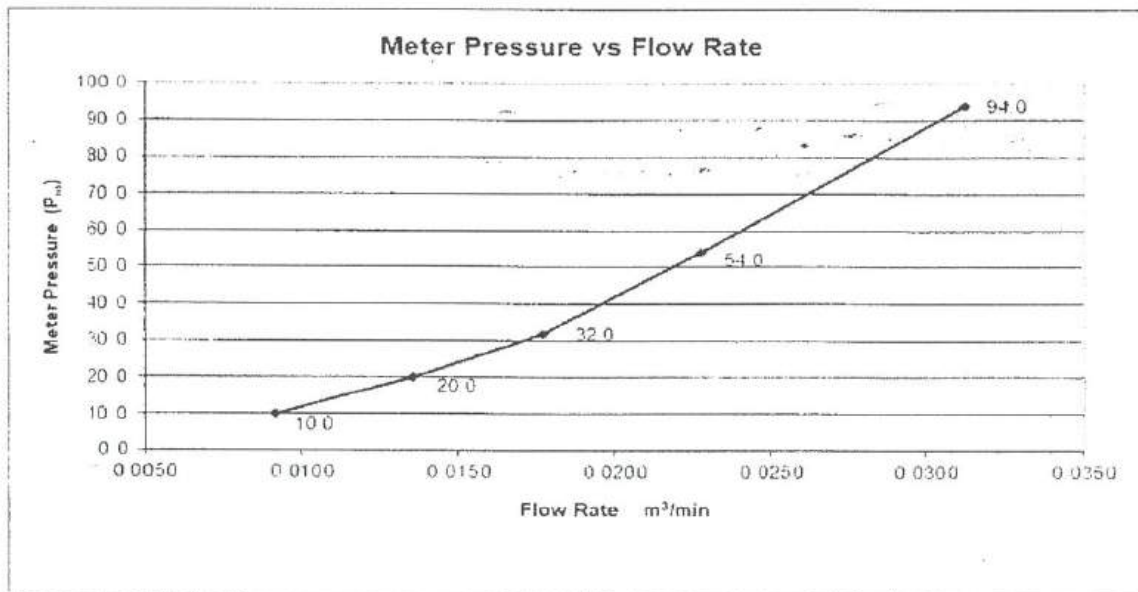
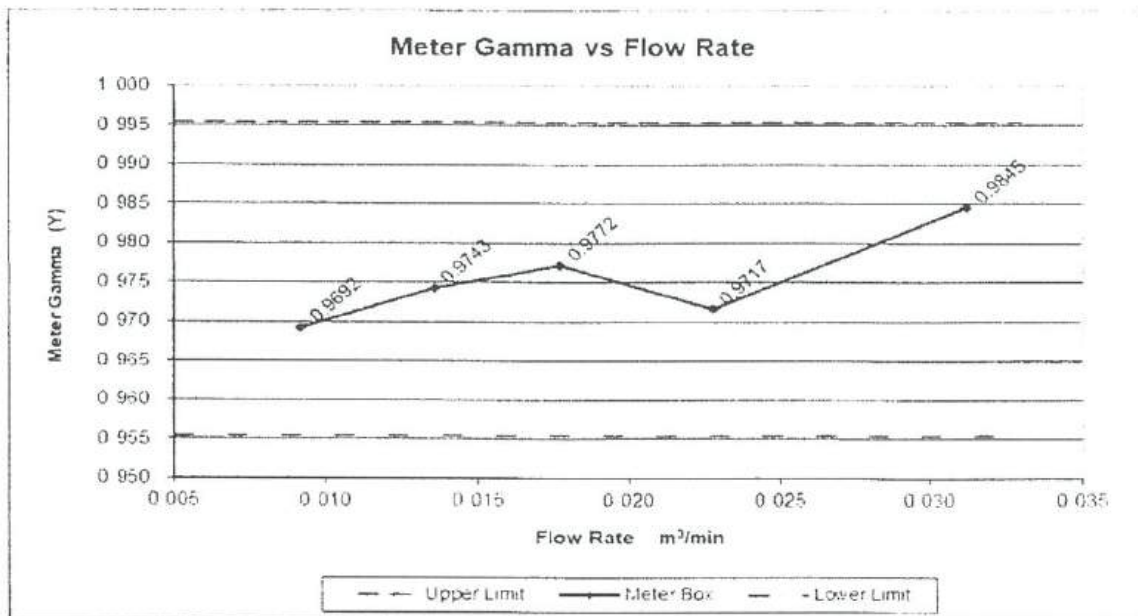
2nd floor VAG Bldg. Ortigas Ave., Greenhills
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Department of Environment and Natural Resources (DENR)
ENVIRONMENTAL MANAGEMENT BUREAU
ACCREDITED THIRD PARTY TESTER
Certificate No: SAT NO. 2022-72



Environmental Management Service Provider



Calibrated By:

Halcy Lemon P. Orquina
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QA/QC:

Edindo C. Fernando
Signature over Printed Name

Date:

25 November 2024

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Department of Environment and Natural Resources (DENR)
ENVIRONMENTAL MANAGEMENT BUREAU
ACCREDITED THIRD PARTY TESTER
Certificate No: SAT NO. 2022-72

POST TEST THERMOCOUPLE CALIBRATION CHECK

EPA Approved Alternative Method (Alt-011)
Single Point Calibration

Thermocouple ID	TMC- T2	Probe / Pitot Tube ID	SPA-6FT-2 / PT-6FT-2
Personnel	HPO, MSL, CAS	Date	25 November 2024

Sensor	Calibrated By:	Reference Temp. °C ¹	Thermocouple Temp. °C	Difference ² (within $\pm 1^{\circ}\text{C}$)	Continuity Check ³	PASS / FAIL
PROBE	HPO	30.1	30	0.1	OK	PASSED
FILTER	HPO	30.2	30	0.2	OK	PASSED
STACK	HPO	30.2	30	0.2	OK	PASSED
EXIT	HPO	30.1	30	0.1	OK	PASSED
OVEN	HPO	30.2	30	0.2	OK	PASSED
AUX.	HPO	30.1	30	0.1	OK	PASSED

¹ Reference Thermometer is mercury-in-glass and ASTM certified, unless otherwise noted.


²After each test run series, check the accuracy (and, hence, the calibration) of each thermocouple system at ambient temperature. The temperature of the thermocouple and reference thermometers shall agree with $\pm 1^{\circ}\text{C}$.

³The continuity check involves subjecting the tip of the thermocouple to a change in temperature to check the crimps, loose connections. Thermocouples with crimps and loose connections will not immediately respond to temperature changes, and those with wrong connections will show an opposite change in temperature.

Calibrated By:


Halcy Lemon P. Orquina
Signature over Printed Name

Checked By:


Manz L. Agdalpen
Signature over Printed Name

QA/QC:


Edindo C. Fernando
Signature over Printed Name

Date:

25 November 2024



Environmental Management Service Provider

TEMPERATURE DISPLAY CALIBRATION

Meter Console No.	BSI - T2	Personnel	HPO, MSL, CAS
Reference Calibration Maker	PIE	Pretest	OK
Model	520B	Posttest	OK
Serial No.	223734	Date	25 Nov 2024

TC CHANNEL ID	Reference Temp. 1, °C	Temp. Reading 1, °C	Criteria	Criteria Met	Reference Temp. 2, °C	Temp. Reading 1, °C	Criteria	Criteria Met
PROBE	0	0	0	Y	50	49	0.310	Y
FILTER	0	0	0	Y	50	49	0.310	Y
EXIT	0	0	0	Y	50	49	0.310	Y
AUX	0	0	0	Y	50	49	0.310	Y
STACK	0	0	0	Y	50	48	0.619	Y
STACK	0	0	0	Y	250	247	0.574	Y

TC CHANNEL ID	Reference Temp. 3, °C	Temp. Reading 1, °C	Criteria	Criteria Met	Reference Temp. 4, °C	Temp. Reading 1, °C	Criteria	Criteria Met
PROBE	100	99	0.268	Y	150	148	0.473	Y
FILTER	100	99	0.268	Y	150	148	0.473	Y
EXIT	100	99	0.268	Y	150	149	0.236	Y
AUX	100	99	0.268	Y	150	149	0.236	Y
STACK	100	99	0.268	Y	150	149	0.236	Y
STACK	350	349	0.161	Y	450	447	0.415	Y

CRITERIA: Percent difference between the Reference Temperature and the average Temperature can be only $\pm 1.5\%K$.

EQUATION: $\frac{[(\text{Ref. Temp.} + 273) - (\text{Temp. Reading} + 273)] \times 100}{(\text{Ref. Temp.} + 273)}$

Calibrated By:

Halcy Lemon P. Orquina

Signature over Printed Name

Checked By:

Manz L. Agdalpen

Signature over Printed Name

QA/QC:

Edindo C. Fernando

Signature over Printed Name

Date:

25 November 2024





Environmental Management Service Provider

TEMPERATURE SENSOR CALIBRATION DATA SHEET

Date	25 November 2024	Thermocouple No.	TMC – T2
Personnel	HPO, MSL, CAS	Reference	Alcohol Thermometer

Date	Reference Point Number	Source (Specify)	Reference Thermometer Temp., °C	Thermocouple Display Temp., °C	Absolute Temperature Difference, %
25 Nov 2024	1	HOT WATER	99.9	100	0.1
	2	AMBIENT	28.3	28	0.3
	3	ICE WATER	2	2	0
18 Jan 2024	1	HOT WATER	99.8	100	0.2
	2	AMBIENT	28.1	28	0.1
	3	ICE WATER	2.2	2	0.2
30 Jun 2023	1	HOT WATER	99.2	99	0.2
	2	AMBIENT	28.1	28	0.1
	3	ICE WATER	2.2	2	0.2

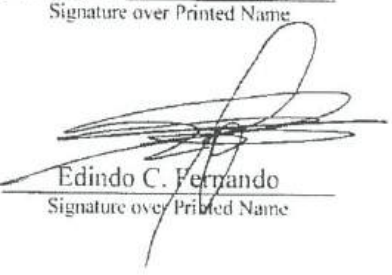
Calibrated By:


Halcy Lemon P. Orquina
Signature over Printed Name

Checked By:


Manz L. Agdalpen
Signature over Printed Name

QA/QC:


Edindo C. Fernando
Signature over Printed Name

Date:

25 November 2024





Environmental Management Service Provider

TYPE-S PITOT TUBE CALIBRATION

PITOT TUBE ID	PT-T2-4FT	Probe Assembly ID	SPA- T2-4FT
Calibrated by:	HPO, MSL, CAS	Date Calibrated	26 November 2024

PARAMETER	VALUE	ALLOWABLE RANGE
Assembly Level	YES	YES
Holes Damaged	NO	NO
Obstructed	NO	NO
$\alpha 1$	0	$-10^{\circ} < \alpha 1 < +10^{\circ}$
$\alpha 2$	0	$-10^{\circ} < \alpha 2 < +10^{\circ}$
$\beta 1$	1	$-5^{\circ} < \beta 1 < +5^{\circ}$
$\beta 2$	0	$-5^{\circ} < \beta 2 < +5^{\circ}$
Y	1	
θ	1	
A	0.905	For $\frac{1}{4}$ " OD, 0.526 to 0.750" For $\frac{3}{8}$ " OD, 0.788 to 1.125"
$Z = A \sin Y$	0.016	$Z \leq 0.125"$
$W = A \sin \theta$	0.016	$W \leq 0.031"$
P_A	0.469	For $\frac{1}{4}$ " OD, 0.263 to 0.375" For $\frac{3}{8}$ " OD, 0.394 to 0.563"
P_B	0.474	For $\frac{1}{4}$ " OD, 0.263 to 0.375" For $\frac{3}{8}$ " OD, 0.394 to 0.563"
$P_A - P_B$	-0.005	-0.063 to $0.063"$
D_T	0.318	0.188 to 0.375"

Where: $\alpha 1$ & $\alpha 2$ = angles between the pitot tube opening and the horizontal plane when viewed from the end

$\beta 1$ & $\beta 2$ = angles between the pitot tube opening and the horizontal plane when viewed from the side

Y = the angle measured when calculating the difference in length between the two pitot tube legs

θ = the angle measured when calculating the distance that the pitot tubes are rotated

A = the distance between the tips of the pitot tube opening

Z = The difference in length between the two pitot tube legs

W = the distance that the pitot tube legs are rotated

P_A & P_B = vertical distance between each pitot tube opening plane & the center line of the pitot tube

D_T = the tube external diameter

Certification

I certify that the Type S pitot tube meets or exceeds all specifications, criteria and / or applicable design features and is hereby assigned a pitot tube calibration factor (C_p) of 0.84.

Calibrated By:

Halcy Lemon P. Orquina

Signature over Printed Name

Checked By:

Manz L. Agdalpen

Signature over Printed Name

QA/QC:

Edindo C. Fernando

Signature over Printed Name

Date:

26 November 2024





Environmental Management Service Provider


NOZZLE CALIBRATION SHEET

Date	26 November 2024	Personnel	HPO, MSL CAS
Nozzle Box ID	NS - T2	Nozzle Type	Stainless Steel

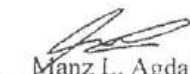
ID	D ₁ (mm)	D ₂ (mm)	D ₃ (mm)	D (mm)	Average (mm)
T2 NS-1	3.06	3.04	3.02	0.04	3.04
T2 NS-2	4.09	4.09	4.09	0.00	4.09
T2 NS-3	5.90	5.87	5.90	0.02	5.89
T2 NS-4	7.90	7.88	7.90	0.01	7.89
T2 NS-5	9.35	9.34	9.36	0.02	9.35
T2 NS-6	10.90	10.90	10.90	0.00	10.90
T2 NS-7	12.41	12.40	12.39	0.00	12.40

D = Maximum difference in any two measurements. Tolerance = 0.1 mm ; Average = Average of D_{1,2,3}

Calibrated By:


Halcy Lemon P. Orquina
Signature over Printed Name

Checked By:


Manz L. Agdalpen
Signature over Printed Name

QA/QC:


Edindo C. Fernando
Signature over Printed Name

Date:

26 November 2024





Environmental Management Service Provider

FLASK CALIBRATION SHEET

Date	26 November 2024	Personnel	HPO, MSI., CAS
FLASK BOX ID	T2- M7 Flask-A	Flask Type	Glass


FLASK ID	1 st Volume(mL)	2 nd Volume(mL)	3 rd Volume(mL)	Average Volume (mL)
BSI T2 – F1	2231	2228	2231	2230
BSI T2 – F2	2233	2232	2225	2230
BSI T2 – F3	2248	2250	2252	2250
BSI T2 – F4	2230	2228	2232	2230
BSI T2 – F5	2229	2231	2230	2230
BSI T2 – F6	2246	2251	2253	2250
BSI T2 – F7	2229	2229	2232	2230
BSI T2 – F8	2238	2241	2241	2240
BSI T2 – F9	2247	2251	2252	2250

*Note: The flask volumes are measured within +/- 10mL. All calibrations are at room temperature.

Calibrated By:


Haley Lemon P. Orquina
Signature over Printed Name

Checked By:


Manz L. Agdalpen
Signature over Printed Name

QA/QC:


Edindo C. Fernando
Signature over Printed Name

Date:

26 November 2024





Environmental Management Service Provider

DIGITAL BALANCE CALIBRATION

Digital Balance ID	DB - T2	Personnel	HPO, MSL, CAS
Manufacturer	AND CO. LTD.	Date	26 November 2024
Model	EJ-1500	Calibration Standard	1000g
Serial Number	BA2826513	Type	Weights (1500g max)

Eccentricity Test		Repeatability Test	
Test Load	1000g	When Loaded up to 1500g (Using 1000g & 500g standard weights)	
Position	Balance Indication	Trial	Balance Indication
1	1000.0	1	1549.9
2	1000.0	2	1549.9
3	1000.0	3	1549.9
4	999.9	4	1549.9
5	1000.0	5	1549.9
Test Results	0.1	Standard Deviation	0

Linearity Test				
Nominal Load	Unit under Test Reading	Deviation from Nominal	Coverage Factor	UE at 95% C.L
Weights	g	g	k	g
0	0	0	2	0
200g	200	0	2	0
500g	500	0	2	0
1000g	1000	0	2	0
1500g	1499.9	0.1	2	0.16

¹Acceptable EPA Method 4 tolerance must be less than 0.5 gram.

²Acceptable EPA Method 5 tolerance must be less than 0.5 gram.

Equipment Description	Equipment ID	Traceability Reference
Standard Weight	1254	08-09-2022-BSI-T2

Calibrated By:

Halcy Lemon P. Orquina
Signature over Printed Name

Checked By:

Manz L. Agdalpen
Signature over Printed Name

QA/QC:

Edindo C. Fernando
Signature over Printed Name

Date:

26 November 2024

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Email: info@tsicv.com



Department of Environment and Natural Resources (DENR)
ENVIRONMENTAL MANAGEMENT BUREAU
ACCREDITED THIRD PARTY TESTER
Certificate No. SAT NO. 2022-72

Making our world more productive

CERTIFICATE NUMBER : 90168754/D962229
REVISION NUMBER :
REVISION DATE :



CERTIFIED STANDARD

Certificate of Analysis

Material Number : S802100-AE-C6

Customer Tag :

Customer : LINDE PHILIPPINES INC.
Job Card : 90168754
Certification Date : 29-Nov-2021

PO Number : 9300463129
Order Date : 08-Nov-2021
SO Number : 128002321
Vcode : GM34242/10A/S BS4

CYLINDER NUMBER

D962229

SPECIFICATION

Component	Requested Concentration	Certified Concentration	Unit	Certified Uncertainty (% +/-)
NITROGEN			Balance	
CARBON MONOXIDE	200	200	ppm	2

The Certified uncertainty is relative unless specified "abs" as absolute with a confidence level of 95% (coverage factor K=2).

CYLINDER 10L ALUM
VALVE BS4 BRASS

Content 1.494 M3 Pressure 150 Bar(a)
Shelf Life 36 Month UN Number 1956 Reference Temperature 20°C
Recommended Storage and Usage Temperature 10 to 40°C Min. Usage Pressure 5 BAR G

TRACEABILITY

Category Traceability Type Traceable To Reference Procedure
PROCESS WEIGHT National Metrology Centre(NMC) ISO6142:2001

METHOD OF CERTIFICATION

Method Gravimetric

INSTRUMENTATION

Method of Analysis
LS71704

REMARKS

Certified By



Checked By



Product filled gravimetrically using high-load high-accuracy, weight traceable to National Metrology Centre (NMC) standards. Linde Gas Singapore has obtained a corporate License complying to ISO 9001 standard.

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Fax +65 6896 7745
Cn Reg No. 199103758R

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www.linde.com.sg

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CERTIFICATE NUMBER : 90168756/D962122
REVISION NUMBER :
REVISION DATE :



Certificate of Analysis

Material Number : S823400-AE-C6

Customer Tag :

Customer : LINDE PHILIPPINES INC.
Job Card : 90168756
Certification Date : 22-Nov-2021

PO Number : 9300463129
Order Date : 08-Nov-2021
SO Number : 128002321
Vcode : GM34553/10A/S BS4

CYLINDER NUMBER

D962122

SPECIFICATION

Component	Requested Concentration	Certified Concentration	Unit	Certified Uncertainty (% +/-)
NITROGEN			Balance	
CARBON MONOXIDE	500	500	ppm	2

The Certified uncertainty is relative unless specified "abs" as absolute with a confidence level of 95% (coverage factor K=2).

CYLINDER : 10L ALUM
VALVE : BS4 BRASS

Content : 1.470 M3
Shelf Life : 36 Month
Recommended Storage and Usage Temperature : 10 to 40°C
Pressure : 150 Bar(a)
UN Number : 1956
Reference Temperature : 20°C
Min. Usage Pressure : 5 BAR G

TRACEABILITY

Category :
PROCESS

Traceability Type :
WEIGHT

Traceable To :
National Metrology Centre(NMC)
Reference Procedure :
ISO6142:2001

METHOD OF CERTIFICATION

Method : Gravimetric

INSTRUMENTATION

Method of Analysis

REMARKS

Certified By



Checked By



Product filled gravimetrically using high-load high-accuracy, weight traceable to National Metrology Centre (NMC) standards. Linde Gas Singapore has obtained a corporate License complying to ISO 9001 standard.

Making our world more productive
CERTIFICATE NUMBER : 90168755/D962087
REVISION NUMBER :
REVISION DATE :



Certificate of Analysis

Material Number : S803400-AE-C6

Customer Tag :

Customer : LINDE PHILIPPINES INC.
Job Card : 90168755
Certification Date : 22-Nov-2021

PO Number : 9300463129
Order Date : 08-Nov-2021
SO Number : 128002321
Vcode : GM23712

CYLINDER NUMBER

D962087

SPECIFICATION

Component	Requested Concentration	Certified Concentration	Unit	Certified Uncertainty (% +/-)
NITROGEN			Balance	
CARBON MONOXIDE	800	800	ppm	2

The Certified uncertainty is relative unless specified "abs" as absolute with a confidence level of 95% (coverage factor K=2).

CYLINDER 10L AL
VALVE BS4 BRASS

Content 1.494 M3 Pressure 150 Bar(a) - Reference Temperature 20°C
Shelf Life 36 Month UN Number 1956 Min. Usage Pressure 5 BAR G
Recommended Storage and Usage Temperature 10 to 40°C

TRACEABILITY

Category
PROCESS

Traceability Type
WEIGHT

Traceable To Reference Procedure
National Metrology Centre(NMC) ISO6142:2001

METHOD OF CERTIFICATION

Method Gravimetric

INSTRUMENTATION

Method of Analysis

REMARKS



Product filled gravimetrically using high-load high-accuracy, weight traceable to National Metrology Centre (NMC) standards. Linde Gas Singapore has obtained a corporate License complying to ISO 9001 standard.

LUTRON ELECTRONIC ENTERPRISE CO., LTD.

ADDRESS : 4F, 106, Min Chuan West Road, 103 Taipei, Taiwan

Tel : +886-2-25570844, 2553-3067 Fax : +886-2-25577132 E-MAIL : lutron@lutron.com.tw

<http://www.lutron.com.tw>

CALIBRATION & TEST CERTIFICATE

To whom it my concern:

We hereby certify that the instrument under mentioned has been certainly calibrated according to our calibration standard and the testing result in the calibration procedure has been good enough within the tolerance regulated in our specification.

Name of Model	: HUMIDITY/TEMP/BARO	Temperature	: 23.2°C
Model Number	: PHB-318	Humidity	: 65 %RH
Serial Number	: AM.02197	Date of Calibration	: Apr. 2, 2024

(The standard generators used for calibration procedure are proofed once a year and can be traceable to the standard authorized by public organization.)

LUTRON ELECTRONIC ENTERPRISE CO., LTD.



Signature

D. C. Lins

President



LUTRON ELECTRONIC

The Art of Measurement

ANNEX F

DENR ACCREDITATION



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Visayas Avenue, Diliman, Quezon City



SAT No. 2022-72

CERTIFICATE OF ACCREDITATION

Pursuant to DENR Administrative Order No. 26 Series of 2013 of the Department of Environment and Natural Resources having substantially met all the requirements prescribed therein,

BERKMAN SYSTEMS INCORPORATED (BSI)

208 VAG Building, Ortigas Ave.,
Greenhills, San Juan City, Metro Manila

is hereby duly accredited as

SOURCE EMISSION TESTING FIRM

As such, the following are authorized as:

QA/QC Manager
Edindo C. Fernando

Team Leader
Halcey Lemon P. Orquina

This certification shall allow the above firm and personnel to conduct stack testing limited to the following methods and parameters:

1. US-EPA Method 1 to 5 - PM
2. US-EPA Method 6/8 - SO₂
3. US-EPA Method 7 - NO_x
4. US-EPA Method 10 - CO

Granted this 14th day of July 2022 and valid until July 14, 2025.


ENGR. WILLIAM P. CUÑADO
Director

Digitally signed by Cuñado William Purgatorio
DN: cn=Cuñado William Purgatorio,
serialNumber=001006000462A,
ou=Environmental Management Bureau,
o=Department of the Environment and
Natural Resources, c=Philippines



ANNEX G

TEST PARTICIPANTS

TEST PARTICIPANTS

BMC FORESTRY CORPORATION

Mr. Narhy C. Pomilban - Pollution Control Officer

BSI

Mr. Halcy Lemon P. Orquina - DENR Accredited Team Leader / Field Engineer

Mr. Marvin S. Llarena - Field Technician

Mr. Christian A. Soleta - Field Technician

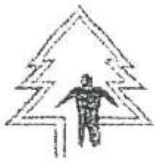
Mr. Jimuel B. Torrelino - Sampling Aide/Driver

Mr. Edindo C. Fernando - DENR Accredited QA/QC Manager

ANNEX H

TEST PLAN

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.



November 8, 2024

ENGR. JEAN C. BORROMELO

OIC, Regional Director

DENR – Environmental Management Bureau

Cordillera Administrative Region (CAR)

DENR Compound, Gibraltar Road, Baguio City

CC : ENGR. RAUL G. CUBANGAY

OIC Chief, Environmental Monitoring and Enforcement Division

Subject: Test Plan for BMC Forestry Corporation – Irisan Lime Project

Dear Director Borromeo:

We are pleased to submit the test plan for our proposed Source Emission Test to be conducted by Berkman Systems, Inc., an accredited third-party tester at **BMC Forestry Corporation – Irisan Lime Project** located at Km.5 Naguilian Road, Irisan, Baguio City.

We hope this addresses your requirements.

Thank you.

Very truly yours,

BMC FORESTRY CORPORATION

By:

NARHY C. POMILBAN

Pollution Control Officer

Noted by:

FRANCISCO O. FLAVIER

Resident Manager



BERKMAN SYSTEMS INC.
Environmental Management Service Provider

BSI-2022-72-24-062

November 15, 2024

ENGR. JEAN C. BORROMEO

OIC, Regional Director

CC : ENGR. RAUL G. CUBANGAY

Chief, Environmental Monitoring and Enforcement Division

ENVIRONMENTAL MANAGEMENT BUREAU

CORDILLERA ADMINISTRATIVE REGION (CAR)

DENR Forestry Compound, Pacdal District

Baguio City, Benguet

Subject: Test Plan for BMC Forestry Corporation - Irisan Lime Project


Dear Dir. Borromeo:

We are pleased to submit the test plan for our proposed Source Emission Monitoring to be conducted at BMC Forestry Corporation - Irisan Lime Project located at Km.5, Naguillian Road, Irisan, Baguio City.

We hope that this addresses your requirements.

Very truly yours,

BSI


EDINDO C. FERNANDO
Field Operations Manager
DENR Accredited QA/QC Manager
SAT No. 2022-72

2nd Floor, VAG Bldg., Ortigas Ave., Greenhills



Department of Environment and Natural Resources (DENR)



Environmental Management Service Provider

BSI-2022-72-24-062

SOURCE SPECIFIC TEST PLAN

This document is the Source Specific Test Plan of **BSI (Berkman Systems, Inc.)** that describes the emission testing that will be completed at **BMC Forestry Corporation - Irisan Lime Project** located at Km.5, Naguilian Road, Irisan, Baguio City.

Section A: FACILITY INFORMATION

BMC Forestry Corporation - Irisan Lime Project
Irisan, Baguio City

Contact Person: **Narhy C. Pomilban**
Pollution Control Officer

Telephone: (074) 445-7180

Section B: PRODUCTION INFORMATION AND FACILITY REQUIREMENTS

The plant should operate the **one (1) unit of 1.08 MT/hr Vertical Shaft Kiln** set for at 90% or greater of permitted capacity during testing. The Implementing Rules and Regulations of the Philippine Clean Air Act specify that the operating capacity during emission testing shall be the basis for setting the maximum allowable operating capacity during permit application.

The facility must provide the following items:

- The client shall provide an on-site single phase **220VAC/60Hz**-power supply.
- The client shall provide at least **two (2)** sampling portholes based on the existing stack diameter and pipe length. Sampling platforms should be installed or constructed properly for the safety of the sampling personnel.
- Copy of latest Permit to Operate (**PTO**)
- Schematic diagram of the process
- Copy of the latest certificate of fuel analysis and delivery receipt.
- Copy of engine log sheet during sampling
- Photo documentation and Video coverage will be taken by the accredited sampling personnel during sampling activity.



Section C: SOURCE INFORMATION

The test will be at **one (1) unit of 1.08 MT/hr Vertical Shaft Kiln** set for 3 sampling runs to be conducted on December 12-14, 2024.

Parameters to be tested and duration – see Table 1.

TABLE 1 – TEST METHODOLOGY

| Particulars | Parameter | Sampling Methodology | No. of Test runs/Duration | Notes |
|---|-----------------------------------|-------------------------------|---------------------------|---|
| one (1) unit of 1.08 MT/hr Vertical Shaft Kiln | Volumetric Flow Rate (VFR) | EPA Method 1-4 | 3 one-hour run/ exhaust | Performed concurrent with PM test |
| | Oxygen / Carbon Dioxide | EPA Method 3 By Fyrite Method | 3 runs / exhaust | Integrated Tedlar bag sample during M5 test |
| | Particulate Matter (PM) | EPA Method 5 | 3 one-hour run/ exhaust | Performed with Method 5 set-up |
| | Sulfur Oxides (SO _x) | EPA Method 6 modified | 3 one-hour run/ exhaust | Simultaneous with Method 5 |
| | Nitrogen Oxide (NO _x) | EPA Method 7 | 3 runs / exhaust | Three grab sample flasks collected per run |
| | Carbon Monoxide (CO) | EPA Method 10 By NDIR | 3 runs / exhaust | Integrated Tedlar bag sample during M5 test |

Section D: QUALITY ASSURANCE / QUALITY CONTROL PROCEDURES

Normal QA/QC procedures described in the Methods will be strictly followed.

Section E: SAMPLING DATE

December 12-14, 2024

The sampling team leader will coordinate the specific run plans with the abovementioned Plant representative. The sampling team will be at the Plant on or before 9:00 AM of the sampling date.


Section F: SAMPLING PERSONNEL

The proposed sampling team shall consist of the following personnel:

Team:

- | | | |
|----------------------------|---|----------------------------------|
| 1. Halcy Lemon P. Orquina | - | Accredited Team Leader |
| 2. Edindo C. Fernando | - | QA/QC Manager |
| 3. Ruel P. Abando | - | Accredited Team Leader (back up) |
| 4. Jose Arjay M. Santiago | - | QA/QC Manager (back up) |
| 5. Romeo M. Elsisura | - | Field Technician |
| 6. Marvin S. Llarena | - | Field Technician |
| 7. Eugene B. Salazar | - | Field Technician |
| 8. Christian A. Soleta | - | Field Technician |
| 9. Jimuel B. Torrelino | - | Driver / Technician |
| 10. Joseph Dandy A. Quilet | - | Driver / Technician |

Signed:

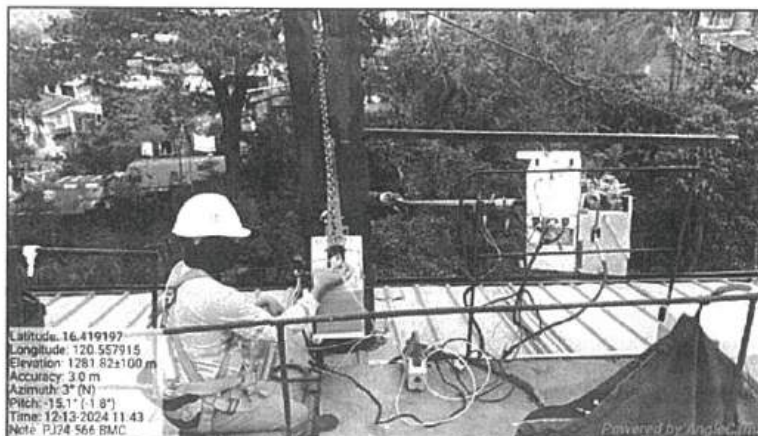


EDINDO C. FERNANDO
Field Operations Manager
DENR Accredited QA/QC Manager
SAT No. 2022-72

ANNEX I

PHOTO DOCUMENTATION

PHOTO DOCUMENTATION



Vertical Shaft Kiln No. 2



Source Emission Monitoring
BMC FORESTRY CORPORATION
Irisan, Baguio City
December 13, 2024



BERKMAN SYSTEMS INC.
Environmental Management Service Provider

To: **MR. NARHY C. POMILBAN** Email: npomilban@benguetcorp.com
Company: **BMC FORESTRY CORPORATION – BC ILP** Date: **22 January 2025**
From: **ENGR. JUBELL D.C. MOGOTE** Page 1 of: **2**
cc: **--** BSI Project No: **PJ 24 566**
Special Instructions: ☐ Confidential ☐ Urgent ☒ Please reply ☒ For your information ☐ For follow-up

If you do not receive all pages or transmission is illegible, please contact the originator to re-send. Should the e-mail be sent to a wrong address, please notify BSI immediately and destroy this copy. Thank you.

Subject: Initial Report on Source Emission Monitoring

Dear Mr. Pomilban,

Please find in the succeeding pages the results of the source emission monitoring conducted on December 13, 2024 at your plant in Irisan, Baguio City.

Source Emission Monitoring Results

| Source Information | | PM
(mg/Nm ³) | SO _x
(as SO ₂)
(mg/Nm ³) | NO _x *
(as NO ₂)
(mg/Nm ³) | CO
(mg/Nm ³) |
|---|----------------|-----------------------------|---|---|-----------------------------|
| VERTICAL SHAFT KILN NO. 2

<i>Brand Name: No information provided</i>
<i>Date Installed: August 1940**</i>
<i>Rated Capacity: 1.08 MT/hr</i>
<i>Load During Sampling: 95%</i>
<i>Fuel Used: LSF01 / RFO</i>
<i>Fuel Sulfur Content: No Fuel Analysis Provided</i>
<i>Fuel Consumption: No Information Provided</i>
<i>Annual Operating Hours: 8,760 hours</i> | Run 1 | 16.9 | 2.3 | 13.5 | 28.6 |
| | Run 2 | 18.6 | 1.5 | 13.0 | 29.8 |
| | Run 3 | 30.8 | < 1.5 | 14.0 | 17.2 |
| | Average | 22.1 | 1.9*** | 13.5 | 25.2 |
| DENR Standards
(existing source fuel burning equipment; other stationary source) | | 150 | 1500 | 1000 | 500 |

*Average of three (3) trial tests

**Based from previous sampling records

***Average of detected values only

Emissions are not applicable for the corrected oxygen factor since the source is not included in the list of equipment under DENR EMB Memorandum Circular No. 2021-15.



We would like to request a scanned copy of your *process flow chart, annual operating records, copy of self-monitoring report (SMR) if possible, monitoring logsheet, fuel consumption during sampling, and fuel delivery receipt* in line with the source emission monitoring conducted at your facilities. These documents will be attached to the final report as per DENR mandatory requirement. Please be informed that DENR-EMB requires that all third party testers to comply with all mandatory requirements including the submission of source emission summary.

The final report will be prepared as soon as we receive a scanned copy of this document with your signature. If we are unable to receive a response from you within three (3) working days upon receipt of this initial report, we will start preparing the final report.

If you have concerns, please do not hesitate to contact us.

Thank you and best regards.


JUBELL D.C. MOGOTE
Environmental Specialist

Noted by:


EDINDO C. FERNANDO
DENR-EMB Accredited QA/QC Manager
SAT No. 2022-72

Conforme:


Francisco O. Flavie/ Managing Head
BMC FORESTRY CORPORATION – BC ILP



CERTIFICATION

This is to certify that **BSI** has satisfactorily completed the *Source Emission Monitoring* conducted on December 13, 2024 at **BMC FORESTRY CORPORATION – BC ILP** located in Km. 5, Naguilian Road, Irisan, Baguio City.

We commend BSI for the successful completion of the contracted scope of work to the full satisfaction of our company.

This certification is being issued upon the request of **BSI** this **22nd day of January 2025**.

BMC FORESTRY CORPORATION

By:

Francisso O. Flavier
Resident Manager/Managing Head



AMBIENT AIR QUALITY AND NOISE LEVEL MEASUREMENT MONITORING REPORT

Reference No.: GEPC-AAQM-2406-035

Prepared for:

**BENGUET CORPORATION
ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet**

Sampling Date: June 29, 2024

Report Date: July 17, 2024

**AMBIENT AIR QUALITY AND NOISE LEVEL
MEASUREMENT MONITORING
REPORT CERTIFICATION**

THREE (3) STATIONS AREA TESTS

PARAMETERS:

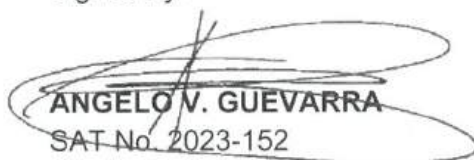
TOTAL SUSPENDED PARTICULATE (TSP)
SULFUR DIOXIDE (SO₂)
NITROGEN DIOXIDE (NO₂)
NOISE LEVEL MEASUREMENT

**BENGUET CORPORATION
ACUPAN CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet**

The ambient air monitoring and noise level measurement monitoring results reported herein were headed and performed by Mr. Angelo V. Guevarra and his team. The laboratory analysis of the collected samples is conducted by Mach Union Laboratories Inc. and has been verified and found to be orderly.

I have certified that the information discussed in this report is accurate to the best of my knowledge.

Signed by:


ANGELO V. GUEVARRA
SAT No. 2023-152

Date Signed: July 17, 2024

AMBIENT AIR QUALITY MONITORING REPORT

FACILITY NAME: Benguet Corporation
Acupan Contract Mining Project

FACILITY ADDRESS: Balatoc, Virac, Itogon, Benguet

1.0 INTRODUCTION

Greentek Environmental Phils. Co. was contracted by **Benguet Corporation - Acupan Contract Mining Project** to conduct ambient air sampling for three (3) Stations within their plant facility as a requirement of their environmental permit and partly for their regular environmental monitoring.

Ambient air sampling was conducted on June 29, 2024, to analyze nitrogen dioxide (NO₂), sulfur dioxide (SO₂) and total suspended particulate (TSP) levels.

2.0 SAMPLING METHODOLOGY

The DENR standard ambient air sampling equipment and analytical procedures were used in the sampling activity. These equipment and procedures are specified below:

Total Suspended Particulate Matter (TSP)

| | |
|----------------------|--|
| Reference Procedure: | USEPA, 40 CFR 50, Appendix B |
| Sampling Equipment: | High Volume Sampler (1-Hour Air Sampler) |
| Method of Analysis: | Gravimetric Method |

Sulfur dioxide (SO₂)

| | |
|----------------------|---------------------------------------|
| Reference Procedure: | USEPA, 40 CFR 50, Appendix A |
| Sampling Equipment: | Gas Bubbler Sampler (USEPA compliant) |
| Method of Analysis: | Pararosaniline Method |

Nitrogen dioxide (NO₂)

| | |
|----------------------|---|
| Reference Procedure: | Air Pollution Monitoring Manual, EMB-1994 |
| Sampling Equipment: | Gas Bubbler Sampler (USEPA compliant) |
| Method of Analysis: | Colorimetric, Griess Saltzman |

The SO₂ and NO₂ samples were stored in an icebox, and the TSP filters were placed in a clean envelope. All collected samples were then transported to the laboratory for analysis.

3.0 SAMPLING LOCATIONS

There are Three (3) sampling stations for ambient air monitoring. The table below shows the location and observations made during the sampling activity.

| STN | LOCATION | OBSERVATION / ACTIVITY IN THE AREA DURING THE TIME OF SAMPLING |
|-----|--|---|
| 1 | Along Keymens Road
(Upwind) | The sampling site at Along Keymens Road is dry with light winds. The facility remains operational during sampling to ensure accurate data collection under typical conditions. Throughout this time, a total of 2 dump trucks, 2 jeeps, 8 motorcycles and 10 cars passed by the site. |
| 2 | Near Assay Laboratory & Gate 2
(Downwind) | The sampling site at Near Assay Laboratory & Gate 2 is dry with light winds. The facility remains operational during sampling to ensure accurate data collection under typical conditions. Throughout this time, a total of 4 cars, 8 motorcycles and 7 jeeps passed by the site. |
| 3 | Near BCACMP Office
(Upwind) | The sampling site at Near BCACMP Office is dry with light winds. The facility remains operational during sampling to ensure accurate data collection under typical conditions. Throughout this time, a total of 2 motorcycles and 9 cars passed by the site. |

4.0 SUMMARY OF RESULTS

The summary results of the laboratory analysis are presented below for all sampling areas.

Table 1
Laboratory Analysis Results and Standard Limits for 60 minutes sampling

| Stn | Location | Date / Time Sampling | TSP
(ug / Nm ³) | SO ₂
(ug / Nm ³) | NO ₂
(ug / Nm ³) |
|--|--|-----------------------------|--------------------------------|--|--|
| 1 | Along Keymens Road
(Upwind) | 29-June-2024
1021H-1121H | 284.4 | 10.9 | 9.9 |
| 2 | Near Assay Laboratory & Gate 2
(Downwind) | 29-June-2024
1132H-1232H | 207.1 | 10.9 | 10.9 |
| 3 | Near BCACMP Office
(Upwind) | 29-June-2024
1244H-1344H | 227.7 | 10.9 | 10.1 |
| DENR NAAQ Standards for 60 minutes sampling | | | 300 | 340 | 260 |

These data are measured to standardize the test results to 25°C and 760mmHg and for comparison purposes.

Table 2
Meteorological Monitoring Reading for 60 minutes sampling

| STN | Location (GPS) | Date / Time Sampling | Barometric Pressure. (Inch Hg) Result Avg. | Ambient Temp.(°C) Result Avg. | % Relative Humidity Result Avg. | Wind Speed Avg. (m/s) |
|-----|---|-----------------------------|--|-------------------------------|---------------------------------|-----------------------|
| 1 | Along Keymens Road
(Upwind) | 29-June-2024
1021H-1121H | 27.09 | 31.9 | 58.3 | 0.2 |
| | N 16°21'36"
E 120°39'32" | | | | | |
| 2 | Near Assay Laboratory & Gate 2
(Upwind) | 29-June-2024
1132H-1232H | 27.33 | 34.5 | 51.4 | 0.2 |
| | N 16°21'34"
E 120°39'31" | | | | | |
| 3 | Near BCACMP Office
(Upwind) | 29-June-2024
1244H-1344H | 29.63 | 34.2 | 54.6 | 0.5 |
| | N 16°21'38"
E 120°39'36" | | | | | |

5.0 DISCUSSION OF RESULTS

The USEPA "Quality Assurance Handbook for Air Pollution Measurement Systems, Environmental Management Bureau, Department of Environment and Natural Resources, Philippine Environmental Policies, Laws, and Regulations handbook was used as a guide to achieve the quality assurance objectives of producing data that is complete, representative, and of known precision and accuracy.

The above results of analysis are compared to the National Ambient Air Quality Standards (NAAQS) for source-specific air pollutants from industrial operations. These standards are specified in the Implementing Rules and Regulations of the Philippine Clean Air Act of 1999.

During sampling on June 29, 2024, the weather from station 1 to 3 was cloudy to sunny with prevailing light to moderate wind blowing from the Southwest to Northeast. *Thus, the results of TSP, SO₂ and NO₂ concentrations are within the applicable CAA/IRR standard for 60 minutes of sampling.*

NOISE LEVEL MEASUREMENT MONITORING REPORT

FACILITY NAME: Benguet Corporation
Acupan Contract Mining Project

FACILITY ADDRESS: Balatoc, Virac, Itogon, Benguet

INTRODUCTION

Environmental noise is the unwanted or harmful outdoor sound created by human activity. On June 29, 2024, daytime noise level monitoring was conducted in three (3) stations within the premises of their facility located at the above address. Noise level measurement was performed, and the measurement was conducted as part of their environmental monitoring and permit requirements.

OBJECTIVE OF THE MONITORING

The objective of noise monitoring is to provide data regarding the level of noise in a location so that it may be compared to the National Pollution Control Commission's (NPCC) noise limit standard. It is also to assess the impact of industrial activities on noise pollution and implement mitigation strategies to safeguard both workers well-being and the surrounding environment.

SAMPLING METHODOLOGY

A precision-type digital sound level meter was used for noise measurement. The said instrument is a LUTRON sound level meter, Model SL-4033SD. The sound level meter meets the IEC 61672 class 1 standard. The sound level meter that was used to measure the level was calibrated at Switchtek Measurement Systems with an acoustical calibrator (Lutron Sound Level). The noise was measured using an "A" weighting network and "slow response" with different limits for various times of the day and area categories. Noise measurement was performed for about 3 minutes per station after the 1-hour ambient sampling activity. The noise sampler was handheld at about thirty degrees (30°) from the plane directly pointing to the facility.

SAMPLING LOCATIONS

There are three (3) sampling stations for noise level measurement monitoring. The table below shows the location and observations made during the sampling activity.

| STN | LOCATION | OBSERVATION / DURING NOISE LEVEL MEASUREMENT |
|-----|--------------------------------|---|
| 1 | Along Keymens Road | The audible noise detected came from the machinery around the area. |
| 2 | Near Assay Laboratory & Gate 2 | The audible noise detected came from the people's voices and vehicles that passed by near the sampling point. |
| 3 | Near BCACMP Office | The audible noise detected came from the guard post (radio) near the sampling point. |

SUMMARY OF RESULTS

Table 3
Noise Level Measurement Monitoring Reading

| Location | Time | Median (dBA) | Category of the Area | DENR Standard (dBA) |
|--------------------------------|-------------|--------------|----------------------|---------------------|
| Along Keymens Road | 1123H-1126H | 57.8 | Class C | 70 |
| Near Assay Laboratory & Gate 2 | 1235H-1238H | 57.4 | Class C | 70 |
| Near BCACMP Office | 1345H-1348H | 56.3 | Class C | 70 |

Table 4
Environmental Noise Quality Standards in General Areas

| Category of the Area | Maximum Allowable Noise (dBA) | | |
|----------------------|-------------------------------|---|-----------------------------|
| | Day Time
0900H to 1800H | Morning & Evening
0500H to 0900H /
1800H to 2200H | Nighttime
2200H to 0500H |
| AA | 50 | 45 | 40 |
| A | 55 | 50 | 45 |
| B | 65 | 60 | 55 |
| C | 70 | 65 | 60 |
| D | 75 | 70 | 65 |

The Philippines standard for noise is categorized into five (5) classes of sections, and the maximum allowable noise is classified in different time.

Description per Category

- Class AA A section or contiguous area which requires quietness, such as areas within 100 meters from school sites, nursery schools, hospital, and special home for the aged.
- Class A A section or contiguous area which is primarily used for residential purposes.
- Class B A section or contiguous area which zoned or used as a commercial area.
- Class C A section primarily zoned or used as a light industrial area.
- Class D A section which is primarily reserved, zoned, or used as a heavy industrial area.

DISCUSSION OF RESULTS

The environmental noise standards are based on Memorandum Circular No. 002 Series of 1980 of the National Pollution Control Commission. The noise was measured using an "A" weighting network and "slow response" with different limits for various times of the day and area categories. The location of Benguet Corporation - Acupan Contract Mining Project is primarily zoned or used as light industrial area (Class C) with a DENR Daytime Noise Standard of 70 dBA.

The results of the noise level measurement reading show that the noise level in ***stations 1 to 3 is within the applicable DENR daytime limit of 70 dBA***. The audible noise detected came from the vehicles that passed by near the sampling point.

“APPENDIX A”

***AMBIENT AIR MONITORING
FIELD DATAS***

AMBIENT AIR MONITORING DATA
Benguet Corporation - Acupan Contract Mining Project
June 29, 2024

GPS Location: N 16°21'36" E 120°39'32"

| Station 1
(Upwind) | Along Keymens Road | | | Flowrate | | | Wind Speed |
|-----------------------|--------------------|--------------|------|----------|-----|-----|------------|
| | | | | TSP | NO2 | SO2 | |
| Time | Pbar inHg | Amb. Tmp. °C | RH% | m3/min | lpm | lpm | m/s |
| 1021H-1031H | 27.10 | 33.8 | 54.9 | 1.0 | 0.5 | 0.5 | 0.2 |
| 1031H-1041H | 27.10 | 32.2 | 56.6 | 1.0 | 0.5 | 0.5 | 0.1 |
| 1041H-1051H | 27.09 | 31.3 | 59.2 | 1.0 | 0.5 | 0.5 | 0.2 |
| 1051H-1101H | 27.09 | 30.1 | 59.9 | 1.0 | 0.5 | 0.5 | 0.3 |
| 1101H-1110H | 27.09 | 31.9 | 60.5 | 1.0 | 0.5 | 0.5 | 0.1 |
| 1111H-1121H | 27.09 | 32.1 | 58.7 | 1.0 | 0.5 | 0.5 | 0.2 |
| Average | 27.09 | 31.9 | 58.3 | 1.0 | 0.5 | 0.5 | 0.2 |

GPS Location: N 16°21'34" E 120°39'31"

| Station 2
(Downwind) | Near Assay Laboratory & Gate 2 | | | Flowrate | | | Wind Speed |
|-------------------------|--------------------------------|--------------|------|----------|-----|-----|------------|
| | | | | TSP | NO2 | SO2 | |
| Time | Pbar inHg | Amb. Tmp. °C | RH% | m3/min | lpm | lpm | m/s |
| 1132H-1142H | 28.17 | 34.7 | 52.8 | 1.0 | 0.5 | 0.5 | 0.2 |
| 1142H-1152H | 27.17 | 35.2 | 49.1 | 1.0 | 0.5 | 0.5 | 0.1 |
| 1152H-1202H | 27.17 | 34.9 | 48.6 | 1.0 | 0.5 | 0.5 | 0.2 |
| 1202H-1212H | 27.16 | 34.4 | 51.8 | 1.0 | 0.5 | 0.5 | 0.2 |
| 1212H-1222H | 27.16 | 33.8 | 52.6 | 1.0 | 0.5 | 0.5 | 0.1 |
| 1222H-1232H | 27.16 | 34.1 | 53.4 | 1.0 | 0.5 | 0.5 | 0.2 |
| Average | 27.33 | 34.5 | 51.4 | 1.0 | 0.5 | 0.5 | 0.2 |

GPS Location: N 16°21'38" E 120°39'36"

| Station 3
(Upwind) | Near BCACMP Office | | | Flowrate | | | Wind Speed |
|-----------------------|--------------------|--------------|------|----------|-----|-----|------------|
| | | | | TSP | NO2 | SO2 | |
| Time | Pbar inHg | Amb. Tmp. °C | RH% | m3/min | lpm | lpm | m/s |
| 1244H-1254H | 27.13 | 33.4 | 54.8 | 1.0 | 0.5 | 0.5 | 0.3 |
| 1254H-1304H | 27.13 | 31.6 | 61.3 | 1.0 | 0.5 | 0.5 | 0.2 |
| 1304H-1314H | 27.13 | 32.5 | 59.8 | 1.0 | 0.5 | 0.5 | 0.2 |
| 1314H-1324H | 27.13 | 31.4 | 58.1 | 1.0 | 0.5 | 0.5 | 0.3 |
| 1324H-1334H | 27.12 | 32.9 | 59.5 | 1.0 | 0.5 | 0.5 | 0.2 |
| 1334H-1344H | 27.12 | 30.6 | 63.4 | 1.0 | 0.5 | 0.5 | 0.4 |
| Average | 27.13 | 32.1 | 59.5 | 1.0 | 0.5 | 0.5 | 0.3 |

NOISE LEVEL MEASUREMENT MONITORING RESULTS
Benguet Corporation - Acupan Contract Mining Project
June 29, 2024

| Station 1 | Along Keymens Road | | |
|---------------------------------|--------------------|-----------|-------|
| Time of Sampling (1123H- 1126H) | | | |
| 58.1 | 59.2 | 55.7 | 58.4 |
| 57.2 | 57.6 | 56.2 | 58.8 |
| 58.8 | 59.4 | 58.1 | 57.1 |
| 55.4 | 58.9 | 57.5 | 56.9 |
| 56.7 | 57.7 | 55.8 | 58.3 |
| 55.6 | 57.8 | 53.2 | 59.6 |
| 58.2 | 58.2 | 54.6 | 58.9 |
| Median = | 57.8 | Average = | 57.43 |
| Minimum = | 53.2 | Maximum = | 59.6 |

| Station 2 | Near Assay Laboratory & Gate 2 | | |
|----------------------------------|--------------------------------|-----------|-------|
| Time of Sampling (1235H - 1238H) | | | |
| 55.7 | 54.7 | 62.8 | 54.1 |
| 57.5 | 56.4 | 60.1 | 57.3 |
| 59.3 | 53.8 | 58.7 | 56.6 |
| 58.6 | 55.9 | 59.1 | 57.5 |
| 57.2 | 58.2 | 56.8 | 59.4 |
| 58.1 | 59.6 | 52.9 | 58.6 |
| 56.8 | 62.4 | 53.7 | 55.3 |
| Median = | 57.4 | Average = | 57.40 |
| Minimum = | 52.9 | Maximum = | 62.8 |

| Station 3 | Near BCACMP Office | | |
|----------------------------------|--------------------|-----------|-------|
| Time of Sampling (1345H - 1348H) | | | |
| 49.8 | 59.4 | 57.8 | 55.1 |
| 49.9 | 57.8 | 55.9 | 55.8 |
| 54.6 | 58.7 | 53.1 | 58.3 |
| 52.1 | 58.9 | 54.6 | 57.6 |
| 55.8 | 59.6 | 56.7 | 54.5 |
| 54.3 | 61.3 | 58.2 | 53.8 |
| 58.2 | 60.4 | 56.8 | 55.9 |
| Median = | 56.3 | Average = | 56.25 |
| Minimum = | 49.8 | Maximum = | 61.3 |



AMBIENT AIR QUALITY AND NOISE LEVEL MONITORING

Name of Facility: Benguet Corporation - Acupan Contract Mining Project
 Facility Address: Palatoc, Virac, Itogon Benguet
 Facility Representative: LORENZ CANALDO Personnel: Mike, Rina

Station No.: 1 (new)
 Specific Location: Along Keyment Road
 Sampling Date: 6/24/20 Coordinates: 16°21'36"N 120°39'32"E
 Filter ID: 240217 Filter Weight: 2.692
2.6891

| Time | pBar
inHg | RH% | Ambient
Temp.,
°C | SO2
Flow
Rate,
lpm | NO2
Flow
Rate,
lpm | TSP
Flow
Rate,
lpm | Weather
Condition | Wind
Direction | Wind
Speed
m/s |
|-----------------|--------------|-------|-------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------|-------------------|----------------------|
| 10:21H - 10:31H | 27.10 | 55.7 | 25.8 | 0.5 | 0.5 | 1.0 | Cloudy | SW-SE | 0.2 |
| 10:31H - 10:41H | 27.10 | 56.18 | 25.2 | 0.5 | 0.5 | 1.0 | Cloudy | SW-SE | 0.1 |
| 10:41H - 10:51H | 27.09 | 57.2 | 25.7 | 0.5 | 0.5 | 1.0 | Cloudy | SW-SE | 0.2 |
| 10:51H - 11:01H | 27.09 | 59.7 | 25.1 | 0.5 | 0.5 | 1.0 | Cloudy | SW-SE | 0.3 |
| 11:01H - 11:11H | 27.07 | 40.5 | 25.9 | 0.5 | 0.5 | 1.0 | Cloudy | SW-SE | 0.1 |
| 11:11H - 11:21H | 27.09 | 58.7 | 25.1 | 0.5 | 0.5 | 1.0 | Cloudy | SW-SE | 0.2 |

Description of the sampling location and observations: (use separate sheet if necessary)

- SO2 CAMP IS OPERATIONAL DURING SAMPLING PERIOD.
- THE AREA WAS DRY WITH LIGHT WIND.
- THE SAMPLING LOCATION POINT IS LOCATED ALONG KEYMENT ROAD.

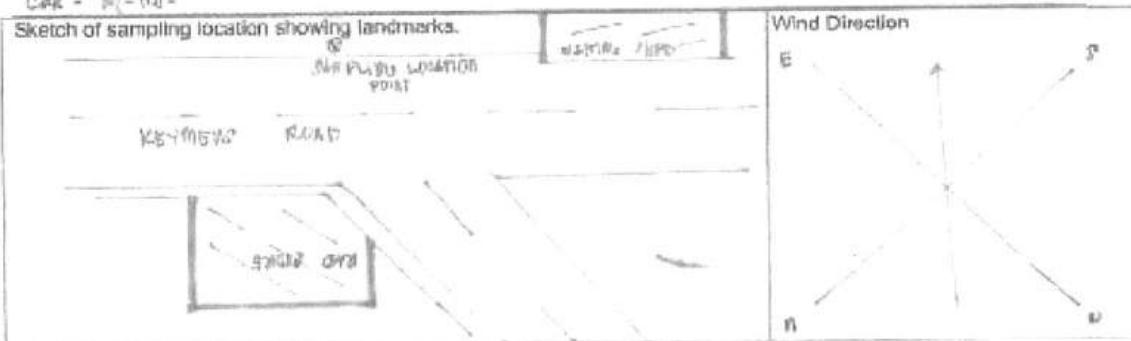
Dustiness - 11

Temp - 11

Relative Humidity - 55.7 - 59.7

Wind - 0.1 - 0.3

Sketch of sampling location showing landmarks.



Noise Level Monitoring

Station No.: 1 (new) Sampling Date: 6/24/20
 Specific Location: ALONG KEYMENT ROAD

| Time | | | | Noise Source / Observation |
|---------|------|------|------|--|
| 12:00 H | 58.1 | 59.2 | 55.7 | NOISE CAME FROM MACHINERY AROUND THE AREA. |
| | 57.2 | 57.6 | 56.2 | |
| | 58.8 | 59.4 | 58.1 | |
| | 58.4 | 58.9 | 57.5 | |
| | 56.7 | 57.7 | 55.8 | |
| | 55.6 | 57.8 | 53.2 | |
| 12:00 H | 58.2 | 58.2 | 54.6 | |



AMBIENT AIR QUALITY AND NOISE LEVEL MONITORING

Name of Facility: BOYBURY CORPORATION - ACHUPAN WASTEWATER TREATMENT PLANT
 Facility Address: PK-1490C VIRAC 1700000000000000
 Facility Representative: LOYD R. CAMERO Personnel: MIC - LMC

Station No.: 2 (DOWNWIND)
 Specific Location: NEAR ACID LAB 1 WASTE 2
 Sampling Date: 11/29/24 Coordinates: 10°51'34"N / 120°59'51"E
 Filter ID: 280218 Filter Weight: 2.4922

| Time | pBar
inHg | RH% | Ambient
Temp.,
°C | SO2
Flow
Rate,
lpm | NO2
Flow
Rate,
lpm | TSP
Flow
Rate,
lpm | Weather
Condition | Wind
Direction | Wind
Speed
m/s |
|---------------------|--------------|------|-------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------|-------------------|----------------------|
| 11/29/24 - 11/29/24 | 27.13 | 42.2 | 34.7 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.2 |
| 11/29/24 - 11/29/24 | 27.17 | 49.1 | 35.2 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.1 |
| 11/29/24 - 11/29/24 | 27.20 | 46.6 | 34.9 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.2 |
| 11/29/24 - 11/29/24 | 27.10 | 51.3 | 34.6 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.2 |
| 11/29/24 - 11/29/24 | 27.10 | 52.6 | 35.2 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.1 |
| 11/29/24 - 11/29/24 | 27.10 | 55.4 | 34.1 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.2 |

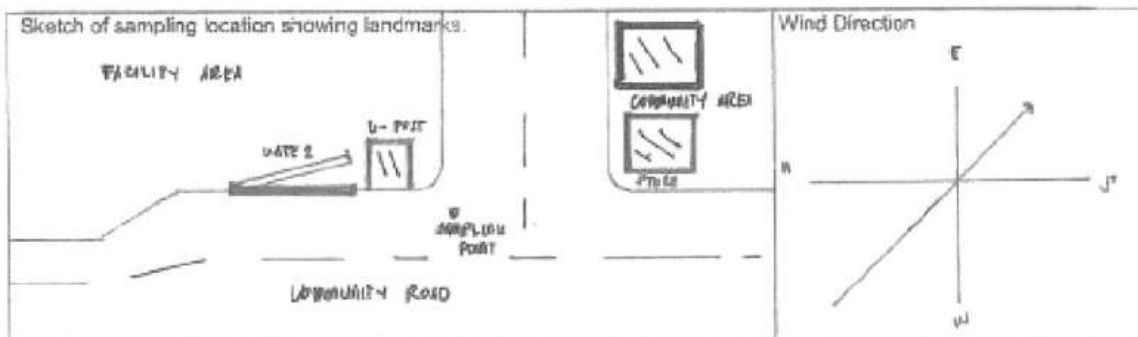
Description of the sampling location and observations: (use separate sheet if necessary)

- PUMP IS OPERATIONAL DURING SAMPLING PERIOD.
- THE SAMPLING LOCATION POINT IS NEAR ACID LAB AND WASTE 2.
- THE AREA WAS DRY WITH LIGHT WIND.

CAR - 10

BOYBURY - 10 - 11

JEFF - 10 - 11



Noise Level Monitoring

Station No.: 2 (DOWNWIND) Sampling Date: 11/29/24
 Specific Location: NEAR ACID LAB 1 WASTE 2

| Time | 55.7 | 54.7 | 53.8 | 54.1 | Noise Source / Observation |
|---------|------|------|------|------|--|
| 12/35 H | 57.5 | 56.4 | 50.1 | 50.5 | NOISE CAME FROM PEOPLE VOICE AND VEHICLE PASSING BY. |
| | 57.9 | 56.8 | 55.7 | 56.6 | |
| | 58.0 | 55.9 | 54.1 | 57.5 | |
| | 57.2 | 58.2 | 56.8 | 57.4 | |
| | 58.1 | 57.6 | 57.9 | 58.6 | |
| 12/38 H | 54.8 | 53.4 | 53.7 | 56.5 | |

Name of Facility: BERNUT CORPORATION - AGUPAN CONTRACT MINING PROJECT
Facility Address: BALITAC VIRAC, TOWN BERNUT
Facility Representative: LLOYD P. CAMADO Personnel: MMC - RMC

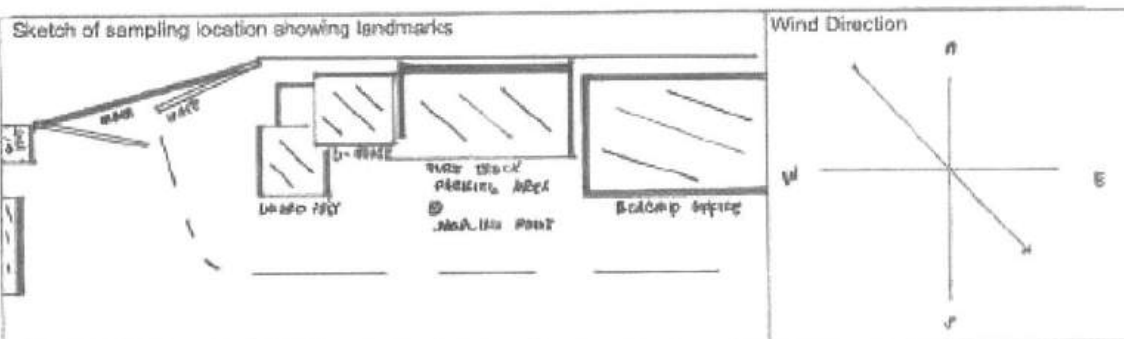
Station No.: 3 (UPWIND)
Specific Location: NEAR BOACAMP OFFICE
Sampling Date: 6/29/24 Coordinates: 16° 21' 48" N / 120° 39' 46" E
Filter ID: 240224 Filter Weight: 2.4267

| Time | pBar
inHg | RH% | Ambient
Temp.,
°C | SO ₂
Flow
Rate,
lpm | NO ₂
Flow
Rate,
lpm | TSP
Flow
Rate,
lpm | Weather
Condition | Wind
Direction | Wind
Speed
m/s |
|-------------|--------------|------|-------------------------|---|---|-----------------------------|----------------------|-------------------|----------------------|
| 1244H-1254H | 27.15 | 54.2 | 35.4 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.3 |
| 1259H-1309H | 27.15 | 51.5 | 31.6 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.2 |
| 1304H-1314H | 27.15 | 57.8 | 32.5 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.2 |
| 1314H-1324H | 27.15 | 58.1 | 31.1 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.3 |
| 1324H-1334H | 27.12 | 59.5 | 32.7 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.2 |
| 1334H-1344H | 27.12 | 60.4 | 30.6 | 0.5 | 0.5 | 1.0 | SUNNY | NW-SE | 0.4 |

Description of the sampling location and observations: (use separate sheet if necessary)

- BOACAMP IS OPERATIONAL DURING MONITORING PERIOD.
- THE AREA WAS DRY WITH LIGHT WIND.
- THE SAMPLING POINT IS NEAR BOACAMP OFFICE

MOTORCYCLE - 11
CAR - 04 - 011



Noise Level Monitoring

Station No.: 3 (UPWIND) Sampling Date: 6/29/24
Specific Location: NEAR BOACAMP OFFICE

| Time | | | | | Noise Source / Observation |
|-------|------|------|------|------|--|
| 1345H | 49.8 | 50.4 | 57.8 | 55.1 | NOISE CAME FROM UNLAD POST WHILE RADIATING THE AREA. |
| | 49.9 | 57.8 | 55.9 | 55.8 | |
| | 54.6 | 58.7 | 53.1 | 58.3 | |
| | 52.1 | 58.9 | 54.6 | 57.6 | |
| | 55.8 | 59.6 | 56.7 | 54.5 | |
| | 54.5 | 61.3 | 58.2 | 53.8 | |
| 1348H | 58.2 | 60.4 | 56.8 | 55.9 | |

“APPENDIX B”

***RESULTS OF LABORATORY
ANALYSIS***

AMBIENT AIR SAMPLING LABORATORY REPORT
Benguet Corporation - Acupan Contract Mining Project
June 29, 2024

Laboratory Data

| Station # | TSP
ug | SO2
ug | NO2
ug |
|-----------|-----------|-----------|-----------|
| Station 1 | 15,100 | 0.29 | 0.262 |
| Station 2 | 11,000 | 0.29 | 0.299 |
| Station 3 | 12,100 | 0.29 | 0.269 |

Computation

TSP = (concentration-ug)/((flowrate-1.0)*(298/(Tm-ave.+273))*((Pbar-ave.*25.4)/760))*60
 SO2 = (concentration-ug)/((flowrate-0.5/1000)*(298/(Tm-ave.+273))*((Pbar-ave.*25.4)/760))*60
 NO2 = (concentration-ug)/((flowrate-0.5/1000)*(298/(Tm-ave.+273))*((Pbar-ave.*25.4)/760))*60

Concentration at Standard Condition

| Station # | TSP
ug/Ncm | SO2
ug/Ncm | NO2
ug/Ncm |
|-----------|---------------|---------------|---------------|
| Station 1 | 284.4 | 10.9 | 9.9 |
| Station 2 | 207.1 | 10.9 | 10.9 |
| Station 3 | 227.7 | 10.9 | 10.1 |



MACH UNION LABORATORIES INC.

Main Office: Mach Union Building, 335 Alabang-Capote Road, Toton 3, 1740 Las Pitas City, Philippines
Extension Office: ANPRA Bldg., PWC-LTO Cmpd., 334 Alabang-Capote Road, Toton 3, 1740 Las Pitas City
Tel. No.: (02) 8553-8381 / (02) 8553-8382 / (02) 8553-8879 / (02) 8580-2573 Fax No.: (02) 8553-6878
Email: info@machunion.com • Website: www.machunion.com • <http://www.iso9001.com/MachUnion>
Accredited: Philippine Accreditation Bureau (DTI-PAB) • Department of Health • Food & Drug Administration
Recognized: Department of Environment & Natural Resources (DENR-EMB) • Bureau of Animal Industry (DA-BAI)

CERTIFICATE OF ANALYSIS

Work Order : MU24013542 Lab. Sample ID : MU24013542-001 Date Reported: 07/16/2024
Client ID : NCRMUL-000356
CUSTOMER : GREENTEK ENVIRONMENTAL PHILS., CO.
2353 RJ Place Bldg., Unit 3A, Selya St., Pandacan, Manila
Attention : Lwayway P. Gaddi
09175130240
jrd.greentek@gmail.com
PROJECT DETAILS: Benguet Corporation - Acupan Contract Mining Project

SAMPLE INFORMATION

| | | | |
|--------------------------|--|------------------------------|---------------------|
| Sample Type | Air Ambient | Storage Condition | Chilled and Ambient |
| Identification | BENQUET CORPORATION - ACUPAN CONTRACT MINING PROJECT | | |
| Description | Air Ambient Sample in Absorbing Solution in 50mL HDPE and Filter Paper (Round) | | |
| Collection Date and Time | 06/29/2024 12:00 AM | Received Date and Time | 07/03/2024 01:00 PM |
| Collected by | CUSTOMER | Analyzed Start Date and Time | 07/03/2024 09:30 AM |
| | | Analyzed End Date and Time | 07/12/2024 06:00 AM |

Comments:

1. All sample information stated herein are based on the details provided by the customer. This results in this certificate of testing relates only to the samples submitted to and tested by the laboratory.



MACH UNION LABORATORIES INC.

Main Office: Mach Union Building, 335 Alabang-Zapote Road, Taron 3, 1740 Las Pinas City, Philippines
 Extension Office: ANPRAS Bldg., PWC-CTO Compd., 314 Alabang-Zapote Road, Taron 3, 1740 Las Pinas City
 Tel. No. (02)8553-8361 / (02)8553-8382 / (02)8553-8870 / (02)8553-2573 Fax No. (02) 8553-8878
 Email: info@machunion.com • Website: www.machunion.com • http://www.facebook.com/MachUnion
 Accredited: Philippine Accreditation Bureau (DTI-PAB) • Department of Health • Food & Drug Administration
 Recognized: Department of Environment & Natural Resources (DENR-DAB) • Bureau of Animal Industry (DA-BAI)

PAB
 PAB ACCREDITED
 TESTING LABORATORY
 PNB ISO/IEC 17025:2017
 LA-2012-25C

CERTIFICATE OF ANALYSIS

Work Order: MU24013542 Lab. Sample ID: MU24013542-001 Date Reported: 07/16/2024
 CUSTOMER: GREENTEK ENVIRONMENTAL PHILS. CO.
 Sample Source: ATI AIR QUALITY MONITORING

LABORATORY TEST RESULTS

| SAMPLE ID | PARAMETER | TEST METHOD | UNIT | RESULT |
|----------------|-----------------------------|---------------------------------|------|--------|
| BCACMP - STN 1 | Nitrogen dioxide | Griess Saltzman Method | ug | 0.26 |
| BCACMP - STN 1 | Sulfur dioxide | Pararosaniline Method | ug | < 0.25 |
| BCACMP - STN 1 | Total Suspended Particulate | High Volume /Gravimetric Method | ug | 16100 |
| BCACMP - STN 2 | Nitrogen dioxide | Griess Saltzman Method | ug | 0.299 |
| BCACMP - STN 2 | Sulfur dioxide | Pararosaniline Method | ug | < 0.25 |
| BCACMP - STN 2 | Total Suspended Particulate | High Volume /Gravimetric Method | ug | 11000 |
| BCACMP - STN 3 | Nitrogen dioxide | Griess Saltzman Method | ug | 0.26 |
| BCACMP - STN 3 | Sulfur dioxide | Pararosaniline Method | ug | < 0.25 |
| BCACMP - STN 3 | Total Suspended Particulate | High Volume /Gravimetric Method | ug | 12100 |

Test Method References:

Code of Federal Regulations Title 40 Parts 50 to 51, USA (1995)
 Selected Methods of Measuring Air Pollutants, NIOS, 1976
 US EPA Title 40 Code of Federal Regulations, Part 50: Standards of Performance for New Stationary Sources, Appendix A to D (1991)

Checked by:

Katrina M. Laguyan, RCh
 Chemist
 PRC# 13881

Certified by:

Maria T. Manao, RCh
 Supervising Chemist
 PRC# 0005485

Approved for Release by:

Aladino M. Abulencia, ChE
 Technical Manager
 PRC License No. 008351

“APPENDIX C”

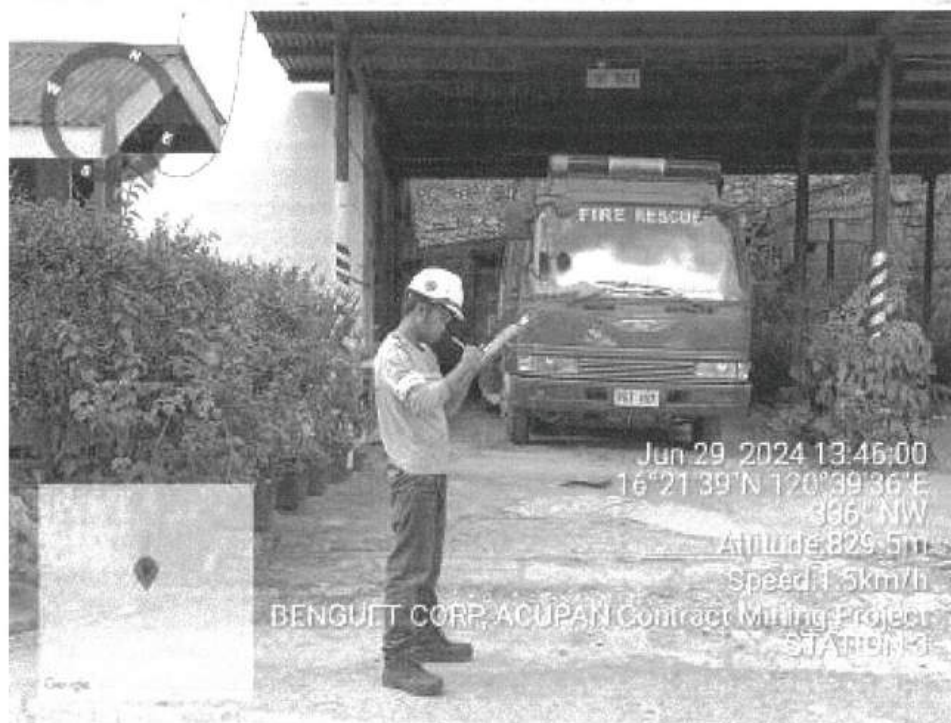
***SAMPLING ACTIVITY PHOTOS
AND VICINITY MAP***



Station 1 - Along Keymens Road (UPWIND)



Station 2 - Near Assay Laboratory & Gate 2 (DOWNWIND)



Station 3 - Near BCACMP Office (UPWIND)

“APPENDIX D”

***AMBIENT AIR EQUIPMENT CALIBRATION
CERTIFICATES***



Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Baluy-Turn, Quezon City, 1100, Philippines
Tel Nos. 02 4267503 / 9282869 / 9287769 Fax No. 4267604
email Address: admin@switchtek.com.ph
www.switchtek.com.ph



| | | | |
|------------------|----------------------------------|----------------------------|----------------------------|
| Certificate No.: | 4080.23-0342-1.23 | Calibration of | 3 IN1 (Barometer Function) |
| Modification: | GREENEX ENVIRONMENTAL PHILS., CO | Test and Verification | |
| Job: | P1 | Certificate of Calibration | |
| Place: | 32 | Initials: | CAC |
| Date: | November 22, 2023 | Min | Hours |
| Category: | Calibration | 1 | 1.00 |
| Cal Officer: | | Total cost | Type |
| | | | Certificate |

CERTIFICATE OF CALIBRATION - 3 IN 1 (Barometer Function)

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

Issued to: GREENEX ENVIRONMENTAL PHILS., CO
Address: 2363 RI PLACE UNIT 3A SELVA STREET BRGY. B60 PANDACAN, MANILA, PHILIPPINES

UNIT UNDER TEST (UUT):

Instrument: 3 IN1 (barometer function)
Brand: LUTRON
Model No.: PHB-318
Serial No.: No record
ID code: No record
Range: Temp. (0-50 Deg. C)
Humidity (10 to 95%)
Dewpoint (-25.3 to 48.9 Deg. C)
Barometer (10 to 999.9 hPa)
Resolution: Temp. (0.1 Deg. C)
Humidity (0.1 %)
Dewpoint (0.1 Deg. C)
Barometer (1 hPa)
Accuracy: Temperature: $\pm 0.8 / 1.5$ °C / °F
RH: ± 1 (3% reading + 1% RH)
Barometric pressure: 10.0 to 999.9 (± 1.5 hPa)
Calibration Date: November 20, 2023
Calibration Due: November 19, 2024

CALIBRATOR INFORMATION:

Instrument: Barigo, precision barometer
Instrument: Druck, pressure calibrator
Instrument: LumeL temp and humidity transmitter
Instrument: Temperature and Humidity chamber
Model No.: KD-GTS-24
Serial No.: 20130503
Traceability: CRM

Environmental Condition:

Condition: DRY/BASIC/NEUTRAL
Relative Humidity: 55.6 ± 5%, 1007 hPa

Ambient Temp. (Deg C): 24.4 ± 2

Calibration Method:

By comparison technique, unit under test was placed in a Chamber with a Standard precision barometer, Temperature and Humidity calibrator. Procedures of calibration and test conform to the requirements of NPL, NIST and ISO/IEC Guide 17025. Data were gathered and plotted against an ideal curve.

Standard error and uncertainty of measurement are written on the attached sheet.

Remarks:

All data pertain only to the unit described obtained at the time of test. This certificate is not valid w/out seal and signature. Unauthorized reproduction is prohibited.

Calibrated By: E.A. CASADO
Date: November 20, 2023

Certified By: A.B. CALIBRO
Date: November 22, 2023

Imprimatur: "I hereby certify that the instrument described herein was calibrated and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards." E.A. CASADO, Calibration Officer, Switchtek Measurement Systems, Inc. (S.M.S.), 4th Floor Northridge Plaza, Annex A, 12 Congressional Ave., Baluy-Turn, Quezon City, 1100, Philippines. Tel Nos. 02 4267503 / 9282869 / 9287769 Fax No. 4267604 email Address: admin@switchtek.com.ph www.switchtek.com.ph

[illegible]

[illegible]

“APPENDIX E”

AMBIENT AIR TESTING PARTICIPANTS

AMBIENT AIR TESTING PARTICIPANTS

BENGUET CORPORATION - ACUPAN CONTRACT MINING PROJECT

Mr. Lloyd P. Camado - Facility Representative

GREENTEK ENVIRONMENTAL PHILS. CO.

Mr. Angelo V. Guevarra - QA/QC Manager

Mr. Manny R. Cruz - Field Technician

Mr. Rodel M. Castante - Field Technician



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Visayas Avenue, Diliman, Quezon City



SAT No. 2023 – 151

CERTIFICATE OF ACCREDITATION

Pursuant to DENR Administrative Order No. 26 Series of 2013 of the Department of Environment and Natural Resources having substantially met all the requirements prescribed therein,

GREENTEK ENVIRONMENTAL PHILS. CO.

#2430 Laura St., Pandacan Manila

is hereby duly accredited as

SOURCE EMISSION TESTING FIRM

As such, the following are authorized as:

QA/QC Manager

Danilo M. Palaypay, Jr.

Team Leader

Aaron Jonathan R. Regilme

This certification shall allow the above firm and personnel to conduct stack testing limited to the following methods and parameters:

1. US-EPA Method 1 to 5 – PM
2. US-EPA Method 6/8 – SO₂
3. US-EPA Method 7 – NO_x
4. US-EPA Method 10 – CO

Granted this December 22, 2023 and valid until December 22, 2026


GILBERT C. GONZALES, CESO III

Director and concurrent
Assistant Secretary for Field Operations



“APPENDIX F”

***LABORATORY CERTIFICATES
OF RECOGNITION***

SCOPE OF RECOGNITION*

Water and Wastewater
Ammonia as $\text{NH}_3\text{-N}$; Arsenic
Barium; BOD; Boron; Cadmium
Chemical Oxygen Demand; Chloride
Chromium as Hexavalent Chromium (Cr^{6+})
Coliform, Fecal; Coliform, Total
Color (True); Copper as Dissolved Copper
Copper, Total; Cyanide as Free Cyanide
Dissolved Oxygen; Fluoride; Iron; Lead
Manganese; Mercury; Nickel; Nitrate as $\text{NO}_3\text{-N}$
Oil and Grease; pH; Phosphate; Selenium
Settleable Solids; Sulfate

DENR RECOGNIZED SIGNATORIES

For Air, Metals, Physical-Chemical
and Waste Analyses
Marisa T. Manao

For Bacteriological Analyses
Luchie S. Ignacio

*Exclusive of sampling, Analytical methods and references
approved for water and wastewater are in Annex CR
040/2020.

ELR LABORATORY CODE NO. NCR-29
Page 1 of 5

Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Visayas Avenue, Diliman, Quezon City

This

CERTIFICATE OF RECOGNITION

C.R. No. 040/2020

is hereby granted to


Mach Union Laboratories, Inc.

Mach Union Bldg., 333 Alabang-Zapote Road, Talon 1, Las Piñas City
and ANTRA Bldg., FMC-LTO Compound, Alabang-Zapote Road, Talon 1, Las Piñas City

after having been assessed and found to comply with the documentation, analytical performance and other technical requirements of Administrative Order No. 63, Series of 1998, Guidelines for the Designation of DENR Recognized Environmental Laboratories.

This certificate is valid for three years from date of issue unless otherwise revoked or cancelled.

In testimony whereof, I have hereunto signed this Certificate and issued the same this thirtieth day of June, year two thousand and twenty at Quezon City, Philippines.


ROY A. CIMATU
Secretary

SCOPE OF RECOGNITION*

Water and Wastewater
Surfactants (Methylene Blue Active Substances)
Temperature; Total Dissolved Solids
Total Suspended Solids; Zinc

Ambient Air
Nitrogen Dioxide; Sulfur Dioxide
Suspended Particulate Matter - PM₁₀
Suspended Particulate Matter - TSP

Stationary Source Emissions
NO_x; Particulates
Sulfur Oxides as SO_x

DENR RECOGNIZED SIGNATORIES

For Air, Metals, Physical-Chemical
and Waste Analyses
Marisa T. Manao

For Bacteriological Analysis
Leticia S. Ignacio

*Excludes of sampling, analytical methods and references
approved for water and wastewater are in Annex CII
0-40/2020.

ELR LABORATORY CODE NO. NCR-29
Page 2 of 8

Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Visayas Avenue, Diliman, Quezon City

This

CERTIFICATE OF RECOGNITION

C.R. No. 040/2020

is hereby granted to

Mach Union Laboratories, Inc.

Mach Union Bldg., 335 Alabang-Zapote Road, Talon 3, Las Piñas City
and ANERA Bldg., PAK-ED Compound, Alabang-Zapote Road, Talon 1, Las Piñas City

after having been assessed and found to comply with the documentation, analytical performance and other technical requirements of Administrative Order No. 63, Series of 1998, Guidelines for the Designation of DENR Recognized Environmental Laboratories.

This certificate is valid for three years from date of issue unless otherwise revoked or cancelled.

In testimony whereof, I have hereunto signed this Certificate and issued the same this thirtieth day of June, year two thousand and twenty at Quezon City, Philippines.

ROY A. CIMATU
Secretary

SCOPE OF RECOGNITION*

Sediments

Arsenic

Total Cadmium, Copper, Iron

Lead, Manganese, Nickel

Silver, Zinc; Total Mercury

Wastes

Antimony: Antimony compounds

Arsenic and its compounds

Barium and its compounds

Cadmium and its compounds

Chromium compounds

Lead compounds

Mercury and mercury compounds

Selenium and its compounds

DENR RECOGNIZED SIGNATORIES

*For Air, Metals, Physical-Chemical
and Waste Analyses*

Marissa T. Manant

For Bacteriological Analysis

Luchie S. Ignacio

**Excludes of sampling, analytical methods and references
approved for water and wastewater use in Annex CR
040/2020.*

EL&E LABORATORY CODE NO. NCR-09

Page 2 of 8

Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Visayas Avenue, Diliman, Quezon City

This

CERTIFICATE OF RECOGNITION

C.R. No. 040/2020

is hereby granted to

Mach Union Laboratories, Inc.

*Mach Union Bldg., 315 Alabang-Zapote Road, Talon 3, Las Pilas City
and ANTRA Bldg., FARC-LTD Compound, Alabang-Zapote Road, Talon 1, Las Pilas City*

after having been assessed and found to comply with the documentation, analytical performance and other technical requirements of Administrative Order No. 63, Series of 1998, Guidelines for the Designation of DENR Recognized Environmental Laboratories.

This certificate is valid for three years from date of issue unless otherwise revoked or cancelled.

In testimony whereof, I have hereunto signed this Certificate and issued the same this thirtieth day of June, year two thousand and twenty at Quezon City, Philippines.


ROY A. CIMATU

Secretary

Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Visayas Avenue, Diliman, Quezon City

ANNEX CR 040/2020
Mach Union Laboratories, Inc.

RECOGNIZED PARAMETERS AND ANALYTICAL METHODS

Water and Wastewater

| PARAMETERS | ANALYTICAL METHODS | REFERENCES |
|-----------------------------------|--|--------------------------------|
| Ammonia as $\text{NH}_3\text{-N}$ | Phenate Method | SMEWW 4500- NH_3 F |
| Arsenic | Electrothermal Atomic Absorption Spectrometric Method
(Nitric Acid / Hotplate Digestion) | SMEWW 3113 B
(SMEWW 3030E) |
| | Manual Hydride Generation/ Atomic Absorption Spectrometric Method | SMEWW 3114 B |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Method) | SMEWW 3120
(SMEWW 3030 F) |
| Barium | Direct Nitrous Oxide – Acetylene Flame Method
(Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3111 D
(SMEWW 3030 F) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method (Nitric Acid – Hydrochloric Acid / Hotplate Method) | SMEWW 3120
(SMEWW 3030 F) |
| BOD | 5-Day BOD Test | SMEWW 5210 B |
| Boron | Carminic Method | SMEWW 4500-B C |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Method) | SMEWW 3120
(SMEWW 3030 F) |
| Cadmium | Direct Air-Acetylene Flame Method
(Nitric Acid - Hydrochloric Acid/ Hotplate Digestion Method) | SMEWW 3111 B
(SMEWW 3030 F) |

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DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Visayas Avenue, Diliman, Quezon City

ANNEX CR 040/2020
Mach Union Laboratories, Inc.

RECOGNIZED PARAMETERS AND ANALYTICAL METHODS

Water and Wastewater

| PARAMETERS | ANALYTICAL METHODS | REFERENCES |
|---|--|--|
| Cadmium | Electrothermal Atomic Absorption Spectrometric Method
(Nitric Acid / Hotplate Digestion) | SMEWW 3113 B
(SMEWW 3030E) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Method) | SMEWW 3120
(SMEWW 3030 F) |
| Chemical Oxygen Demand | Open Reflux Method | SMEWW 5220 B |
| | Closed Reflux, Colorimetric Method | SMEWW 5220 D |
| Chloride | Argentometric Method | SMEWW 4500-Cl ⁻ B |
| | Ion Chromatography with Chemical Suppression of Eluent Conductivity | SMEWW 4110 B |
| Chromium as Hexavalent Chromium (Cr ⁶⁺) | Colorimetric Method | SMEWW 3500-Cr B |
| Coliform, Fecal | Multiple Tube Fermentation Technique – Fecal Coliform Procedure | SMEWW 9221 E |
| Coliform, Total | Multiple Tube Fermentation Technique – Standard Total Coliform Fermentation Technique | SMEWW 9221 B |
| Color (True) | Visual Comparison Method | SMEWW 2120 B |
| Copper as Dissolved Copper | Direct Air-Acetylene Flame Method
(Nitric Acid - Hydrochloric Acid / Hotplate Digestion Method) | SMEWW 3111 B
(SMEWW 3030 F with SMEWW 3030 B) |
| | Electrothermal Atomic Absorption Spectrometric Method
(Nitric Acid / Hotplate Digestion) | SMEWW 3113 B
(SMEWW 3030 E with SMEWW 3030 B) |

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RECOGNIZED PARAMETERS AND ANALYTICAL METHODS

Water and Wastewater

| PARAMETERS | ANALYTICAL METHODS | REFERENCES |
|-------------------------|--|--------------------------------|
| Copper, Total | Direct Air-Acetylene Flame Method
(Nitric Acid - Hydrochloric Acid /
Hotplate Digestion Method) | SMEWW 3111 B
(SMEWW 3030 F) |
| | Electrothermal Atomic Absorption
Spectrometric Method
(Nitric Acid / Hotplate Digestion) | SMEWW 3113 B
(SMEWW 3030 E) |
| | Inductively Coupled Plasma –
Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid /
Hotplate Method) | SMEWW 3120
(SMEWW 3030 F) |
| Cyanide as Free Cyanide | Cyanide – Selective Electrode (w/o
distillation) | SMEWW 4500-CN- F |
| Dissolved Oxygen | Iodometric Method - Azide
Modification | SMEWW 4500-O C |
| | Membrane Electrode Method | SMEWW 4500-O G |
| Fluoride | Ion Chromatography with Chemical
Suppression of Eluent Conductivity | SMEWW 4110 B |
| | Ion-Selective Electrode Method | SMEWW 4500-F C |
| Iron | Direct Air-Acetylene Flame Method
(Nitric – Hydrochloric Acid/ Hotplate
Digestion) | SMEWW 3111 B
(SMEWW 3030 F) |
| | Inductively Coupled Plasma –
Emission Spectroscopy Method
(Nitric – Hydrochloric Acid/ Hotplate
Digestion) | SMEWW 3120 B
(SMEWW 3030 F) |
| Lead | Direct Air-Acetylene Flame Method
(Nitric Acid/ Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 E) |

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RECOGNIZED PARAMETERS AND ANALYTICAL METHODS

Water and Wastewater

| PARAMETERS | ANALYTICAL METHODS | REFERENCES |
|-------------------------------|--|--------------------------------|
| Lead | Electrothermal Atomic Absorption Spectrometric Method
(Nitric Acid/ Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 E) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Method) | SMEWW 3120
(SMEWW 3030 F) |
| Manganese | Direct Air-Acetylene Flame Method
(Nitric – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 F) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Method) | SMEWW 3120
(SMEWW 3030 F) |
| Mercury | Cold-Vapor Atomic Absorption Spectrophotometric Method | SMEWW 3112 B |
| Nickel | Direct Air-Acetylene Flame Method
(Nitric – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 F) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Method) | SMEWW 3120
(SMEWW 3030 F) |
| Nitrate as NO ₃ -N | Ion Chromatography with Chemical Suppression of Eluent Conductivity | SMEWW 4110 B |
| | Nitrate Electrode Method | SMEWW 4500-NO ₃ - D |

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RECOGNIZED PARAMETERS AND ANALYTICAL METHODS

Water and Wastewater

| PARAMETERS | ANALYTICAL METHODS | REFERENCES |
|--|--|--|
| Oil and Grease | Liquid-Liquid, Partition - Gravimetric Method | SMEWW 5520 B |
| pH | Electrometric Method | SMEWW 4500-H ⁺ B |
| Phosphate | Stannous Chloride Method | SMEWW 4500-P D |
| Selenium | Electrothermal Atomic Absorption Spectrometric Method
(Nitric Acid / Hotplate Digestion) | SMEWW 3113 B
(SMEWW 3030 E) |
| | Inductively Coupled Plasma - Emission Spectroscopy Method
(Nitric Acid - Hydrochloric Acid / Hotplate Method) | SMEWW 3120
(SMEWW 3030 F) |
| | Manual Hydride Generation/ Atomic Absorption Spectrometric Method | SMEWW 3114 B |
| Settleable Solids | Imhoff Cone Method | SMEWW 2540 F |
| Sulfate | Ion Chromatography with Chemical Suppression of Eluent Conductivity | SMEWW 4110 B |
| | Turbidimetric Method | SMEWW 4500-SO ₄ ²⁻ E |
| Surfactants (Methylene Blue Active Substances) | Anionic Surfactants as MBAS | SMEWW 5540 C |
| Temperature | Laboratory and Field Methods | SMEWW 2550 B |
| Total Dissolved Solids | Gravimetric, Dried at 180°C | SMEWW 2540 C |
| Total Suspended Solids | Gravimetric, Dried at 103-105°C | SMEWW 2540 D |
| Zinc | Direct Air-Acetylene Flame Method
(Nitric - Hydrochloric Acid / Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 F) |
| | Inductively Coupled Plasma - Emission Spectroscopy Method
(Nitric Acid - Hydrochloric Acid / Hotplate Method) | SMEWW 3120
(SMEWW 3030 F) |



AMBIENT AIR QUALITY AND NOISE LEVEL MEASUREMENT MONITORING REPORT

Reference No.: GEPC-AAQM-2412-072

Prepared for:

**BENGUET CORPORATION ACUPAN
CONTRACT MINING PROJECT
Balatoc, Virac, Itogon, Benguet**

Sampling Date: December 13, 2024

Report Date: December 27, 2024

**AMBIENT AIR QUALITY AND NOISE LEVEL
MEASUREMENT MONITORING
REPORT CERTIFICATION**

THREE (3) STATIONS AREA TESTS

PARAMETERS:

TOTAL SUSPENDED PARTICULATE (TSP)
SULFUR DIOXIDE (SO₂)
NITROGEN DIOXIDE (NO₂)
NOISE LEVEL MEASUREMENT

**BENGUET CORPORATION ACUPAN
CONTRACT MINING PROJECT**
Balatoc, Virac, Itogon, Benguet

The ambient air monitoring and noise level measurement monitoring results reported herein were headed and performed by Mr. Danilo M. Palaypay, Jr. and his team. The laboratory analysis of the collected samples is conducted by Mach Union Laboratories Inc. and has been verified and found to be orderly.

I have certified that the information discussed in this report is accurate to the best of my knowledge.

Signed by:



DANILO M. PALAYPAY, JR.

SAT No. 2023-151

Date Signed: December 27, 2024

AMBIENT AIR QUALITY MONITORING REPORT

FACILITY NAME: Benguet Corporation Acupan Contract Mining Project

FACILITY ADDRESS: Balatoc, Virac, Itogon, Benguet

1.0 INTRODUCTION

Greentek Environmental Phils. Co. was contracted by **Benguet Corporation Acupan Contract Mining Project** to conduct ambient air sampling for Three (3) stations within their plant facility as a requirement of their environmental permit and partly for their regular environmental monitoring.

Ambient air sampling was conducted on December 13, 2024, to analyze nitrogen dioxide (NO₂), sulfur dioxide (SO₂) and total suspended particulate (TSP) levels.

2.0 SAMPLING METHODOLOGY

The DENR standard ambient air sampling equipment and analytical procedures were used in the sampling activity. These equipment and procedures are specified below:

Total Suspended Particulate Matter (TSP)

Reference Procedure: USEPA, 40 CFR 50, Appendix B
Sampling Equipment: High Volume Sampler (1-Hour Air Sampler)
Method of Analysis: Gravimetric Method

Sulfur dioxide (SO₂)

Reference Procedure: USEPA, 40 CFR 50, Appendix A
Sampling Equipment: Gas Bubbler Sampler (USEPA compliant)
Method of Analysis: Pararosaniline Method

Nitrogen dioxide (NO₂)

Reference Procedure: Air Pollution Monitoring Manual, EMB-1994
Sampling Equipment: Gas Bubbler Sampler (USEPA compliant)
Method of Analysis: Colorimetric, Griess Saltzman

The SO₂ and NO₂ samples were stored in an icebox, the TSP filters were placed in a clean envelope. All collected samples were then transported to the laboratory for analysis.

3.0 SAMPLING LOCATIONS

There are Three (3) sampling stations for ambient air monitoring. The table below shows the location and observations made during the sampling activity.

| STN | LOCATION | OBSERVATION / ACTIVITY IN THE AREA DURING THE TIME OF SAMPLING |
|-----|---|--|
| 1 | Along Keymens Road
(Upwind) | The Plant facility was operational during sampling with light to moderate wind. There were twelve (12) cars, fourteen (14) trucks and fifteen (15) motorcycles that passed by during sampling. |
| 2 | Near Assay Laboratory
& Gate 2
(Upwind) | The Plant facility was operational during sampling with light to moderate wind. There were ten (10) trucks, five (5) car and eight (8) motorcycles that passed by during sampling. |
| 3 | Near BCACMP Office
(Downwind) | The Plant facility was operational during sampling with light to moderate wind. There were five (5) trucks and one (1) car that passed by during sampling. |

4.0 SUMMARY OF RESULTS

The summary results of the laboratory analysis are presented below for all sampling areas.

Table 1
Laboratory Analysis Results and Standard Limits for 60 minutes sampling

| Stn | Location | Date / Time Sampling | TSP
(ug / Nm ³) | SO ₂
(ug / Nm ³) | NO ₂
(ug / Nm ³) |
|--|--|----------------------------|--------------------------------|--|--|
| 1 | Along Keymens Road
(Upwind) | 13-Dec-2024
1315H-1415H | 270.6 | 10.8 | 19.9 |
| 2 | Near Assay Laboratory & Gate 2
(Upwind) | 13-Dec-2024
1135H-1235H | 190.3 | 10.8 | 15.9 |
| 3 | Near BCACMP Office
(Downwind) | 13-Dec-2024
1015H-1115H | 182.2 | 10.8 | 12.4 |
| DENR NAAQ Standards for 60 minutes sampling | | | 300 | 340 | 260 |

These data are measured to standardize the test results to 25°C and 760mmHg and for comparison purposes.

Table 2
Meteorological Monitoring Reading for 60 minutes sampling

| STN | Location (GPS) | Date / Time Sampling | Barometric Pressure. (Inch Hg) Result Avg. | Ambient Temp.(°C) Result Avg. | % Relative Humidity Result Avg. | Wind Speed Avg. (m/s) |
|-----|--|----------------------------|--|-------------------------------|---------------------------------|-----------------------|
| 1 | Along Keymens Road
(Upwind) | 4-Dec-2024
1315H-1415H | 27.12 | 29.4 | 59.9 | 1.7 |
| | N 16°21'35.718"
E 120°39'31.724" | | | | | |
| 2 | Near Assay Laboratory & Gate 2
(Upwind) | 13-Dec-2024
1135H-1235H | 27.25 | 30.7 | 56.9 | 1.2 |
| | N 16°21'33.744"
E 120°39'30.636" | | | | | |
| 2 | Near BCACMP Office
(Downwind) | 13-Dec-2024
1135H-1235H | 27.27 | 29.9 | 55.8 | 1.1 |
| | N 16°21'38.406"
E 120°39'36.17" | | | | | |

5.0 DISCUSSION OF RESULTS

The USEPA "Quality Assurance Handbook for Air Pollution Measurement Systems, Environmental Management Bureau, Department of Environment and Natural Resources, Philippine Environmental Policies, Laws, and Regulations handbook was used as a guide to achieve the quality assurance objectives of producing data that is complete, representative, and of known precision and accuracy.

The above results of analysis are compared to the National Ambient Air Quality Standards (NAAQS) for source-specific air pollutants from industrial operations. These standards are specified in the Implementing Rules and Regulations of the Philippine Clean Air Act of 1999.

During sampling on December 12, 2024, the weather from stations 2 to 3 was sunny with prevailing light to moderate wind blowing from the Northeast to Southwest, while on December 13, 2024, the weather from station 1 was sunny with prevailing light to moderate wind blowing from the Southwest to Northeast, respectively. *Thus, the results of TSP, SO₂ and NO₂ concentrations are within the applicable CAA/IRR standard for 60 minutes of sampling.*

NOISE LEVEL MEASUREMENT MONITORING REPORT

FACILITY NAME: Benguet Corporation Acupan Contract Mining Project

FACILITY ADDRESS: Balatoc, Virac, Itogon, Benguet

INTRODUCTION

Environmental noise is the unwanted or harmful outdoor sound created by human activity. On December 13, 2024, daytime noise level monitoring was conducted in Three (3) stations within the premises of their facility located at the above address. Noise level measurement was performed, and the measurement was conducted as part of their environmental monitoring and permit requirements.

OBJECTIVE OF THE MONITORING

The objective of noise monitoring is to provide data regarding the level of noise in a location so that it may be compared to the National Pollution Control Commission's (NPCC) noise limit standard. It is also to assess the impact of industrial activities on noise pollution and implement mitigation strategies to safeguard both workers well-being and the surrounding environment.

SAMPLING METHODOLOGY

A precision-type digital sound level meter was used for noise measurement. The said instrument is a LUTRON sound level meter, Model SL-4033SD. The sound level meter meets the IEC 61672 class 1 standard. The sound level meter that was used to measure the level was calibrated at Switchtek Measurement Systems with an acoustical calibrator (Lutron Sound Level). The noise was measured using an "A" weighting network and "slow response" with different limits for various times of the day and area categories. Noise measurement was performed for about 3 to 5 minutes per

station after the 1-hour ambient sampling activity. The noise sampler was handheld at about thirty degrees (30°) from the plane directly pointing to the facility.

SAMPLING LOCATIONS

There are Three (3) sampling stations for noise level measurement monitoring. The table below shows the location and observations made during the sampling activity.

| STN | LOCATION | OBSERVATION / DURING NOISE LEVEL MEASUREMENT |
|------------|--------------------------------|--|
| 1 | Along Keymens Road | The audible noise was detected from the plant facility that the generator set was operational during sampling. |
| 2 | Near Assay Laboratory & Gate 2 | The audible noise was detected from the plant facility that the generator set was operational during sampling. |
| 2 | Near BCACMP Office | The audible noise was detected from the plant facility that the generator set was operational during sampling. |

SUMMARY OF RESULTS

Table 3
Noise Level Measurement Monitoring Reading

| Location | Time | Median (dBA) | Category of the Area | DENR Standard (dBA) |
|--------------------------------|-------------|---------------------|-----------------------------|----------------------------|
| Along Keymens Road | 1420H-1423H | 62.9 | Class C | 70 |
| Near Assay Laboratory & Gate 2 | 1238H-1241H | 55.8 | Class C | 70 |
| Near BCACMP Office | 1120H-1123H | 49.5 | Class C | 70 |

Table 4
Environmental Noise Quality Standards in General Areas

| Category of the Area | Maximum Allowable Noise (dBA) | | |
|----------------------|-------------------------------|---|-----------------------------|
| | Day Time
0900H to 2900H | Morning & Evening
0500H to 0900H /
2900H to 2200H | Nighttime
2200H to 0500H |
| AA | 50 | 45 | 40 |
| A | 55 | 50 | 45 |
| B | 65 | 60 | 55 |
| C | 70 | 65 | 60 |
| D | 75 | 70 | 65 |

The Philippines standard for noise is categorized into Three (3) classes of sections, and the maximum allowable noise is classified in different time.

Description per Category

- Class AA A section or contiguous area which requires quietness, such as areas within 100 meters from school sites, nursery schools, hospital, and special home for the aged.
- Class A A section or contiguous area which is primarily used for residential purposes.
- Class B A section or contiguous area which zoned or used as a commercial area.
- Class C A section primarily zoned or used as a light industrial area.
- Class D A section which is primarily reserved, zoned, or used as a heavy industrial area.

DISCUSSION OF RESULTS

The environmental noise standards are based on Memorandum Circular No. 002 Series of 1980 of the National Pollution Control Commission. The noise was measured using an "A" weighting network and "slow response" with different limits for various times of the day and area categories. The location of Benguet Corporation Acupan Contract Mining Project is primarily zoned or used as a industrial area (Class C) with a DENR Daytime Noise Standard of 70 dBA.

The results of the noise level measurement reading show that the noise level in ***stations 1 to 3 were within the applicable DENR daytime limit of 70 dBA.*** The audible noise was detected from the plant facility and vehicle that passing by during sampling.

“APPENDIX A”

***AMBIENT AIR MONITORING
FIELD DATAS***

AMBIENT AIR MONITORING DATA
Benguet Corporation - Acupan Contract Mining Project
December 13, 2024

GPS Location: N 16°21'35.718" E 120°39'31.724"

| Station 1
(Upwind) | Along Keymens Road | | | Flowrate | | | Wind Speed |
|-------------------------------|---------------------------|--------------|------|----------|-----|-----|------------|
| | | | | TSP | NO2 | SO2 | |
| Time | Pbar inHg | Amb. Tmp. °C | RH% | m3/min | lpm | lpm | m/s |
| 1315H-1325H | 27.12 | 31.1 | 59.2 | 1.0 | 0.5 | 0.5 | 1.8 |
| 1325H-1335H | 27.12 | 29.7 | 59.6 | 1.0 | 0.5 | 0.5 | 1.6 |
| 1335H-1345H | 27.12 | 29.6 | 58.7 | 1.0 | 0.5 | 0.5 | 1.6 |
| 1345H-1355H | 27.11 | 29.0 | 60.0 | 1.0 | 0.5 | 0.5 | 1.8 |
| 1355H-1405H | 27.11 | 28.6 | 60.7 | 1.0 | 0.5 | 0.5 | 1.8 |
| 1405H-1415H | 27.11 | 28.3 | 61.2 | 1.0 | 0.5 | 0.5 | 1.8 |
| Average | 27.12 | 29.4 | 59.9 | 1.0 | 0.5 | 0.5 | 1.7 |

GPS Location: N 16°21'33.744" E 120°39'30.636"

| Station 2
(Upwind) | Near Assay Laboratory & Gate 2 | | | Flowrate | | | Wind Speed |
|-------------------------------|---|--------------|------|----------|-----|-----|------------|
| | | | | TSP | NO2 | SO2 | |
| Time | Pbar inHg | Amb. Tmp. °C | RH% | m3/min | lpm | lpm | m/s |
| 1135H-1145H | 27.25 | 31.2 | 53.2 | 1.0 | 0.5 | 0.5 | 1.2 |
| 1145H-1155H | 27.25 | 31.1 | 57.5 | 1.0 | 0.5 | 0.5 | 1.0 |
| 1155H-1205H | 27.25 | 30.8 | 57.7 | 1.0 | 0.5 | 0.5 | 1.0 |
| 1205H-1215H | 27.24 | 30.7 | 56.7 | 1.0 | 0.5 | 0.5 | 1.2 |
| 1215H-1225H | 27.24 | 29.5 | 59.5 | 1.0 | 0.5 | 0.5 | 1.4 |
| 1225H-1235H | 27.24 | 31.0 | 56.8 | 1.0 | 0.5 | 0.5 | 1.2 |
| Average | 27.25 | 30.7 | 56.9 | 1.0 | 0.5 | 0.5 | 1.2 |

GPS Location: N 16°21'38.406" E 120°39'36.17"

| Station 3
(Downwind) | BCACMP Office | | | Flowrate | | | Wind Speed |
|---------------------------------|----------------------|--------------|------|----------|-----|-----|------------|
| | | | | TSP | NO2 | SO2 | |
| Time | Pbar inHg | Amb. Tmp. °C | RH% | m3/min | lpm | lpm | m/s |
| 1015H-1025H | 27.27 | 28.7 | 58.9 | 1.0 | 0.5 | 0.5 | 1.0 |
| 1025H-1035H | 27.27 | 29.5 | 57.7 | 1.0 | 0.5 | 0.5 | 1.0 |
| 1035H-1045H | 27.27 | 29.9 | 56.3 | 1.0 | 0.5 | 0.5 | 1.2 |
| 1045H-1055H | 27.27 | 30.0 | 55.9 | 1.0 | 0.5 | 0.5 | 1.0 |
| 1055H-1105H | 27.26 | 30.6 | 53.2 | 1.0 | 0.5 | 0.5 | 1.2 |
| 1105H-1115H | 27.26 | 30.9 | 53.0 | 1.0 | 0.5 | 0.5 | 1.2 |
| Average | 27.27 | 29.9 | 55.8 | 1.0 | 0.5 | 0.5 | 1.1 |

NOISE LEVEL MEASUREMENT MONITORING RESULTS
Benguet Corporation - Acupan Contract Mining Project
December 13, 2024

| Station 1 | Along Keymens Road | | |
|---------------------------------|--------------------|-----------|-------|
| Time of Sampling (1420H- 1423H) | | | |
| 65.0 | 62.0 | 63.2 | 62.0 |
| 64.5 | 62.9 | 63.7 | 62.7 |
| 64.3 | 61.9 | 63.6 | 62.5 |
| 69.6 | 62.5 | 62.5 | 63.1 |
| 66.0 | 65.6 | 62.2 | 62.8 |
| 63.9 | 62.6 | 62.3 | 62.6 |
| 63.0 | 63.7 | 61.7 | 62.5 |
| Median = | 62.9 | Average = | 63.39 |
| Minimum = | 61.7 | Maximum = | 69.6 |

| Station 2 | Near Assay Laboratory & Gate 2 | | |
|----------------------------------|--------------------------------|-----------|-------|
| Time of Sampling (1238H - 1241H) | | | |
| 54.6 | 59.8 | 56.5 | 56.3 |
| 53.6 | 69.8 | 55.8 | 55.7 |
| 53.2 | 63.2 | 56.3 | 55.8 |
| 58.2 | 68.5 | 57.8 | 55.5 |
| 53.3 | 55.5 | 55.4 | 61.7 |
| 55.0 | 55.4 | 56.0 | 50.2 |
| 54.5 | 56.6 | 56.1 | 52.1 |
| Median = | 55.8 | Average = | 56.87 |
| Minimum = | 50.2 | Maximum = | 69.8 |

| Station 3 | BCACMP Office | | |
|----------------------------------|---------------|-----------|------|
| Time of Sampling (1120H - 1123H) | | | |
| 53.5 | 50.6 | 52.0 | 48.4 |
| 48.8 | 49.8 | 51.0 | 50.6 |
| 51.3 | 48.6 | 49.0 | 49.6 |
| 48.6 | 48.5 | 48.5 | 49.1 |
| 54.1 | 48.5 | 50.6 | 54.6 |
| 52.4 | 48.8 | 50.8 | 48.8 |
| 51.5 | 47.9 | 49.1 | 49.3 |
| Median = | 49.5 | Average = | 49.3 |
| Minimum = | 47.9 | Maximum = | 54.6 |

AMBIENT AIR QUALITY AND NOISE LEVEL MONITORING

Name of Facility: Benguet Corp Acquis Contract Mining Project

Facility Address: ITOGON Benguet

Facility Representative: Ms. Jamimah Salazar Personnel: RSP, BCB, EGT

Station No.: 1 Cuwina

Specific Location: Along Keyman's Road

Sampling Date: 12-13-24

Coordinates: 16°21'35.712"N 120°39'31.124"E

Filter ID: 240478

Filter Weight: 2.6956

| Time | Barometric Pressure inHg | RH% | Ambient Temp., °C | TSP Flow Rate m³/min | NO2 Flow Rate, lpm | SO2 Flow Rate, lpm | Weather Condition | Wind Direction | Wind Speed m/s |
|-------------|--------------------------|------|-------------------|----------------------|--------------------|--------------------|-------------------|----------------|----------------|
| 1315 - 1325 | 27.12 | 59.2 | 31.1 | 1.0 | 0.5 | 0.5 | Sunny | SW-NE | 1.8 |
| 1325 - 1335 | 27.12 | 59.6 | 29.7 | 1.0 | 0.5 | 0.5 | Sunny | SW-NE | 1.6 |
| 1335 - 1345 | 27.12 | 58.7 | 29.6 | 1.0 | 0.5 | 0.5 | Sunny | SW-NE | 1.6 |
| 1345 - 1355 | 27.11 | 60.0 | 29.0 | 1.0 | 0.5 | 0.5 | Sunny | SW-NE | 1.8 |
| 1355 - 1405 | 27.11 | 60.7 | 28.6 | 1.0 | 0.5 | 0.5 | Sunny | SW-NE | 1.8 |
| 1405 - 1415 | 27.11 | 61.2 | 28.3 | 1.0 | 0.5 | 0.5 | Sunny | SW-NE | 1.8 |

Description of the sampling location and observations: (use separate sheet if necessary)

- The Area is light moderate wind.

- The Plant Facility operational during sampling period.

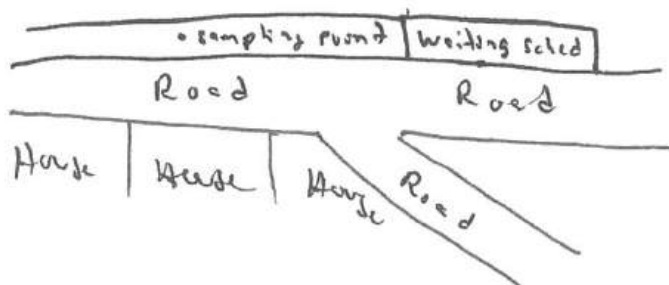
Vehicle

Car - ~~III~~ - ~~III~~ - II

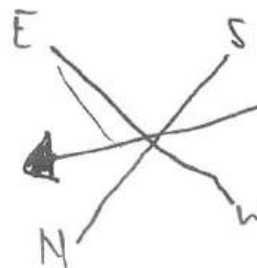
Truck - ~~III~~ - ~~III~~ - ~~III~~ -

Motorcycle - ~~III~~ - ~~III~~ - ~~III~~ -

Sketch of sampling location showing landmarks.



Wind Direction



Noise Level Monitoring

Station No.: 1

Sampling Date: 12-13-24

Specific Location: Along Keyman's Road

| Time | | | | | Noise Source / Observation |
|------|------|------|------|------|------------------------------------|
| 1420 | 65.0 | 62.0 | 63.2 | 62.0 | Noise Came from Facility Operation |
| | 64.5 | 62.4 | 63.7 | 62.7 | |
| | 64.3 | 61.5 | 63.6 | 62.5 | |
| | 64.6 | 62.5 | 62.5 | 63.1 | |
| | 64.0 | 65.6 | 62.2 | 62.6 | |
| | 63.9 | 62.4 | 62.3 | 62.6 | |
| 1423 | 63.0 | 63.7 | 61.7 | 62.5 | |

AMBIENT AIR QUALITY AND NOISE LEVEL MONITORING

Name of Facility: Bunguet Corp Acupan contract Mining Project

Facility Address: ITOGON Bunguet

Facility Representative: Ms. Janimah Salayas Personnel: RSP, BCB, EGT

Station No.: 2 Cupwind

Specific Location: Near Assay Lab and Mut 1st

Sampling Date: 12-13-24

Coordinates: 16°21'33.744"N 120°39'30.636"E

Filter ID: 240477

Filter Weight: 2.6826

| Time | Barometric Pressure
InHg | RH% | Ambient Temp.,
°C | TSP
Flow Rate
m³/min | NO2
Flow Rate,
lpm | SO2
Flow Rate,
lpm | Weather Condition | Wind Direction | Wind Speed
m/s |
|-----------|-----------------------------|------|----------------------|----------------------------|--------------------------|--------------------------|-------------------|----------------|-------------------|
| 1135-1145 | 27.25 | 53.2 | 31.2 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.2 |
| 1145-1155 | 27.25 | 57.5 | 31.1 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.0 |
| 1155-1205 | 27.25 | 57.7 | 30.8 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.0 |
| 1205-1215 | 27.24 | 56.7 | 30.7 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.2 |
| 1215-1225 | 27.24 | 59.5 | 29.5 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.4 |
| 1225-1235 | 27.24 | 56.8 | 31.0 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.2 |

Description of the sampling location and observations: (use separate sheet if necessary)

The Area is cleared but dusty because of
the vehicle passing by the road.
the Area is light moderate wind

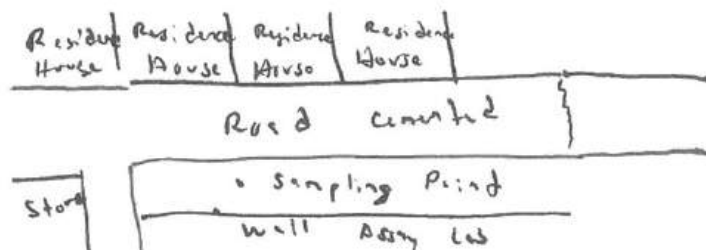
Vehicle

Truck - MH - MH -

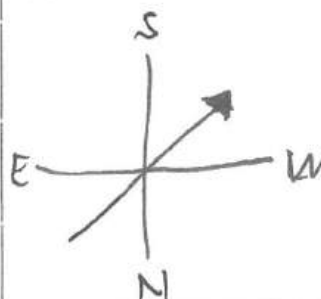
Car - MH -

Motorcycle - MH - MH

Sketch of sampling location showing landmarks.



Wind Direction



Noise Level Monitoring

Station No.: 2

Sampling Date: 12-13-24

Specific Location: Near Assay Lab and Mut 1st

| Time | | | | | Noise Source / Observation |
|------|------|------|------|------|--|
| 1238 | 54.6 | 59.8 | 56.5 | 56.3 | Noise come from
the vehicle passing
by the road. |
| | 53.6 | 69.8 | 55.8 | 55.7 | |
| | 58.2 | 63.2 | 56.3 | 55.8 | |
| | 58.2 | 68.5 | 57.8 | 58.5 | |
| | 57.3 | 55.5 | 55.4 | 61.7 | |
| | 55.0 | 55.4 | 56.0 | 50.2 | |
| 1241 | 54.5 | 56.6 | 56.1 | 52.1 | |

AMBIENT AIR QUALITY AND NOISE LEVEL MONITORING

Name of Facility: Benguet Corp Agupan Contract Mining Project
 Facility Address: ITOGON BENGUET
 Facility Representative: Mr. Terrence Salazar Personnel: RIP, BCB, EGT

Station No.: 3 (downwind)
 Specific Location: GCAMP - OFFICE
 Sampling Date: 12-13-24 Coordinates: 16°21'38.406"N 120°39'36.17"E
 Filter ID: 240476 Filter Weight: 2.6923

| Time | Barometric Pressure inHg | RH% | Ambient Temp., °C | TSP Flow Rate m³/min | NO2 Flow Rate, lpm | SO2 Flow Rate, lpm | Weather Condition | Wind Direction | Wind Speed m/s |
|-----------|--------------------------|------|-------------------|----------------------|--------------------|--------------------|-------------------|----------------|----------------|
| 1015-1025 | 27.27 | 58.9 | 28.7 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.0 |
| 1025-1035 | 27.27 | 57.7 | 29.5 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.0 |
| 1035-1045 | 27.27 | 56.3 | 29.9 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.2 |
| 1045-1055 | 27.27 | 53.9 | 30.0 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.0 |
| 1055-1105 | 27.26 | 53.2 | 30.6 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.2 |
| 1105-1115 | 27.26 | 53.0 | 30.9 | 1.0 | 0.5 | 0.5 | Sunny | NE-SW | 1.2 |

Description of the sampling location and observations: (use separate sheet if necessary)

- The Facility is operation during sampling period.
 - The Area is light Moderate wind.
 Vehicle
 Truck - Nil Motorcycle -
 car - 1

Sketch of sampling location showing landmarks.



Noise Level Monitoring

Station No.: 3 Sampling Date: 12-13-24
 Specific Location: GCAMP - OFFICE

| Time | | | | | Noise Source / Observation |
|------|------|------|------|------|---|
| 1120 | 50.5 | 50.6 | 52.0 | 48.9 | Noise come from the vehicle passing by near road. |
| | 48.8 | 49.8 | 51.0 | 50.6 | |
| | 51.3 | 48.6 | 46.0 | 49.6 | |
| | 48.4 | 48.5 | 48.5 | 49.1 | |
| | 54.1 | 48.5 | 50.6 | 54.6 | |
| | 52.4 | 48.8 | 50.8 | 48.8 | |
| 1123 | 51.5 | 47.9 | 49.1 | 49.9 | |

“APPENDIX B”

***RESULTS OF LABORATORY
ANALYSIS***

AMBIENT AIR SAMPLING LABORATORY REPORT
Benguet Corporation - Acupan Contract Mining Project
December 13, 2024

Laboratory Data

| Station # | TSP
ug | SO2
ug | NO2
ug |
|-----------|-----------|-----------|-----------|
| Station 1 | 14,500 | 0.29 | 0.532 |
| Station 2 | 10,200 | 0.29 | 0.425 |
| Station 3 | 9,800 | 0.29 | 0.333 |

Computation

TSP = (concentration-ug)/(((flowrate-1.0)*(298/(Tm-ave.+273))*((Pbar-ave.*25.4)/760))*60
 SO2 = (concentration-ug)/(((flowrate-0.5/1000)*(298/(Tm-ave.+273))*((Pbar-ave.*25.4)/760))*60
 NO2 = (concentration-ug)/(((flowrate-0.5/1000)*(298/(Tm-ave.+273))*((Pbar-ave.*25.4)/760))*60

Concentration at Standard Condition

| Station # | TSP
ug/Ncm | SO2
ug/Ncm | NO2
ug/Ncm |
|-----------|---------------|---------------|---------------|
| Station 1 | 270.6 | 10.8 | 19.9 |
| Station 2 | 190.3 | 10.8 | 15.9 |
| Station 3 | 182.2 | 10.8 | 12.4 |



MACH UNION LABORATORIES INC.

Main Office: Mach Union Building, 335 Alabang-Zapote Road, Talon 3, 1740 Las Piñas City, Philippines
Extension Office: ANFRA Bldg., FMC-LTO Cmpd., 314 Alabang-Zapote Road, Talon 1, 1740 Las Piñas City
Tel. No.: (02)8553-8381 / (02)8553-8382 / (02)8553-8879 / (02)8550-2573 Fax No.: (02) 8553-8878
Email: info@machunion.com • Website: www.machunion.com • http://www.facebook.com/MachUnion
Accredited: Philippine Accreditation Bureau (DTI-PAB) • Department of Health • Food & Drug Administration
Recognized: Department of Environment & Natural Resources (DENR-EMB) • Bureau of Animal Industry (DA-BAI)

CERTIFICATE OF ANALYSIS

Work Order : MU24035702 Lab. Sample ID : MU24035702-001 Date Reported: 12/21/2024
Client ID : NCRMUL-000356
CUSTOMER : GREENTEK ENVIRONMENTAL PHILS. CO.
2430 Laura St., Brgy. 862, Pandacan, Manila
Attention : Liwayway P. Gaddi
09175139249
greentek.services@yahoo.com
PROJECT DETAILS: BENGUET CORP ACUPAN CONTRACT MINING PROJECT
Itogon, Benguet

SAMPLE INFORMATION

Sample Type : Air Ambient Storage Condition : Chilled and Ambient
Identification : BCACMP AIR QUALITY MONITORING
Description : Air Ambient Sample in Absorbing Solution in 50mL HDPE and Filter Paper (8X10)
Collection Date and Time : 12/13/2024 12:00 AM Received Date and Time : 12/16/2024 02:35 PM
Collected by : CUSTOMER Analyzed Start Date and Time : 12/16/2024 03:15 PM
Analyzed End Date and Time : 12/20/2024 06:00 PM

Comments:

1 All sample information stated herein are based on the details provided by the client. The results in this certificate of testing relates only to the samples submitted to and tested by the laboratory.



MACH UNION LABORATORIES INC.

Main Office: Mach Union Building, 335 Alabang-Zapote Road, Talon 3, 1740 Las Piñas City, Philippines
Extension Office: ANFRA Bldg., FMC-LTO Cmpd., 314 Alabang-Zapote Road, Talon 1, 1740 Las Piñas City
Tel. No.: (02)8553-9381 / (02)8553-8382 / (02)8553-8879 / (02)8550-2573 Fax No.: (02) 8553-8878
Email: info@machunion.com • Website: www.machunion.com • http://www.facebook.com/MachUnion
Accredited: Philippine Accreditation Bureau (DTI-PAB) • Department of Health • Food & Drug Administration
Recognized: Department of Environment & Natural Resources (DENR-EMB) • Bureau of Animal Industry (DA-BAI)



PAB ACCREDITED
TESTING LABORATORY
PNS ISO/IEC 17025:2017
LA-2012-215C

CERTIFICATE OF ANALYSIS

Work Order : MU24035702

Lab. Sample ID : MU24035702-001

Date Reported: 12/21/2024

CUSTOMER : GREENTEK ENVIRONMENTAL PHILS., CO.

Sample Source : BCACMP AIR QUALITY MONITORING

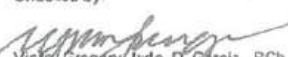
LABORATORY TEST RESULTS

| SAMPLE ID | PARAMETER | TEST METHOD | UNIT | RESULT |
|--------------|-----------------------------|---------------------------------|------|--------|
| BCACWP-STN 1 | Nitrogen Dioxide | Griess Saltzman Method | ug | 0.532 |
| BCACWP-STN 1 | Sulfur dioxide | Pararosaniline Method | ug | < 0.29 |
| BCACWP-STN 1 | Total Suspended Particulate | High Volume /Gravimetric Method | ug | 14500 |
| BCACWP-STN 2 | Nitrogen Dioxide | Griess Saltzman Method | ug | 0.425 |
| BCACWP-STN 2 | Sulfur dioxide | Pararosaniline Method | ug | < 0.29 |
| BCACWP-STN 2 | Total Suspended Particulate | High Volume /Gravimetric Method | ug | 10200 |
| BCACWP-STN 3 | Nitrogen Dioxide | Griess Saltzman Method | ug | 0.333 |
| BCACWP-STN 3 | Sulfur dioxide | Pararosaniline Method | ug | < 0.29 |
| BCACWP-STN 3 | Total Suspended Particulate | High Volume /Gravimetric Method | ug | 9800 |

Test Method Reference:

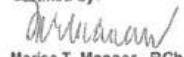
Code of Federal Regulations Title 40 Parts 50 to 51, USA, 1999.
Selected Methods of Measuring Air Pollutants, WHO, 1976.
US EPA Title 40 Code of Federal Regulations, Part 50 Standard of Performance for New Stationary Sources, Appendix A to C, 1991

Checked by:



Victor Gregory Jude D. Garcia, RCh
Chemist III
PRC# 0043349

MU24035702_FINAL_241221 0917H

Certified by:


Marisa T. Manao, RCh
Supervising Chemist
PRC# 0005465

Approved for Release by:

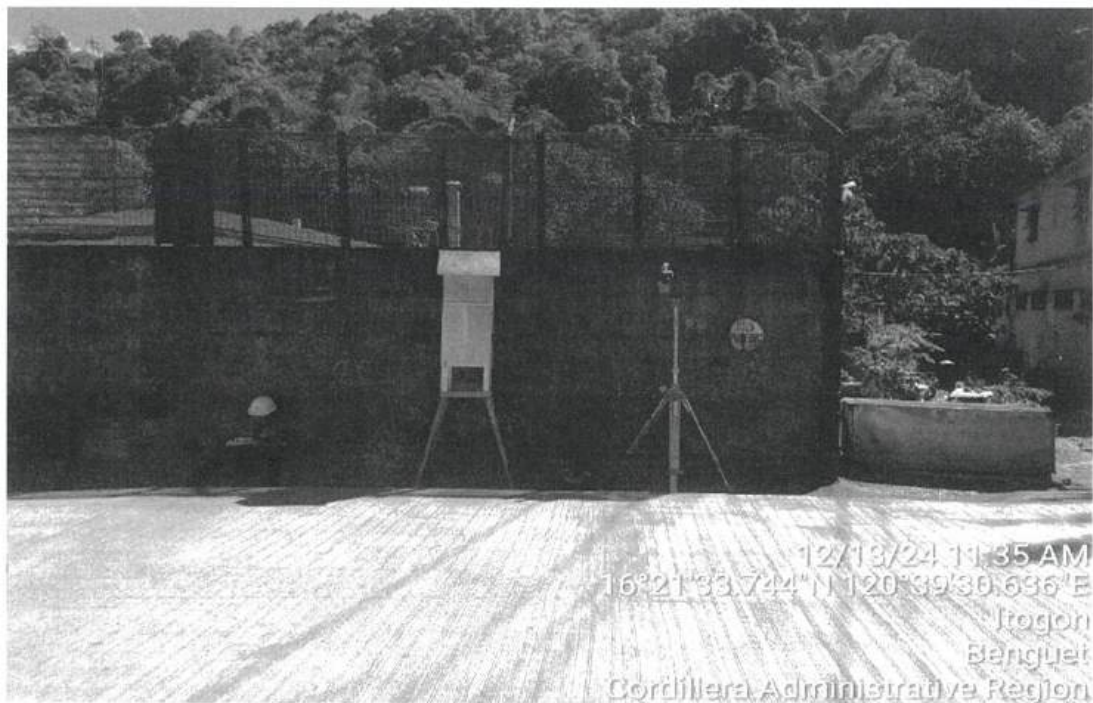

Alading M. Abulencia, ChE
Technical Manager
PRC License No. 0008351

“APPENDIX C”

***SAMPLING ACTIVITY PHOTOS
AND VICINITY MAP***



Station 1 - Along Keymens Road (Upwind)



Station 2 - Near Assay Laboratory & Gate 2 (Upwind)



Station 3 - Near BCACMP Office (Downwind)



VICINITY MAP

“APPENDIX D”

***AMBIENT AIR EQUIPMENT CALIBRATION
CERTIFICATES***



Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Bahay Toro, Quezon City, 1100, Philippines
Tel Nos. 02 4267593 / 9282869 / 9287769 Fax No. 4537694
email Address: admin@switchtek.com.ph
www.switchtek.com.ph



Certificate No.: 4000.23-9142-1.23 Calibration of 3 IN1 (barometer function)
Identification: GREENTEX ENVIRONMENTAL PHILS., CO
Address: 2353 RJ PLACE UNIT 3A SELYA STREET BRGY.860 PANDACAN, MANILA, PHILIPPINES

CERTIFICATE OF CALIBRATION - 3 IN 1 (Barometer Function)

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

UNIT UNDER TEST (UUT):

| | | | |
|-------------|--|-------------------|-------------------|
| Instrument: | 3 IN1 (barometer function) | Calibration Date: | November 20, 2024 |
| Brand: | LUTRON | Calibration Due: | November 19, 2025 |
| Model No.: | PHB-318 | Calibrated By: | C.A. CASADO |
| Serial No.: | No record | | |
| Range: | Temp. (0-50 Deg. C)
Humidity (10 to 95%)
Dewpoint (-25.3 to 48.9 Deg. C)
Barometer (10 to 999.9 hPa) | | |
| Resolution: | Temp. (0.1 Deg. C)
Humidity (0.1 %)
Dewpoint (0.1 Deg. C)
Barometer (1 hPa) | | |
| ID code: | No record | | |

Results:

Barometer

| REFERENCE READING
(hPa) | UNIT UNDER TEST
READING (hPa) | ERROR IN
READING (hPa) | STANDARD DEVIATION | REMARKS |
|----------------------------|----------------------------------|---------------------------|--------------------|--|
| 1009.0 | 1003.0 | 6.00 | 4.2426 | The user should determine the suitability of the instrument for its intended use |
| 1005.0 | 1000.0 | 5.00 | 3.5355 | |
| 1000.0 | 995.0 | 5.00 | 3.5355 | |
| 990.0 | 984.0 | 6.00 | 4.2426 | |

Standard error: \pm 7.78 hPa

Uncertainty: \pm 6.09 hPa

Temperature* Pressure* Sound* Gas Detector/Analyzer *Flow *Volume* Weight *Fat %* pH* Conductivity *Resistivity *Conductivity *Voltage *Amperage *Earth ground *Earth ground Current/Leak *Capacitance *Inductance *Resistance *Thermistor *Torque Wrench *Calorimeter *Caliper* Micrometer* Densimeter *Hygrometer *Moisture* Hygrometer* Capacitance & Inductance Meter *Sphygmomanometer *Low Ohm meter *Dielectric Test Gauge *Gauge Block* Ruler* Oxygen Meter* Psychrometer* Vibration* Dielectric V Meter* Transformer Turns Ratio* Hi-Pot Meter* Capacitance & Discharge



Switchtek Measurement Systems

A Division of Switchtek Construction Corporation

4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.
Bahay Toro, Quezon City, 1100, Philippines

Tel Nos 83517471 / 89282869 / 89287769 Fax No. 89828269

email Address: admin@switchtek.com.ph

www.switchtek.com.ph

| | | | |
|------------------|-----------------------------------|----------------------------|-------------|
| Certificate No.: | 4000.05-5664-2.23. REV | Calibration of | Rotameter |
| Identification: | GREENTEK ENVIRONMENTAL PHILS., CO | Test and Verification | |
| Job | P1 | Certificate of Calibration | |
| Fin. acc: | 32 | Initials... | CAC |
| Done: | July 20, 2024 | Men | Hours |
| Categories | Test and Calibration | 2 | 1.0 |
| Cal Officer | | Total cost | - |
| | | Type | Certificate |

CERTIFICATE OF CALIBRATION - ROTAMETER

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

Issued To: GREENTEK ENVIRONMENTAL PHILS., CO
Address: 2430 LAURA STREET, PANDACAN, MANILA, PHILIPPINES

UNIT UNDER TEST (UUT):

Instrument: Rotameter
Brand: KIMOTO
Model No: F94-40883
Serial No: No record
Property ID: No record
Range: 0.1 to 2.5 LPM
Graduation: 0.1 LPM
Calibration Date: July 02, 2024
Calibration Due: July 02, 2025

CALIBRATOR INFORMATION:

Instrument: DWYER, Rotameter
Inert Gas: Pure (N2) Nitrogen Gas
Standard Thermometer: Heraeus, Standard platinum resistance thermometer
Test Gauge: NABL UKAS
Standard Gauge: Cert#SMS200.01
Instrument: Primary DC DRYCAL
Brand: RIOS
Serial No.: 4329
Traceability: NIST, NPL and PTB Lab

Environmental Condition:
Condition: DRY/BASIC/NEUTRAL
Relative Humidity: 48 ±5%, 1009 hPa

Ambient Temp. (Deg C): 19.8 ±2

Calibration Method:

By comparative technique, unit under test was tested and calibrated in referenced with a Standard Flowmeter at planned intervals using dried and filtered inert gas and in accordance with NIST, NPL and ISO/IEC Guide 17025. Data were gathered and tabulated.

During calibration, the unit was found to have a standard error of ± 0.0000 LPM with a confidence level of not less than 95%. Uncertainty of measurement is ± 0.058 LPM. Calculations were taken using Standard Deviation Formula.

Result:

| NO. OF TEST | REFERENCE READING (LPM) | UNIT UNDER TEST READING (LPM) | ERROR IN READING (LPM) | STANDARD DEVIATION |
|-------------|-------------------------|-------------------------------|------------------------|--------------------|
| 1 | 0.000 | 0.00 | 0.000 | 0.0000 |
| 2 | 0.500 | 0.50 | 0.000 | 0.0000 |
| 3 | 1.000 | 1.00 | 0.000 | 0.0000 |
| 4 | 1.500 | 1.50 | 0.000 | 0.0000 |
| 5 | 2.000 | 2.00 | 0.000 | 0.0000 |

Remarks:

All data pertain only to the unit described obtained at the time of test. This certificate is not valid w/out seal and signature. Unauthorized reproduction is prohibited.

***** NOTE MEASUREMENT INDICATOR IS AT THE UPPER PART OF THE FLOATER*****

Calibrated By: C.A. CASADO

Date: July 02, 2024

Certified By: A.R. CAINDOC

Date: July 02, 2024



Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Bahay Toro, Quezon City, 1100, Philippines
Tel Nos. 02 4267593 / 9282869 / 9287769 Fax No. 4537694
email Address: admin@switchtek.com.ph

www.switchtek.com.ph



| | | | |
|------------------|-----------------------------------|----------------------------|-------------------|
| Certificate No.: | 400.01-8227-3.23 | Calibration of | Sound Level Meter |
| Identification: | GREENTEX ENVIRONMENTAL PHILS., CO | Test and Verification | |
| Job: | P1 | Certificate of Calibration | |
| Fin. acc: | 32 | Initials: | CAC |
| Done.....: | June 4, 2024 | Men | Hours |
| Categories | Calibration | 2 | 1.0 |
| Cal Officer | | Total cost | Type |
| | | | Certificate |

CERTIFICATE OF CALIBRATION - SOUND LEVEL METER

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

Issued To: GREENTEX ENVIRONMENTAL PHILS., CO
Address: Z353 RJ PLACE UNIT 3A SELYA STREET BRGY. 860 PANDACAN, MANILA, PHILIPPINES

UNIT UNDER TEST (UUT):

Instrument: Sound Level Meter
Brand: LUTRON
Model No: SL-4033SD
Serial No: I.433801
Range: 35 to 130 dB
ID Code: No record
Calibration Date: June 3, 2024
Calibration Due: June 2, 2025

CALIBRATOR INFORMATION:

Instrument: Sound Level Calibrator
Brand: Lutron
Serial No: I.278821
Model No: SC-942
Traceability: IEC 60942 Type H A Standard
NIST and NPL

Environmental Condition:

Condition: DRY/BASIC/NEUTRAL
Relative Humidity: 41.2 ±5%, 1006 hPa

Ambient Temp. (Deg C): 23.7 ±2

Calibration Method:

By comparative technique, Standard Sound Generator was introduced at the unit under test at a constant value of 94.0 dB to 114 dB at a uniform frequency of 1000 Hz. Data were gathered and tabulated. Procedures of test conform to the requirements of OMI 88 Guidelines, IEC 60942 of the NIST and National Physical Laboratories.

During calibration, the unit was found to have a standard error of ± 0.00 dB with a confidence level of not less than 95%. Uncertainty of measurement is ± 0.58 dB. Calculations were taken using the Standard Deviation Formula.

Results:

| TRIALS | REFERENCE READING
(dB) | UNIT UNDER TEST READING
(dB) | | ERROR IN READING | STANDARD
DEVIATION | REMARKS |
|--------|---------------------------|---------------------------------|---------|------------------|-----------------------|---------|
| | | AS FOUND | AS LEFT | | | |
| 1 | 94.0 | 93.8 | 94.0 | 0.00 | 0.0000 | Passed |
| 2 | 114.0 | 114.0 | 114.3 | 0.30 | 0.2121 | |

Remarks:

All data pertain only to the unit described observed at the time of test. This certificate is not valid w/out seal and signature. Unauthorized reproduction is prohibited.

Calibrated By: C.A. CASADO
Date: June 3, 2024

Certified By: A.R. CAINDOC
Date: June 4, 2024

Temperature* Pressure* Sound* Gas Detector/Analyzer* Fuse* Nutrient* Weight* pH* Conductivity* Resistivity* Conductivity* Voltage* Amperes* Calorimeter* Frequency Counter* Pyrometer* Glass & B-Axis Thermometer* PWR* J/K* IR* Radiant Valve* Recorder* Thermoset* Torque Wrench* Calorimeter* Caliper* Micrometer* Durimeter* Refractometer* Multi-tester* Hydrometer* Capacitance & Inductance Meter* Polygraph/Anemometer* Load Cell* Jitter* High Test* Gauge Block* Ruler* Gauge Meter* Pyrometer* Variator* Diode Tester* Meter* Transformer Turns Ratio* 10 Per Meter* Capacitance Displacement



Switchtek Measurement Systems

A Division of Switchtek Construction Corporation

4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,

Bahay Toro, Quezon City, 1106, Philippines

Tel Nos: 3453-7694 ; 8928-2869 ; 8928-7769 Fax No.: 8426-7593

email Address: admin@switchtek.com.ph

www.switchtek.com.ph



| | | | |
|------------------|-----------------------------------|----------------------------|---------------------|
| Certificate No.: | 4000.05-8227-1.23 | Calibration of | High Volume Sampler |
| Identification: | GREENTEK ENVIRONMENTAL PHILS., CO | Test and Verification | |
| Job: | P1 | Certificate of Calibration | |
| Fin. acc: | 32 | Initials.: | CAC |
| Done.....: | May 15, 2024 | Men | Hours |
| Categories | | 1 | 1.0 |
| Cal Officer | | Total cost | - |
| | | Type | Certificate |

CERTIFICATE OF CALIBRATION - HIGH VOLUME SAMPLER

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

Issued To: GREENTEK ENVIRONMENTAL PHILS., CO
Address: 2353 RJ PLACE UNIT 3A SELVA STREET BRGY. 860 PANDACAN, MANILA, PHILIPPINES

UNIT UNDER TEST (UUT):

Instrument: High Volume Sampler
Brand: STAPLEX
Model No: TFIA-2
Serial No: 25707T
Range: 0.5 to 2 m3/min.
Graduation: 0.1 m3
ID code: No record
Calibration Dates: May 11, 2024
Calibration Due: May 10, 2025

CALIBRATOR INFORMATION:

Instrument: Rotating Vane Anemometer
Manufacturer: LUTRON
Model No: AM-4206M
Serial No: Q432206
Range: 0 to 30.0 m/s
0 to 50.0 °C
Origin: USA
Calibrated Against: UKAS, thru Laser Doppler Anemometer

Environmental Condition: Ambient Temp. (Deg C): 24.5 ±2
Condition: DRY/BASIC/NEUTRAL
Relative Humidity: 56 ±5%, 1011 hPa

Calibration Method:

By comparative technique, unit under test was tested and calibrated in reference with a rotating vane anemometer at planned intervals using dried and filtered inert gas and with NIST, NPL and ISO/IEC Guide 17025. Data were gathered and tabulated.

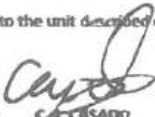
During calibration, the unit was found to have a standard error of ± 0.008 m3/min. with a confidence level of not less than 95%. Uncertainty of measurement is ± 0.062m3/min. Calculations were taken using Standard Deviation Formula.

Results:

| NO. OF TEST | REFERENCE READING
(m3/min.) | UNIT UNDER TEST
READING (m3/min.) | ERROR IN READING (m3/min.) | STANDARD DEVIATION |
|-------------|--------------------------------|--------------------------------------|----------------------------|--------------------|
| 1 | 1.00 | 1.0 | 0.000 | 0.0000 |
| 2 | 1.99 | 1.9 | 0.010 | 0.0071 |
| 3 | 2.01 | 2.0 | -0.010 | 0.0071 |

Remarks:

All data pertain only to the unit described obtained at the time of test. This certificate is not valid w/out seal and signature. Unauthorized reproduction is prohibited.

Calibrated By: 
Date: May 11, 2024

Certified By: 
Date: May 11, 2024

Temperature * Pressure * Sound * Gas Detector/Analyzer * Flow * Volume * Weight * Rh * Pt * Conductivity * Resistivity * Conductivity * Voltage * Amperes * Kwhmeter * Frequency Controller * Hygrometer * Glass & Bi-Metal
Thermometer * PPM * SVI * IRV * Relief Valve * Recorder * Thermostat * Torque Wrench * Calorimeter * Caliper * Micrometer * Dynamometer * Refractometer * Multi-Tester * Hydrometer * Capacitance & Inductance Meter
* Sphygmomanometer * Low Ohm meter * Dial Test Gauge * Gauge Block * Ruler * Oxygen Meter * Psychrometer * Vibration * Dielectric KV Meter * Transformer Turns Ratio * Hi Pot Meter * Capacitance & Dissipation

“APPENDIX E”

AMBIENT AIR TESTING PARTICIPANTS

AMBIENT AIR TESTING PARTICIPANTS

BENGUET CORPORATION ACUPAN CONTRACT MINING PROJECT

Ms. Jemimah Salayog - Facility Representative

GREENTEK ENVIRONMENTAL PHILS. CO.

Mr. Danilo M. Palaypay, Jr. - Technical and QA/QC Manager

Mr. Bryan C. Badon - Team Leader - Trainee

Mr. Emerbill G. Justo - Team Leader - Trainee

Mr. Reynaldo S. Pile - Field Technician / Driver



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Visayas Avenue, Diliman, Quezon City



SAT No. 2023 – 151

CERTIFICATE OF ACCREDITATION

Pursuant to DENR Administrative Order No. 26 Series of 2013 of the Department of Environment and Natural Resources having substantially met all the requirements prescribed therein,

GREENTEK ENVIRONMENTAL PHILS. CO.

#2430 Laura St., Pandacan Manila

is hereby duly accredited as

SOURCE EMISSION TESTING FIRM

As such, the following are authorized as:

QA/QC Manager

Danilo M. Palaypay, Jr.

Team Leader

Aaron Jonathan R. Regilme

This certification shall allow the above firm and personnel to conduct stack testing limited to the following methods and parameters:

1. US-EPA Method 1 to 5 – PM
2. US-EPA Method 6/8 – SO₂
3. US-EPA Method 7 – NO_x
4. US-EPA Method 10 – CO

Granted this December 22, 2023 and valid until December 22, 2026

GILBERT C. GONZALES, CESO III

Director and concurrent
Assistant Secretary for Field Operations



“APPENDIX F”

***LABORATORY CERTIFICATES
OF RECOGNITION***

**SCOPE OF RECOGNITION AND
DENR RECOGNIZED
SIGNATORIES ARE SPECIFIED
AND CAN BE VERIFIED AT
[https://emb.gov.ph/denr-
recognized-environmental-
laboratory/](https://emb.gov.ph/denr-recognized-environmental-laboratory/)
AND ARE INTEGRAL PARTS OF
THIS CERTIFICATE.**



**ISSUE DATE: JULY 25, 2023
EXPIRY DATE: JULY 25, 2026**

ELR LABORATORY CODE No. NCR-29

Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Visayas Avenue, Diliman, Quezon City

This

CERTIFICATE OF RECOGNITION

C.R. No. 040/2023

is hereby granted to

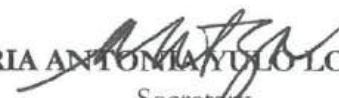
Mach Union Laboratories Inc.

*Mach Union Bldg., 335 Alabang-Zapote Road, Talon Tres, Las Piñas City & ANFRA Bldg., FMC-LTO Compound
314 Alabang Zapote Road, Talon Uno, Las Piñas City*

after having been assessed and found to comply with the documentation, analytical performance and other technical requirements of Administrative Order No. 63, series of 1998 (AO 63), Guidelines for the Designation of DENR Recognized Environmental Laboratories.

This certificate remains valid subject to continued compliance with the requirements of AO 63.

In testimony whereof, I have hereunto signed this Certificate at Quezon City, Philippines.


MARIA ANTONIA YULO-LOYZAGA
Secretary

Laboratory Head:

Marisa T. Manao

SCOPE OF RECOGNITION

(Exclusive of Sampling)

Water and Wastewater

| PARAMETERS | ANALYTICAL METHODS | REFERENCES |
|--|---|--------------------------------|
| Ammonia as $\text{NH}_3\text{-N}$ | Ammonia – Selective Electrode Method | SMEWW 4500- NH_3 D |
| Ammonia as $\text{NH}_3\text{-N}$ | Phenate Method | SMEWW 4500- NH_3 F |
| Arsenic | Electrothermal Atomic Absorption Spectrometric Method
(Nitric Acid / Hotplate Digestion) | SMEWW 3113
(SMEWW 3030 E) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3120
(SMEWW 3030 F) |
| | Manual Hydride Generation/ Atomic Absorption Spectrometric Method | SMEWW 3114 B |
| Barium | Direct Nitrous Oxide-Acetylene Flame Method
(Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3111 D
(SMEWW 3030 F) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3120
(SMEWW 3030 F) |
| BOD | 5-Day BOD Test | SMEWW 5210 B |
| Boron | Carminic Method | SMEWW 4500-B C |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid/ Hotplate Digestion) | SMEWW 3120
(SMEWW 3030 F) |
| Cadmium | Direct Air-Acetylene Flame Method
(Nitric Acid – Hydrochloric Acid/ Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 F) |
| | Electrothermal Atomic Absorption Spectrometric Method
(Nitric Acid / Hotplate Digestion) | SMEWW 3113
(SMEWW 3030 E) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3120
(SMEWW 3030 F) |
| Chemical Oxygen Demand | Closed Reflux, Colorimetric Method | SMEWW 5220 D |
| | Open Reflux Method | SMEWW 5220 B |
| Chloride | Argentometric Method | SMEWW 4500- Cl^- B |
| | Ion Chromatography with Chemical Suppression of Eluent Conductivity | SMEWW 4110 B |
| Chromium as Hexavalent Chromium (Cr^{6+}) | Colorimetric Method | SMEWW 3500-Cr B |
| Coliform, Fecal | Multiple Tube Fermentation Technique – Fecal Coliform Procedure | SMEWW 9221 E |
| Coliform, Total | Multiple Tube Fermentation Technique – Standard Total Coliform Fermentation Technique | SMEWW 9221 B |
| Color (Apparent) | Visual Comparison Method | SMEWW 2120 B |

| Color (True) | Visual Comparison Method | SMEWW 2120 B |
|--|---|--|
| COV PH (http://www.gov.ph) | Photometrics/EMB Gov PH | EMB |
| Copper, Total | Direct Air-Acetylene Flame Method
(Nitric Acid – Hydrochloric Acid/ Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 F) |
| | Electrothermal Atomic Absorption Spectrometric Method
(Nitric Acid / Hotplate Digestion) | SMEWW 3113
(SMEWW 3030 E) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3120
(SMEWW 3030 F) |
| Copper as Dissolved Copper | Direct Air-Acetylene Flame Method
(Filtration; Nitric Acid – Hydrochloric Acid/ Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 F with SMEWW 3030 B) |
| | Electrothermal Atomic Absorption Spectrometric Method
(Filtration; Nitric Acid / Hotplate Digestion) | SMEWW 3113
(SMEWW 3030 E with SMEWW 3030 B) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Filtration; Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3120
(SMEWW 3030 F with SMEWW 3030 B) |
| Cyanide as Free Cyanide | Cyanide – Selective Electrode (w/o distillation) | SMEWW 4500-CN ⁻ F |
| Dissolved Oxygen | Iodometric Method – Azide Modification | SMEWW 4500-O C |
| | Membrane Electrode Method | SMEWW 4500-O G |
| Fluoride | Ion Chromatography with Chemical Suppression of Eluent Conductivity | SMEWW 4110 B |
| | Ion-Selective Electrode Method | SMEWW 4500-F ⁻ C |
| Iron | Direct Air-Acetylene Flame Method
(Nitric Acid – Hydrochloric Acid/ Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 F) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3120
(SMEWW 3030 F) |
| Lead | Direct Air-Acetylene Flame Method
(Nitric Acid/ Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 E) |
| | Electrothermal Atomic Absorption Spectrometric Method
(Nitric Acid / Hotplate Digestion) | SMEWW 3113
(SMEWW 3030 E) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3120
(SMEWW 3030 F) |
| Manganese | Direct Air-Acetylene Flame Method
(Nitric Acid – Hydrochloric Acid/ Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 F) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3120
(SMEWW 3030 F) |
| Mercury | Cold – Vapor Atomic Absorption Spectrophotometric Method | SMEWW 3112 B |
| Nickel | Direct Air-Acetylene Flame Method
(Nitric Acid – Hydrochloric Acid/ Hotplate Digestion) | SMEWW 3111 B
(SMEWW 3030 F) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method
(Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | SMEWW 3120
(SMEWW 3030 F) |
| Nitrate as NO ₃ -N | Ion Chromatography with Chemical Suppression of Eluent Conductivity | SMEWW 4110 B |
| | Nitrate Electrode Method | SMEWW 4500-NO ₃ ⁻ D |
| | Colorimetric, Brucine | US EPA 352.1 |
| Oil and Grease | Liquid-Liquid, Partition – Gravimetric Method | SMEWW 5520 B |

| | | | |
|---|--|--|--|
| GOVPH (http://www.gov.ph)
Home (http://www.miliss.gov.ph) | Electrometric Method
Home (http://www.miliss.gov.ph) | About Us ▾
Programs ▾
Services ▾
Foreign Assisted Projects ▾
E-Library ▾
ME | SMEWW 4500 - H⁺ B |
| Phosphate as Phosphorus (Total, Reactive) | Stannous Chloride Method | | SMEWW 4500-P D |
| | Vanadomolybdophosphoric Acid Colorimetric Method | | SMEWW 4500-P C |
| Selenium | Electrothermal Atomic Absorption Spectrometric Method (Nitric Acid / Hotplate Digestion) | | SMEWW 3113 (SMEWW 3030 E) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method (Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | | SMEWW 3120 (SMEWW 3030 F) |
| | Manual Hydride Generation/ Atomic Absorption Spectrometric Method | | SMEWW 3114 B |
| Settleable Solids | Imhoff Cone Method | | SMEWW 2540 F |
| Sulfate | Ion Chromatography with Chemical Suppression of Eluent Conductivity | | SMEWW 4110 B |
| | Turbidimetric Method | | SMEWW 4500-SO ₄ ²⁻ E |
| Surfactants (Methylene Blue Active Substances) | Anionic Surfactants as MBAS | | SMEWW 5540 C |
| Temperature | Laboratory and Field Methods | | SMEWW 2550 B |
| Total Dissolved Solids | Gravimetric, Dried at 180°C | | SMEWW 2540 C |
| Total Suspended Solids | Gravimetric, Dried at 103-105°C | | SMEWW 2540 D |
| Zinc | Direct Air-Acetylene Flame Method (Nitric Acid – Hydrochloric Acid/ Hotplate Digestion) | | SMEWW 3111 B (SMEWW 3030 F) |
| | Inductively Coupled Plasma – Emission Spectroscopy Method (Nitric Acid – Hydrochloric Acid / Hotplate Digestion) | | SMEWW 3120 (SMEWW 3030 F) |

Sediments

| PARAMETERS | ANALYTICAL METHODS |
|--|---|
| Arsenic | Manual Hydride Generation / Atomic Absorption Spectrophotometric Method |
| Barium | Direct Nitrous Oxide – Acetylene Flame Method |
| Total Cadmium, Copper, Iron, Lead, Manganese, Nickel, Silver, Zinc | Atomic Absorption Spectrophotometric Method (Wet Ashing) |
| Total Mercury | Cold – Vapor Atomic Absorption Spectrophotometric Method |

Ambient Air

| PARAMETERS | ANALYTICAL METHODS |
|---|---|
| Nitrogen Dioxide | Gas Bubbler Griess-Saltzman Method |
| Sulfur Dioxide | Gas Bubbler and Pararosaniline Method |
| Suspended Particulate Matter-TSP | High Volume and Gravimetric Method |
| Suspended Particulate Matter-PM ₁₀ | High Volume with 10-micron particle size inlet; Gravimetric |

| PARAMETERS | ANALYTICAL METHODS |
|----------------------------------|---|
| NOx | Phenoldisulfonic Acid Method |
| Particulates | Gravimetric Method |
| Sulfur Oxides as SO ₂ | Titration Method with Barium Chloride using Thorin as Indicator |

Wastes

| PARAMETERS | ANALYTICAL METHODS |
|-------------------------------|---|
| Antimony; Antimony compounds | US EPA Method 1311/ Hydride Generation AAS |
| Arsenic and its compounds | US EPA Method 1311/ Hydride Generation AAS |
| Barium and its compounds | US EPA Method 1311 / Flame AAS Method |
| Cadmium and its compounds | US EPA Method 1311 / Flame AAS Method |
| Chromium and its compounds | US EPA Method 1311 / Flame AAS Method |
| Fluoride and its compounds | US EPA Method 1311 / Ion Selective Electrode Method |
| Hexavalent chromium compounds | US EPA Method 1311 / Colorimetric Method |
| Lead compounds | US EPA Method 1311 / Flame AAS Method |
| Mercury and mercury compounds | US EPA Method 1311 / Cold-Vapor AAS Method |
| Silver and its compounds | US EPA Method 1311 / Flame AAS Method |

DENR RECOGNIZED SIGNATORIES

**NAME OF SIGNATORY****AREA/S OF RESPONSIBILITY/IES**

Gino Franco P. Camposano

Physical-Chemical Analyses

Luchie S. Ignacio

Bacteriological Analysis

Marisa T. Manaoz

All Analyses

Katrina U. Pagulayan

Air, Metals and Physical-Chemical Analyses

Liza Louise P. Perez

Bacteriological Analysis



Environmental Management Service Provider

7 August 2024

Ref. No.: LT-24-241-25-68

MR. FRANCISCO O. FLAVIER
Resident Manager
BMC FORESTRY CORPORATION – BC ILP
Km. 5 Naguilan Road, Irian, Baguio City

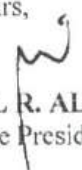
Subject: *24-Hours Ambient Air Quality and Noise Level Monitoring Report*

Dear Mr. Flavie,

We are pleased to submit the final report of the 24-hours ambient air quality and noise level monitoring as a result of our visit to your plant in Irian, Baguio City on May 27 to 29, 2024.

We hope that this report addresses your requirements.

Very truly yours,


EMMANUEL R. ALTAREJOS
Executive Vice President

ERA/mla



24-HOURS AMBIENT AIR QUALITY AND NOISE LEVEL MONITORING REPORT

BMC FORESTRY CORPORATION – BC ILP

Km. 5 Naguilan Road, Irisan, Baguio City



Environmental Management Service Provider

2nd Floor, VAG Building
Ortigas Avenue, Greenhills,
San Juan, Metro Manila,
Philippines

**24-HOURS AMBIENT AIR QUALITY AND NOISE
LEVEL MONITORING REPORT**
(May 27 to 30, 2024)

BMC FORESTRY CORPORATION – BC ILP
Irisan, Baguio City

Prepared for:

BMC Forestry Corporation – BC ILP
Km. 5 Naguilan Road, Irisan, Baguio City
Tel. No.: (074) 445-7180; Fax No.: (074) 445-7185

Prepared by:

BSI
2nd Floor VAG Building, Ortigas Avenue
Greenhills, San Juan, Metro Manila
Tel. No.: (02) 863 6129 ; Fax. No.: (02) 727 9831

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BMC FORESTRY CORPORATION – BC ILP

24-Hours Ambient Air Quality and Noise Level Monitoring Report

1. INTRODUCTION

This report presents the procedures and results of the ambient air quality and noise level monitoring conducted on May 27 to 30, 2024 at BMC Forestry Corporation – BC ILP situated in Irisan, Baguio City. BSI was commissioned to conduct the monitoring wherein Mr. Halcy Lemon P. Orquina led the team that conducted the 24-hours ambient air quality and noise level monitoring. Meanwhile, Mr. Francisco O. Flavier, Resident Manager of BMC Forestry Corporation – BC ILP, served as site contact person during the activity.

The pollutants considered for the 24-hours ambient air quality monitoring were particulate matter less than 10 microns (PM_{10}), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2) at three (3) designated sampling stations within the plant's vicinity (see *Annex A*). In addition, noise level measurements were also undertaken at the same stations.

2. OBJECTIVE OF THE MONITORING

The purpose of the monitoring was to verify the company's compliance with the ambient air quality guideline values of the Department of Environment and Natural Resources (DENR) Administrative Order No. 2000-81 (*Implementing Rules and Regulations of the Philippine Clean Air Act of 1999*), and the noise level standards of the *National Pollution Control Commission (NPCC)* Memorandum Circular 002 Series of 1980.

3. METHODS OF SAMPLING AND ANALYSIS

3.1 24-Hours Ambient Air Quality Monitoring

The prescribed methods of sampling and analysis in DAO No. 2000-81 for PM_{10} , SO_2 , and NO_2 were employed. The methodologies are discussed in this section and presented in *Table 1*.

Table 1. Methods of Ambient Air Sampling and Analysis

| Parameter | Sampling Methodology / Analysis |
|---|---|
| Particulate Matter less than 10 microns (PM_{10}) | Low Volume – Gravimetric Method |
| Sulfur Dioxide (SO_2) | Bubbler – Pararosaniline Method |
| Nitrogen Dioxide (NO_2) | Bubbler – Griess-Saltzman Reaction Method |

Reference: USEPA 40 CFR, Part 50

BMC FORESTRY CORPORATION – BC ILP

24-Hours Ambient Air Quality and Noise Level Monitoring Report

3.1.1 Particulate Matter less than 10 microns

Sampling of PM_{10} was carried out by using a low volume PM_{10} sampler. Ambient air was drawn at a controlled flow rate into a specially-shaped cyclone inlet where the larger particulates are inertially separated from PM_{10} size range. Each size fraction in the PM_{10} size range is then collected on a pre-weighed glass microfiber filter over the specified sampling period. The filter paper with retained particles was recovered after sampling and desiccated for 24 hours in the laboratory followed by accurate weighing using a calibrated mass balance. The net weight (mass gain) from the initial and final masses of the filter paper corresponds to the amount of PM_{10} collected. The concentration of PM_{10} in ambient air was determined from the ratio of total mass of PM_{10} collected and the total normal volume of air sampled.

3.1.2 Sulfur Dioxide

Sulfur dioxide in the ambient air was sampled using a handy gas sampler by aspirating air at a controlled flowrate into a solution of 0.04 M sodium tetrachloromercurate (TCM) through a glass midget impinger over the specified sampling period. The solution was then treated in the laboratory with formaldehyde and with a specially purified acid-bleached pararosaniline to form an intensely colored pararosaniline methyl sulfonic acid. The color intensity was measured spectrophotometrically at 548 nm and is directly related to the amount of SO_2 collected. SO_2 concentration was determined from the difference between the absorbance of the sample and blank, multiplied by the calibration factor, and divided by the total normal volume of air sampled.

3.1.3 Nitrogen Dioxide

Nitrogen dioxide in the ambient air was determined using Griess-Saltzman Reaction Method. Air was drawn using a handy gas sampler at a controlled flowrate into an azo dye forming reagent through a glass midget impinger over a specified sampling period. The absorption reaction produces a stable red-violet color. The color intensity was read by a spectrophotometer in a laboratory at 550 nm and is directly related to the amount of NO_2 collected. NO_2 concentration was determined from the difference between the absorbance of the sample and blank, multiplied by the calibration factor, and divided by the total normal volume of air sampled.

3.2 Sampling Observations

Meteorological observations such as wind direction and speed were recorded during the duration of the activity in order to correlate the interpretation of the gathered concentrations.

3.2.1 Wind Direction

Wind direction is the direction from which the wind originates. It is reported in the cardinal directions. The wind direction in a certain station is determined by observing the motion of the wind from field observation of objects such as trees, grasses, smoke, etc. using a compass as a reference.

3.2.2 Wind Speed

Wind speeds were recorded during the sampling activity using the Beaufort Wind Scale as a guide. Devised by Britain's Admiral Sir Francis Beaufort, this was one of the first scales used to estimate and report wind speeds via visual observations. The scale starts with 0 and goes to a force of 12. Table 4 details the categorization of the Beaufort wind forces 0 to 4 only, along with the corresponding equivalent speeds, wind descriptions, and land observations.

Table 2. Modern Beaufort Wind Scale

| Force | Equivalent Speed (m/s) | Description | Land Observation |
|-------|------------------------|-----------------|--|
| BF0 | 0.0 - 0.2 | Calm | <ul style="list-style-type: none">• Calm• Smoke rises vertically |
| BF1 | 0.3 - 1.5 | Light Air | <ul style="list-style-type: none">• Direction of wind shown by smoke drift, but not by wind vanes |
| BF2 | 1.6 - 3.3 | Light Breeze | <ul style="list-style-type: none">• Wind felt on exposed skin• Leaves rustle• Wind vanes begin to move |
| BF3 | 3.4 - 5.4 | Gentle Breeze | <ul style="list-style-type: none">• Leaves and small twigs constantly moving• Light flags extended |
| BF4 | 5.5 - 7.9 | Moderate Breeze | <ul style="list-style-type: none">• Dust and loose paper raised• Small branches begin to move |

Source: Encyclopedia of Coastal Science (2005)

3.2.3 Cloud and Rain Description

The systems used to describe sky condition and rain description during the sampling period are outlined in Tables 3 and 4, respectively. These terminologies were adopted and used by the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA).

BMC FORESTRY CORPORATION – BC ILP*24-Hours Ambient Air Quality and Noise Level Monitoring Report***Table 3. Cloud Description**

| Sky Condition | Definition / Description |
|----------------------------------|--|
| Clear or Sunny Skies | <ul style="list-style-type: none">• State of the sky when it is cloudless, totally clear or with a few small light clouds visible.• Has a total cloud cover of less than one okta. |
| Partly Cloudy | <ul style="list-style-type: none">• State of the sky is within 2-5 oktas total cloud cover or has between 30% to 70% cover of the celestial dome. |
| Partly Cloudy to at Times Cloudy | <ul style="list-style-type: none">• Mostly partly cloudy but there are times when more than 70% of the celestial dome is covered with clouds. |
| Mostly or Mainly Cloudy | <ul style="list-style-type: none">• The sky is mostly covered with clouds but with possible brief periods of sunshine.• The total cloud cover is between 6 to 8 oktas. |
| Cloudy | <ul style="list-style-type: none">• The sky is covered with clouds between 6 to 8 oktas or has more than 70% cloud cover.• Predominantly more clouds than clear sky.• For a longer period during the day, the sun is obscured by clouds. |
| Overcast | <ul style="list-style-type: none">• The sky is totally or completely covered with thick and opaque clouds, 8 oktas or around 100% cloud cover. |

*Source: PAGASA***Table 4. Rain Description**

| Rain Description | Definition / Description |
|-------------------------|--|
| Very Light Rains | <ul style="list-style-type: none">• Scattered drops that do not completely wet an exposed surface regardless of duration. |
| Light Rains | <ul style="list-style-type: none">• The rate of fall is from trace to 2.5 mm per hour.• Individual drops easily identified and puddles (small muddy pools) form slowly.• Small streams may flow in gutters. |
| Moderate Rains | <ul style="list-style-type: none">• The rate of fall is between 2.5 mm to 7.5 mm per hour.• Puddles rapidly forming and down pipes flowing freely. |
| Heavy Rains | <ul style="list-style-type: none">• The rate of fall is greater than 7.5 mm per hour.• The sky is overcast, there is a continuous precipitation.• Falls in sheets, misty spray over hard surfaces.• May cause roaring noise on roofs. |
| Monsoon Rains | <ul style="list-style-type: none">• Heavy and continuous precipitation attributed to either the Southwest or Northeast Monsoon. |
| Occasional Rains | <ul style="list-style-type: none">• Not frequent but is recurrent precipitation. |
| Widespread Rains | <ul style="list-style-type: none">• Precipitation occurring extensively throughout an area. |
| Frequent rains | <ul style="list-style-type: none">• Precipitation occurring regularly and often throughout the time duration. |
| Intermittent Rains | <ul style="list-style-type: none">• Precipitation which ceases at times and re-occur again. |

Source: PAGASA

BMC FORESTRY CORPORATION – BC ILP

24-Hours Ambient Air Quality and Noise Level Monitoring Report

3.3 24-Hours Ambient Noise Level Monitoring

A direct-reading sound level meter (in A-weighting network) was used to collect noise level data at each sampling station. A-weighted (dBA) scale was selected as required by the 1978 NPCC and the 1980 NPCC standards were also based on the same weighting network. A-weighting network most closely approximates the response of human ear to various sound frequencies.

The procedure used followed that of Wilson (1989), in which at least a total of fifty (50) readings were recorded in order to increase the confidence limits of the data. Procedures outlined by Wilson (1989) were adopted in the monitoring as the time interval, duration of sampling, size of data needed, and methods of noise level analysis were not specified in the 1978 NPCC.

According to the provision provided in the NPCC Memorandum Circular 002 (1980), the arithmetic median of seven (7) maximum-recorded noise levels is regarded as the noise level comparable to the standard. 24-Hours ambient noise levels were undertaken at four periods with the inclusive times as seen in *Table 5*. Field observations during the monitoring were also noted so as to identify the primary sources of noise in each area.

Table 5. Noise Monitoring Periods

| Period | Time |
|---------------|--------------------|
| Morning | 5:00 AM - 9:00 AM |
| Daytime | 9:00 AM - 6:00 PM |
| Evening | 6:00 PM - 10:00 PM |
| Nighttime | 10:00 PM - 5:00 AM |

4. RESULTS AND DISCUSSION

4.1 24-Hours Ambient Air Quality Monitoring

Three (3) designated sampling stations were assessed with PM₁₀, SO₂ and NO₂. The pollutant concentrations, as presented in *Table 6*, were within the DENR National Ambient Air Quality Guideline Values (NAAQGV) for Criteria Pollutants of 150 µg/Ncm for PM₁₀, 180 µg/Ncm for SO₂, and 150 µg/Ncm for NO₂ based on 24 hours averaging time.

BMC FORESTRY CORPORATION – BC ILP




24-Hours Ambient Air Quality and Noise Level Monitoring Report

Table 6. 24-Hours Ambient Air Quality Monitoring Results

| Station | Location | Date / Time of Sampling | PM ₁₀
(µg/Ncm) | SO ₂
(µg/Ncm) | NO ₂
(µg/Ncm) |
|--|--------------------------------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|
| A24-1 | Basketball Area | May 27-28, 2024 /
1420H-1420H | 8.06 | 0.29 | 4.00 |
| A24-2 | Near Plant Barracks | May 28-29, 2024 /
1433H-1433H | 7.27 | 0.57 | 1.97 |
| A24-3 | Near Bamboo
Plantation/Water Tank | May 29-30, 2024 /
1500H-1500H | 6.27 | 0.94 | 1.18 |
| DENR National Ambient Air Quality Guideline Values for
Criteria Pollutants based on 24 hours averaging time | | | 150 | 180 | 150 |

Sampling observations during the monitoring as well as photo documentations are summarized in Table 7. Moreover, the summary of results including the gathered meteorological data, laboratory certificate of analyses, and calibration records of the equipment used were attached in Annexes B, C, and D, respectively.

Table 7. Field Observations and Photo Documentations during Sampling

| Station | Field Observations | Photo Documentations |
|--|---|--|
| <p>A24-1</p> <p>Basketball Area</p> <p>May 27 to 28, 2024
1420H-1420H</p> | <p>The monitoring station is located on cement ground of the basketball court. Behind the station is a rocky terrain. The area is surrounded by trees and grass. No vehicular activities were observed. Plant is at normal operation during the monitoring.</p> <p>Weather was generally cold with mostly cloudy to overcast skies. Wind was blowing predominantly from the southeast at light air condition. Light to heavy rainfall occurred during the periods between 1520H to 1920H, 0620H to 0820H and 1320H to 1420H occurred during sampling. Air temperature ranged from 20.1 to 28.3°C, with hourly readings averaging to 23.4°C.</p> |  |
| <p>A24-2</p> <p>Near Plant Barracks</p> <p>May 28 to 29, 2024
1433H-1433H</p> | <p>The monitoring station is located on gravelly ground partly covered with grass near Plant Barracks. The area is surrounded by trees and plants. No vehicular activities were observed. Plant is at normal operation during the monitoring.</p> <p>Weather was generally cold with partly cloudy to overcast skies. Wind was blowing predominantly from the southeast at light air to light breeze condition. Light rainfall occurred during the period between 1533H to 1833H and 0133H to 0333H occurred during sampling. Air temperature ranged from 21.2 to 30.5°C, with hourly readings averaging to 24.3°C.</p> |  |
| <p>A24-3</p> <p>Near Water Tank</p> <p>May 29 to 30, 2024
1500H-1500H</p> | <p>The monitoring station is located on an elevated and unpaved soil ground covered with grass. The area is surrounded by trees and small plants. No vehicular activities were observed. Plant is at normal operation during the monitoring.</p> <p>Weather was generally cold with partly cloudy to overcast skies. Wind was blowing predominantly from the southeast at light air condition. Light rainfall occurred during the period between 1600H to 2300H and 0400H to 0600H occurred during sampling. Air temperature ranged from 20.4 to 29.6°C, with hourly readings averaging to 23.8°C.</p> |  |

BMC FORESTRY CORPORATION – BC ILP

24-Hours Ambient Air Quality and Noise Level Monitoring Report

4.2 24-Hours Ambient Noise Level Monitoring

The same three (3) ambient air quality stations were monitored for 24-hours ambient noise level and the results are presented in *Table 8*.

All stations are categorized under Class C areas (a section which is primarily reserved as a light industrial area). As per NPCC Memorandum Circular 002 Series of 1980, the applicable standards for Class C areas are 65 dBA for morning, 70 dBA for daytime, 65 dBA for evening, and 60 dBA for nighttime measurements.

Table 8. 24-Hours Ambient Noise Level Monitoring Results

| Station | Location | Date / Time of Sampling | Period | Noise Level (dBA) | NPCC Standards Class C (dBA) |
|---------|-------------------------------------|----------------------------|-----------|-------------------|------------------------------|
| N24-1 | Basketball Court Area | May 28, 2024 / 0606H-0616H | MORNING | 54 | 65 |
| | | May 27, 2024 / 1630H-1640H | DAYTIME | 52 | 70 |
| | | May 27, 2024 / 1803H-1813H | EVENING | 52 | 65 |
| | | May 27, 2024 / 2203H-2213H | NIGHTTIME | 44 | 60 |
| N24-2 | Near Plant Barracks | May 29, 2024 / 0530H-0540H | MORNING | 56 | 65 |
| | | May 28, 2024 / 1441H-1451H | DAYTIME | 56 | 70 |
| | | May 28, 2024 / 1800H-1810H | EVENING | 55 | 65 |
| | | May 28, 2024 / 1000H-1010H | NIGHTTIME | 55 | 60 |
| N24-3 | Near Bamboo Plantation / Water Tank | May 30, 2024 / 0600H-0610H | MORNING | 56 | 65 |
| | | May 29, 2024 / 1438H-1448H | DAYTIME | 55 | 70 |
| | | May 29, 2024 / 1000H-1010H | EVENING | 55 | 65 |
| | | May 29, 2024 / 2200H-2210H | NIGHTTIME | 56 | 60 |

Class C - A section primarily reserved as a light industrial area

The results indicate that all stations complied with the 24-hours ambient noise level standards. The primary sources of noise are summarized in *Table 9*. The equipment calibration certificate of the noise meter used during the measurement is attached in *Annex D*.

BMC FORESTRY CORPORATION – BC ILP

24-Hours Ambient Air Quality and Noise Level Monitoring Report

Table 9. Sources of 24-Hrs Ambient Noise

| Station | Location | Period | Sources of Noise |
|---------|-------------------------------------|-----------|---|
| N24-1 | Basketball Court Area | Morning | Kiln operation, compressor and rustling of tree leaves |
| | | Daytime | Kiln operation, compressor and rustling of tree leaves |
| | | Evening | Kiln compressor, chirring insects and rustling of tree leaves |
| | | Nighttime | Compressor, chirring insects and rustling of tree leaves |
| N24-2 | Near Plant Barracks | Morning | Kiln #2 operation |
| | | Daytime | People conversation and kiln #2 operation |
| | | Evening | Raindrops, kiln #2 operation and people conversation |
| | | Nighttime | Kiln #2 operation and chirring insects |
| N24-3 | Near Bamboo Plantation / Water Tank | Morning | Kiln #2 operation, compressor and rustling of tree leaves |
| | | Daytime | Kiln #2 operation, compressor and rustling of tree leaves |
| | | Evening | Kiln #2 operation, compressor and rustling of tree leaves |
| | | Nighttime | Kiln #2 operation, compressor and rustling of tree leaves |

5. REFERENCES

DENR Administrative Order No. 2000-81. 1999. Implementing Rules and Regulations of the Philippine Clean Air Act of 1999.

National Pollution Control Commission. 1978. Rules and Regulations of the National Pollution Control Commission, Chapter IV Article I - Noise Control Regulations, Sections 74-79, Implementing Rules and Regulations, Presidential Decree No. 984 (National Pollution Control Decree of 1976). Manila: Official Gazette. June 1978, 4477-4479 pp.

National Pollution Control Commission. 1980. NPCC Memorandum Circular 002 Series of 1980 - Amendments to Article 1 (Noise Control Regulations), Chapter IV (Miscellaneous Regulations), Rules and Regulations of the National Pollution Control Commission. Manila: Official Gazette.

PAG-ASA. 2004. Definition and description of weather forecast terminologies used and adopted by PAG-ASA. <http://kidlat.pagasa.dost.gov.ph/wb/terminology.html> (Accessed November 2013).

U.S. National Archives and Records Administration. Code of Federal Regulations. Title 40 Part 50. National Primary and Secondary Ambient Air Quality Standards. 2000.

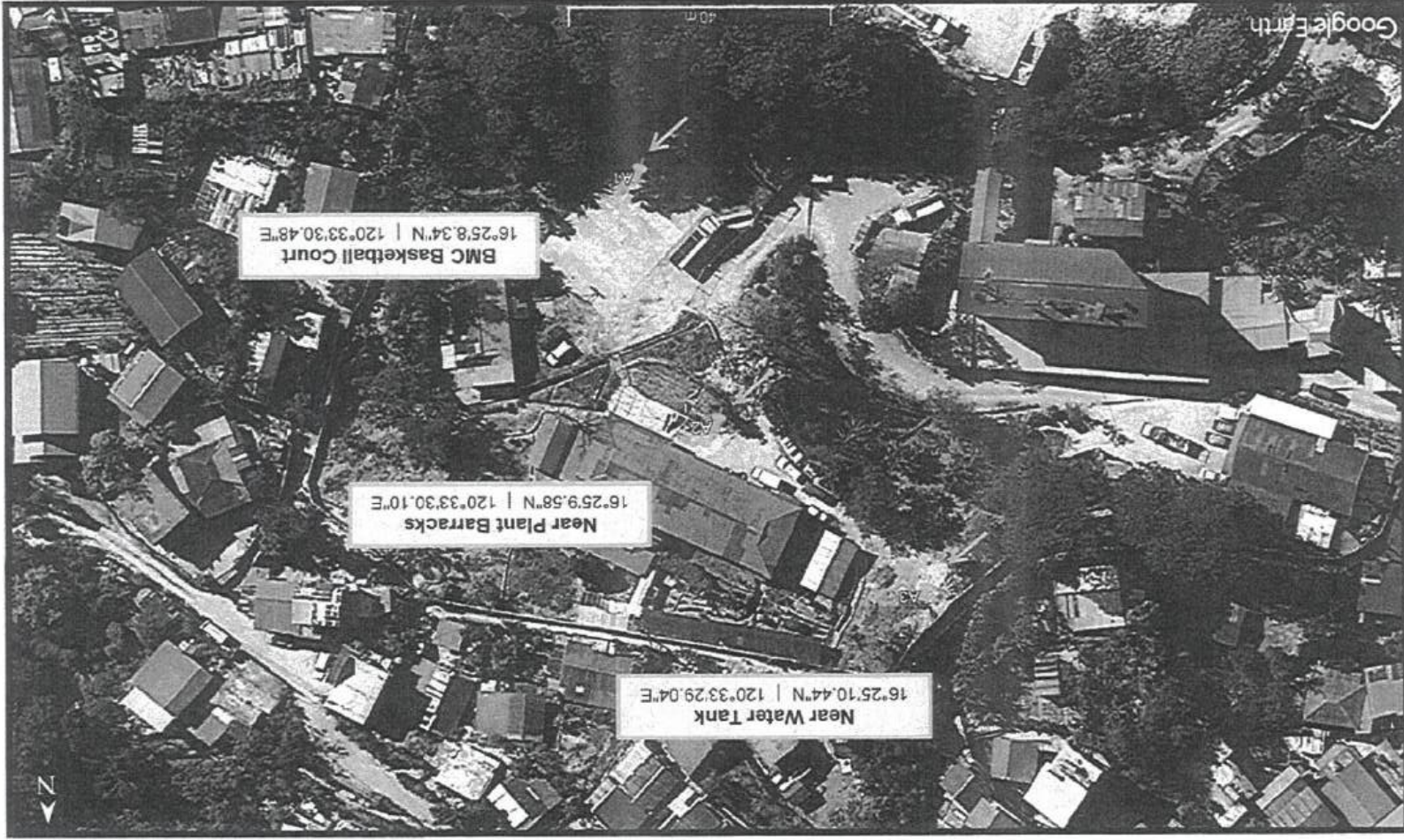
Wilson, C. E. 1989. Noise Control: Measurements, Analysis, and Control of Sound and Vibration. New York: Harper & Row, Publishers, Inc.

ANNEX A

MAP OF AMBIENT AIR QUALITY AND NOISE LEVEL MONITORING STATIONS



MAP OF AMBIENT AIR QUALITY AND NOISE LEVEL MONITORING STATIONS



BMC FORESTRY CORPORATION – BC ILP
Irisan, Baguio City

ANNEX B

AMBIENT AIR QUALITY MONITORING SUMMARY OF RESULTS

Ambient Air Quality Summary of Results for the 24-Hour Monitoring of TSP, PM₁₀, Particulate Pb, SO₂, and NO₂

Project No. : PJ24-241
 Client : BMC Forestry Corp. ILP
 Location : Insan, Baguio City

| Station Code | A1 | A2 | A3 |
|------------------|------------------|--------------------------|-------------------------------------|
| Location | Basket Ball Area | Near Plant Barracks Area | Near Bamboo Plantation / Water Tank |
| Date of Sampling | May 27, 2024 | May 28, 2024 | May 29, 2024 |
| Time of Sampling | 1420H-1420H | 1433H-1433H | 1500H-1500H |

| Particulate Matter Less than 10 Microns (PM ₁₀) Data | | | |
|--|---------|---------|---------|
| Volume of air for PM ₁₀ sampling, Ncm | 20.7239 | 20.6357 | 20.7240 |
| PM ₁₀ Weight, µg | 167 | 150 | 130 |
| PM ₁₀ Concentration, µg/Ncm | 8.06 | 7.27 | 6.27 |

| Sulfur Dioxide (SO ₂) and Nitrogen Dioxide (NO ₂) Data | | | |
|--|--------|--------|--------|
| Volume of air for SO ₂ and NO ₂ sampling, Ncm | 1.2410 | 1.2357 | 1.2410 |
| SO ₂ Weight, µg | 0.357 | 0.700 | 1.170 |
| SO ₂ Concentration, µg/Ncm | 0.29 | 0.57 | 0.94 |
| NO ₂ Weight, µg | 4.970 | 2.440 | 1.460 |
| NO ₂ Concentration, µg/Ncm | 4.00 | 1.97 | 1.18 |

| | | | |
|---------------------------|------------|------------|------------|
| Average Temperature, °C | 23.4 | 24.3 | 23.8 |
| Clouds (Octa) | 5/8 to 8/8 | 5/8 to 8/8 | 5/8 to 8/8 |
| Prevailing Wind Direction | BF1 | BF1, BF2 | BF1, BF2 |
| Prevailing Wind Condition | SE | SE | SE |

Remarks:

| | | | | | |
|-----|----------------------|-----|------------------------------|-----|---------------------------------|
| BF | Beaufort Force | BF1 | Light Air (0.3 - 1.5 m/s) | BF3 | Gentle Breeze (3.4 - 5.4 m/s) |
| BF0 | Calm (0.0 - 0.2 m/s) | BF2 | Light Breeze (1.6 - 3.3 m/s) | BF4 | Moderate Breeze (5.5 - 7.9 m/s) |

ANNEX C

LABORATORY CERTIFICATES



ELARSI, INC.

Unit 201-204 & 406 Rizalina Annex Bldg. 1677 Quezon Avenue, Quezon City
Tel. No. 8927-77-15 Fax No. 8929-4824 Email: info@elarsi.com

CLIENT : BSI
ADDRESS : 2nd Flr., VAG Bldg Ortigas Ave. Greenhills
San Juan, Metro Manila
Contact Number : 8863-6129
Nature of Sample/s : Ambient Air Sample
No. of Sample/s Submitted : Four (4)
Lab. Report No. : 241927-AA
Date/Time Sampled : 05-27-24 to 05-30-24 1600H
Date Received : 05-31-24
Date Analyzed : 05-31-24 to 06-06-24
Date Reported : 06-06-24

[REPORT OF ANALYSES]

| Sample No. | Sample ID | NO ₂ , ug ^a | Analysis Date/Time |
|------------|-----------------|-----------------------------------|--------------------|
| ES-2408616 | PJ 24 241 A24-1 | 4.97 | 05-31-24 1614H |
| ES-2408617 | PJ 24 241 A24-2 | 2.44 | 05-31-24 1614H |
| ES-2408618 | PJ 24 241 A24-3 | 1.46 | 05-31-24 1614H |
| ES-2408619 | PJ 24 241 Blank | < 0.038 | 05-31-24 1614H |

^a - Method 406 / Griess-Saltzman

Reference:

James P. Lodge Methods for Ambient Air Sampling & Analysis, 3rd edition

Analyzed By:

JENAI A. ANDAYA, RChT
Laboratory Chemical Technician
PRC Lic. No. 0009297

Checked By:

JEMMA B. JACINTO, RCh
Laboratory Supervisor
PRC Lic. No. 0010872

Analyzed By:

JESSEMAR G. GUIMBAQLIBOT, RChT
Laboratory Chemical Technician
PRC Lic. No. 0006100

Certified Correct By:

RENATO M. GOFREDO, JR., RCh
Laboratory Manager
PRC Lic. No. 0009824



DENR
RECOGNIZED
LABORATORY
C.R. No. 006/2021

Test results reflect the quality of the samples as received.

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Unit 201-204 & 406 Rizalina Annex Bldg. 1677 Quezon Avenue, Quezon City
Tel. No. 8927-77-15 Fax No. 8929-4824 Email: info@elarsi.com

CLIENT : BSI
ADDRESS : 2nd Flr., VAG Bldg Ortigas Ave. Greenhills
San Juan, Metro Manila
Contact Number : 8863-6129
Nature of Sample/s : Ambient Air Sample
No. of Sample/s Submitted : Four (4)
Lab. Report No. : 241926-AA
Date/Time Sampled : 05-27-24 to 05-30-24 1600H
Date Received : 05-31-24
Date Analyzed : 06-27-24 to 07-04-24
Date Reported : 07-04-24

[R E P O R T O F A N A L Y S E S]

| Sample No. | Sample ID | SO ₂ , ug ^a | Analysis Date/Time |
|------------|-----------------|-----------------------------------|--------------------|
| ES-2408612 | PJ 24 241 A24-1 | 0.357 | 06-27-24 1400H |
| ES-2408613 | PJ 24 241 A24-2 | 0.700 | 06-27-24 1400H |
| ES-2408614 | PJ 24 241 A24-3 | 1.17 | 06-27-24 1400H |
| ES-2408615 | PJ 24 241 Blank | < 0.155 | 06-27-24 1400H |

^a - Pararosaniline Method / Colorimetric

Reference
CFR 40 Appendix A2 to Part 50

Analyzed By:

JESSEMAR G. GUIMBAOLIBOT, RChT
Laboratory Chemical Technician
PRC Lic. No. 0006100

Checked By:

JEMMA D. JACINTO, RCh
Laboratory Supervisor
PRC Lic. No. 0010872

Certified Correct By:

RENATO M. GOFREDO, JR., RCh
Laboratory Manager
PRC Lic. No. 0009824

Test results reflect the quality of the samples as received.

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Unit 201-204 & 406 Rizalina Annex Bldg. 1677 Quezon Avenue, Quezon City
Tel. No. 8927-77-15 Fax No. 8929-4824 Email: info@elarsi.com

CLIENT : BSI
ADDRESS : 2nd Flr., VAG Bldg Ortigas Ave. Greenhills
San Juan, Metro Manila
Contact Number : 8863-6129
Nature of Sample/s : Ambient Air Sample
No. of Sample/s Submitted : Four (4)
Lab. Report No. : 241925-AA
Date/Time Sampled : 05-27-24 to 05-30-24 1600H
Date Received : 05-31-24
Date Analyzed : 06-06-24 to 06-10-24
Date Reported : 06-10-24

[REPORT OF ANALYSES]

| Sample No. | Sample ID | PM ₁₀ , ug ^a | Analysis Date/Time |
|------------|-----------------|------------------------------------|--------------------|
| ES-2408608 | PJ 24 241 A24-1 | 167 | 06-06-24 0845H |
| ES-2408609 | PJ 24 241 A24-2 | 150 | 06-06-24 0845H |
| ES-2408610 | PJ 24 241 A24-3 | 130 | 06-06-24 0845H |
| ES-2408611 | PJ 24 241 Blank | < 100 | 06-06-24 0845H |

^a - Method 501 / Gravimetric

Reference:
James P. Lodge, Methods for Ambient Air Sampling & Analysis, 3rd edition

Analyzed By:

JENAIA A. ANDAYA, RChT
Laboratory Chemical Technician
PRC Lic. No. 0009297

Checked By:

JEMMA B. JACINTO, RCh
Laboratory Supervisor
PRC Lic. No. 0010872

Certified Correct By:

RENATO M. GOFREDO, JR., RCh
Laboratory Manager
PRC Lic. No. 0009824

Test results reflect the quality of the samples as received.

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REQUEST FOR ANALYSIS

CHAIN OF CUSTODY FORM



ELARSI, INC.

Unit 201-204 & 406 Rizalina Annex Bldg. 1677 Quezon Avenue, Quezon City
Tel. No. 8927-77-15, 8994-3443 * Fax No. 8929-48-24 * E-mail: info@elarsi.com

Company: BSI
Address: DELTA AS AVE
Contact Person: HALEY LAMON/CRISTINA Contact No./s: 0929-879-0669

INV #

OR#

FOR LABORATORY USE ONLY

Lab. Report No.

241925-AA

-241927

Submitted by:

H.P. Ogun
(Printed Name/Signature)

Date/Time

27 May 24 / 16:30

Reviewed by:

[Signature]
(Printed Name/Signature)

Date/Time

27 May 24 / 16:30

Approved by:

[Signature]
(Printed Name/Signature)

Date/Time

27 May 24 / 16:30

Method of Transport

☒ Walk-in ☐ Courier ☐ Pick-up ☐ Others

Sample Condition Upon Receipt

☐ Sealed / Container Intact
☒ Chilled/Frozen
☐ Room Temp
☐ Preserved

Container Type

☐ Plastic Bottle
☐ Glass/Sterile Glass
☐ TEDLAR Bag
☒ Others 7L PVC

Turn Around Time

☐ Urgent/Rush (3-5 Working Days)

☒ Routine (7-12 Working Days)

Nature of Sample (PLEASE CHECK)

Water

☐ Drinking Water
☐ Wastewater
☐ Others

Metals

☐ Water
☐ Air
☐ Others

Air

☒ Stack Source Emission
☐ Ambient Air Sample
☐ Work Env. Measurement
☐ Others

Solids

☐ Soil
☐ Sludge
☐ Sediment
☐ Others

FOR LAB. USE ONLY

| Sample No. | Sample Identification | Analyses Requested | Method Of Analysis | Date of Sampling/Time | No. of Samples | Remarks | DATE OF THE FOLLOWING | | | |
|------------|-----------------------|--------------------|---|-----------------------|----------------|---------|---------------------------|----------------|----------|-----------------|
| | | | | | | | Certificate Sent/Reported | Worksheet Sent | COC Sent | Sample Disposed |
| PM10 | A1-24Hrs | PM10
SO2
NO2 | Gravimetry
Koromastline
Grav - Coromastline | 27-28
May
2024 | 3 | | | | | |
| SO2 | A2-24Hrs | PM10
SO2
NO2 | | 28-29
May
2024 | 3 | Blank | | | | |
| NO2 | A3-24Hrs | PM10
SO2
NO2 | | 29-30
May
2024 | 3 | | | | | |
| | Blank | | | | | | | | | |

* USE ONE (1) COC FOR EACH NATURE OF SAMPLE

* Unless otherwise requested, all samples will be dispatched two (2) weeks after analysis

* Use of COC FORM is subject to change without notice and is not for

Serial No

2023

ANNEX D

EQUIPMENT CALIBRATION CERTIFICATES

Calibration Report

Tisch Particulate Matter 10 (PM₁₀) Air Sampler

No. 06012024PM₁₀475-11

Submitted by: Edindo C. Fernando

BSI (Berkman Systems Inc.)

Address: 2nd Floor VAG Bldg., Greenhills, San Juan

| Site | Calibrator Make/Model |
|---|------------------------------------|
| Location: On-Site | Make: BGI Tetracal |
| Date: Jun 1, 2024 | Model/S.N.: 139/#1, Range: 6-30LPM |
| Tech.: Roberto L. Co | Result of Venturi Calibration |
| Sampler: TE-Wilbur PM ₁₀ Air Sampler | No. 1: 5.37813 ΔP ^0.52138 |
| Serial #: 475 / TSP - D SN: 3868 | Overall Uncertainty: 0.35% |

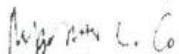
| | |
|----------------|----------------------|
| Temp (° F): -- | Elevation (ft): -- |
| Ta (° K): 295 | SL Press (in Hg): -- |
| Ta (° C): 22 | Pa (mm Hg): 752 |

| Test Points | Sampler Flowmeter Setting, LPM | Q _s , LPM | Q _s , STP, LPM |
|-------------|--------------------------------|----------------------|---------------------------|
| 1 | 15.0 | 15.050 | 14.950 |
| 2 | 16.7 | 16.746 | 16.670 |
| 3 | 18.4 | 18.368 | 18.300 |

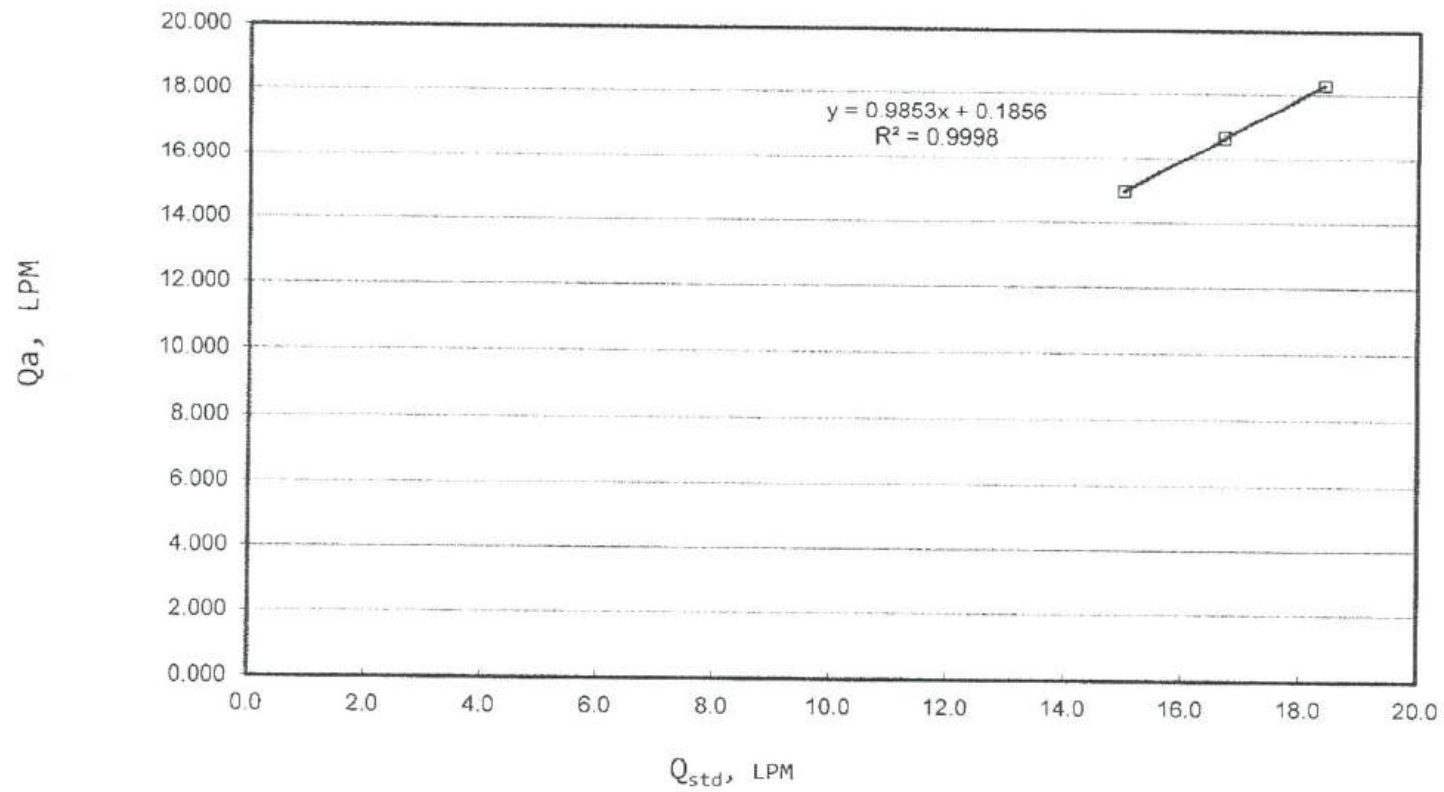
Remarks: 1. The above values are those obtained at the time of test and refer only to the particular instrument submitted.

2. The flow rate controller was set at 16.7 LPM.

Calibrated by:


ROBERTO L. CO

Calibration Graph



CALIBRATION REPORT
No. 06292024GS-BSI-DGS-2-10

| | | | |
|-----------------------------|--------------------------|-------------------|-----------------|
| Instrument/Model: | BSI Dual Gas Sampler | Standard Used: | Agilent ADM1000 |
| Serial Number: | BSI DGS-2 | Range: | 1000ml/min |
| Submitted by: | Mr. Edindo Fernando | Temp., °C: | 25 |
| Address: | BSI (Berkman System Inc) | Rel. Humidity, %: | 60 |
| Barometric Pressure, mm Hg: | 752 | Date: | 29-Jun-24 |

CALIBRATION DATA
FLOW RATE 1

| Test Point | UUT Flowmeter Setting, LPM | Qa, Actual, LPM | Qs, STP, LPM |
|------------|----------------------------|-----------------|--------------|
| 1 | 0.5 | 0.50 | 0.49 |
| 2 | 1.0 | 1.00 | 0.99 |
| 3 | 1.5 | 1.50 | 1.46 |

FLOW RATE 2

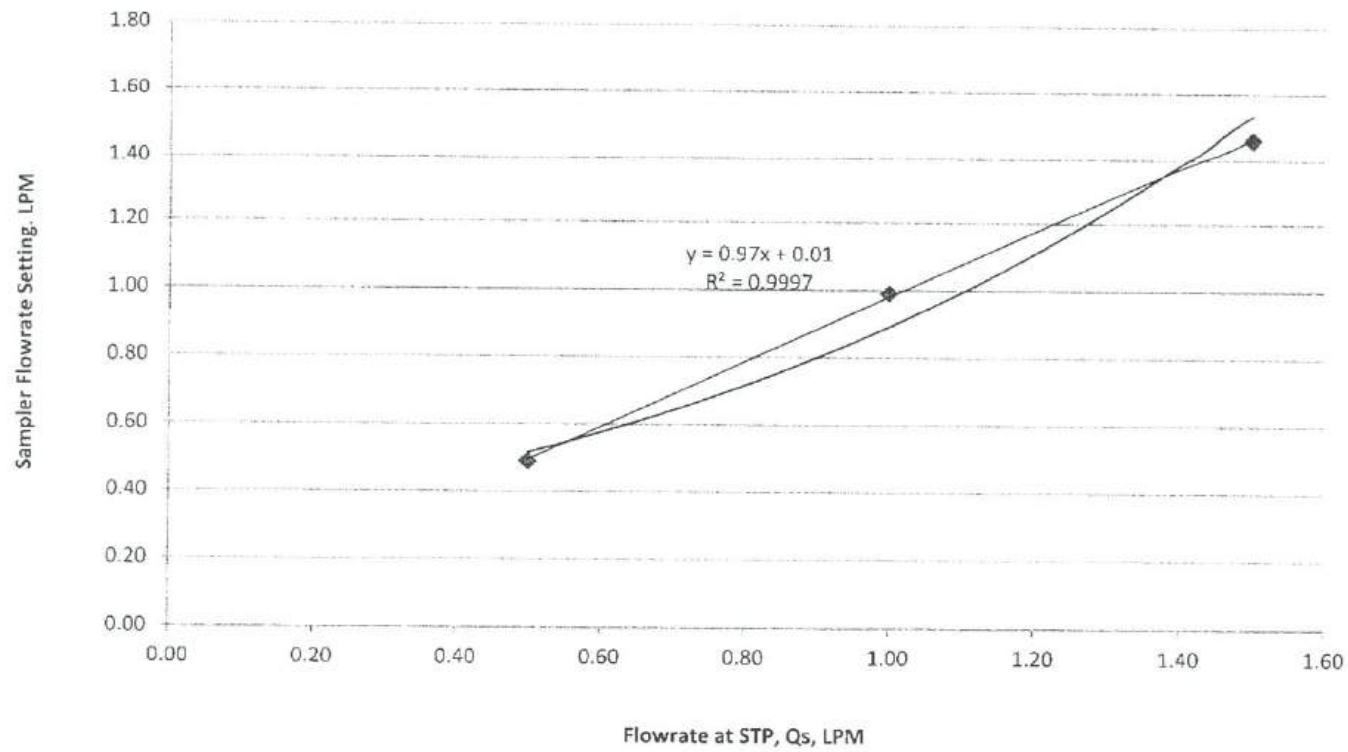
| Test Point | UUT Flowmeter Setting, LPM | Qa, Actual, LPM | Qs, STP, LPM |
|------------|----------------------------|-----------------|--------------|
| 1 | 0.5 | 0.50 | 0.50 |
| 2 | 1.0 | 0.98 | 0.96 |
| 3 | 1.5 | 1.50 | 1.48 |

Remarks: 1. The above values are those obtained at the time of test and refer only to the particular instrument submitted.

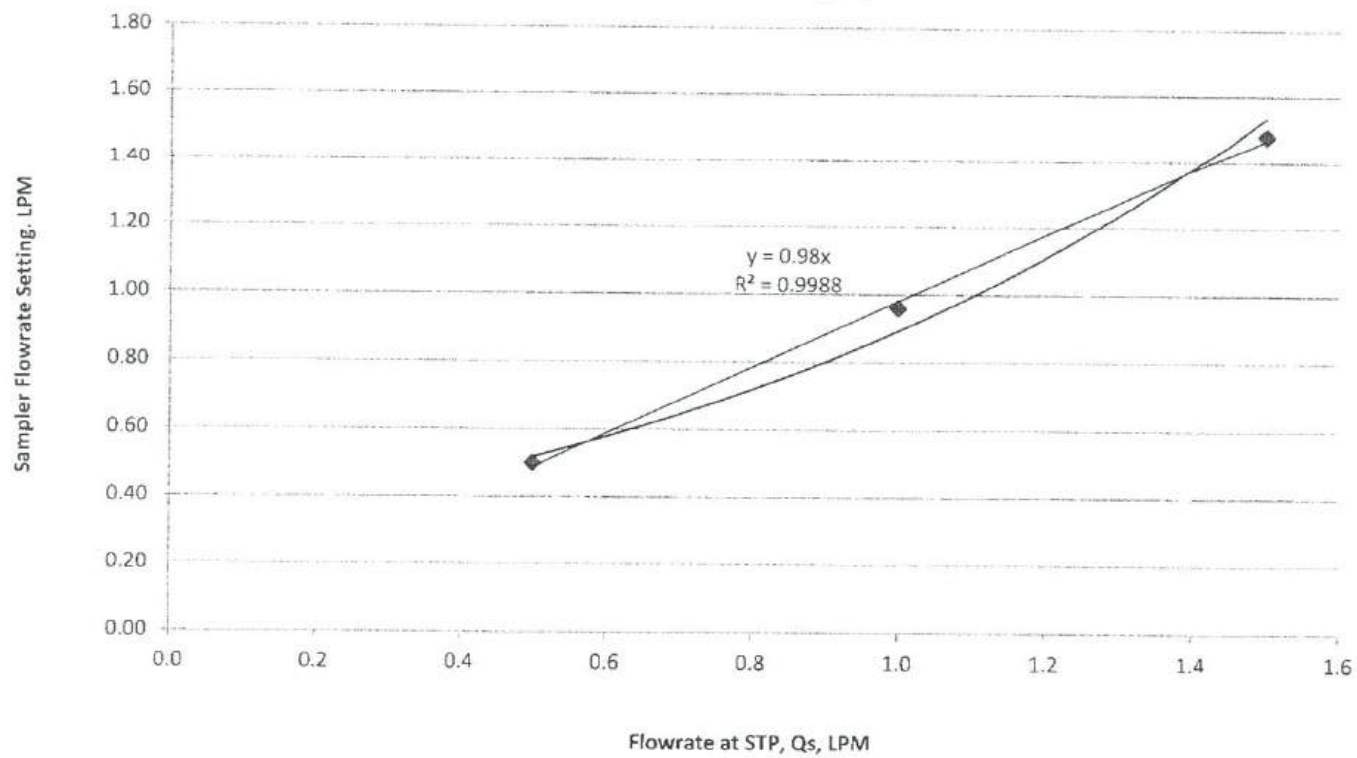
Calibrated By:

Roberto L. Co
 Roberto L. Co

Calibration Graph Flow Rate 1



Calibration Graph Flow Rate 2





Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Bahay Toro, Quezon City, 1100, Philippines
Tel Nos. 02 4267593 / 9282869 / 9287769 Fax No. 4537694
email Address: admin@switchtek.com.ph
www.switchtek.com.ph



| | | | | | |
|------------------|------------------------------|-----------------------|------------------------------------|------------|-------------|
| Certificate No.: | 400023-8979-423 | Calibration of | 3 IN1 (Anemometer, Barometer, %RH) | | |
| Identification: | BERKMAN SYSTEMS INCORPORATED | Test and Verification | Certificate of Calibration | | |
| Job: | PI | Initials..: | CAC | | |
| Fin. acc: | 32 | Men | Hours | Total cost | Type |
| Done..: | December 5, 2023 | 2 | 1.00 | - | Certificate |
| Categories | Calibration | | | | |
| Cal Officer | | | | | |

CERTIFICATE OF CALIBRATION - 3 IN 1 (ANEMOMETER, BAROMETER, % RH)

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

Issued to: BERKMAN SYSTEMS INCORPORATED
Address: Suite 208 VAG Bldg., Ortigas Avenue, Greenhills, San Juan, Metro Manila, Philippines

UNIT UNDER TEST (UUT):

Instrument: 3 IN1 (Anemometer, Barometer, %RH)
Brand: LUTRON
Model No.: ABH-4225
Serial No.: AJ.79434
Range: Velocity (0-30.0 m/s)
Temp. (0-50 Deg. C)
Humidity (10 to 95%)
Dewpoint (-25.3 to 48.9 Deg. C)
10.0 to 999.9 hPa
Resolution: Velocity (0-30.0 m/s)/0.1 m/s
Temp. (0-50 Deg. C)/0.1 Deg. C
Humidity (10 to 95%)/0.1 %RH
Dewpoint (-25.3 to 48.9 Deg. C)/0.01 Deg. C
Barometric (10.0 to 999.9 hPa) /0.1

CALIBRATOR INFORMATION:

Instrument: Temperature and Humidity chamber
Model No.: XB-OTS-34
Serial No.: 20130803
Traceability: CNAS
Instrument: Rotating Vane Anemometer
Manufacturer: LUTRON
Model No.: AM-4206M
Serial No.: Q432206
Range: 0 to 30.0 m/s
0 to 50.0 °C
Calibrated Against: LUKAS, thru Laser Doppler Anemometer
Instrument: Barigo, Precision Barometer
Calibrated Against: NIST

Calibration Date: December 4, 2023
Calibration Due: December 3, 2024

Environmental Condition:

Condition: DRY/BASIC/NEUTRAL
Relative Humidity: 52.2 ±5%, 1010 hPa
Ambient Temp. (Deg C): 23 ±2

Calibration Method:

By comparison technique, unit under test was tested in reference with a Rotating vane anemometer, precision barometer, Standard Temperature and Humidity calibrator. Procedures of calibration and test conform to the requirements of NPL, NIST and ISO/IEC Guide 17025. Data were gathered and plotted against an ideal curve. Standard error and uncertainty of measurement are written on the attached sheet.

Remarks:

All data pertain only to the unit described obtained at the time of test. This certificate is not valid w/out seal and signature. Unauthorized reproduction is prohibited.

Calibrated By: C.A. CASADO
Date: December 4, 2023

Certified By: R.R. ANOCC
Date: December 5, 2023



Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Bahay Toro, Quezon City, 1100, Philippines
Tel Nos. 02 4267593 / 9282869 / 9287769 Fax No. 4537694
email Address: admin@switchtek.com.ph
www.switchtek.com.ph



Certificate No.: 4000.23-8979-423 Calibration of 3 IN1 (Anemometer, Barometer, %RH)
Identification: BERKMAN SYSTEMS INCORPORATED
Address: Suite 208 VAO Bldg., Ortigas Avenue, Greenhills, San Juan, Metro Manila, Philippines

CERTIFICATE OF CALIBRATION - 3 IN 1 (ANEMOMETER, BAROMETER, % RH)

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

UNIT UNDER TEST (UUT):

Instrument: 3 IN1 (Anemometer, Barometer, %RH)
Brand: LUTRON
Model No.: ABH-4225
Serial No.: AJ.79434
Range: Velocity (0-30.0 m/s)
Temp. (0-50 Deg. C)
Humidity (10 to 95%)
Dewpoint (-25.3 to 48.9 Deg. C)
10.0 to 999.9 hPa
Resolution: Velocity (0-30.0 m/s)/0.1 m/s
Temp. (0-50 Deg. C)/0.1 Deg. C
Humidity (10 to 95%)/0.1 %RH
Dewpoint (-25.3 to 48.9 Deg. C)/0.01 Deg. C
Barometric (10.0 to 999.9 hPa) /0.1

Calibration Date: December 4, 2023
Calibration Due: December 3, 2024
Calibrated By: C.A. CASADO

MODE: THERMOHYGROMETER

Results:

Temperature:

| REFERENCE READING
(°C) | UNIT UNDER TEST
READING (°C) | ERROR IN
READING (°C) | STANDARD DEVIATION | REMARKS |
|---------------------------|---------------------------------|--------------------------|--------------------|---|
| 9.6 | 9.9 | -0.30 | 0.2121 | The user should determine
the suitability of the
instrument of its intended
use. |
| 20.0 | 21.3 | -1.30 | 0.9192 | |
| 23.9 | 24.8 | -0.90 | 0.6364 | |
| 40.4 | 39.8 | 0.60 | 0.4243 | |

Standard error: ± 1.10 °C

Uncertainty: ± 1.22 °C

Relative Humidity:

| REFERENCE READING
(% RH) | UNIT UNDER TEST
READING (% RH) | ERROR IN
READING (% RH) | STANDARD DEVIATION | REMARKS |
|-----------------------------|-----------------------------------|----------------------------|--------------------|----------------------|
| 73.7 | 58.0 | 15.70 | 11.1016 | DO NOT USE THIS MODE |
| 64.2 | 50.6 | 13.60 | 9.6167 | |
| 55.0 | 42.0 | 13.00 | 9.1924 | |
| 47.0 | 35.0 | 12.00 | 8.4853 | |

Standard error: ± 19.20 % RH

Uncertainty: ± 12.01 % RH



Switchtek Measurement Systems

A Division of Switchtek Construction Corporation
4th Floor Northridge Plaza, Annex A, 12 Congressional Ave.,
Bahay Toro, Quezon City, 1100, Philippines
Tel Nos. 02 4267593 / 9282869 / 9287769 Fax No. 4537694
email Address: admin@switchtek.com.ph
www.switchtek.com.ph



Certificate No.: 4000.23-8979-4.23 Calibration of 3 INI (Anemometer, Barometer, XRH)
Identification: BERKMAN SYSTEMS INCORPORATED
Address: Suite 208 YAG Bldg., Ortigas Avenue, Greenhills, San Juan, Metro Manila, Philippines

CERTIFICATE OF CALIBRATION - 3 IN 1 (ANEMOMETER, BAROMETER, % RH)

This report of calibration shall document that the instrument herein was examined and tested in compliance with ISO/IEC 17025 against NIST traceable reference standards and its co-equal standards.

UNIT UNDER TEST (UUT):

Instrument: 3 INI (Anemometer, Barometer, XRH)
Brand: LUTRON
Model No.: ABH-4225
Serial No.: A.J.79434
Range: Velocity (0-30.0 m/s)
Temp. (0-50 Deg. C)
Humidity (10 to 95%)
Dewpoint (-25.3 to 48.9 Deg. C)
10.0 to 999.9 hPa
Resolution: Velocity (0-30.0 m/s)/0.1 m/s
Temp. (0-50 Deg. C)/0.1 Deg. C
Humidity (10 to 95%)/0.1 %RH
Dewpoint (-25.3 to 48.9 Deg. C)/0.01 Deg. C
Barometric (10.0 to 999.9 hPa) /0.1

Calibration Date: December 4, 2023
Calibration Due: December 3, 2024
Calibrated By: C.A. CASADO

MODE: THERMOHYGROMETER

Results:

Barometric

| REFERENCE READING
(hPa) | UNIT UNDER TEST
READING (hPa) | ERROR IN
READING (hPa) | STANDARD DEVIATION | REMARKS |
|----------------------------|----------------------------------|---------------------------|--------------------|---|
| 1015 | 1007 | 8.00 | 5.6569 | The user should determine
the suitability of the
instrument for its intended
use |
| 1010 | 1004 | 6.00 | 4.2426 | |
| 1000 | 993 | 7.00 | 4.9497 | |

Standard error: ± 8.57 hPa

Uncertainty: ± 7.87 hPa

Velocity

| REFERENCE READING
(m/s) | UNIT UNDER TEST
READING (m/s) | ERROR IN
READING (m/s) | STANDARD DEVIATION | REMARKS |
|----------------------------|----------------------------------|---------------------------|--------------------|---|
| 0.00 | 0.00 | 0.00 | 0.0000 | The user should determine
the suitability of the
instrument for its intended
use |
| 5.20 | 5.10 | 0.10 | 0.0707 | |
| 9.55 | 9.40 | 0.15 | 0.1061 | |
| 15.10 | 14.90 | 0.20 | 0.1414 | |

Standard error: ± 0.16 m/s

Uncertainty: ± 0.59 m/s

As a part of our commitment to quality, we have implemented a strict quality control system. This system includes a comprehensive calibration process for all instruments used in our laboratory. We ensure that all instruments are calibrated against NIST traceable reference standards and that the calibration process is documented and controlled. We also maintain a strict record-keeping system for all calibration data and results. This ensures that our customers receive accurate and reliable calibration results every time.

[illegible]

ANNEX E

TEST PARTICIPANTS

TEST PARTICIPANTS

BMC FORESTRY CORPORATION – BC ILP

Mr. Francisco O. Flavie - Resident Manager

BSI


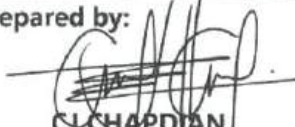

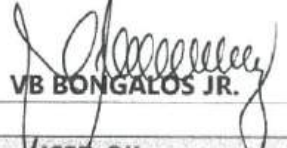
Mr. Halcy Lemon P. Orquina - Field Engineer










Mr. Edindo C. Fernando - QA/QC Manager

Mr. Joseph Dandy A. Quilet - Field Technician

Mr. Christian A. Soleta - Field Technician


Mr. Jimuel B. Torellino - Sampling Aide / Driver

| | | | | | |
|-----------------------|--|---------------------|---------------------|--|--------------|
| Document Title | EMS GUIDELINES | | | 
BonguetCorp | |
| Process | Hazardous Waste Management (Used Oil, Oil and Grease Contaminated Items) | | | | |
| Document Code | DRCS-12-07-A_MSG_HWMCI | Revision No. | 02 | Effective Date | Jan. 2, 2024 |
| Department | Mill, Mill Mechanical, Mine Mechanical, Motorpool, Warehouse, MEPEO Department | | | Page Number | Page 1 of 2 |
| Prepared by: | 
CJ CHAPDIAN | | Reviewed by: | 
BGO EMS | |
| | | | Approved by: | 
VB BONGALOS JR. | |



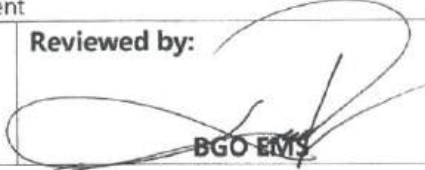

| | | |
|---|---|--|
| USED OIL
Each department will assign a designated storage area for used oil
 | USED OIL
Use tightly sealed and properly labeled containers with secondary containment
 | USED OIL
When full, notify MEPEO Dept for proper inventory & documentation
 |
| USED OIL
Collected containers will be stored in a centralized temporary storage facility
 | USED OIL
Accumulated used oil will be sold to EMB-accredited buyer
 | USED OIL
A signed waiver will be issued to by the buyer to the company
 |
| USED OIL
Used oil from mill mechanical will be re-used
 | OIL CONTAMINATED
All contaminated items will be disposed in hazardous trash bin
 | OIL CONTAMINATED
When full, seal the container and notify MEPEO Dept. for inventory
 |








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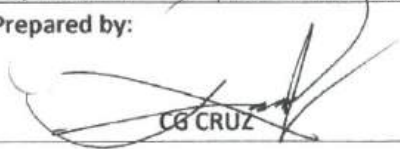

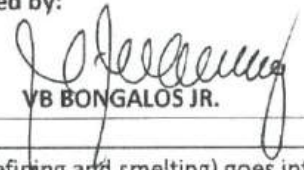
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|----------------|--|--------------|----|---|--------------|
| Document Title | EMS GUIDELINES | | | 
BenguetCorp | |
| Process | Hazardous Waste Management (Used Oil, Oil and Grease Contaminated Items) | | | | |
| Document Code | DRCS-12-07-A_MSG_HWMC | Revision No. | 02 | Effective Date | Jan. 2, 2024 |
| Department | Mill, Mill Mechanical, Mine Mechanical, Motorpool, Warehouse, MEPEO Department | | | Page Number | Page 2 of 2 |

| OIL CONTAMINATED | OIL CONTAMINATED | OIL CONTAMINATED |
|---|---|---|
| Collected containers will be stored in a centralized temporary storage facility | Contact an EMB-accredited Treatment/Storage/Disposal Company | Used spill kit materials are disposed in the hazardous trash bin |
|  |  |  |









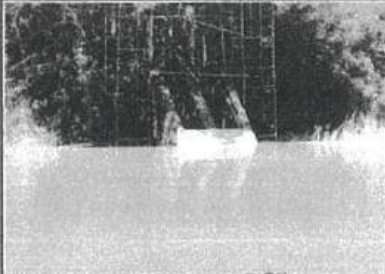
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|--|--|---|----|---|--------------|
| Document Title | EMS GUIDELINES | | | 
BenguetCorp | |
| Process | Hazardous Waste Management (Aerosol Cans) | | | | |
| Document Code | DRCS-12-07-B_EMSG_HWM_AC | Revision No. | 01 | Effective Date | Jan. 1, 2023 |
| Department | Warehouse, Geology, Mine Technical Services (Survey), MEPEO Department | | | Page Number | Page 1 of 1 |
| Prepared by: | | Reviewed by: | | Approved by: | |
| 
SV CAO-ROSARIO | | 
BGO-EMS | | 
VB BONGALOS JR. | |

| | | | | | |
|--------------|--|--------------|---|--------------|---|
| AEROSOL CANS | Each department will be responsible for collecting all their empty cans | AEROSOL CANS | Empty cans will be stored in it's original box (labeled "empty") | AEROSOL CANS | When the box is full, seal the box & notify MEPEO Dept for inventory |
| |  | |  | |  |
| AEROSOL CANS | Collected containers will be stored in a centralized temporary storage | AEROSOL CANS | Contact an EMB-accredited Treatment/Storage/Disposal Company | | |
| |  | |  | | |


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|----------------|--|--------------|--|--|--|
| Document Title | EMS GUIDELINES | | | 
BenguetCorp | |
| Process | Hazardous Waste Management – Mill Tailings
(including Excess Metallurgic Samples, Sample Rejects) | | | | |
| Document Code | DRCS-12-07-C_MSG_HWM_MT | Revision No. | 01 | Effective Date | Jan. 1, 2023 |
| Department | Mill, Metallurgy Laboratory, MEPEO Department | | | Page Number | Page 1 of 1 |
| Prepared by: | 
CG CRUZ | | | Reviewed by: | 
BGO EMS |
| | | | Approved by:

VB BONGALOS JR. | | |











| | | | | | |
|------|--|---|---|--|--|
| MILL | All discharge (pulp, tails, contaminated water) from the mill (from crushing, grinding to refining and smelting) goes into Tails Treatment Facility. The solution is treated with SMBS before being pumped to Tails Storage Facility (TSF) | | | | |
| |  |  |  | | |


| | | | | | |
|-----------------|---|-------------|--|-------------|---|
| MET LAB SAMPLES | All excess samples and rejects from Met Lab are returned to the Mill | SPILL | Sluice all spill towards canals that are connected to the treatment facility | MONITORING | Discharge monitoring |
| |  | |  | |  |
| MONITORING | Monitor tanks to avoid overflow | MONITORING | Regular cleanup of canal/drain | MAINTENANCE | Regular check of discharge valves pipes and connections |
| |  | |  | |  |
| MONITORING | Regular monitoring of TSF | MAINTENANCE | Installation of piezometer to monitor TSF (dam's) strength | MAINTENANCE | Installation of stopper boards at TSF |
| |  | |  | |  |




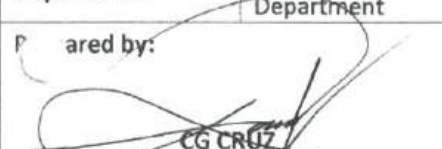

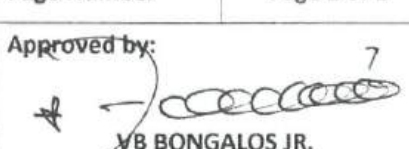
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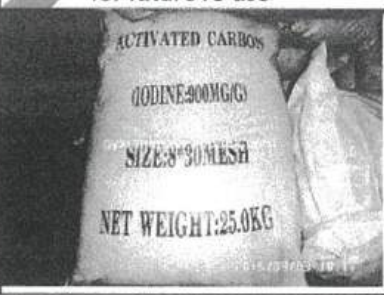


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| Document Title | EMS GUIDELINES | | | 
BenguetCorp | |
| Process | Hazardous Waste Management – Cyanide Cans/Contaminated Plastic | | | | |
| Document Code | DRCS-12-07-D_MSG_HWM_CC | Revision No. | 01 | Effective Date | Jan. 1, 2023 |
| Department | Warehouse, Mill, Safety, and Enviro Department | | | Page Number | Page 1 of 1 |
| Prepared by: | | Reviewed by: | | Approved by: | |
| 
JAM ALMEROL | | 
BGO/EMS | | 
VB BONGALOS JR. | |

| | | | | | |
|-----------------|---|---|--|-----------------|---|
| CYANIDE CANS | Mill will assign designated stockpile area for empty cyanide cans | CYANIDE CANS | Met Lab will collect all empty cans for re-use | CYANIDE CANS | All cans are washed properly with water and soap before reuse |
| |  | |  | |  |
| CYANIDE CANS | Use designated wash area to control contaminated wash water | CYANIDE CANS | Puncture holes at the bottom to discourage reusing for any liquids | CYANIDE PLASTIC | All packaging from the cyanide crate are considered haz-waste |
| |  | |  | |  |
| CYANIDE PLASTIC | All cyanide packaging will be disposed in the haz-waste trash bin | CYANIDE PLASTIC | When full, seal the container and notify MEPEO Dept for inventory | CYANIDE PLASTIC | Collected waste bags will be stored in a centralized temporary storage |
| |  | |  | |  |
| CYANIDE PLASTIC | Contact an EMB-accredited Treatment/Storage/Disposal Company |  | | | |

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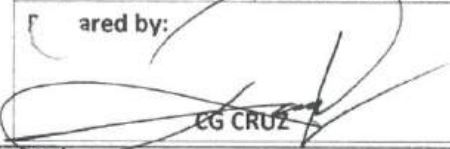
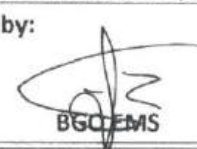
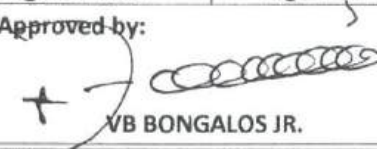
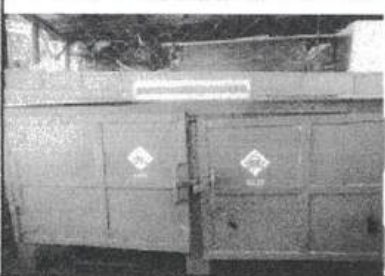







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| Document Title | EMS GUIDELINES | | | 
BenguetCorp | |
| Process | Hazardous Waste Management – Reagent/Chemical Sacks and Bags | | | | |
| Document Code | DRCS-12-07-E_MSG_HWM_RS | Revision No. | 01 | Effective Date | Jan. 1, 2023 |
| Department | Mill, Metallurgy Lab, Assay Lab, Warehouse, and MEPEO Department | | | Page Number | Page 1 of 1 |
| Prepared by: | 
CG CRUZ | | Reviewed by: | 
BGO-EMS | |
| | | | Approved by: | 
VB BONGALOS JR. | |



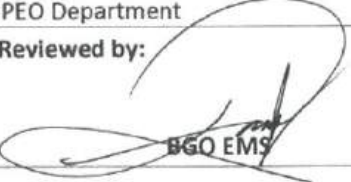
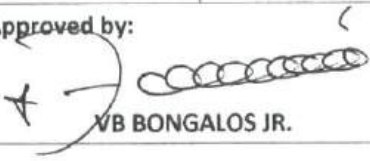
| | | | |
|--|---|--|---|
| REAGENT SACKS/BAGS | <p>All department users will assign designated area for empty sacks</p>  | <p>REAGENT SACKS/BAGS</p> <p>Accumulated sacks will be transferred to a centralized temporary storage</p>  | <p>REAGENT SACKS/BAGS</p> <p>Notify MEPEO Dept for proper inventory and documentation</p>  |
| REAGENT SACKS/BAGS | <p>Contact an EMB-accredited Treatment/Storage/Disposal Company</p>  | <p>REAGENT SACKS/BAGS</p> <p>The sacks from the following reagents are considered haz-waste</p> <div> <p>Caustic Soda
Borax
Soda Ash, Light
Litharge</p> </div> | <p>CARBON SACKS</p> <p>Empty carbon sacks can be stored for future re-use</p>  |
| Na ₂ S ₂ O ₅ BAGS | <p>Empty sodium metabisulfite bags are washed for re-use</p>  | <p>Na₂S₂O₅ BAGS</p> <p>Use designated wash area to control contaminated wash water</p>  | |











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|----------------|---|--------------|----------------|--|--------------|
| Document Title | EMS GUIDELINES | | | 
BenguetCorp | |
| Process | Hazardous Waste Management (Laboratory/Mill Procedure Wastes – Slags, Used Bowl Clay, Crucibles and Cupels, Contaminated Lab Equipment/Tiles) | | | | |
| Document Code | DRCS-12-07-F_MSG_HWM_CLE | Revision No. | 01 | Effective Date | Jan. 1, 2023 |
| Department | Assay Lab, Metallurgy Lab, Mill, and MEPEO Department | | | Page Number | Page 1 of 1 |
| Prepared by: | 
EG CRUZ | | Reviewed by: | 
BGO EMS | |
| | | | Approved by: | 
VB BONGALOS JR. | |
| LAB/MILL WASTE | Each department will be responsible for collecting their own lab waste | | LAB/MILL WASTE | Assign designated temporary storage for collected waste per department | |
| | Assay Laboratory
Mill
Metallurgy Laboratory | | |  | |
| LAB/MILL WASTE | Each lab waste is disposed separately, properly sealed and labeled | | LAB/MILL WASTE |  | |
| | Accumulated sacks will be transferred to a centralized temporary storage | | | Notify ENVIRO Dept for proper inventory and documentation | |
| LAB/MILL WASTE |  | | LAB/MILL WASTE |  | |
| | Maintain segregation for different lab waste (properly labeled) | | |  | |
| LAB/MILL WASTE | Contact an EMB-accredited Treatment/Storage/Disposal Company | | LAB/MILL WASTE | Chemical precipitates on the acid scrubber is dissolved before disposal | |
| |  | | |  | |



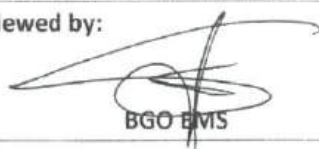
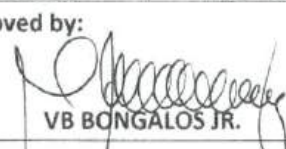

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|----------------|--|--------------|--|---|--|
| Document Title | EMS GUIDELINES | | | 
BonguetCorp | |
| Process | Hazardous Waste Management (Batteries) | | | | |
| Document Code | DRCS-12-07-H_HWM_B | Revision No. | 01 | Effective Date | Jan. 1, 2023 |
| Department | All Departments, Motorpool, Mine Mechanical, Electrical, Warehouse, and MEPEO Department | | | Page Number | Page 1 of 1 |
| Prepared by: | 
SV CAO-ROSA RIO | | | Reviewed by: | 
BGO EMS |
| | | | Approved by:

VB BONGALOS JR. | | |


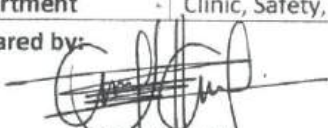

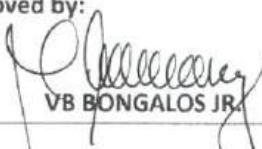
| | | | | | |
|--------------------|---|--------------------|--|--------------------|---|
| VEHICLE BATTERY | Motorpool will collect all unusable batteries in a designated space | VEHICLE BATTERY | When space is full, notify MEPEO for proper inventory & documentation | VEHICLE BATTERY | Collected batteries will be stored in a centralized temporary storage |
| |  | |  | |  |
| VEHICLE BATTERY | Contact an EMB-accredited Treatment/Storage/Disposal Company | DRY CELL BATTERIES | Electrical Dept will collect all empty batteries from all departments | DRY CELL BATTERIES | Collected batteries will be stored in a leak-proof waste container |
| |  | |  | |  |
| DRY CELL BATTERIES | When bin is full, notify MEPEO for proper inventory & documentation | DRY CELL BATTERIES | Collected batteries will be stored in a centralized temporary storage | DRY CELL BATTERIES | Contact an EMB-accredited Treatment/Storage/Disposal Company |
| |  | |  | |  |










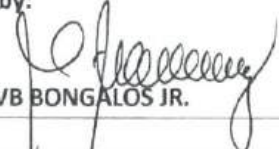
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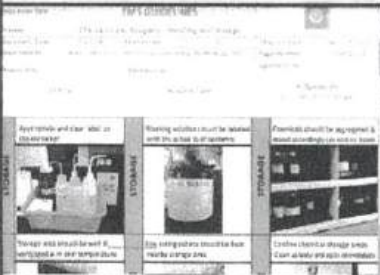





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|--|---|--|--|--|--------------|
| Document Title | EMS GUIDELINES | | 
BenguetCorp | | |
| Process | Hazardous Waste Management – Fluorescent Lamps and Bulbs | | | | |
| Document Code | DRCS-12-07-I_MSG_HWM_FLB | Revision No. | 02 | Effective Date | Jan. 2, 2024 |
| Department | All Departments, Electrical, Warehouse, and MEPEO | | | Page Number | Page 1 of 1 |
| Prepared by: | | Reviewed by: | | Approved by: | |
| 
CJ CHAPDIAN | | 
BGO EMS | | 
VB BONGALOS JR. | |


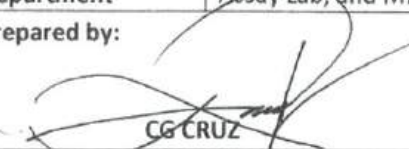


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|-------------------------|--|-------------------------|--|-------------------------|---|
| FLUORESCENT LAMPS/BULBS | All busted lamps and bulbs are collected by the Electrical Dept | FLUORESCENT LAMPS/BULBS | Collected lights/bulbs are stored in a centralized temporary storage | FLUORESCENT LAMPS/BULBS | Notify MEPEO Department for proper inventory & documentation |
| |  | |  | |  |
| FLUORESCENT LAMPS/BULBS | Contact an EMB-accredited Treatment/Storage/Disposal Company | | | | |
| |  | | | | |






| | | | | | |
|----------------|--|--------------|--|--|--|
| Document Title | EMS GUIDELINES | | | 
BenguetCorp | |
| Process | Hazardous Waste Management – Medical Waste | | | | |
| Document Code | DRCS-12-07-K_MSG_HWM_MW | Revision No. | 02 | Effective Date | Jan. 2, 2024 |
| Department | Clinic, Safety, MEPEO Department | | | Page Number | Page 1 of 1 |
| Prepared by: | 
CJ CHAPDIAN | | | Reviewed by: | 
BGO EMS |
| | | | Approved by:

VB BONGALOS JR. | | |

| | | | | | |
|---------------|--|---------------|---|---------------|---|
| MEDICAL WASTE | Medical waste is collected in a separate waste bin | MEDICAL WASTE | When bin is full, it is transferred to specially marked "biohazard" bags | MEDICAL WASTE | MEPEO Department is notified for proper inventory & documentation |
| |  | |  | |  |
| MEDICAL WASTE | Clinic will coordinate with MEPEO & Motorpool for delivery logistics | | | | |
| |  | | | | |


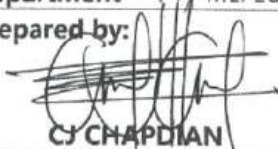

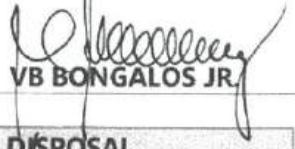
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|----------------|--|--------------|--------------|--|--------------|
| Document Title | EMS GUIDELINES | | | 
BenguetCorp | |
| Process | Hazardous Waste Management – Other Chemical/Reagent Containers (Crates, Boxes, & Bottles) | | | | |
| Document Code | DRC5-12-07-L_MSG_HWM | Revision No. | 01 | Effective Date | Jan. 1, 2023 |
| Department | Warehouse, Mill, Metallurgy Lab, Assay Lab, and MEPEO Department | | | Page Number | Page 1 of 1 |
| Prepared by: | 
CG CRUZ | | Reviewed by: | 
BGO EMS | |
| | | | Approved by: | 
VB BONGALOS JR. | |




| | | | | | |
|--------------------|---|--------------------|---|--------------------|--|
| ACID BOTTLES | Assign designated areas for temp storage of empty bottles per dept. | ACID BOTTLES | Segregate bottles and containers by following EMS guideline for chemicals | REAGENT CONTAINERS | Label designated areas properly |
| |  | |  | |  |
| REAGENT CONTAINERS | When storage is full, notify Enviro for proper inventory & documentation | REAGENT CONTAINERS | Collected containers are stored in a centralized temporary storage | REAGENT CONTAINERS | Maintain segregation and labels in the central storage (rebar) |
| |  | |  | |  |
| REAGENT CONTAINERS | Contact an EMB-accredited Treatment/Storage/Disposal Company | | | | |
| |  | | | | |



| | | | | | |
|--|--|--------------|----|--|--------------|
| Document Title | EMS GUIDELINES | | | 
BenguetCorp | |
| Process | Hazardous Waste Management – MIBK Waste | | | | |
| Document Code | DRCS-12-07-M_MSG_HWM_MW | Revision No. | 01 | Effective Date | Jan. 1, 2023 |
| Department | Assay Lab, and MEPEO Department | | | Page Number | Page 1 of 1 |
| Prepared by: | Reviewed by: | | | Approved by: | |
| 
CG CRUZ | 
BGO EMS | | | 
VB BONGALOS JR. | |

| | | | | | |
|------------|--|------------|---|------------|---|
| MIBK WASTE | Waste MIBK is stored back to it's original container for containment | MIBK WASTE | All filled up containers are sent to a centralized temporary storage | MIBK WASTE | Notify MEPEO Dept for proper inventory and documentation |
| |  | |  | |  |
| MIBK WASTE | In the central storage, all will be transferred in an approved steel drum | MIBK WASTE | Contact an EMB-accredited Treatment/Storage/Disposal Company | | |
| |  | |  | | |


MASTER COPY

| | | | | | |
|----------------|--|--------------|--|--|--|
| Document Title | EMS GUIDELINES | | | 
BenguetCorp | |
| Process | Hazardous Waste Management – Ink Cartridges / Bottles | | | | |
| Document Code | DRCS-12-07-N_MSG_HWMIC | Revision No. | 02 | Effective Date | Jan. 2, 2024 |
| Department | MEPEO, All Departments | | | Page Number | Page 1 of 1 |
| Prepared by: | 
CJ CHAPDIAN | | | Reviewed by: | 
BGO EMS |
| | | | Approved by:

VB BONGALOS JR. | | |

| DISPOSAL | DISPOSAL | DISPOSAL |
|---|--|---|
| Empty printer ink cartridges/ bottles are collected from each department. | MEPEO Dept. is notified for proper inventory and documentation of the empty cartridges/ bottles that are disposable. | Collected empty cartridges/ bottles that are disposable are stored in the Hazardous Waste Storage Facility. |
|  |  |  |

| DISPOSAL | RECYCLING |
|---|---|
| Contact an EMB-accredited Transporter and Treater for proper disposal | Collected empty cartridges/ bottles are turned over to the Procurement Dept. which handles the refilling. |
|  |  |



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Cordillera Administrative Region
Baguio City

Appendix I

ENVIRONMENTAL COMPLIANCE CERTIFICATE

CAR 1012 – 174 – 2110 (Amended)

The Department of Environment and Natural Resources (DENR) thru the Environmental Management Bureau – Cordillera Administrative Region (EMB-CAR) hereby grants this Environmental Compliance Certificate (ECC) for the **Acupan Contract Mining Project (ACMP)** of **Benguet Corporation** located at the former Balatoc Power Station Area, Virac, Itogon, Benguet, after complying with the Environmental Impact Assessment (EIA) requirements as prescribed in the promulgated guidelines implementing section 3 (b) of P.D. 1586.

This Certificate is further specified as follows:

A. Scope:

1. This Certificate is valid only for the abovesited project with a rated milling capacity not to exceed 300 dry metric tons per day (300 DMT/Day) and/or as described in the submitted documents.
2. This Certificate does not exempt the project from the requirements of other concerned agencies;

B. Conditions:

1. The development and operation of the project shall be in accordance with the plans and specifications described in the submitted documents. Any major modification and/or expansion shall be subject to the Environmental Impact Statement (EIS) System requirement;
2. The proponent shall cause the implementation of the Environmental Management Plan (EMP) and all other BC commitments described in the submitted EIA documents;
3. Tailings and other wastes generated from the operation of the plant shall be contained and disposed-off properly in the designated pollution control facility(ies) as described in the submitted EIA documents;
4. Pond/plant effluent discharges shall conform with the standards set forth under RA 9275 otherwise known as the Clean Water Act of the Philippines and its implementing Rules and Regulations;

DENR Cmpd., Gibraltar Rd.
Baguio City 2600
P.O. Box 1959

Telefax No. (074) 446-6440/ 443-4909
Tel. No. (074) 446-2881/442-2348

5. Piezometer monitoring station(s) shall be installed along strategic area(s) at tailings pond nos. 1 and 2 (TP #1 & TP #2) to monitor phreatic level stability;
6. The legal requirements pursuant to RA 6969 also known as the Toxic Substances and Hazardous and Nuclear Waste Control Act of 1990, RA 9275 or the Philippine Clean Water Act of 2004 and, RA 8749 or the Philippine Clean Air Act of 1999 shall be secured consistent to the operations of the plant. Compliance to said requirements shall be coordinated with the EMB-CAR;
7. Should there be a breakdown in the pollution control appurtenances and/or major damage(s) incurred, the proponent shall voluntarily cease its operation until such time that said damages incurred shall be rehabilitated or restored. Further, the proponent shall immediately inform the EMB, DENR-CAR of said damages and of the remedial measures undertaken;
8. The proponent shall submit to EMB-CAR one (1) year prior to the final shutdown of the plant a comprehensive abandonment plan. In relation, the EMB shall first review and approve the environmental aspects/components of the plan consistent with EMB functions prior to implementation;
9. To oversee the compliance of the proponent with the ECC conditions, the proponent shall maintain the operation of the established Sectoral Monitoring Team including the Environmental Monitoring Fund (EMF) to cover all costs attendant to the said monitoring.
10. The project is subject to on-the-spot monitoring/inspection at any reasonable time by the EMB-CAR which may be in coordination with concerned groups.
11. The proponent shall cause the implementation of any undertaking which may be imposed by the EMB-CAR as a result of Technical Conference/s called relative hereof;
12. This Certificate supersedes the Environmental Compliance Certificate (ECC) NO. CAR 0211-144-120 issued the project on November 29, 2002.
13. This Certificate shall be deemed automatically expired if the project is not implemented within five (5) years from the date of issuance; and
14. Any transfer of project proprietorship or project name carries the same conditions in this ECC for which notification to the EMB-CAR shall be made by the proponent within fifteen (15) days from such transfer.

Non-compliance with any of the above stipulations will be sufficient cause for the suspension or cancellation of this Certificate, administrative sanctions against the office head and/or imposition of fine in the amount not to exceed Fifty Thousand Pesos (P



50,000.00) for every violations thereof, at the discretion of the DENR (Section 9 of P. D. 1586).

C. Recommendations (for the consideration of the project proponent, the PMRB-Benguet/MGB-CAR and, other concerned agencies in the issuance of applicable permits/authorities):

1. The recommendations cited in the Geotechnical Analysis of Dam and Review of the Hydrology for the Re-mining of Tailings from the BGO Tailings Ponds No. I, II, & III final report, where applicable, should be given preferential consideration under the requirements of the MGB-CAR;
2. Qualified local residents should be given priority employment during the development and operation of the project;
3. Construction works should be under the tight supervision of a technical personnel to ensure that standards and requirements of sound engineering, safety and health practices are strictly followed;
4. An emergency response and contingency plan in the event of failure of any of the project appurtenant facilities and/or during disaster/calamity; and
5. The appurtenant physical structures and equipment of the project, where applicable, are subject to the requirements of the National Building Code of the Philippines and the permitting requirements of MGB-CAR/LGU-concerned.

Issued this _____ day of 15 DEC 2010, Year Two Thousand Ten.

RECOMMENDING APPROVAL:

APPROVED:


NESTOR M. DONAAL
Chief, EIA Division


PAQUITO T. MORENO, JR.
Regional Director

Amendment of ECC Condition ₱ 1,200.00 O.R. No. _____ Date _____
Legal Research Fee ₱ 240.00 O.R. No. _____ Date _____

NOTE: NOT VALID WITHOUT SEAL



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Cordillera Administrative Region
Baguio City

Appendix I-1

February 22, 2018

MR. FRANCISCO O. FLAVIER
Operations Manager
BMC Forestry Corporation
Km. 5, Naguilian Rd., Irisan, Baguio City

opd-089-18
Office of the Regional Director,
EMB-CAR
RELEASED
By 8 Date 2/26

SUBJECT : AMENDMENT OF ECC NO. ECC-OL-CAR-2016-0058 ISSUED ON SEPTEMBER 15, 2016 TO BMC FORESTRY CORPORATION FOR THE IRISAN LIME PROCESSING PLANT LOCATED AT KM. 5, NAGUILIAN RD., IRISAN, BAGUIO CITY

Dear Mr. Flavier:

This has reference to the letter dated October 23, 2017 requesting for an amendment of the Environmental Compliance Certificate (ECC) numbered ECC-OL-CAR-2016-0058 issued on September 15, 2016 for maximizing the plant production capacity of the Irisan Lime Processing Plant.

After careful evaluation of the submitted documents and in consideration of the payment of Php 2,035.00 under O.R. numbers 2673464 and 7643336 dated 11/23/2017, this office has decided to grant the ECC amendment. The project description of the ECC shall now read as follows:

PROJECT DESCRIPTION

The ECC covers the operation of the Irisan Lime Processing project with an annual production capacity of 19,420 MT and the full operations of the three (3) vertical shaft kilns located within an 18,541 sq. m. lot at Km. 5, Naguilian Rd., Irisan, Baguio City covered by the Transfer Certificate of Title numbered 018-2013000103 in the name of Iparatoc Mineral Resources Corporation (IMRC). The project involves the processing of raw lime stones into quicklime and slaked lime through calcination process by subjecting the limestone feeds into continuous heat in vertical shaft kilns.

All other provisions of the original ECC (No. ECC-OL-CAR-2016-0058 issued on September 15, 2016) not herein amended shall remain valid and existing. Consequently, non-compliance with the said conditions shall be sufficient cause for the imposition of fines in accordance with the penal provisions of PD 1586 and/or cancellation of the ECC.

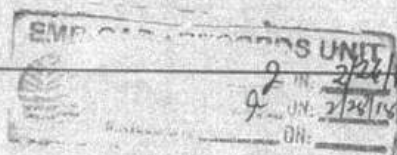
This letter shall be attached to and shall form part of the aforementioned ECC.

For information and record.

Very truly yours,


REYNALDO S. DIGAMO
OIC, Regional Director

DENR Cmpd., Gibraltar Rd.
Baguio City 2600
P.O. Box 1959



Telefax No. (074) 444-6440
Tel. No. (074) 442-2348/ 442-3896
(074) 448-2881/ 443-4909





Republic of the Philippines
Department of Environment and Natural Resource
ENVIRONMENTAL MANAGEMENT BUREAU

DENR Compound, Gibraltar, Baguio City
Telephone No. (074) 442-2346, (074) 446-2881, (074) 443-4909 Fax No. (074) 446-6440
car@emb.gov.ph
Visit us at: <http://www.emb.gov.ph/portal/car>

September 15, 2016

ECC-OL-CAR-2016-0058

MR. FRANCISCO O. FLAVIER
Operations Manager
BMC Forestry Corporation
Km. 5, Naguillian Rd., Irisan, Baguio City

Subject: **ENVIRONMENTAL COMPLIANCE CERTIFICATE**

Dear Mr. Flavier:

This refers to the Environmental Compliance Certificate (ECC) application for the **Irisan Lime Kilns** operation at Km. 5, Naguillian, Irisan, Baguio City.

After satisfying the requirements of the said application, this Bureau has decided to grant an ECC for the above-mentioned project.

With the issuance of this ECC, you are expected to implement the measures presented in the Initial Environmental Examination Checklist (IEEC), intended to protect and mitigate the project's adverse impacts on community health, welfare and the environment. Environmental considerations shall be incorporated in all phases and aspects of the project. You may proceed with the project implementation after securing all the necessary permits from other pertinent Government agencies. This Office will be monitoring the project periodically to ensure your compliance with stipulations cited in the attached ECC.

Please be guided accordingly.

Very truly yours,

REYNALDO S. DIGAMO
OIC, Regional Director



Republic of the Philippines
Department of Environment and Natural Resource
ENVIRONMENTAL MANAGEMENT BUREAU

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car@emb.gov.ph
Visit us at <http://www.emb.gov.ph/portal/car>

ENVIRONMENTAL COMPLIANCE CERTIFICATE

(Issued under Presidential Decree 1586)

ECC-OL-CAR-2016-0058

THIS IS TO CERTIFY THAT the **BMC Forestry Corporation**, a subsidiary of Benguet Corporation, Inc., herein represented by its Operations Manager, **Francisco O. Flavio**, is granted this ECC for the operation of the **Irisan Lime Processing Plant**, by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB).

SUBJECT ONLY to the conditions and restrictions set in this ECC and in the attached document labelled as Annexes A and B.

This Certificate is issued with the following details and supersedes the unnumbered ECC issued by the National Environmental Protection Council (NEPC) on December 2, 1982.

PROJECT DESCRIPTION

The ECC covers the operation of the Irisan Lime Processing project with an annual production capacity of 9,500 MT located within an 18,541 sq. m. lot at Km. 5, Naguilian Rd., Irisan, Baguio City covered by the Transfer Certificate of Title numbered 018-2013000103 in the name of Ifaratoc Mineral Resources Corporation (IMRC). The project involves the processing of raw lime stones into quicklime and slaked lime through calcination process by subjecting the limestone feeds into continuous heat in vertical shaft kilns. The details of the project components, amenities and facilities are found in Annex C hereof.

This Certificate is issued in compliance with the requirements of Presidential Decree No. 1586, and in accordance to DENR Administrative Order (D.A.O.) No. 2003-30. The EMB, however, is not precluded from reevaluating and correcting any deficiencies or errors that may be found after issuance of this Certificate.

Issued at EMB-CAR, DENR Compound, Gibraltar, Baguio City this September 15, 2016.

Recommending Approval:


NESTOR M. DONAAL

OIC-Chief, Clearance & Permitting Division

Approved:


REYNALDO S. DIGAMO

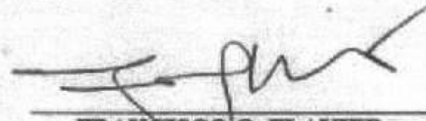


Environmental Compliance Certificate
IRISAN LIME KILNS
Km.5, Naguilian, Irisan Baguio City, Benguet
BMC FORESTRY CORPORATION

OIC, Regional Director

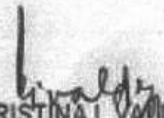
SWORN ACCOUNTABILITY STATEMENT

I, FRANCISCO O. FLAVIER, Operations Manager, representing the BMC FORESTRY CORPORATION with Office address at Km. 5, Naguilian Rd., Baguio City, takes full responsibility in complying with all conditions in this Environmental Compliance Certificate (ECC).


FRANCISCO O. FLAVIER
Signature

TIN No. 103-481-016

Subscribed and sworn before me this 16 SEP 2016, the above-named affiant taking oath
presenting his GTG 13724959, issued on June 01, 2016
at Baguio City


CRISTINA I. VALDEZ
Notary Public

My Commission Expires on 31 December 2016
Roll No. 61819; 25 April 2013; Manila
IBP No. 1003788; 01-07-16; Baguio-Benguet
PTR No. 2436102; 12-21-13; Baguio City

Doc. No. 31
Page No. 63
Book No. 19
Series of 2014



Environmental Compliance Certificate
IRISAN LIMEKILNS
Km.5, Naguilian, Irisan Baguio City, Benguet
BMC FORESTRY CORPORATION

I. CONDITIONS**ENVIRONMENTAL MANAGEMENT**

All commitments, mitigating measures and monitoring requirements, contained in the Initial Environmental Examination Checklist Report for the lime processing plant project, particularly in the Environmental Management Plan/ Environmental Monitoring Plan, including any modifications and/or additional information as approved by the EMB, shall be instituted to minimize any adverse impact of the project to the environment throughout its implementation, which shall include among others, to wit:

1. Voluntary cease its operation in the event of any malfunction in any of the appurtenant facilities until the time that said damages are rehabilitated or restored. Further, the proponent shall immediately inform the EMB-CAR of said damages and of remedial measures undertaken;
2. Uncalcined limestone/discards shall be prevented from deposition to and along drainage/natural waterways and water bodies, and shall be disposed – off properly in an appropriate/designated disposal site(s) which shall be maintained in a stable and non-polluting condition;
3. Timely construction of adequate engineered earth retaining structures along affected and geologically unstable areas, especially in the stockyard of limestone and quarry areas, to protect adjacent properties/environment;
4. The proponent shall plant appropriate/indigenous tree species along the periphery of the project site to serve as buffer for dust and noise and improvement of aesthetics and in the support of the National Greening Program and climate change initiatives of the government;

GENERAL CONDITIONS

5. The legal requirements pursuant to RA 6969 or the Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990, RA 8749 or the Philippine Clean Air Act of 1999, RA 9003 or the Ecological Solid Waste Management Act of 2000 and RA 9275 or the Philippine Clean Water Act of 2004 shall be secured whenever applicable. Compliance with said requirements shall be coordinated with the Clearance and Permitting Division (CPD) of EMBCAR, DENR;
6. The proponent shall secure regularly necessary permit(s)/clearances/authority from concerned national and local offices relative to project implementation;
7. The proponent shall allow entry of EMB-CAR personnel into the project site at all times to conduct monitoring and to validate project's compliance with the ECC conditions stipulated therein and EMP Mitigating Measures;
8. The proponent shall submit to EMB-CAR within fifteen (15) days after every quarter a Self-monitoring Report (SMR) and a Compliance Monitoring Report (CMR) semi-annually;



Environmental Compliance Certificate
 IRISAN LIMEKILNS
 Km.5, Naguilian, Irisan Baguio City, Benguet
 BMC FORESTRY CORPORATION

9. The proponent shall cause the implementation of any undertaking which may be imposed by EMB-CAR as a result of Technical Conference/s called relative to environmental issues arising from the implementation of the project;

II. RESTRICTIONS

10. Limestone feed materials shall be strictly sourced out from the company's permitted quarry areas and/or other sources sanctioned by government authorities. Violation of this condition shall automatically cause the cancellation/revocation of this ECC or imposition of fine;
11. Project development shall be in accordance with the submitted documents. Major modifications and/or expansion shall be subject to a new Environmental Impact Assessment (EIA) requirement;
12. Any transfer of project ownership carries the same conditions and restriction in this ECC for which a written notification to the EMB-CAR shall be made by the transferee/transferor within fifteen (15) days from such transfer; and
13. The project shall undergo the requirements specified in the implementing guidelines of the Department Administrative Order No. 2003-30 if the project construction has stopped for a period of five (5) years.

Non-compliance with any of the provisions of this Certificate shall be a sufficient cause for the cancellation of this Certificate and/or imposition of a fine in an amount not to exceed Fifty Thousand Pesos (P50, 000.00) for every violation thereof without prejudice to imposition of fines and penalties under other environmental laws.

***NOTE:** This Certificate cancels the ECC issued by the National Environmental Protection Council (NEPC) on December 2, 1982.



Environmental Compliance Certificate
IRISAN LIMEKILNS
Km.5, Naguillian, Irisan Baguio City, Benguet
BMC FORESTRY CORPORATION

PROJECT ASSESSMENT PLANNING TOOL

For the assistance of the Proponent and the Government agencies concerned in the management of the Project and for better coordination in mitigation of the impacts of the Project on its surrounding areas and the environment, the following are recommended for appropriate action.

| OTHER REGULATORY REQUIREMENTS/CONDITIONS | CONCERNED GOVERNMENT AGENCIES/ENTITIES |
|--|--|
| 1. Compliance with the Labor Code of the Philippines | DOLE – Bureau of Working Condition |
| 2. Compliance with the Sanitation Code of the Philippines | Department of Health (DOH) |
| 3. Compliance with the Ecological Solid Waste Management Act. | LGU Concerned |
| 4. Compliance to the Mining Act of the Philippines | MGB, DENR/LGU concerned |
| ENVIRONMENTAL PLANNING RECOMMENDATIONS FOR THE PROPONENT | |
| 5. Priority of employment shall be given to qualified local residents. Adequate public information for jobs available to local residents in the affected areas shall be provided;
6. Preservation of the existing trees be included as an essential part of the development/improvement scheme;
7. Undertake project during reasonable time periods of the day so as not to cause undue disturbance;
8. Strict supervision of project implementation by competent technical personnel to ensure that standards and requirements of sound engineering, safety and health practices are strictly followed; and
9. Working areas should have appropriate warning signs, lighting during night time and barricade to prevent accident. | |



Environmental Compliance Certificate
 IRISAN UMEKILNS
 Km.5, Naguilian, Irisan Baguio City, Benguet
 BMC FORESTRY CORPORATION

PROJECT COMPONENTS, AMENITIES AND FACILITIES

| Processing Plant Components/Facilities | |
|--|--|
| 1. | Three (3) units 2 m. x 4 m. high vertical shaft kilns |
| 2. | Three (3) units fuel oil pumps |
| 3. | Seven (7) units – 15,000-liter each capacity fuel oil tanks |
| 4. | One (1) unit – 60,000-liter capacity overhead fuel storage tank |
| 5. | One (1) unit – 90 MT silo storage |
| 6. | Two (2) units – 95 MT lime and limestone bins |
| 7. | Two (2) units lump lime discharge bins |
| 8. | Two (2) units crushed lime discharge bins |
| 9. | Two (2) units settling tanks |
| 10. | Three (3) units – 66 m ³ /min each capacity gas scrubber |
| 11. | Three (3) units dust collector |
| 12. | Three (3) units standby generator sets <ul style="list-style-type: none"> • One (1) unit 50 KW capacity “CATERPILLAR” standby generator set • Two (2) units 200 KW each capacity “CUMMINS” standby generator set |
| 13. | One (1) unit-three (3) compartments oil-water separator |
| 14. | One (1) unit platform scale |
| 15. | One (1) unit air compressor |
| 16. | One (1) unit skip bucket elevator |
| 17. | One (1) unit belt conveyor |
| 18. | One (1) unit brick cutter |
| 19. | One (1) unit lime crusher |
| Buildings/Amenities/Others | |
| 1. | Two-storey 489.75 sq. m. office building with one unit – two-chambered septic tank |
| 2. | Two-storey 520.0 sq. m. bunkhouse with two units – two-chambered septic tanks |
| 3. | One-storey 310.50 sq. m. staff house with one unit – two-chambered septic tank |
| 4. | 225 sq. m. parking area |
| 5. | 4,340 sq. m. stockyard (raw materials sourced-out from legal sources and from lot development activities) |
| 6. | A basketball court |


 NESTOR M. DONAAL



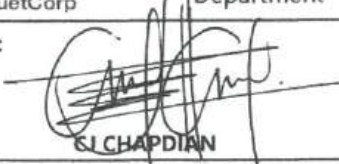
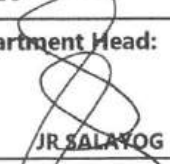


OIC-Chief, Clearance & Permitting Division


 REYNALDO S. DIGAMO

OIC, Regional Director



Environmental Compliance Certificate
 IRISAN LIMEKILNS
 Km.5, Naguilian, Irisan Baguio City, Benguet
 BMC FORESTRY CORPORATION


| | | | | | | | |
|--|--|---|---|-------------------|--|--------------|---|
| 
BenguetCorp | Document Title | REGISTRY OF COMPLIANCE OBLIGATIONS | | |  | | |
| | Document Code | DRCS-11_EMS_CO_01 | Revision | 10 | | | |
| | Department | MEPEO | Effective Date | February 28, 2025 | | | |
| Prepared by: | 
EJ CHAPDIAN | Department Head: | 
JR SALAYOG | Reviewed By: | 
BGO EMS | Approved By: | 
VALERIANO B. BONGALOS, JR. |

| No. | Governing Laws, Rules and Regulations | Applicable Requirement | Interested Parties | Evidence of Compliance | Status of Compliance | Remarks |
|-----|--|--|--------------------|---|----------------------|---|
| 1 | General Environment
PD 1586 Establishing an Environment Impact Statement System including other Environmental Manangement related measures and for other purposes
DAO 2003-30
Implementing Rules and Regulations (IRR) for the Philippine Environmental Impact Statement (EIS) System | Securing ECC | DENR - EMB | <u>ECC NO: CAR 1012 - 174 - 2110 (Amended - December 15, 2010)</u> | COMPLIANT | Restricted to 300 tonnes per day |
| 2 | DAO 2014-02- Revised Guidelines for Pollution Control Officer Accreditation | Accreditation of Pollution Control Officer | DENR - EMB | <u>Compliances\MEPEO\Accreditation of Pollution Control Officer-COA No. 2023-CAR-5329 Renewal.pdf</u> | COMPLIANT | Accreditation is valid until April 17, 2026 |
| 3 | | Training Course for Managing Head | | <u>EMB CAR 419-2015 (Training Course for Managing Head)</u> | COMPLIANT | Attended by VBB on Feb. 17, 2020 |
| 4 | DAO 2003-27
Amending DAO 26, DAO 29 and DAO 81, Among others on the Submission of Self-Monitoring-Report (SMR) | Preparation and Submission of Self-Monitoring-Report (SMR) | DENR/ EMB | <u>Self-Monitoring-Report 4th Quarter of 2024</u> | COMPLIANT | Submitted on January 15, 2025 |
| 5 | | | | <u>Solid Waste Management Guidelines</u> | COMPLIANT | EMSG-09: Solid Waste Management Guidelines |

| No. | Governing Laws, Rules and Regulations | Applicable Requirement | Interested Parties | Evidence of Compliance | Status of Compliance | Remarks |
|-----|--|---|--------------------|---|----------------------|---|
| 6 | R.A. 9003 Ecological Solid Waste Management Act of 2000; | Section 4, Segregation, Collection and Transport of Solid Waste | DENR - EMB | <u>Annual Environmental Protection and Enhancement Program for ACMP-Benguet Corp 2025</u> | COMPLIANT | Proposed AEPEP
Submitted: Nov. 29, 2024
Revised AEPEP
Submitted: December 5, 2024
(Revised Solid waste management is included into the program) |
| 7 | DAO 2001-34 Implementing Rules & Regulations of RA 9003 | | | <u>Module-5, Self-Monitoring-Report 4th Quarter of 2024 (Solid Waste Collection and Monitoring Report)</u> | COMPLIANT | Submitted on January 15, 2025 |
| 8 | R.A. 9275 Philippine Clean Water Act of 2004; | Section 14: Discharge Permit | DENR - EMB | <u>Discharge Permit for Phase II Tailings Dam Application Permit Update</u> | PARTIALLY COMPLIANT | The renewal of the Discharge Permit (DP) is already on processed and submitted through online application, though the releasing of the DP will depends on the water analysis results if the arsenic parameter will normalize. |
| 9 | | | | <u>Discharge Permit of Oil-Water Separator at Mine Mechanical Shop (DP-CAR-24-10617)</u> | COMPLIANT | Expiry date: July 21, 2025 |
| 10 | | | | <u>Discharge Permit of Oil-Water Separator at Motorpool Shop (DP-CAR-23-07804)</u> | COMPLIANT | Expiry date: July 21, 2025 |
| 11 | | | | <u>Discharge Permit of one (1) unit 2-Chambered Septic Tank for the Administration Building (DP-CAR-24-08775)</u> | COMPLIANT | Approved: Sep. 9, 2024
Valid Until: Sep. 9, 2025 |
| 12 | DAO 2005-10 Implementing Rules & Regulations of RA 9275 | | | <u>Discharge Permit of one (1) unit 2-Chambered Septic Tank for the Assay Laboratory Building (DP-CAR-24-12186)</u> | COMPLIANT | Approved: Dec. 3, 2024
Valid Until: Dec. 3, 2025 |




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| No. | Governing Laws, Rules and Regulations | Applicable Requirement | Interested Parties | Evidence of Compliance | Status of Compliance | Remarks |
|---|--|--------------------------------------|--------------------|--|----------------------|---|
| 13 | | | | <u>Discharge Permit of one (1) unit 2-Chambered Septic Tank for the Metallurgy Laboratory (DP-CAR-24-11549)</u> | COMPLIANT | Approved: Nov. 20, 2024
Valid Until: Nov. 20, 2025 |
| 14 | | | | <u>Discharge Permit of one (1) unit 2-Chambered Septic Tank for the Motorpool Department (DP-CAR-24-08775)</u> | COMPLIANT | Approved: Sep. 16, 2024
Valid Until: Sep. 16, 2025 |
| 15 | | Section 14.6: Self-Monitoring Report | DENR - EMB | <u>Self-Monitoring-Report 4th Quarter of 2024</u> | COMPLIANT | SMR 4th Qtr 2023 - Module 3 |
| 16 | DAO 2016-08 Water Quality and General Effluent Standards Of 2019 | | | <u>A. Latest Quarterly MMT Water Quality Sampling & Testing</u> | COMPLIANT | Date sampled: November 12, 2024 |
| 17 | | | | <u>B. Latest Monthly water quality sampling & testing.</u> | COMPLIANT | Date sampled: January 16, 2025 |
| 18 | | | | <u>C. Motorpool Shop Oil-Water Separator water quality testing</u> | COMPLIANT | Date sampled: January 16, 2025 |
| 19 | | | | <u>D. Mine Mechanical Shop Oil-Water Separator water quality testing</u> | COMPLIANT | Date sampled: January 16, 2025 |
| 20 | | | | <u>Permit to Operate 2-unit Thermo Digestion Chamber w/ 1-unit Scrubber at Assay Lab. PTO-OL-CAR-2021-03214-R</u> | COMPLIANT | Date Issued: May 22, 2021
Date Expires: January 22, 2026 |
| 21 | | | | <u>Permit to operate 2-unit Cupellation Furnace w/ 1-unit Lead fume scrubber system at Assay Lab. Permit No: PTO-OL-CAR-2023-00343-R</u> | COMPLIANT | Date Issued: January 12, 2023
Date Expires: January 12, 2026 |
| 22 | | | | <u>Permit to Operate Dust Collection Facility System (Application)</u> | COMPLIANT | Date Issued: May 3, 2024
Date Expires: August 3, 2028 |
| R.A. 8749 Philippine Clean Air Act of 1999; | | | | | |  |



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| No. | Governing Laws, Rules and Regulations | Applicable Requirement | Interested Parties | Evidence of Compliance | Status of Compliance | Remarks |
|---|--|--------------------------------------|--------------------|--|----------------------|---|
| 13 | | | | <u>Discharge Permit of one (1) unit 2-Chambered Septic Tank for the Metallurgy Laboratory (DP-CAR-24-11549)</u> | COMPLIANT | Approved: Nov. 20, 2024
Valid Until: Nov. 20, 2025 |
| 14 | | | | <u>Discharge Permit of one (1) unit 2-Chambered Septic Tank for the Motorpool Department (DP-CAR-24-08775)</u> | COMPLIANT | Approved: Sep. 16, 2024
Valid Until: Sep. 16, 2025 |
| 15 | | Section 14.6: Self-Monitoring Report | DENR - EMB | <u>Self-Monitoring-Report 4th Quarter of 2024</u> | COMPLIANT | SMR 4th Qtr 2023 - Module 3 |
| 16 | DAO 2016-08 Water Quality and General Effluent Standards Of 2019 | | | <u>A. Latest Quarterly MMT Water Quality Sampling & Testing</u> | COMPLIANT | Date sampled: November 12, 2024 |
| 17 | | | | <u>B. Latest Monthly water quality sampling & testing.</u> | COMPLIANT | Date sampled: January 16, 2025 |
| 18 | | | | <u>C. Motorpool Shop Oil-Water Separator water quality testing</u> | COMPLIANT | Date sampled: January 16, 2025 |
| 19 | | | | <u>D. Mine Mechanical Shop Oil-Water Separator water quality testing</u> | COMPLIANT | Date sampled: January 16, 2025 |
| 20 | | | | <u>Permit to Operate 2-unit Thermo Digestion Chamber w/ 1-unit Scrubber at Assay Lab. PTO-OL-CAR-2021-03214-R</u> | COMPLIANT | Date Issued: May 22, 2021
Date Expires: January 22, 2026 |
| 21 | | | | <u>Permit to operate 2-unit Cupellation Furnace w/ 1-unit Lead fume scrubber system at Assay Lab. Permit No: PTO-OL-CAR-2023-00343-R</u> | COMPLIANT | Date Issued: January 12, 2023
Date Expires: January 12, 2026 |
| 22 | | | | <u>Permit to Operate Dust Collection Facility System (Application)</u> | COMPLIANT | Date Issued: May 3, 2024
Date Expires: August 3, 2028 |
| R.A. 8749 Philippine Clean Air Act of 1999; | | | | | | |

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| No. | Governing Laws, Rules and Regulations | Applicable Requirement | Interested Parties | Evidence of Compliance | Status of Compliance | Remarks |
|-----|--|--|--------------------|--|----------------------|---|
| 23 | Article 4, Section 21-Pollution From Motor Vehicles
Article 5, Section 24 Pollution From Other Sources
DAO 2000-81 Implementing Rules & Regulations of RA 8749 | Permit to Operate of Air Pollution Sources | DENR - EMB | <u>PTO One Unit Acid Fume Scrubber System at Mill Refinery</u>
<u>PO No.</u> | PARTIALLY COMPLIANT | Issued: March 11, 2020 Expires on February 16, 2025
<u>Renewal is on process:</u>
<u>Submitted online: January 15, 2025</u> |
| 24 | | | | <u>Permit to Operate Two Units 25 kVa Genarator Sets Permit No.: PTO-OL-CAR-2023-08042-R</u> | | Issued: June 21, 2023 Expires on June 20, 2027 |
| 25 | | | | <u>Permit to Operate 12 units 15kgs/hr eavh Assing Vessels</u> | COMPLIANT | Issued: July 2, 2024 Expires on April 2, 2029 |

R.A. 6969, Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990;
DAO 1992-29 Implementing Rules & Regulations of RA 6969

| | | | | | | |
|----|---|-------------------------|------------|--|-----------|--|
| 26 | DAO NO. 1997-39 Chemical Control Order for Cyanide and Cyanide Compounds | Securing CCO Reg. Cert. | DENR - EMB | <u>CCO Registration Certificate for Cyanide and Cyanide Compounds</u>
RCN: CCOr-CAR-CN-2020-00058 | COMPLIANT | Online registration Issued on March 4, 2020 |
| 27 | DAO NO. 2013-24 Chemical Control Order for Lead and Lead Compounds | Securing CCO Reg. Cert. | | <u>CCO Registration Certificate for Lead and Lead Compounds</u>
RCN: CCOr-2024-00222 | COMPLIANT | Online registration Issued on Nov. 20, 2024 |
| 28 | DAO NO. 2004-01 Chemical Control Order for Polychlorinated Biphenyls (PCBs) | Securing CCO Reg. Cert. | | <u>CCO Registration Certificate for Polychlorinated Biphenyls (PCBs)</u>
RCN: CCO-PCB-RCAR-BEN-32 | COMPLIANT | Online registration Issued on June 6, 2016 |
| 29 | DAO NO. 2019-17 Chemical Control Order for Arsenic and Arsenic Compound | Securing CCO Reg. Cert. | | <u>CCO Registration Certificate for Arsenic</u>
RCN: CCOr-CEN-As-2024-00144 | COMPLIANT | Online registration Issued on August 5, 2025 |



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| No. | Governing Laws, Rules and Regulations | Applicable Requirement | Interested Parties | Evidence of Compliance | Status of Compliance | Remarks |
|-----|---|--|--------------------|---|----------------------|---|
| 30 | MEMORANDUM CIRCULAR NO. 2003 – 008
Series of 2003-Procedural and Reference Manual for
DAO 2003-27 | Quarterly SMR
submission/s | | <u>Quarterly Hazardous Waste Monitoring
and Inventory</u> | COMPLIANT | SMR 4th Qtr 2024- Module 2 |
| 31 | DAO 2013-22, Revised Procedures and Standards for
the Management of Hazardous Waste (Revising DAO
2004-36) 3.3
Requirement for Waste Generators | 1. Hazardous
Waste Genarator
Registration
Certificate | DENR - EMB | <u>Hazardous Waste Genarator Registration
Certificate</u> | COMPLIANT | Genarator ID No. OL-GR-CAR-
11-000978 |
| 32 | DAO 1992-29, Section 29. Hazardous Waste Storage
and Labelling | 2. Quarterly
Report (SMR) | | <u>Self-Monitoring-Report 4th Quarter of
2024</u> | COMPLIANT | Submitted on January 15,
2025 |
| 33 | DOA 136-14 Guidelines for the Implementation of
Globally harmonized System (GHS) in Chemical safety
Program in the Workplace | 3.
Comprehensive
Emergency
Contingy PlanS | | <u>Contingency Program for Hazardous
Waste- Benguet Corporation</u> | COMPLIANT | Prepared by: JRS
Reviewed by: GPG
Approved by: VBB Jr. |
| 34 | DAO 1992-29, Section 29. Hazardous Waste Storage
and Labelling

DOA 136-14 Guidelines for the Implementation of
Globally harmonized System (GHS) in Chemical safety
Program in the Workplace | 4. Storage and
Labeling
requirements | | EMS Guidelines | COMPLIANT | DRCS-12-01_MSG_HSCR, DRCS-
12-02_MSG_HSDCC, DRCS-12-
03_MSG_HTSO, DRCS-12-07-
A_MSG_HWMC, DRCS-12-07-
B_MSG_HWMC_AC, DRCS-12-07-
A_MSG_HWM_MT, DRCS-12-07-
D_MSG_HWM_CC, DRCS-12-07-
E_MSG_HWM_CLE, DRCS-12-07-
G_MSG_HWM_AC, DRCS-12-07-
I_MSG_HWM_FLB, DRCS-12-07-
J_MSG_HWM_PCB, DRCS-12-07-
K_MSG_HWM_MW, DRCS-12-07-
L_MSG_HWM, DRCS-12-07-
O_MSG_HWMFM, DRCS-12-07-
N_MSG_HWMIC, DRCS-12-
09_MSG_SWM, DRCS-12-11-
N_MSG_ACF |



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| No. | Governing Laws, Rules and Regulations | Applicable Requirement | Interested Parties | Evidence of Compliance | Status of Compliance | Remarks |
|---|--|--|--------------------|--|----------------------|--|
| 35 | DAO 2013-22, 4.0 Governing Rules and Regulation for Hazardous Waste Transporter Section 26. Waste Generators | Registered Waste Transporters, Duly Authorized by DENR | DENR - EMB | All Waste Services, Inc. ECC | COMPLIANT | All Waste Services, Inc. ECC Amended Issued- March 18 2016 |
| 36 | DAO 2013-22, 4.0 Governing Rules and Regulation for Hazardous Waste Transporter Section 27 Waste Transporter | Waste Generator ID | DENR - EMB | Transporter's Hazardous Waste Generator Registration Certificate | COMPLIANT | Genarator ID No.: OL-GR-R3-14-000183 |
| 37 | DAO 2013-22, 4.0 Governing Rules and Regulation for Hazardous Waste Transporter, 50 Governing Rules and Regulations for Hazardous Waste Treatment Storage and Disposal (TSD) Facilities. | TSD Registration Certificate | DENR - EMB | TSD Registration Certificate | PARTIALLY COMPLIANT | The renewal is on process thru online registration of HWMS- EMB. Awaiting for the approval of the Discharge permit of the TSF 2 as it is one of the requirements for the releasing of the TSD Certificate
<u>HWMS Portal update</u> |
| R.A. 7942 Philippine Mining Act of 1995 | | | | | | |
| DAO 2010-21 Implementing Rules & Regulations of RA 7942 | | | | | | |
| 38 | Section 270. Reporting Requirements | Records of Extraction | MGB | Semi-Annual Report on Mine Waste and Mill Tailings Produced, Contained and/ or Utilized for the Period of July-December 2024 | COMPLIANT | Submitted at MGB-CAR: Feb. 14, 2024
Submitted at MGB-CENTRAL: Feb. 10, 2024 |
| 39 | Section 166. General Provision for Environmental protection | Establishment of Environmental Protection Program | MGB | Environmental Protection and Enhance Program (EPEP) | COMPLIANT | Submitted: Nov. 08, 2019 (Hard copy Available at MEPEO Dept.) |
| 40 | Section 169. Environmental Protection and Enhancement Program
Section 171. Annual Environmental Protection and Enhancement Program | | | Annual Environmental Protection and Enhancement Program of Benguet Corp- ACMP for 2025 | COMPLIANT | Proposed AEPEPE Submitted: Nov. 29, 2024
Revised AEPEP Submitted: Jan. 15, 2025 |



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| No. | Governing Laws, Rules and Regulations | Applicable Requirement | Interested Parties | Evidence of Compliance | Status of Compliance | Remarks |
|-----|--|---|--------------------|---|----------------------|--|
| 41 | Section 173. Organization of a Mine Environmental Protection and Enhancement Office (MEPEO) | Establishment of MEPEO as integral part of Mine Organization | MGB | <u>Table of Organization of MEPEO Department</u> | COMPLIANT | Updated: March 2025 |
| 42 | Section 174. Environmental Monitoring Audit | Monitoring by MMT at least every quarter | MGB | <u>4th Quarter 2024 ACMP- MMT Compliance Monitoring and Validation Report (CMVR)</u> | COMPLIANT | 2024 4th Qtr. MRFC Meeting Conducted on: Dec. 5, 2024
Submitted at EMB: Jan. 15, 2024 |
| 43 | Section 189. Mine Waste and Tailings Fess Reserve Fund
Section 190. Mine Waste and Tailings Fees
Section 191. Payment of Mine Waste and Tailings Fees Due | MWT payment semi-annually | MGB | <u>Payment for BC - ACMP MWT Fee for July-December 2024</u> | COMPLIANT | Awaiting for the scheduled Validation of MGB-CAR |
| 44 | Section 270. Reporting Requirements:
n. Semiannual Status Report on the Environmental Work Program
DAO 2010-21 Revised Implementing Rules and Regulations of R.A. 7942, otherwise known as the Philippine Mining Act of 1995 | Monthly, Quarterly and Integrated Annual Reporting | MGB | <u>4th Quarter Compliance Monitoring Report (CMR) / Accomplishment Report relative to the Annual Environmental Protection and Enhancement Program (AEPEP)</u> | COMPLIANT | Submitted: Jan. 15, 2025 |
| 45 | DAO 2015-02 on the harmonization of the Philippine Environmental Impact System and the Philippine Mining Act of 1995 in relation to Mining Projects. | | | <u>2024 AEPEP Annual Accomplishment Report</u> | COMPLIANT | Submitted: January 30, 2025 |
| 46 | Executive Order 26 of 2011 and Executive Order 193 of 2015 - Enhanced National Greening Program | Implementation and Quarterly Submission of National Greening Program (NGP) Report | MGB/CENRO | <u>NGP Report 4th Qtr. 2024</u> | COMPLIANT | Submitted: Jan. 15, 2025 |



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| No. | Governing Laws, Rules and Regulations | Applicable Requirement | Interested Parties | Evidence of Compliance | Status of Compliance | Remarks |
|-----|--|---|--------------------|---|----------------------|-----------------------------|
| 47 | Administrative Order (DAO) No. 22, series of 1989 - Adopt-A-Tree Adopt-A-Mining Forest Program | Implementation and Semi Annual Submission of Mining Forest Program Report | MGB | <u>Mining Forest Program 2nd Sem. 2024</u> | COMPLIANT | Submitted: Jan. 15, 2025 |
| 48 | MGB-MEMORANDUM dated July 10, 2020 - Establishment of Bamboo Plantation in Mining Areas | Submission Quarterly Accomplishment Report | MGB | <u>4th Quarter 2024 Bamboo Plantation Accomplishment Report</u> | COMPLIANT | Submitted: Jan. 15, 2025 |
| 49 | DAO 02 Series of 2017- The Revise Procedural Manual for DENR Administrative Orders No. 30, Series of 2003

DENR-EMB-MEMORANDUM CIRCULAR NO. 2016-001 | Submission of online Semestral Compliance Monitoring Report (CMR) | EMB | <u>Online CMR 2nd Sem 2024</u> | COMPLIANT | Submitted: January 31, 2025 |

| SUMMARY OF ENVIRONMENTAL COMPLIANCE OBLIGATIONS | | |
|---|----|-------------------|
| Total Number of Compliances | 49 | Percentage |
| Number of Compliant | 46 | 93.88 % |
| Number of Partially- Compliant | 3 | 6.12 % |
| Number of Non- Compliant | 0 | 0.00 % |

| Compliance Obligation Indicators: | |
|-----------------------------------|---|
| COMPLIANT | Actions / requirements have been fully implemented, accomplished and approved. |
| PARTIALLY COMPLIANT | Actions have been taken to address the requirements, however, approval / implementation of the same is pending. |
| NON-COMPLIANT | No actions have been taken to address the requirements. |


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Republic of the Philippines
 Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
 Cordillera Administrative Region
 80 Diego Silang St., Baguio City 2600
 Tel. No. 63 74 442 6392; Fax No. 63 74 304 2596; Website: www.car.mgb.gov.ph
 E-mail: car@mgb.gov.ph; car_mgb@yahoo.com; mgb.cordillera@gmail.com



CERTIFICATE OF APPROVAL

SHP # 04A-2024-CAR

The Mines and Geosciences Bureau-CAR, having evaluated the submitted amended 2024 Safety and Health Program (SHP) in accordance with the provisions of Department of Environment and Natural Resources Administrative Order (DAO) No. 2010-21, the Revised Implementing Rules and Regulations of Republic Act (RA) No. 7942, otherwise known as the "Philippine Mining Act of 1995", hereby grants this Certificate of Approval to **BENGUET CORPORATION-ACUPAN CONTRACT MINING PROJECT (BC-ACMP), PC-ACMP-002-CAR**, located at Virac, Itogon, Benguet.

This Certificate is issued subject to the pertinent provisions of the abovementioned laws, rules and regulations, and to the following conditions:

1. This Certificate is valid only for programs, projects, and activities stipulated in the CY 2024 SHP;
2. The committed budget for the CY 2024 SHP is Seven Million One Hundred Sixty-Two Thousand and Two Hundred Seventeen Pesos (PhP7,162,217.00);
3. The implementation of identified programs, projects and activities shall be subject to validation by the **MGB-CAR** and auditing of the **MGB Central Office (MGB-CO)**;
4. Benguet Corporation-Acupan Contract Mining Project (BC-ACMP), shall submit to **MGB-CAR** a quarterly accomplishment reports within 15 working days at the end of each quarter and an annual accomplishment report 30 days after the end of the calendar year;
5. The company shall notify the **MGB-CAR** of any amendment in the approved SHP. Provided that the amendments do not compromise the overall safety and health programs and conditions of the project; and

MGB-CAR-FO-MSESDD-MSHS-011-00 (09.05.17)

"MINING SHALL BE PRO-PEOPLE AND PRO-ENVIRONMENT
 IN SUSTAINING WEALTH CREATION AND IMPROVED QUALITY OF LIFE."

Office of the Regional Director/Finance and Administrative Division - 63 74 442 6392; ICT - 63 74 661 7685; Geosciences Division/Laboratory Section 63 74 304 2500; Mine Management Division - 63 74 304 3068 (Monitoring and Technical Services Section/Mining Tenement Evaluation/Mineral Lands Survey Section); Mine Safety Environment and Social Development Section - 63 74 304 2595; Social Development Section/Environment Section 63 74 304 2530



Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
Cordillera Administrative Region
80 Diego Silang St., Baguio City 2600
Tel. No. 63 74 442 6392; Fax No. 63 74 304 2596; Website: www.car.mgb.gov.ph
E-mail: car@mgb.gov.ph; car_mgb@yahoo.com; mgb.cordillera@gmail.com



6. Additional conditions may be imposed to effectively implement the approved SHP should the results of the monitoring by the **MGB-CAR** or audit by the **MGB-CO** warrants them.

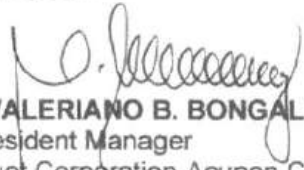
Non-compliance with the above conditions shall be sufficient ground for the penalties indicated in the Philippine Mining Act of 1995 and its implementing rules and regulations.

Given this 18th day of June 2024 at the Mines and Geosciences Bureau-CAR, Baguio City


FAY W. APIL
Regional Director



CONFORME:


MR. VALERIANO B. BONGALOS, JR.
VP/Resident Manager
Benguet Corporation-Acupan Contract Mining Project
Virac, Itogon, Benguet

MGB-CAR-FO-MSESDD-MSHS-011-00 (09.05.17)

**"MINING SHALL BE PRO-PEOPLE AND PRO-ENVIRONMENT
IN SUSTAINING WEALTH CREATION AND IMPROVED QUALITY OF LIFE."**

Office of the Regional Director/Finance and Administrative Division – 63 74 442 6392; ICT – 63 74 661 7685; Geosciences Division/Laboratory Section 63 74 304 2500; Mine Management Division - 63 74 304 3068 (Monitoring and Technical Services Section/Mining Tenement Evaluation/Mineral Lands Survey Section); Mine Safety Environment and Social Development Section – 63 74 304 2595; Social Development Section/Environment Section 63 74 304 2530



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 E-mail: car@mgb.gov.ph, car_mgb@yahoo.com, mgb.cordillera@gmail.com



CERTIFICATE OF APPROVAL

SHP # 07-2024-CAR

The Mines and Geosciences Bureau-CAR, having evaluated the submitted 2024 Safety and Health Program (SHP) in accordance with the provisions of Department of Environment and Natural Resources Administrative Order (DAO) No. 2010-21, the Revised Implementing Rules and Regulations of Republic Act (RA) No. 7942, otherwise known as the "Philippine Mining Act of 1995", hereby grants this Certificate of Approval to **BMC FORESTRY CORPORATION-IRISAN LIME PROJECT (BMC FC-ILP)**, **MPP No. 01C-2022-CAR**, located at Km. 5 Naguilian Road, Irisan, Baguio City.

This Certificate is issued subject to the pertinent provisions of the abovementioned laws, rules and regulations, and to the following conditions:

1. This Certificate is valid only for programs, projects, and activities stipulated in the CY 2024 SHP;
2. The committed budget for the CY 2024 SHP is One Hundred Fifty Seven Thousand and Seven Hundred Eighty Pesos (PhP157,780.00);
3. The implementation of identified programs, projects and activities shall be subject to validation by the **MGB-CAR** and auditing of the **MGB Central Office (MGB-CO)**;
4. BMC Forestry Corporation-Irisan Lime Project, shall submit to **MGB-CAR** a quarterly accomplishment reports within 15 working days at the end of each quarter and an annual accomplishment report 30 days after the end of the calendar year;
5. The company shall notify the **MGB-CAR** of any amendment in the approved SHP. Provided that the amendments do not compromise the overall safety and health programs and conditions of the project; and

MGB-CAR-FO-MSESDD-MSHS-011-00 (09.05.17)

"MINING SHALL BE PRO-PEOPLE AND PRO-ENVIRONMENT
 IN SUSTAINING WEALTH CREATION AND IMPROVED QUALITY OF LIFE."

Office of the Regional Director/Finance and Administrative Division - 63 74 442 6392; ICT - 63 74 661 7685; Geosciences Division/Laboratory Section 63 74 304 2500; Mine Management Division - 63 74 304 3068 (Monitoring and Technical Services Section/Mining Tenement Evaluation/Mineral Lands Survey Section); Mine Safety Environment and Social Development Section - 63 74 304 2595; Social Development Section/Environment Section 63 74 304 2530



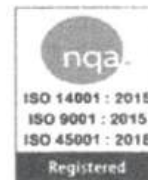
Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU

Cordillera Administrative Region

80 Diego Silang St., Baguio City 2600

Tel. No. 63 74 442 6392; Fax No. 63 74 304 2596; Website: www.car.mgb.gov.ph

E-mail: car@mgb.gov.ph, car_mgb@yahoo.com, mgb.cordillera@gmail.com



6. Additional conditions may be imposed to effectively implement the approved SHP should the results of the monitoring by the **MGB-CAR** or audit by the **MGB-CO** warrants them.


Non-compliance with the above conditions shall be sufficient ground for the penalties indicated in the Philippine Mining Act of 1995 and its implementing rules and regulations.

Given this 30th day of January 2024 at the Mines and Geosciences Bureau-CAR, Baguio City



FAY W. APIL
Regional Director



CONFORME:


MR. FRANCISCO O. FLAVIER
Resident Manager
BMC Forestry Corporation-ILP
Km. 5 Naguilian Road, Irisan, Baguio City

MGB-CAR-FO-MSESDD-MSHS-011-00 (09.05.17)


"MINING SHALL BE PRO-PEOPLE AND PRO-ENVIRONMENT
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Office of the Regional Director/Finance and Administrative Division – 63 74 442 6392; ICT – 63 74 661 7685; Geosciences Division/Laboratory Section 63 74 304 2500; Mine Management Division - 63 74 304 3068 (Monitoring and Technical Services Section/Mining Tenement Evaluation/Mineral Lands Survey Section); Mine Safety Environment and Social Development Section – 63 74 304 2595; Social Development Section/Environment Section 63 74 304 2530



Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
Cordillera Administrative Region



ANNUAL SOCIAL DEVELOPMENT AND MANAGEMENT PROGRAM (ASDMP)

CERTIFICATE OF APPROVAL
ASDMP No. 2024-04-CAR (4th)

The Mines and Geosciences Bureau-CAR, having evaluated the 2024 Annual Social Development and Management Program (ASDMP), hereby grants this Certificate of Approval to **BENGUET CORPORATION** for its Acupan Contract Mining Project located in *Barangay Virac, Municipality of Itogon, Province of Benguet*, under the **Mining Patent No. PC-ACMP-002-CAR** after substantially complying with the requirements as mandated under DENR Administrative Order (D.A.O) No. 2010-21.

This Certificate is being issued subject to the pertinent provisions of the abovementioned DAO and to the following conditions:

1. This Certificate is valid only for the Programs/Projects/Activities (P/P/As) stipulated in the submitted 2024 ASDMP;
2. The budget allocation for this ASDMP amounts to Four Million Seven Hundred Seventy-four Thousand One Hundred Fifty-five and 24/100 (Php 4,774,155.24), which is equivalent to the 1.5% of the previous years' operating cost as declared in its Affidavit to implement the P/P/As stipulated in the Program which is broken down as follows:

| 2023 Operating Cost (Php) | Basis of Allocation | 2024 ASDMP Total Amount (Php) |
|---------------------------|--|-------------------------------|
| 318,277,016.27 | (75%) Development of Host and Neighboring Communities | 3,580,616.43 |
| | <i>Balance</i> | 456,866.29 |
| | (15%) Information, Education Communication | 716,123.29 |
| | <i>Balance</i> | 15,064.80 |
| | (10%) Development of Mining Technology and Geosciences | 447,415.52 |
| | <i>Balance</i> | 175,590.35 |
| | Sub-Total | 4,774,155.24 |
| | Sub-total (<i>Balance from previous ASDMP</i>) | 647,521.44 |
| | GRAND TOTAL | 5,421,676.68 |

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Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
Cordillera Administrative Region



3. The Company shall include the remaining balance (*Php* 647,521.44) from its previous ASDMP after determination of the 1.5% projected/operating cost to implement the P/P/As stipulated in the Program. Said balance shall be treated separately on accomplishment/monitoring reports;
4. The Company may incorporate any alterations and/or re-alignment of P/P/As and funds from the approved ASDMP. Provided that, such changes is the result of consultations with its host and neighboring communities, accompanied by supporting documents such as resolutions, and approved by the MGB RO;
5. The Company shall submit a quarterly monitoring report fifteen (15) calendar days after the end of each quarter to MGB RO. Likewise, the annual accomplishment report shall be submitted thirty (30) calendar days after the end of each calendar year to the MGB RO, copy furnished the MGB Central Office (CO); and
6. Additional conditions may be imposed to effectively and efficiently implement the approved SDMP should the results of monitoring by the MGB RO or audit by the MGB CO warrant them.

Non-compliance with the above conditions shall be sufficient ground for the cancellation, revocation or termination of this Certificate or suffer the penalty prescribed in the Penal Provisions of Republic Act No. 7942, the Philippine Mining Act of 1995.

Given this **1st** day of **March 2024** at the Mines and Geoscience Bureau-CAR, Baguio City, Philippines.

Fay W. Apil
FAY W. APIL
Regional Director
MGB-CAR
nac





Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
Cordillera Administrative Region



ANNUAL SOCIAL DEVELOPMENT AND MANAGEMENT PROGRAM (ASDMP)

CERTIFICATE OF APPROVAL
ASDMP No. 2024-01-CAR (3rd)

The Mines and Geosciences Bureau-CAR, having evaluated the 2024 Annual Social Development and Management Program (ASDMP), hereby grants this Certificate of Approval to **BMC FORESTRY CORPORATION** for its Irisan Lime Project located at *Barangay Irisan, in the City of Baguio, Province of Benguet*, under Mineral Processing Permit (MPP) No. 01C-2022-CAR after substantially complying with the requirements as mandated under DENR Administrative Order (D.A.O) No. 2010-21.

This Certificate is being issued subject to the pertinent provisions of the abovementioned DAO and to the following conditions:

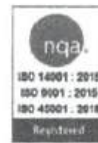
1. This Certificate is valid only for the Programs/Projects/Activities (P/P/As) stipulated in the submitted 2024 ASDMP;
2. The budget allocation for this ASDMP amounts to **Eight Hundred Fifty-nine Thousand Six Hundred Seventy-seven and 87/100 (Php 859,627.87)**, which is equivalent to the 1.5% of the previous years' operating cost as declared in its Affidavit to implement the P/P/As stipulated in the Program which is broken down as follows:

| 2023 Operating Cost (Php) | Basis of Allocation | 2024 ASDMP Total Amount (Php) |
|---------------------------|--|-------------------------------|
| 57,308,524.51 | (75%) Development of Host and Neighboring Communities | 644,720.90 |
| | <i>Balance</i> | 0.00 |
| | (15%) Information, Education Communication | 128,944.18 |
| | <i>Balance</i> | 0.00 |
| | (10%) Development of Mining Technology and Geosciences | 85,962.79 |
| | <i>Balance</i> | 0.00 |
| | Sub-Total | 859,627.87 |
| | Sub-total (<i>Balance from previous ASDMP</i>) | 0.00 |
| | GRAND TOTAL | 859,627.87 |

[Signature]



Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
Cordillera Administrative Region



3. The Company shall include the remaining balance (*Php 0.00*) from its previous ASDMP after determination of the 1.5% projected/operating cost to implement the P/P/As stipulated in the Program. Said balance shall be treated separately on accomplishment/monitoring reports;
4. The Company may incorporate any alterations and/or re-alignment of P/P/As and funds from the approved ASDMP. Provided that, such changes is the result of consultations with its host and neighboring communities, accompanied by supporting documents such as resolutions, and approved by the MGB RO;
5. The Company shall submit a quarterly monitoring report fifteen (15) calendar days after the end of each quarter to MGB RO. Likewise, the annual accomplishment report shall be submitted thirty (30) calendar days after the end of each calendar year to the MGB RO, copy furnished the MGB Central Office (CO); and
6. Additional conditions may be imposed to effectively and efficiently implement the approved SDMP should the results of monitoring by the MGB RO or audit by the MGB CO warrant them.

Non-compliance with the above conditions shall be sufficient ground for the cancellation, revocation or termination of this Certificate or suffer the penalty prescribed in the Penal Provisions of Republic Act No. 7942, the Philippine Mining Act of 1995.

Given this **20th** day of **February 2024** at the Mines and Geoscience Bureau-CAR, Baguio City, Philippines.


FAY W. APIL
Regional Director
MGB-CAR






BenguetCorp

STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR CONSOLIDATED FINANCIAL STATEMENTS

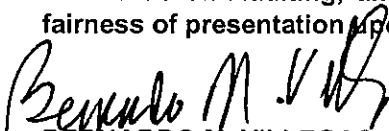
The management of BENGUET CORPORATION and its Subsidiaries (the "Group") is responsible for the preparation and fair presentation of the consolidated financial statements including the schedules attached therein, for the years ended December 31, 2024, 2023 and 2022, in accordance with the prescribed financial reporting framework indicated therein, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is responsible for overseeing the Group's financial reporting process.

The Board of Directors reviews and approves the consolidated financial statements including the schedules attached therein, and submits the same to the stockholders.

Sycip Gorres Velayo & Co., the independent auditor appointed by the stockholders, has audited the consolidated financial statements of the Group in accordance with Philippine Standards on Auditing, and in its report to the stockholders, has expressed its opinion on the fairness of presentation upon completion of such audit.


BERNARDO M. VILLEGAS
Chairman of the Board


LINA G. FERNANDEZ
President


MAX D. ARCEÑO
Senior Vice President – Finance & Treasurer

Signed this March 26, 2025.

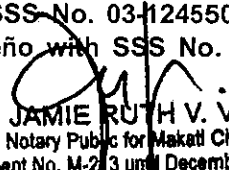
ACKNOWLEDGMENT

REPUBLIC OF THE PHILIPPINES)
City of Makati) S.S.

SUBSCRIBED AND SWORN to before me this MAR 26 2025 at Makati City, affiants exhibited to me their valid identification: Mr. Bernardo M. Villegas with SSS No. 03-12455042; Atty. Lina G. Fernandez with SSS No. 03-7537025-8; and Mr. Max D. Arceño with SSS No. 03-82056688, all issued by the Office of the Social Security System, Philippines.

Doc. No. 37;
Page No. 9;
Book No. 1;
Series of 2025.

DOCUMENTARY STAMP TAX PAID
SERIAL NO. 20167138
DATE: MAR 26 2025


ATTY. JAMIE RUTH V. VIVERO
Notary Public for Makati City
Appointment No. M-213 until December 31, 2026
D.S. Tantulco & Associates, 3rd Floor, Universal Re Building,
106 Paseo de Roxas, Makati City
Roll No. 80094

IBP No. 485926, December 20, 2024, Leyte
PTR No. MKT 10469748, Makati City, January 8, 2025
MCLE Compliance VIII - 0015422 valid until April 14, 2028
Universal Re-Building, 106 Paseo de Roxas, 1226 Makati City Philippines
MCPO Box 3488 • Phone: +632.812.1380 • Fax: +632.752.0717

COVER SHEET

for

AUDITED FINANCIAL STATEMENTS

SEC Registration Number

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COMPANY NAME

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PRINCIPAL OFFICE (No. / Street / Barangay / City / Town / Province)

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Department requiring the report

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Secondary License Type, If Applicable

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| N | / | A | |
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COMPANY INFORMATION

Company's Email Address

bccorpsec@benguetcorp.com

Company's Telephone Number

(02) 8812-1380

Mobile Number

09166100630

No. of Stockholders

16,857

Annual Meeting (Month / Day)

December 20

Fiscal Year (Month / Day)

December 31

CONTACT PERSON INFORMATION

The designated contact person **MUST** be an Officer of the Corporation

Name of Contact Person

Mr. Reynaldo P. Mendoza

Email Address

rey_men777@yahoo.com

Telephone Number/s

(02) 8812-1220

Mobile Number

N/A

CONTACT PERSON'S ADDRESS

5 Atipolo Bend St. Phase 2, Greenwoods Executive Village, Cainta, Rizal

NOTE 1 : In case of death, resignation or cessation of office of the officer designated as contact person, such incident shall be reported to the Commission within thirty (30) calendar days from the occurrence thereof with information and complete contact details of the new contact person designated.

2 : All Boxes must be properly and completely filled-up. Failure to do so shall cause the delay in updating the corporation's records with the Commission and/or non-receipt of Notice of Deficiencies. Further, non-receipt of Notice of Deficiencies shall not excuse the corporation from liability for its deficiencies.



INDEPENDENT AUDITOR'S REPORT

The Board of Directors and Stockholders
Benguet Corporation
7th Floor, Universal Re-Building
106 Paseo de Roxas, Makati City

Opinion

We have audited the consolidated financial statements of Benguet Corporation and its subsidiaries (the Group), which comprise the consolidated statements of financial position as at December 31, 2024 and 2023, and the consolidated statements of income, consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for each of the three years in the period ended December 31, 2024, and notes to the consolidated financial statements, including material accounting policy information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2024 and 2023, and its consolidated financial performance and its consolidated cash flows for each of the three years in the period ended December 31, 2024 in accordance with Philippine Financial Reporting Standards (PFRS) Accounting Standards.

Basis for Opinion

We conducted our audits in accordance with Philippine Standards on Auditing (PSAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the Code of Ethics for Professional Accountants in the Philippines (Code of Ethics) together with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Philippines, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.



We have fulfilled the responsibilities described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Valuation of Land at Fair Value

The Group accounts for its land as investment properties using the fair value model and as property, plant and equipment using the revaluation model. As at December 31, 2024, land classified as investment properties amounting to ₱3,324.76 million and land classified as property, plant and equipment amounting to ₱1,919.55 million represented 31% and 18% of the consolidated total assets, respectively. The determination of the fair values of these properties involves significant management judgment and estimations. The valuation also requires the assistance of external appraisers whose calculations also depend on certain assumptions, such as sales and listing of comparable properties registered within the vicinity and adjustments to sales price based on internal and external factors. Thus, we considered the valuation of land as a key audit matter.

The disclosures relating to investment properties are included in Note 11 while those relating to property, plant and equipment are included in Note 9 to the consolidated financial statements.

Audit Response

We evaluated the competence, capabilities and objectivity of the external appraiser by considering their qualifications, experience and reporting responsibilities. We evaluated the methodology and assumptions used in the valuation of the investment properties and property, plant and equipment. We assessed the methodology adopted by referencing common valuation models and reviewed the relevant information supporting the sales and listings of comparable properties. We also inquired from the external appraisers the basis of adjustments made to the sales price.

Recoverability of Deferred Mine Exploration Costs

As at December 31, 2024, the carrying value of the Group's deferred mine exploration costs amounted to ₱550.50 million. These deferred mine exploration costs pertain to the expenditures incurred by the Group for the mining properties located in Benguet, Bataan and Nevada, USA. Under PFRS 6, *Exploration and Evaluation of Mineral Resources*, these deferred mine exploration costs shall be assessed for impairment when facts and circumstances suggest that the carrying amounts exceed the recoverable amounts. The ability of the Group to recover its deferred mine exploration costs would depend on the commercial viability of the projects. We considered this as a key audit matter because of the materiality of the amount involved, and the significant judgment required in assessing whether there is any indication of impairment.



The Group's disclosures in relation to deferred mine exploration costs are included in Note 10 to the consolidated financial statements.

Audit Response

We obtained management's assessment on whether there is any indication that deferred mine exploration costs may be impaired. We inspected the summary of the status of each exploration project as of December 31, 2024, as certified by the Group's technical group head, the type of expenses incurred, and assessed whether ongoing exploration activities exist to support the continued capitalization of these assets under the Group's accounting policies, and compared it with the disclosures submitted to regulatory agencies. We inspected contracts and agreements, inquired with management whether further evaluation is required in advance of a development decision and that such exploration is continuing, made reference with existing drilling results and inspected the approved budget for continuing the exploration and development costs. We inspected the licenses/permits of each exploration project to determine that the period for which the Group has the right to explore in the specific area has not expired, will not expire in the near future, and will be renewed accordingly. We also inquired about the existing concession areas that are expected to be abandoned or any exploration activities that are planned to be discontinued in those areas.

Impairment Testing of Property, Plant and Equipment

As at December 31, 2024 the Group's net assets exceeded its market capitalization. In the event that an impairment indicator is identified, the assessment of the recoverable amount of property, plant and equipment requires significant judgment and involves estimation and assumptions about future production levels and costs, as well as external inputs such as commodity prices, discount rate, and foreign currency exchange rates. Hence, such assessment is a key audit matter in our audit.

The disclosures in relation to property, plant and equipment are included in Note 9 to the consolidated financial statements.

Audit Response

We involved our internal specialist in evaluating the methodologies and the assumptions used. These assumptions include the expected life of the mining projects, future production levels and costs as well as external inputs such as commodity prices, discount rate and foreign currency exchange rates. We compared the key assumptions used against the mine life based on the ore reserve reports, production reports from the operations departments, forecasted average market price of gold and nickel, discount rate based on industry weighted average capital cost, and forecasted foreign currency exchange rates of various financial institutions. We tested the parameters used in the determination of the discount rate against market data. We also reviewed the Group's disclosures about those assumptions to which the outcome of the impairment test is most sensitive, specifically those that have the most significant effect on the determination of the recoverable amount of property, plant and equipment.



Other Information

Management is responsible for the other information. The other information comprises the information included in the SEC Form 20-IS (Definitive Information Statement), SEC Form 17-A and Annual Report for the year ended December 31, 2024, but does not include the consolidated financial statements and our auditor's report thereon. The SEC Form 20-IS (Definitive Information Statement), SEC Form 17-A and Annual Report for the year ended December 31, 2024 are expected to be made available to us after the date of this auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

In connection with our audits of the consolidated financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audits, or otherwise appears to be materially misstated.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with PFRS Accounting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with PSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.



As part of an audit in accordance with PSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Plan and perform the group audit to obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group as a basis for forming an opinion on the consolidated financial statements. We are responsible for the direction, supervision and review of the audit work performed for purposes of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.



From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is
Peter John R. Ventura.

SYCIP GORRES VELAYO & CO.

Peter John R. Ventura

Peter John R. Ventura

Partner

CPA Certificate No. 0113172

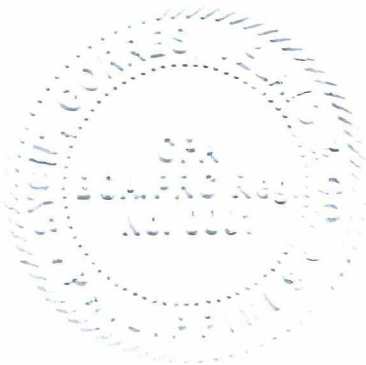
Tax Identification No. 301-106-741

BOA/PRC Reg. No. 0001, April 16, 2024, valid until August 23, 2026

BIR Accreditation No. 08-001998-158-2024, October 2, 2024, valid until October 1, 2027

PTR No. 10465400, January 2, 2025, Makati City

March 26, 2025



BENGUET CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
(Amounts in Thousands)

| | December 31 | |
|--|--------------------|-------------|
| | 2024 | 2023 |
| ASSETS | | |
| Current Assets | | |
| Cash and cash equivalents (Note 4) | ₱1,753,715 | ₱774,192 |
| Trade and other receivables (Note 5) | 741,276 | 746,726 |
| Inventories (Note 6) | 191,940 | 247,959 |
| Financial assets at fair value through profit or loss (Note 7) | 704,637 | 1,328,780 |
| Other current assets (Note 8) | 368,716 | 660,569 |
| Total Current Assets | 3,760,284 | 3,758,226 |
| Noncurrent Assets | | |
| Property, plant and equipment (Note 9) | | |
| At revalued amount | 1,972,598 | 1,776,614 |
| At cost | 743,913 | 789,935 |
| Deferred mine exploration costs (Note 10) | 550,505 | 520,367 |
| Investment properties (Note 11) | 3,324,759 | 2,997,953 |
| Deferred tax assets - net (Note 30) | 8,685 | 5,571 |
| Other noncurrent assets (Note 12) | 506,577 | 488,952 |
| Total Noncurrent Assets | 7,107,037 | 6,579,392 |
| TOTAL ASSETS | ₱10,867,321 | ₱10,337,618 |
| LIABILITIES AND EQUITY | | |
| Current Liabilities | | |
| Trade and other payables (Note 13) | ₱604,319 | ₱507,801 |
| Loans payable (Note 14) | — | 339,238 |
| Lease liabilities - current (Note 15) | 7,107 | 4,238 |
| Liability for mine rehabilitation - current (Note 16) | 4,869 | 17,783 |
| Income tax payable | 38,849 | 33,340 |
| Total Current Liabilities | 655,144 | 902,400 |
| Noncurrent Liabilities | | |
| Lease liabilities - net of current portion (Note 15) | 8,158 | 4,093 |
| Liability for mine rehabilitation - net of current portion (Note 16) | 48,151 | 44,347 |
| Pension liability (Note 29) | 39,963 | 58,194 |
| Deferred tax liabilities - net (Note 30) | 826,761 | 775,867 |
| Other noncurrent liabilities (Note 17) | 119,939 | 185,732 |
| Total Noncurrent Liabilities | 1,042,972 | 1,068,233 |
| Total Liabilities | 1,698,116 | 1,970,633 |
| Equity | | |
| Capital stock (Note 18) | 714,277 | 624,277 |
| Capital surplus | 686,627 | 415,547 |
| Cost of share-based payment (Note 19) | 8,225 | 8,104 |
| Retained earnings | 6,199,684 | 5,907,571 |
| Other components of equity (Note 18) | 1,568,408 | 1,419,502 |
| | 9,177,221 | 8,375,001 |
| Treasury shares (Note 18) | (8,016) | (8,016) |
| Total Equity | 9,169,205 | 8,366,985 |
| TOTAL LIABILITIES AND EQUITY | ₱10,867,321 | ₱10,337,618 |

See accompanying Notes to Consolidated Financial Statements.



BENGUET CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(Amounts in Thousands, Except Earnings Per Share)

| | Years Ended December 31 | | |
|---|-------------------------|--------------------|--------------------|
| | 2024 | 2023 | 2022 |
| REVENUE (Note 20) | ₱2,385,872 | ₱2,531,358 | ₱4,025,195 |
| COSTS AND OPERATING EXPENSES | | | |
| Costs of mine products sold (Note 21) | (822,241) | (680,471) | (970,388) |
| Costs of services and other sales (Note 22) | (85,361) | (84,056) | (80,158) |
| Selling and general expenses (Note 23) | (866,539) | (906,015) | (1,078,542) |
| Excise taxes and royalty fees (Notes 20) | (162,311) | (182,425) | (299,747) |
| | (1,936,452) | (1,852,967) | (2,428,835) |
| INTEREST EXPENSE (Notes 14 and 15) | (7,355) | (2,776) | (1,102) |
| OTHER INCOME - net (Note 26) | 106,908 | 56,994 | 164,014 |
| INCOME BEFORE INCOME TAX | 548,973 | 732,609 | 1,759,272 |
| PROVISION FOR INCOME TAX (Note 30) | 113,303 | 178,466 | 428,225 |
| NET INCOME | ₱435,670 | ₱554,143 | ₱1,331,047 |
| BASIC EARNINGS PER SHARE (Note 31) | ₱0.61 | ₱0.89 | ₱2.14 |
| DILUTED EARNINGS PER SHARE (Note 31) | ₱0.61 | ₱0.88 | ₱2.12 |

See accompanying Notes to Consolidated Financial Statements.



BENGUET CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Amounts in Thousands)

| | Years Ended December 31 | | |
|---|-------------------------|-----------------|-------------------|
| | 2024 | 2023 | 2022 |
| NET INCOME | ₱435,670 | ₱554,143 | ₱1,331,047 |
| OTHER COMPREHENSIVE INCOME
(LOSS), NET OF TAX | | | |
| <i>Item to be reclassified to profit or loss in
subsequent periods:</i> | | | |
| Translation adjustment on foreign subsidiaries | 2,255 | (336) | 5,192 |
| <i>Items not to be reclassified to profit or loss in
subsequent periods:</i> | | | |
| Revaluation of land, net of tax (Note 9) | 141,642 | 36,066 | 20,700 |
| Remeasurement gain (loss) on pension liability,
net of tax (Note 29) | 4,491 | (1,725) | 6,960 |
| Revaluation of artworks, net of tax (Note 9) | 724 | — | — |
| Unrealized gain (loss) on equity instruments
designated at fair value through other
comprehensive income (FVOCI)
(Note 12) | (206) | 43 | 603 |
| Unrealized loss on intangible asset | — | — | (27) |
| | 146,651 | 34,384 | 28,236 |
| TOTAL OTHER COMPREHENSIVE
INCOME, NET OF TAX | 148,906 | 34,048 | 33,428 |
| TOTAL COMPREHENSIVE INCOME | ₱584,576 | ₱588,191 | ₱1,364,475 |

See accompanying Notes to Consolidated Financial Statements.



BENGUET CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

FOR THE YEARS ENDED DECEMBER 31, 2024, 2023 AND 2022

(Amounts in Thousands)

| | Capital stock
(Note 18) | Capital surplus | Cost of share-based payment | Retained earnings | Other components of equity | | | | | Total other components of equity | Treasury shares
(Note 18) | Total |
|--|----------------------------|-----------------|-----------------------------|-------------------|---|--|--|--|--|----------------------------------|------------------------------|-------------------|
| | | | | | Revaluation increment on land and artworks
(Note 18) | Cumulative translation adjustment on foreign subsidiaries
(Note 18) | Remeasurement gain on pension liability
(Notes 18 and 29) | Unrealized gain (loss) on financial assets at FVOCI
(Notes 12 and 18) | Unrealized gain on intangible asset
(Notes 12 and 18) | | | |
| Balances at January 1, 2022 | ₱624,015 | ₱409,929 | ₱9,198 | ₱4,021,846 | ₱1,305,820 | ₱36,208 | ₱10,673 | (₱275) | ₱135 | ₱1,352,561 | (₱8,016) | ₱6,409,533 |
| Stock options expense (Notes 19 and 24) | — | — | 2,258 | — | — | — | — | — | — | — | — | 2,258 |
| Cancellation of stock options | — | 5,181 | (5,181) | — | — | — | — | — | — | — | — | — |
| Transfer of fair value reserve on financial asset at FVOCI (Note 12) | — | — | — | 535 | (535) | — | — | — | — | (535) | — | — |
| Net income | — | — | — | 1,331,047 | — | — | — | — | — | — | — | 1,331,047 |
| Other comprehensive income (loss) | — | — | — | — | 20,700 | 5,192 | 6,960 | 603 | (27) | 33,428 | — | 33,428 |
| Total comprehensive income (loss) | — | — | — | 1,331,047 | 20,700 | 5,192 | 6,960 | 603 | (27) | 33,428 | — | 1,364,475 |
| Balances at December 31, 2022 | 624,015 | 415,110 | 6,275 | 5,353,428 | 1,325,985 | 41,400 | 17,633 | 328 | 108 | 1,385,454 | (8,016) | 7,776,266 |
| Stock options expense (Notes 19 and 24) | — | — | 2,260 | — | — | — | — | — | — | — | — | 2,260 |
| Exercise of stock options (Notes 18 and 19) | 262 | 437 | (431) | — | — | — | — | — | — | — | — | 268 |
| Net income | — | — | — | 554,143 | — | — | — | — | — | — | — | 554,143 |
| Other comprehensive income (loss) | — | — | — | — | 36,066 | (336) | (1,725) | 43 | — | 34,048 | — | 34,048 |
| Total comprehensive income (loss) | — | — | — | 554,143 | 36,066 | (336) | (1,725) | 43 | — | 34,048 | — | 588,191 |
| Balances at December 31, 2023 | 624,277 | 415,547 | 8,104 | 5,907,571 | 1,362,051 | 41,064 | 15,908 | 371 | 108 | 1,419,502 | (8,016) | 8,366,985 |
| Stock issuance (Note 18) | 90,000 | 270,000 | — | — | — | — | — | — | — | — | — | 360,000 |
| Dividend declaration (Note 18) | — | — | — | (143,557) | — | — | — | — | — | — | — | (143,557) |
| Stock options expense (Notes 19 and 24) | — | — | 1,201 | — | — | — | — | — | — | — | — | 1,201 |
| Cancellation of stock options (Note 19) | — | 1,080 | (1,080) | — | — | — | — | — | — | — | — | — |
| Net income | — | — | — | 435,670 | — | — | — | — | — | — | — | 435,670 |
| Other comprehensive income (loss) | — | — | — | — | 142,366 | 2,255 | 4,491 | (206) | — | 148,906 | — | 148,906 |
| Total comprehensive income (loss) | — | — | — | 435,670 | 142,366 | 2,255 | 4,491 | (206) | — | 148,906 | — | 584,576 |
| Balances at December 31, 2024 | ₱714,277 | ₱686,627 | ₱8,225 | ₱6,199,684 | ₱1,504,417 | ₱43,319 | ₱20,399 | ₱165 | ₱108 | ₱1,568,408 | (₱8,016) | ₱9,169,205 |

See accompanying Notes to Consolidated Financial Statements.



BENGUET CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in Thousands)

| | Years Ended December 31 | | |
|--|-------------------------|-----------------|-------------------|
| | 2024 | 2023 | 2022 |
| CASH FLOWS FROM OPERATING ACTIVITIES | | | |
| Income before income tax | ₱548,973 | ₱732,609 | ₱1,759,272 |
| Adjustments for: | | | |
| Depreciation and depletion (Notes 9 and 25) | 62,644 | 55,630 | 81,214 |
| Interest income (Notes 4, 12 and 26) | (41,699) | (10,592) | (2,089) |
| Movements in pension liability | (12,244) | (123) | (6,486) |
| Movements in liability for mine rehabilitation | (11,687) | 8,014 | 18,604 |
| Interest expense (Notes 14 and 16) | 7,330 | 2,776 | 1,102 |
| Provision for (reversal of) impairment loss on other noncurrent assets
(Notes 12, 23 and 26) | (2,281) | — | 938 |
| Stock options expense (Notes 19 and 26) | 1,201 | 2,260 | 2,258 |
| Loss (gain) on: | | | |
| Revaluation of investment properties (Notes 11 and 26) | (314,491) | 136 | (85,332) |
| Settlement of loans (Notes 14 and 26) | 309,396 | — | — |
| Change in fair value of financial assets at fair value through profit or
loss (FVPL) (Notes 7 and 26) | (55,500) | (51,893) | (18,213) |
| Unrealized foreign currency exchange (Note 26) | (11,333) | 5,929 | 2,655 |
| Disposal of intangible assets (Notes 12 and 26) | — | (150) | — |
| Disposal of property, plant and equipment (Notes 9 and 26) | — | (105) | 11,238 |
| Sale of investment properties (Notes 11 and 26) | — | — | (619) |
| Operating income before working capital changes | 480,309 | 744,491 | 1,764,542 |
| Decrease (increase) in: | | | |
| Trade and other receivables | 5,450 | 35,779 | (56,894) |
| Inventories | 56,019 | (67,387) | (38,467) |
| Input value-added taxes and creditable withholding taxes | (78,556) | 131,824 | 76,837 |
| Other current assets | (78,443) | 11,473 | 129,260 |
| Increase (decrease) in: | | | |
| Trade and other payables | (29,727) | (47,911) | (113,686) |
| Noncurrent contract liabilities | — | (52,082) | (53,986) |
| Net cash flows generated from operations | 355,052 | 756,187 | 1,707,606 |
| Income taxes paid | (35,780) | (228,743) | (445,168) |
| Interest received | 41,699 | 10,592 | 2,089 |
| Interest paid | (814) | (573) | (1,102) |
| Net cash flows generated from operating activities | 360,157 | 537,463 | 1,263,425 |
| CASH FLOWS FROM INVESTING ACTIVITIES | | | |
| Proceeds from disposal of: | | | |
| Financial assets at FVPL (Note 7) | 699,307 | — | 59,311 |
| Short-term investments (Note 8) | 390,819 | — | — |
| Intangible assets (Note 12) | — | 380 | — |
| Property, plant and equipment (Note 9) | — | 105 | 157 |
| Investment properties (Note 11) | — | — | 4,630 |
| Additions to: | | | |
| Short-term investments (Note 8) | (10,194) | (406,540) | — |
| Financial assets at FVPL (Note 7) | (19,664) | (162,276) | (480,732) |
| Investment properties (Note 11) | (18,540) | (6,225) | — |
| Deferred mine exploration costs (Note 10) | (27,131) | (28,310) | (31,221) |
| Property, plant and equipment (Note 9) | (1,710) | (68,253) | (45,383) |
| Payments of advances to supplier of aircraft (Note 12) | — | (4,054) | (257,889) |
| Increase in other noncurrent assets | (16,235) | (79,586) | (99,581) |
| Net cash flows generated from (used in) investing activities | 996,652 | (754,759) | (850,708) |

(Forward)



| | Years Ended December 31 | | |
|---|-------------------------|------------------|-------------------|
| | 2024 | 2023 | 2022 |
| CASH FLOWS FROM FINANCING ACTIVITIES | | | |
| Payments of: | | | |
| Loans payable (Note 14) | (P655,150) | P— | P— |
| Dividend declared (Note 18) | (108,068) | — | — |
| Principal portion of lease liabilities (Note 15) | (5,401) | (5,828) | (P8,366) |
| Proceeds from: | | | |
| Issuance of shares (Note 18) | 360,000 | — | — |
| Deposit for future stock subscription (Note 18) | 20,000 | — | — |
| Employees' exercise of stock options (Note 19) | — | 268 | — |
| Net cash flows used in financing activities | (388,619) | (5,560) | (8,366) |
| NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS | 968,190 | (222,856) | 404,351 |
| EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS | 11,333 | (5,702) | (4,849) |
| CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR | 774,192 | 1,002,750 | 603,248 |
| CASH AND CASH EQUIVALENTS AT END OF YEAR (Note 4) | P1,753,715 | P774,192 | P1,002,750 |

See accompanying Notes to Consolidated Financial Statements.



BENGUET CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Amounts in Thousands, except number of shares, per share data and when indicated)

1. Corporate Information and Status of Business Operations

Corporate Information

Benguet Corporation (the Parent Company) was incorporated in the Philippines on August 12, 1903 and was listed in the Philippine Stock Exchange (PSE) on January 4, 1950.

The Parent Company is currently engaged in gold, nickel, and other metallic and nonmetallic mineral production, exploration, research and development and natural resource projects. The nature of business of the Parent Company's subsidiaries are summarized in Note 2 to the consolidated financial statements.

The Parent Company's registered office address is 7th Floor Universal Re-Building, 106 Paseo de Roxas, 1226 Makati City.

Status of Business Operations

Quasi-reorganization

On December 5, 2011, the Philippine Securities and Exchange Commission (SEC) approved the application of the Parent Company for quasi-reorganization to wipe out its deficit as at December 31, 2010, setting it off against its capital surplus and revaluation increment as follows:

| | <i>Prior to quasi-reorganization</i> | <i>Effect of quasi-reorganization</i> | <i>After quasi-reorganization</i> |
|-----------------------|--------------------------------------|---------------------------------------|-----------------------------------|
| Capital surplus | ₱1,153,579 | (₱1,153,579) | ₱— |
| Revaluation increment | 1,561,048 | (1,010,848) | 550,200 |
| Deficit | (2,164,427) | 2,164,427 | — |

For purposes of dividend declaration, the retained earnings of the Parent Company shall be restricted to the extent of the deficit wiped out by the revaluation increment amounting to ₱1.01 billion until the asset to which the revaluation increment relates is disposed. In addition, the retained earnings of the Parent Company shall be restricted further by the accumulated fair valuation gains of investment properties of the Parent Company amounting to ₱1,262.69 million and ₱978.96 million as at December 31, 2024 and 2023, respectively.

Significant developments in the Parent Company and its subsidiaries' (collectively, the Group) operations follow:

a. Mining Projects

Benguet Gold Operations (BGO)

The Group produces gold from the Benguet mines, consisting of the Acupan and Kelly underground mines, that were suspended in 1992, following the 1991 earthquake, that flooded the said underground mines. In 2003, BGO resumed operations and production is partly carried out through independent mining contractors in Acupan Contract Mining Project (ACMP) which is a community-based underground mining project.



The Parent Company is currently working on exploration and drilling programs to upgrade BGO's capacity. The exploration and geology group completed the design for the surface and underground diamond drilling program for the Phase 1 of the Greater Acupan Project.

The related feasibility study for Greater Acupan Project was approved in 2013 and the Parent Company is still raising the necessary funds to start the execution of the project.

On October 28, 2016, the Parent Company received from the Department of Environment and Natural Resources (DENR) the mine audit report dated October 21, 2016, which was conducted pursuant to DENR Memorandum Circular No. 2016-01 requiring audit of all operating mines. The audit report recommended the suspension of the Parent Company's mining operations and required the Parent Company to submit an explanation. On November 1, 2016, the Parent Company submitted an explanation to the DENR stating that there are no legal and factual bases to suspend BGO's operations.

On February 14, 2017, the Parent Company received from DENR cancellation order dated February 8, 2017 which cancel the patent authority to undertake mining operations (PC-ACMP-002-CAR) in BGO for violation of mining and environmental laws, rules and regulations.

On February 22, 2017, the Parent Company filed Notice of Appeal before the Office of the President, which stayed the execution of the cancellation order. On March 22, 2017, the Parent Company submitted to the Office of the President its Appeal Memorandum. As of March 26, 2025, the Office of the President has not yet resolved the appeal.

In November 2019, the DENR directed the regional offices of the Mines and Geosciences Bureau (MGB) and Environmental Management Bureau (EMB) to validate the environmental compliance of BGO as input to early resolution of the appeal. In January 2020, MGB submitted a favorable validation report to DENR and recommended to set aside the cancellation order which was favorably acted upon. Hence as at December 31, 2024, the Parent Company continues to mine and operate.

On April 17 to 18, 2024, NQA Philippines, Inc. (NQA), an independent evaluation and certification body, conducted ISO 14001:2015 Surveillance Audit for BGO. The ISO certification is valid until March 15, 2025. As at March 26, 2025, BGO is in the process of rescheduling its recertification with NQA.

Sta. Cruz Nickel Project (SCNP)

On July 8, 2016, Benguetcorp Resources Management Corporation (BRMC) received from the regional offices of the DENR, MGB, and Environmental Management Bureau (EMB) a joint suspension order, which suspended the mining operations in Sta. Cruz, Zambales.

The Writ of Kalikasan case was referred by Supreme Court to the Court of Appeals for trial proceedings.

On October 18, 2016, BRMC received from DENR the mine audit report dated October 3, 2016 which was conducted pursuant to DENR Memorandum Circular No. 2016 -01 requiring audit of all operating mines. The audit report recommended the suspension of the Company's mining operations and required the Company to submit an explanation.



BRMC replied to the DENR taking strong exception to the mine audit report particularly on the recommendation to maintain the status quo of the Suspension Order issued by the DENR on July 7, 2016.

On November 1, 2016, the Company submitted an explanation to the DENR stating that there are no legal and factual basis to suspend BRMC's operations.

On February 13, 2017, BRMC received from the DENR a order cancelling its Mineral Production Sharing Agreement (MPSA). The cancellation order alleged that BRMC's operations had overlapped a watershed in the area and violated certain provisions of laws and regulations, majority of which were previously raised in the mine audit report.

On February 22, 2017, BRMC filed Notice of Appeal before the Office of the President to set aside the cancellation order. BRMC's nickel project is operated outside of any known critical or declared watershed. BRMC is operating within the Zambales Chromite Mineral Reservation, a mineral reservation which has been excluded from government declared watersheds. BRMC filed before the Office of the President its appeal memorandum on March 21, 2017.

On March 28, 2017, the local government of Zambales issued a Manifestation of Consent which lifted the moratorium and allowed BRMC to proceed with hauling and shipment of its nickel ore inventory, which was mined before the suspension took effect, to avoid any adverse impact on the environment.

On May 22, 2017, the Court of Appeals denied the petition for the Writ of Kalikasan case considering the case has become moot due to the DENR closure orders. Thereafter, the petitioners filed a Motion for Reconsideration.

On December 14, 2017, the Court of Appeals denied the Motion for Reconsideration. Accordingly, the prohibitory injunctive provisional Writ on the Kalikasan case issued by the Supreme Court was lifted. The denial of the petition was questioned in the Supreme Court then a Petition for Review by Certiorari. In March 2022, the Supreme Court gave due course to the Certiorari by remanding the case to the Court of Appeals for continuation of the proceedings. The case was set for preliminary conference.

On July 2, 2020, MGB Regional Office No. III in its Memorandum recommended granting the appeal of BRMC on the DENR order dated February 8, 2017 cancelling the MPSA agreement.

In August 2020, the DENR has determined that BRMC has fully addressed the violations and has complied with the recommendations of the Mining Industry Coordinating Council (MICC) Review Team. The recommendation was also approved by the Secretary of the DENR.

On October 29, 2020, BRMC received a Memorandum dated October 20, 2020 from DENR-MGB Regional Office No. III stating that the Regional Director DENR-MGB Regional Office No. III concurs with the directives of MGB Acting Director to lift the current suspension order subject to its compliance with the certain requirements.

On November 17, 2020, BRMC further notified the MGB Regional Office No. III through a letter dated November 18, 2020 the planned resumption of its mining operations on November 20, 2020.

BRMC now operates in Areas 2 and 3 of its MPSA, implementing activities pursuant to the Three-year Development and Work Program that it resubmitted on December 15, 2020, after



getting the previous version approved last July 1, 2020 by the Director of MGB Regional Office No. III.

Starting 2021, BRMC was able to fully operate its nickel mining project and continued to transport and hauled for shipment the ore inventory stockpiles in Areas 1 and 3 of the MPSA which were given Ore Transport Permit (OTP).

On October 10, 2022, NQA issued to BRMC ISO 14001:2015 Recertification audit. The certification is valid until February 3, 2026. This certification makes BRMC fully compliant with DAO 2015-07.

Irisan Lime Project (ILP)

The Parent Company's ILP in Irisan, Baguio is engaged in the production and trading of quicklime. ILP produced 6,177 tons, 6,553 tons and 7,340 tons of quicklime in 2024, 2023 and 2022, respectively. On March 22, 2022, the Mineral Processing Permit (MPP) for the ILP was renewed for a period of five years or until March 21, 2027.

Benguet Antamok Gold Operation (BAGO)

The Parent Company's BAGO in Itogon, Benguet has been suspended since August 1998. BAGO has an estimated resource of about 12.4 million tons, averaging 3.45 grams of gold per ton, at the end of 1999. Pursuant to DAO No. 2010-04, the Parent Company's Application for Mineral Production Sharing Agreement (APSA) in the Cordillera Administrative Region (CAR) was denied on February 8, 2011. Subsequently, the Parent Company filed an appeal on April 15, 2011 with MGB Central Office and elevated the appeal to the DENR. On October 5, 2021, the DENR granted the appeal and the APSA was reinstated back to the Parent Company.

In October 2016, a leak occurred in BAGO's tailings dam, which affected the Liang River. In response to the DENR show cause letter dated November 23, 2016, the Parent Company explained that there was no negligence because the incident was due to force majeure and the tailings leak was immediately remediated. The Parent Company also emphasized that it has no existing mining operations in BAGO as it has long been suspended. The BAGO open pit mine and the BAGO underground mine has not operated since 1998 and 1989, respectively. The Parent Company contended that its infrastructure in BAGO is under care and maintenance. On January 1, 2017, the case was elevated to the Pollution Adjudication Board (PAB) from the Environmental Management Bureau (EMB), where the Parent Company submitted its Position Paper. No subsequent updates as of March 26, 2025.

Masinloc Chromite Operation (MCO)

From 1934 to 2007, the Parent Company managed the Coto mines under an operating agreement with its claimowner, Consolidated Mines, Inc. (CMI). With the expiration of the operating agreement on July 8, 2007, the Parent Company has transferred back the mine to CMI. As at March 26, 2025, the Parent Company is still engaged in discussion with CMI over the liquidation of MCO's assets.

b. Exploration, Research and Development Projects

Balatoc Tailings Project (BTP)

The Parent Company's Board of Directors (BOD) approved an initial ₱10.0 million research and development fund for the BTP in Itogon, Benguet for the study on the feasibility of reprocessing 16.7 million tons of tailings resource with an average of 0.69 grams gold per ton and is estimated to contain 371,000 ounces of gold. A core research and development team, together with the



Beijing Geological Research Institute of Mining and Metallurgy, has done the analysis toward the preparation and completion of the bankable feasibility study.

On October 21, 2009, the Parent Company appointed ATR Kim Eng Capital Partners, Inc. as financial advisor to raise additional development capital for the BTP.

On the same date, the Parent Company entered into a processing agreement with Balatoc Gold Resources Corporation (BGRC), a subsidiary, to implement the BTP. The Parent Company has completed the bankable feasibility study of the BTP and engaged external Competent Persons to prepare and review reports as required under the Philippine Mineral Reporting Code modeled after the Joint Ore Reserve Committee of Australia.

In September 2010, the Parent Company signed a Deed of Assignment with BGRC, to transfer Mineral Processing Permit (MPP) No. 13-2010-Cordillera Administrative Region (CAR) covering the BTP and was approved by DENR-MGB in November 2011.

BGRC continued the activities on expansion and rehabilitation of its penstocks at Tailings Pond Nos. 2 and 3 and earthmoving works on the silt dam at Gold Creek and the Ambalanga River pumping station, and the ridge enhancement works on Tailings Ponds Nos. 2 and 3.

On January 17, 2013, the Parent Company's BOD authorized and approved the deed of exchange between the Parent Company and BGRC covering all of the Parent Company's rights and interest in BTP in exchange of BGRC's shares.

Following the expiration of MPP No. 13-2010-CAR, BGRC reconveyed to the Parent Company on March 16, 2016 and this was approved by the DENR-MGB on May 31, 2016.

Antamok Tailings Project (ATP)

The ATP, which targeted the BAGO mill tailings pond, was conceived as a possible additional resource that could be developed similar to BTP. The BAGO tailings pond, located a few hundred meters downstream from the BAGO open pit mine, contains some 7.64 million tons of tailings produced from the BAGO milling operations. In addition, a considerable tonnage of extraneous materials, estimated at about 1.95 million tons washed from the BAGO pit over the years from the Otek marginal grade material dump and from the numerous illegal miners' workings, found its way into the pond and is now resting on top of the tailings deposit. A preliminary sampling of these extraneous materials showed that these can be considered for exploitation together with the original tailings in the pond. More core drilling, however, may be required to firm up the resource estimate of these impounded materials.

The Parent Company has approved an initial ₱7.50 million research fund for the ATP for the feasibility study on the reprocessing. The Parent Company is conducting a feasibility study on the reprocessing of tailings from the BAGO, which are impounded in the tailings pond downstream of the old BAGO mill. The initial drilling conducted to test the impounded materials indicates a grade of 4.0 grams of gold per ton.

Surigao Coal Prospect (SCP)

Pre-development activities for the SCP were put on hold in 2011 due to DENR Circular Executive Order (EO) 23, series of 2011, which declares a moratorium on the cutting of timber in the natural and residual forests. The City Environment and Natural Resources Office of the Municipality of Lianga denied the Parent Company's request for a tree inventory, which is preparatory to the application for a cutting permit. The decision was reversed in January 2012 after the issuance of a memorandum from the Executive Secretary, which exempted exploration



and mining activities from the said EO. The Parent Company is in the process of completing the requirements to secure permits for the development of the project. A preliminary hydrology study was done at the nearby Hubo river's water source to assess if the volume capacity of the river system can support a hydro plant, which will complement the Coal Power Plant Study. The Parent Company's application for new Coal Operating Contract (CoC) with the Department of Energy can now proceed with the submission of Certificate of No Mining Ban from the provincial Local Government Unit (LGU).

Ampucao Copper-Gold Prospect (Ampucao Prospect)

The Ampucao prospect is partly located inside the contract claims of Pugo Mining Company in the southern part of Benguet's Acupan gold mine. The initial exploration work conducted by the Parent Company's geologists indicates a porphyry copper-gold mineralization hosted in diorite below the 2000 level. Two test holes have been programmed to be drilled within the area, but have been put on-hold pending the approval of the Exploration Permit Application (EXPA).

Pantangan Copper Gold Prospect (PGP)

The PGP in Balanga, Bataan consists of 1,410 hectares covered by MPSA No. 154-2000-III. The property is under an operating agreement with Option to Purchase, with Balanga Bataan Minerals Corporation, signed in March 1996. Surface mineralization consists of quartz and clay veins, ranging from 0.70 meters to 10 meters wide, with gold and silver values. The Parent Company has implemented drilling programs in the property starting in 2020. On October 14, 2024, the DENR approved the renewal of the MPSA for the second 25-year term commencing March 31, 2025.

Recent geological works in the Pantangan property have also led to the identification of two parcels composed of Block-1 and Block-3 area called PAB-1 and PAB-2 located inside the mineral tenement hosting high quality mountain rock deposits with favorable potential for rock aggregates. The potential rock formations are composed of consolidated volcanic conglomerate and massive andesite units based on their actual ground analysis. The large-scale quarry in PAB-1 and PAB-2 within the MPSA still needs drilling for Declaration of Mining Project Feasibility (DMPF).

On the aggregates prospect outside the MPSA, the Parent Company continues to do topographical/road surveys and apply for permits including for road-right-of-way in the 40-hectares and 30-hectares Quarry Permit Area (QPA). The MGB has issued area clearance in the 30-hectares QPA, EMB has approved the ECC, and NCIP has given a certificate of non-coverage. The Parent Company is working on LGU consent and tree inventory.

BOLCO Gold Prospect (BOLCO)

BOLCO in R.T. Lim, Zamboanga Sibugay consists of 340.3 hectares of land area and is under an operating agreement with Orelina Mining Corporation (OMC). An exploration program to evaluate the mineral potential of the main structure at depth is being undertaken following the DENR approval of the Exploration Permit (EP) on December 5, 2023. Before, the APSA was denied on May 12, 2010 and subject of an appeal on January 30, 2013, until it was reinstated by the DENR on November 4, 2020. It was afterwards converted to EXPA.

Financial or Technical Assistance Agreement (FTAA) Application

The Parent Company and its subsidiary, Sagittarius Alpha Realty Corporation (SARC), have two pending FTAA applications consisting of land area totaling 72,806,291 hectares. The FTAA application in Ilocos Norte (denominated as AFTA-000003-1) and Apayao (denominated as AFTA No. 033-CAR) are undergoing Free, Prior and Informed consent requirement through the



Regional Office of the NCIP. Exploration work for the two areas will be undertaken as soon as the applications have been approved by the Philippine government.

c. Water Projects

Baguio City Bulk Water Supply Project (BCBWSP)

On August 16, 2005, the BOD of the Baguio Water District (BWD) issued to the Parent Company a Notice of Award covering the BCBWSP. The Parent Company's proposal is to convert its mined-out 440 Vein Open Pit into a water reservoir to supply 50,000 cubic meters of potable water per day to Baguio City.

On September 7, 2007, the BWD issued Board Resolution Number 30-2007, which resolved to terminate the bulk water supply contract negotiation and to scrap the project. The Parent Company filed request for reconsideration on September 13, 2007.

On November 29, 2007, the BWD issued a Board Resolution denying the request for reconsideration. The Parent Company then filed a case against BWD with the Regional Trial Court.

In 2020, pursuant to a Memorandum of Agreement (MOA) with Manila Water Company, Inc. (MWCI) regarding the assignment of water rights in Laboy River in connection with MWCI's bulk water supply proposal to Baguio City, the Parent Company withdrew the case against BWD without prejudice to filing of a new case for recovery of cost and damages due to the aborted bidding award. The MOA with MWCI lapsed in 2023 and the Parent Company invoked the long stop date of 3 years to demand reversion of water rights over Laboy River. In February 2024, MWCI and the Parent Company executed a Deed of Assignment for the reconveyance of the Water Permit subject for National Water and Resources Board (NWRB) approval of the transfer.

Water Rights of Agua de Oro Ventures Corporation (ADOVC)

ADOVC, a subsidiary of BMC, has water permits in various locations in Tuba, Benguet: Kairuz Spring granted on September 12, 2001, Amliang Spring granted on October 17, 2002, and Kias Creek granted on August 13, 2004.

The water permits give ADOVC water access to these water sources, except for Kairuz Spring. The owner sold the water source on August 2012. The new owner denied ADOVC to access the water source. In an order dated September 12, 2001, the transfer of the water permit was approved subject to the rights of ADOVC equivalent to 11.60 liters per second. The diversion of the water shall be from the source and for the purpose indicated in the permit and in no case should said use exceed the quantity and period indicated therein. As of March 26, 2025, management is still awaiting resolution of the issue.

As at December 31, 2024 and 2023, the cost and accumulated amortization of the water rights amounted to ₱4.59 million. ADOVC accrued and paid water permit fees amounting to ₱0.05 million and ₱0.04 million in 2024 and 2023, respectively.

d. Land Development Project

Kelly Special Economic Zone (KSEZ)

The Parent Company has approved an initial ₱4.90 million for the feasibility study covering the KSEZ and the potential of other real estate project of the Group. The Parent Company plans to transfer the said properties to BC Property Management, Inc. (BCPMI), a subsidiary of BMC. The capital expenditures related to the implementation of the project will then be infused as



equity of the Parent Company in BCPMI. As at March 26, 2025, the said project has not yet materialized.

e. Logistics Services

On August 31, 2017, the BOD approved the dissolution of Calhorr 1 Marine Services Corporation (CMSC) and Calhorr 2 Marine Services Inc. (CMSI), wholly owned subsidiaries of Keystone Port Logistics and Management Services Corporation (KPLMSC), by shortening their corporate term until September 30, 2017. CMSC and CMSI are awaiting the clearance letter from the Bureau of Internal Revenue (BIR) before it could apply for liquidation with the Philippine SEC. Final liquidation will take place after the Philippine SEC's approval of the said application. In 2021, CMSC and CMSI received the clearance letter from the BIR. As at March 26, 2025, CMSC and CMSI have not yet filed the application of liquidation with the Philippine SEC.

f. Health Care Services

The Parent Company spun off its Benguet Laboratories (BL) Division on September 19, 2012 through its wholly owned subsidiary, Benguetcorp Laboratories, Inc. (BLI), to undertake the expansion of BL into a distinct operating unit that can raise the necessary development funds and create value for the Group. BLI operates two full-fledged tertiary multi-specialty facilities in Baguio under the trade name Benguet Laboratories.

Authorization for the Issuance of the Consolidated Financial Statements

The consolidated financial statements of the Group as at December 31, 2024 and 2023 and for each of the three years in the period ended December 31, 2024 were authorized for issuance by the Parent Company's BOD on March 26, 2025.

2. Summary of Material Accounting Policies

Basis of Preparation

The consolidated financial statements of the Group have been prepared on a historical cost basis, except for land and artworks classified as property, plant and equipment, financial assets at FVOCI, financial assets at FVPL and investment properties, which have been measured at fair value. The consolidated financial statements are presented in Philippine peso, which is the Parent Company's functional and presentation currency. All values are rounded to the nearest thousands (₱000), except when otherwise indicated.

Statement of Compliance

The consolidated financial statements of the Group have been prepared in compliance with the Philippine Financial Reporting Standards (PFRS) Accounting Standards.



Basis of Consolidation and Group Information

As at December 31, 2024 and 2023, the consolidated financial statements include the accounts of the Parent Company and the following subsidiaries:

| | Nature of business | Country of incorporation | Effective percentage of ownership |
|--|--|--------------------------|-----------------------------------|
| Berec Land Resources Inc. (BLRI)* | Exploration and development | Philippines | 100.00 |
| BRMC | Exploration and development | Philippines | 100.00 |
| ADOVC* | Selling of treated and untreated water | Philippines | 100.00 |
| BCPMI* | Management services | Philippines | 100.00 |
| BMC* | Foundry | Philippines | 100.00 |
| BMC's Subsidiaries: | | | |
| Arrow Freight and Construction Corporation (AFCC) | Logistics | Philippines | 100.00 |
| Benguetrade, Inc. (BTI)* | Trading | Philippines | 100.00 |
| BMC Forestry Corporation (BFC) | Real estate | Philippines | 100.00 |
| BPGC* | Exploration and development | Philippines | 100.00 |
| KPLMSC | Logistics | Philippines | 100.00 |
| KPLMSC's Subsidiaries: | | | |
| CMSC** | Logistics | Philippines | 100.00 |
| CMSI** | Logistics | Philippines | 100.00 |
| Media Management Corporation (MMC)* | Management services | Philippines | 100.00 |
| BenguetCorp International Limited (BIL)* | Holding company | Hong Kong | 100.00 |
| Aglao Development Corporation (ADC) | Land use development | Philippines | 100.00 |
| BIL Subsidiaries: | | | |
| Benguet United States of America (USA), Inc.* | Exploration and development | USA | 100.00 |
| Benguet Canada Limited* | Exploration and development | Canada | 100.00 |
| Pillars of Exemplary Consultants, Inc. (PECT)* | Professional services | Philippines | 100.00 |
| SARC* | Real estate holding | Philippines | 100.00 |
| SARC's Subsidiary: | | | |
| BGRC* | Exploration and development | Philippines | 100.00 |
| Benguetcorp Construction and Development Corporation (BCDC) (formerly Batong Buhay Mineral Resources Corporation)* | Exploration and development | Philippines | 100.00 |
| Ifaratoc Mineral Resources Corporation (IMRC)* | Exploration and development | Philippines | 100.00 |
| Acupan Gold Mines Inc.* | Exploration and development | Philippines | 100.00 |
| Benguetcorp Laboratories Inc. (BLI) | Health services | Philippines | 100.00 |
| Samar Agricultural Farm Corporation (SAFC) | Agriculture | Philippines | 100.00 |
| * Non-operating | | | |
| ** In process of liquidation | | | |

Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with the Group's accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.



New Standards, Interpretations and Amendments

The accounting policies adopted are consistent with those of the previous financial year, except for the adoption of amended standards effective in 2024. The Group has not early adopted any standard, interpretation or amendment that has been issued but is not yet effective. Adoption of these amended standards did not have an impact on the consolidated financial statements of the Group:

- Amendments to PAS 1, *Classification of Liabilities as Current or Non-current*
- Amendments to PFRS 16, *Lease Liability in a Sale and Leaseback*
- Amendments to PAS 7 and PFRS 7, *Disclosures: Supplier Finance Arrangements*

Standards issued but not yet effective

Pronouncements issued but not yet effective are listed below. Unless otherwise indicated, the Group does not expect that the future adoption of the said pronouncements will have a significant impact on its consolidated financial statements. The Group intends to adopt the following pronouncements when they become effective.

Effective beginning on or after January 1, 2025

- Amendments to PAS 21, *Lack of exchangeability*

Effective beginning on or after January 1, 2026

- Amendments to PFRS 9 and PFRS 7, *Classification and Measurement of Financial Instruments*
- Amendments to PFRS 9 and PFRS 7, *Contracts Referencing Nature-dependent Electricity*
- Annual Improvements to PFRS Accounting Standards—Volume 11
 - Amendments to PFRS 1, *Hedge Accounting by a First-time Adopter*
 - Amendments to PFRS 7, *Gain or Loss on Derecognition*
 - Amendments to PFRS 9, *Lessee Derecognition of Lease Liabilities and Transaction Price*
 - Amendments to PFRS 10, *Determination of a 'De Facto Agent'*
 - Amendments to PAS 7, *Cost Method*

Effective beginning on or after January 1, 2027

- PFRS 17, *Insurance Contracts*
- PFRS 18, *Presentation and Disclosure in Financial Statements*
- PFRS 19, *Subsidiaries without Public Accountability*

Deferred effectivity

- Amendments to PFRS 10, *Consolidated Financial Statements*, and PAS 28, *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*

Financial Instruments

Financial Assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortized cost, FVOCI, and FVPL.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at FVPL, transaction costs. Trade receivables that do not contain a



significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under PFRS 15.

Subsequent Measurement

The subsequent measurement of financial assets depends on their classification as follows:

- *Financial assets at amortized cost (debt instruments)*
Financial assets at amortized cost are subsequently measured using the effective interest rate (EIR) method and are subject to impairment. Gains and losses are recognized in the consolidated statement of income when the asset is derecognized, modified or impaired.

The Group's financial assets at amortized cost include cash and cash equivalents, trade receivables, loan receivable, receivables from lessees of bunkhouses and short-term investments under "Other current assets" (see Notes 4, 5 and 8).

- *Financial assets at FVPL*
Financial assets at FVPL are carried in the consolidated statement of financial position at fair value with net changes in fair value recognized in the consolidated statement of income.

The Group's financial assets at FVPL include its investments in unit investment trust fund (UITF) (see Note 7).

- *Financial assets at FVOCI*
Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the consolidated statement of income when the right of payment has been established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in the consolidated statement of comprehensive income. Equity instruments designated at FVOCI are not subject to impairment assessment.

The Group's financial assets at FVOCI include investments in quoted shares (see Note 12).

Impairment

The Group recognizes an allowance for expected credit losses (ECLs) for all debt instruments not held at FVPL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original EIR. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECLs are recognized in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12 months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For cash and cash equivalents and short-term investments, the Group applies the low credit risk simplification. The probability of default and loss given defaults are publicly available and are considered to be low credit risk investments. It is the Group's policy to measure ECLs on such instruments on a 12-month basis. However, when there has been a significant increase in credit risk since origination, the allowance will be based on the lifetime ECL. The Group uses publicly



available ratings to determine whether the debt instrument has significantly increased in credit risk and to estimate ECLs.

For trade receivables, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

For other receivables, the Group calculates ECLs at initial recognition by considering the consequences and probabilities of possible defaults only for the next 12 months, rather than the life of the asset. It continues to apply this method until a significant increase in credit risk has occurred, at which point the loss allowance is measured based on lifetime ECLs.

At each reporting date, the Group assesses whether there has been a significant increase in credit risk for financial assets since initial recognition by comparing the risk of default occurring over the expected life between the reporting date and the date of initial recognition. The Group considers reasonable and supportable information that is relevant and available without undue cost or effort for this purpose. This includes quantitative and qualitative information and forward-looking analysis.

Exposures that have not deteriorated significantly since origination, or where the deterioration remains within the Group's investment grade criteria are considered to have a low credit risk. The provision for credit losses for these financial assets is based on a 12-month ECL. The low credit risk exemption has been applied on debt investments that meet the investment grade criteria of the Group from the time of origination.

An exposure will migrate through the ECL stages as asset quality deteriorates. If, in a subsequent period, asset quality improves and also reverses any previously assessed significant increase in credit risk since origination, then the loss allowance measurement reverts from lifetime ECL to 12-months ECL.

The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Financial Liabilities

Initial recognition, measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at FVPL, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

Subsequent Measurement - Financial liabilities at amortized cost (loans and borrowings)

After initial measurement, loans and borrowings and payables are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in the consolidated statement of income when the liabilities are derecognized as well as through the EIR amortization process.



The Group's financial liabilities include loans payable, trade payables and accrued expenses under "Trade and other payables", lease liabilities and equity of claim owners on contract operations under "Other noncurrent liabilities" (see Notes 13, 14, 15 and 17).

Fair Value Measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible to the Group.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their best economic interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the consolidated financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 - Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 - Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

For assets and liabilities that are recognized in the consolidated financial statements at fair value on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.



Inventories

Costs incurred in bringing each product to its present location and condition are accounted for, as follows:

| | | |
|-------------------------|---|---|
| Materials and supplies | - | at purchase price less purchase discount, returns and rebates on a first-in, first-out method |
| Beneficiated nickel ore | - | at cost on a moving average production method during the year exceeding a determined cut-off grade |
| Quicklime and slakelime | - | at cost on a moving average production method |
| Gold buttons | - | at cost on a moving average production method |
| Subdivision lots | - | at land costs, amounts paid to contractors for costs incurred in the development and improvement of the properties (planning and design costs, cost of site preparation, professional fees, property taxes, construction overheads and other related costs) |

Net realizable value (NRV) for materials and supplies represents the current replacement cost. NRV for beneficiated nickel ore, quicklime and slakelime, gold bullions or buttons, and subdivision lots is the estimated selling price in the ordinary course of business less costs of completion and estimated costs necessary to make the sale.

Value-added Taxes (VAT)

Revenues, expenses, and assets are recognized net of the amount of VAT, if applicable.

When VAT from sales of goods and/or services (output VAT) exceeds VAT passed on from purchases of goods or services (input VAT), the excess is recognized as payable in the consolidated statement of financial position. When VAT passed on from purchases of goods or services (input VAT) exceeds VAT from sales of goods and/or services (output VAT), the excess is recognized as an asset in the consolidated statement of financial position to the extent of the recoverable amount.

Deferred Mine Exploration Costs

Exploration and evaluation activity involve the search for mineral resources, the determination of technical feasibility and the assessment of commercial viability of an identified resource.

Exploration and evaluation activity include:

- Researching and analyzing historical exploration data
- Gathering exploration data through geophysical studies
- Exploratory drilling and sampling
- Determining and examining the volume and grade of the resource
- Surveying transportation and infrastructure requirements
- Conducting market and finance studies

License costs paid in connection with a right to explore in an existing exploration area are capitalized and amortized over the term of the permit.

Once the legal right to explore has been acquired, exploration and evaluation expenditure is charged to consolidated statement of income as incurred, unless the Group concludes that a future economic benefit is more likely than not to be realized. These costs include directly attributable employee remuneration, materials and fuel used, surveying costs, drilling costs and payments made to contractors.



In evaluating whether the expenditures meet the criteria to be capitalized, several different sources of information are used. The information that is used to determine the probability of future benefits depends on the extent of exploration and evaluation that has been performed.

Expenditure on exploration and evaluation is accounted for in accordance with the area of interest method. Exploration and evaluation expenditure is capitalized provided the rights to tenure of the area of interest is current and either: the exploration and evaluation activities are expected to be recouped through successful development and exploitation of the area of interest or, alternatively, by its sale; or exploration and evaluation activities in the area of interest have not, at the reporting date, reached a stage that permits a reasonable assessment of the existence or otherwise of economically recoverable reserves, and active and significant operations in, or relating to, the area of interest are continuing.

When the technical feasibility and commercial viability of extracting a mineral resource have been demonstrated, then, any fulfillment exploration and evaluation expenditure is reclassified as mine and mining properties and mine development costs included as part of property, plant and equipment. Prior to reclassification, exploration and evaluation expenditure is assessed for impairment.

When a project is abandoned, the related deferred mine exploration costs are written off. Exploration areas are considered permanently abandoned if the related permits of the exploration have expired and/or there are no definite plans for further exploration and/or development.

Property, Plant and Equipment

Property, plant and equipment, except land and artworks, are stated at cost, excluding the costs of day-to-day servicing, less accumulated depreciation, depletion and amortization and accumulated impairment in value, if any. Such cost includes the cost of replacing part of such property, plant and equipment if the recognition criteria are met.

When significant parts of property, plant and equipment are required to be replaced at intervals, the Group recognizes such parts as individual assets with specific useful lives and depreciates, depletes and amortizes them accordingly. Likewise, when a major inspection is performed, its cost is recognized in the carrying amount of the property, plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in the consolidated statement of income when incurred. The present value of the expected cost for the decommissioning of an asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

CIP is recorded at cost. This includes costs of construction and other direct costs. CIP is not depreciated until such time that the relevant asset is completed, transferred to the appropriate account and put into operational use.

Land is carried at revalued amount less any impairment in value. Valuations are performed with sufficient frequency to ensure that the carrying amount of a revalued asset does not differ materially from its fair value.

Artworks, which the Group holds for aesthetic purposes, are also stated at revalued amount less any accumulated depreciation and accumulated impairment in value. Depreciable amount is determined after considering the residual value. The initial cost of artworks includes purchase consideration, the fair value in the case of vested assets, and those costs that are directly attributable to bringing the asset to its location and condition necessary for its intended purpose.



The increment from valuation of land and artworks, net of deferred tax liability, resulting from the revaluation is credited to revaluation increment under the other components of equity caption included in the equity section in the consolidated statement of financial position. However, to the extent that it reverses a revaluation deficit of the same asset previously recognized in the consolidated statement of income, the increase is recognized in consolidated statement of income. A revaluation deficit is recognized in the consolidated statement of income, except to the extent that it offsets an existing surplus on the same asset recognized in the revaluation increment. Upon derecognition of the revalued property, the relevant portion of the revaluation increment realized in respect of previous valuations is released from the revaluation increment directly to retained earnings.

Depreciation and amortization are computed on a straight-line basis over the estimated useful lives of the assets as follows:

| Category | Number of years |
|--------------------------------|-----------------|
| Port facilities | 25 |
| Land improvements | 3-25 |
| Buildings | 5-20 |
| Machinery, tools and equipment | 2-15 |

Right-of-Use Assets

The Group recognizes right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are initially measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The initial cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, lease payments made at or before the commencement date less any lease incentives received and estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease, unless those costs are incurred to produce inventories.

Unless the Group is reasonably certain to obtain ownership of the leased asset at the end of the lease term, the recognized right-of-use assets are depreciated on a straight-line basis over the shorter of their estimated useful life and lease term, as follows:

| Leased assets | Lease terms |
|---------------|----------------|
| Land | 10 to 25 years |
| Office spaces | 5 to 8 years |
| Clinic spaces | 3 years |
| Vehicle | 2 years |

Right-of-use assets are subject to impairment.

The estimated useful lives, residual values and depreciation and amortization method are reviewed periodically to ensure these are consistent with the expected pattern of economic benefits from items of property, plant and equipment. The useful lives and residual values are reviewed at the end of each reporting period and adjusted prospectively, if appropriate.

Fully depreciated assets are retained in the accounts until these are no longer in use. No further depreciation is charged to current operation for these items.



Mine and Mining Properties

Capitalized expenditure is assessed for impairment and is transferred from deferred exploration costs to mine development costs when it has been established that a mineral deposit is commercially mineable, development sanctioned, and a decision has been made to formulate a mining plan (which occurs upon completion of a positive economic analysis of the mineral deposit).

After transfer of the deferred exploration costs, all subsequent expenditure on the construction, installation or completion of infrastructure facilities is capitalized in mine development costs. Development expenditure includes costs considered integral to the development of the mine. Any costs incurred in testing the assets to determine if they are functioning as intended, are capitalized, while any proceeds received from selling any product during testing shall be recognized in the consolidated statement of income.

No depletion is charged during the mine development phases.

When the Group has already achieved commercial levels of production, mine development costs are moved to mine and mining properties. Commercial production is deemed to have commenced when management determines that the completion of operational commissioning of major mine and plant components is completed, operating results are being achieved consistently for a period of time and that there are indicators that these operating results will be continued.

The carrying value of mine and mining properties represents total expenditures incurred to date on the area of interest, less accumulated depletion and any impairment.

When a mine construction project moves into the production phase, the capitalization of certain mine construction costs ceases, and costs are either regarded as part of the cost of inventory or expensed, except for costs which qualify for capitalization relating to mining asset additions, improvements or new developments, underground mine development or mineable reserve development.

Mine and mining properties are subject to depletion, which is computed using the units-of-production method based on the economically recoverable reserves. Mine and mining properties include the initial estimate of provision for mine rehabilitation and decommissioning, for which the Group is constructively liable.

Investment Properties

Investment properties pertain to properties, which are held to earn rentals or for capital appreciation or both.

Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at fair value, which reflects market conditions at the end of the reporting period. Gains or losses arising from changes in the fair values of investment properties are included in the consolidated statement of income in the period in which these arise. Fair values are determined based on the revaluation performed by an accredited external independent appraiser. Upon derecognition of the investment property, the portion of the revaluation increment realized in respect of previous valuation is released from the revaluation increment directly to retained earnings.

Investment properties are derecognized either when they have been disposed of or when they are permanently withdrawn from use and no future economic benefit is expected from their disposal. Any gains or losses on the retirement or disposal of investment property is recognized in the consolidated statement of income in the year of retirement or disposal.



Transfers are made to investment property when, and only when, there is a change in use, evidenced by ending of owner-occupation, commencement of an operating lease to another party or ending of construction or development. Transfers are made from investment property when, and only when, there is a change in use, evidenced by commencement of owner-occupation or commencement of development with a view to sale. Transfers between investment property and owner-occupied property do not change the carrying amount of the investment property transferred and they do not change the cost of the property.

If an owner-occupied property becomes an investment property that will be carried at fair value, the Group shall apply PAS 16, *Property, Plant and Equipment*, up to the date of change in use. The Group shall treat any difference at that date between the carrying amount of the property and its fair value in the same way as a revaluation in accordance with PAS 16. On subsequent disposal of the investment property, the revaluation surplus included in equity shall be transferred to retained earnings.

Impairment of Nonfinancial Assets

The Group assesses, at the end of each reporting period, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. The recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years.

Impairment losses of continuing operations, including impairment on inventories, are recognized in the consolidated statement of income in expense categories consistent with the function of the impaired asset, except for properties previously revalued with the revaluation taken to consolidated statement of comprehensive income. For such properties, the impairment is recognized in consolidated statement of comprehensive income up to the amount of any previous revaluation.

For the other assets, an assessment is made at the end of each reporting period to determine whether there is an indication that previously recognized impairment losses no longer exist or have decreased. If such indication exists, the Group estimates the asset's or CGU's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, depletion or amortization, had no impairment loss been recognized for that asset in prior years. Such reversal is recognized in the consolidated statement of income unless the asset is carried at revalued amount, in which case, the reversal is treated as a revaluation increase.



Deferred Mine Exploration Costs

The Group assesses whether facts and circumstances suggest that the carrying amount of deferred mine exploration costs may exceed its recoverable amount. Below are some of the facts and circumstances, which the Group considers in determining whether there is impairment on deferred mine exploration costs:

- the period for which the Group has the right to explore in the specific area has expired during the period or will expire in the near future, and is not expected to be renewed
- substantive expenditure on further exploration for and evaluation of mineral resources in the specific area is neither budgeted nor planned
- exploration for and evaluation of mineral resources in the specific area have not led to the discovery of commercially viable quantities of mineral resources and the entity has decided to discontinue such activities in the specific area, and
- sufficient data exist to indicate that, although a development in the specific area is likely to proceed, the carrying amount of the deferred mine exploration costs is unlikely to be recovered in full of successful development or by sale

Full provision is made for the impairment unless it is probable that such costs are expected to be recouped through successful exploration and development of the area of interest, or alternatively, by its sale. If the project does not prove to be viable or is abandoned, all revocable cost associated with the project and the related impairment provisions are written off.

Recovery of impairment losses recognized in prior years is recorded if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognized. The recovery is recorded in the consolidated statement of income.

Leases

The Group assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Group as a Lessee

At the commencement date of the lease, the Group recognizes lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating a lease, if the lease term reflects the Group exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognized as expense in the period on which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the in-substance fixed lease payments or a change in the assessment to purchase the underlying asset.

The Group has elected to classify interest paid on lease liabilities as cash flows from operating activities.



Short-term Leases

The Group applies the short-term lease recognition exemption to its short-term leases of clinic spaces (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). Lease payments on short-term leases are recognized as expense on a straight-line basis over the lease term.

Provisions

General

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Group expects some or all of the provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the consolidated statement of income, net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as interest expense in the consolidated statement of income.

Liability for Mine Rehabilitation

Mine rehabilitation costs will be incurred by the Group either while operating, or at the end of the operating life of, the Group's facilities and mine and mining properties. The Group assesses its mine rehabilitation provision at each reporting date. The Group recognizes a rehabilitation provision where it has a legal and constructive obligation as a result of past events, and it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount of obligation can be made. The nature of these restoration activities includes: dismantling and removing structures; rehabilitating mines and tailings dams; dismantling operating facilities; closing plant and waste sites; and restoring, reclaiming and re-vegetating affected areas.

The obligation generally arises when the asset is installed, or the ground/environment is disturbed at the mining operation's location. When the liability is initially recognized, the present value of the estimated costs is capitalized by increasing the carrying amount of the related mining assets to the extent that it was incurred as a result of the development or construction of the mine. Any rehabilitation obligations that arise through the production of inventory are recognized as part of the related inventory item. Additional disturbances that arise due to further development or construction at the mine are recognized as additions or charges to the corresponding assets and rehabilitation liability when these occur. Costs related to restoration of site damage (subsequent to start of commercial production) that is created on an ongoing basis during production are provided for at their net present values and recognized in the consolidated statement of income as extraction progresses.

Changes in the estimated timing of rehabilitation or changes to the estimated future costs are dealt with prospectively by recognizing an adjustment to the rehabilitation liability and a corresponding adjustment to the asset to which it relates, if the initial estimate was originally recognized as part of an asset measured in accordance with PAS 16.

Any reduction in the rehabilitation liability and, therefore, any deduction from the asset to which it relates, may not exceed the carrying amount of that asset. If it does, any excess over the carrying value is taken immediately to the consolidated statement of income.

If the change in estimate results in an increase in the rehabilitation liability and, therefore, an addition to the carrying value of the asset, the Group considers whether this is an indication of impairment of



the asset as a whole, and if so, tests for impairment. If, for mature mines, the estimate for the revised mine assets net of rehabilitation provisions exceeds the recoverable value, that portion of the increase is charged directly to expense.

Over time, the discounted liability is increased for the change in present value based on the discount rates that reflect current market assessments and the risks specific to the liability. The periodic unwinding of the discount is recognized in the consolidated statement of income as part of interest expense.

For closed sites, changes to estimated costs are recognized immediately in the consolidated statement of income.

Rehabilitation trust funds committed for use in satisfying environmental obligations are included in other noncurrent assets in the consolidated statement of financial position.

Capital Stock and Capital Surplus

Common and preferred shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction from proceeds. The excess of proceeds from issuance of shares over the par value of shares less any incremental costs directly attributable to the issuance, net of tax, is credited to capital surplus.

Revenue Recognition

The Group is principally engaged in the business of producing gold and nickel ore. Revenue from contracts with customers is recognized when control of the goods or services is transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services.

The Group has generally concluded that it is the principal in its revenue contracts because it typically controls the goods or services before transferring them to the customer.

Sale of Mine Products

Revenue from sale of mine products is recognized at the point in time when the control of the asset is transferred to the customer which is normally at the time of shipment, and the selling prices are known or can be reasonably estimated. Revenue from sale of gold is measured at the prevailing international gold buying price and prevailing Philippine peso to United States dollar buying rate set by the Bangko Sentral ng Pilipinas (BSP) Treasury department on a daily basis and is recognized based on the initial weight and assay tests, which represent the best estimate. Revenue from sale of nickel ore is measured based on contract at the prevailing price at Ferro Alloy and prevailing Philippine peso to United States dollar buying rate and is recognized based on the initial weight and assay tests, which represent the best estimate. Subsequent adjustments to revenue due to quantity and/or quality changes are recognized upon determination of the final weight and assay tests.

BSP Refining Charges

BSP refining charges are deducted from revenue to arrive at revenue from contracts with customers since BSP refining charges are necessary expenses by BSP in determining the final gold content.

Despatch/Demurrage

Despatch/demurrage is added/deducted from revenue to arrive at revenue from contracts with customers. Despatch is earned when shipment is loaded earlier than the allowable lay time while demurrage is incurred when shipment is not loaded on time.



Medical and Dental Services

The Group has contracts with customers to provide medical and dental services. Each individual service is either sold separately or bundled together with other medical services. In determining the transaction price for the sale of medical and dental services, the Group considers the effects of variable consideration.

Revenue from medical and dental services are recognized over the period in which the medical and dental services are provided, and are included as part of the Group's sale of goods and services in Note 20.

Trucking Services

The Group provides trucking services for the transportation of mining materials and construction supplies.

Revenue from trucking services is computed as actual delivered cubic meters multiplied by the contract price. The Group has concluded that revenue from trucking services is recognized over time since the customers simultaneously benefits as the Group performs the services. Revenue from trucking services is included as part of the Group's sale of goods and services.

Port Services

Revenue from port service is recognized over time upon loading of ores to the vessel and is included as part of the Group's sale of goods and services.

Excise Taxes and Royalty Fees

Excise taxes and royalty fees pertain to the taxes paid or accrued by the Group arising from the production of gold and nickel ore. These taxes and royalties are recognized once revenue from the sale of the related mine product is recognized.

Pension and Other Post-employment Benefits

The Parent Company, BRMC, BLI and AFCC have separate, noncontributory, defined benefit pension plans, covering all permanent, regular and full-time employees.

The net defined benefit liability or asset is the aggregate of the present value of the defined benefit obligation at the end of the reporting period reduced by the fair value of plan assets, adjusted for any effect of limiting a net defined benefit asset to the asset ceiling. The asset ceiling is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan.

The cost of providing benefits under the defined benefit plan is determined using the projected unit credit method.

Remeasurements, comprising of actuarial gains or losses, excluding amounts included in net interest on the net defined benefit liability and the return on plan assets (excluding amounts included in the net interest on the net defined benefit liability), are recognized immediately in the consolidated statement of financial position with a corresponding debit or credit to retained earnings through OCI in the period in which these occur. Remeasurements are not reclassified to consolidated statement of income in subsequent periods.

Past services costs are recognized in the consolidated statement of income on the earlier of:

- The date of the plan amendment or curtailment, and
- The date that the Group recognizes related restructuring costs



Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Group recognizes the following changes in the net defined benefit obligation under “costs of mine products sold”, “costs of services and other sales” and “selling and general expenses” in the consolidated statement of income:

- Service costs comprising current service costs, past-service costs, gains and losses on curtailments and non-routine settlements
- Net interest expense or income

Plan assets are assets that are held by a long-term employee benefit fund or qualifying insurance policies. Plan assets are not available to the creditors of the Group, nor can they be paid directly to the Group. Fair value of plan assets is based on market price information. When no market price is available, the fair value of plan assets is estimated by discounting expected future cash flows using a discount rate that reflects both the risk associated with the plan assets and the maturity or expected disposal date of those assets (or, if they have no maturity, the expected period until the settlement of the related obligations). If the fair value of the plan assets is higher than the present value of the defined benefit obligation, the measurement of the resulting defined benefit asset is limited to the present value of economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan.

Share-based Payment Transactions

Employees (including senior executives) of the Group receive remuneration in the form of share-based payment transactions, whereby employees render services as consideration for equity instruments (equity-settled transactions).

The cost of equity-settled transactions is determined by the fair value at the date when the grant is made using an appropriate valuation model. That cost is recognized, together with a corresponding increase in equity, over the period in which the performance and/or service conditions are fulfilled, in employee benefits expense.

The cumulative expense recognized for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Group’s best estimate of the number of equity instruments that will ultimately vest. The profit and loss charge or credit for a period represents the movement in cumulative expense recognized as at the beginning and end of that period and is recognized in employee benefits.

No expense is recognized for awards that do not ultimately vest, except for equity settled transactions for which vesting is conditional upon a market or non-vesting condition. These are treated as vesting irrespective of whether or not the market or non-vesting condition is satisfied, provided that all other performance and/or service conditions are satisfied.

Where the terms of an equity-settled award are modified, the minimum expense recognized is the expense computed based on the grant date fair value of the unmodified award, provided the original terms of the award are met. An additional expense, measured as at the date of modification, is recognized for any modification that increases the total fair value of the share-based payment transaction, or is otherwise beneficial to the employee. Where an award is cancelled by the Group or by the counterparty, any remaining element of the fair value of the award is expensed immediately in the consolidated statement of income.

When the terms of an equity-settled award are cancelled, it is treated as if it had vested on the date of cancellation, and any expense not yet recognized for the award is recognized immediately. However, if a new award is substituted for the cancelled award and designated as a replacement award on the



date that it is granted, the cancelled and new awards are treated as if they were a modification of the original award, as described in the previous paragraph.

Where an equity-settled award expires or is cancelled, its cost is transferred to capital surplus.

Forfeitures revise the expense to reflect the best available estimate of the number of equity instruments expected to vest.

The dilutive effect of outstanding options is reflected as additional share dilution in the computation of diluted earnings per share.

Foreign Currencies

The Group's consolidated financial statements are presented in Philippine peso, which is also the Parent Company's functional currency. For each entity, the Group determines the functional currency and items included in the financial statements of each entity are measured using that functional currency. The Group uses the direct method of consolidation and on disposal of a foreign operation, the gain or loss that is reclassified to profit or loss reflects the amount that arises from using this method.

Transactions and Balances

Transactions in foreign currencies are initially recorded by the Group's entities at their respective functional currency spot rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognized in consolidated statement of income with the exception of monetary items that are designated as part of the hedge of the Group's net investment of foreign operation. These are recognized in OCI until the net investment is disposed of, at which time, the cumulative amount is reclassified to consolidated statement of income. Tax charges and credits attributable to exchange differences on those monetary items are also recorded in OCI.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined. The gain or loss on translation of non-monetary items measured at fair value of the item is treated in line with the recognition of the gain or loss arising on the change in fair value of the item (i.e., translation differences on items whose fair value gain or loss is recognized in OCI or consolidated statement of income are also recognized in OCI or consolidated statement of income, respectively).

Foreign Subsidiaries

On consolidation, the assets and liabilities of foreign operations are translated into Philippine peso at the rate of exchange prevailing at the reporting date and their statements of income are translated at the average exchange rates for the year. The exchange differences arising on the translation for consolidation are recognized in OCI. On disposal of a foreign operation, the component of OCI relating to that particular foreign operation is recognized in the consolidated statement of income.



Income Taxes

Current Tax

Current tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the tax authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted as of the end of the reporting period in the country where the Group operates and generates taxable income.

Current tax relating to items recognized directly in equity is recognized in equity and not in the consolidated statement of income.

Deferred Tax

Deferred tax is provided using the liability method on all temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- Where the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit (tax loss)
- In respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, where the timing of the reversal of the temporary differences can be controlled by the parent, investor or venturer and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognized for all deductible temporary differences, carry-forward of unused tax credits from excess of minimum corporate income tax (MCIT) over regular corporate income tax (RCIT) and unused net operating loss carry-over (NOLCO), to the extent that it is probable that sufficient future taxable profit will be available against which the deductible temporary differences, excess of MCIT over RCIT and unused NOLCO can be utilized, except:

- Where the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss
- In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available, against which the temporary differences can be utilized

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient future taxable profit will be available to allow all or part of the deferred tax assets to be utilized. Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it has become probable that sufficient future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realized, or the liability is settled based on tax rates (and tax laws) that have been enacted or substantively enacted at the end of the reporting period.

Deferred tax relating to items recognized outside consolidated statement of income is recognized outside consolidated statement of income. Deferred tax items are recognized in correlation to the underlying transaction either in OCI or directly in equity.



Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Uncertainty Over Income Tax Treatments

The Group assesses at the end of each financial reporting period whether it has any uncertain tax treatments by reviewing the assumptions about the examination of tax treatments by the taxation authority, determining taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates, and considering changes in relevant facts and circumstances. The Group then evaluates how likely is it that a certain tax treatment will be accepted by the taxation authority. If it is probable that the taxation authority will accept a certain tax treatment, the Group concludes that it has no uncertain tax treatment and will measure tax amounts in line with the income tax filings. If it is not probable that the taxation authority will accept a certain tax treatment, the Group measures tax amounts based on the 'most likely amount' method (better predicts uncertainty if the possible outcomes are binary or are concentrated on one value) or 'expected value' method (better predicts uncertainty if there is a range of possible outcomes that are neither binary nor concentrated on one value). The Group presents uncertain tax as part of current income tax liabilities or deferred income tax liabilities.

Earnings Per Share (EPS)

Basic EPS amount is calculated by dividing net income for the year attributable to ordinary equity holders of the Parent Company by the weighted average number of ordinary shares outstanding, adjusted for any stock dividends declared during the year.

Diluted EPS amount is calculated by dividing the net profit attributable to ordinary equity holders of the Parent Company (after deducting interest on the convertible cumulative preference shares) by the weighted average number of ordinary shares outstanding, adjusted for any stock dividends declared during the year plus the weighted average number of ordinary shares that would be issued on the conversion of all the dilutive potential ordinary shares into ordinary shares.

If the number of ordinary or potential ordinary shares outstanding increases as a result of a capitalization, bonus issue or share split, or decreases as a result of a reverse share split, the calculation of basic and diluted earnings per share for all periods presented shall be adjusted retrospectively. If these changes occur after the reporting period but before the financial statements are authorized for issue, the per share calculations for those and any prior period financial statements presented shall be based on the new number of shares. The fact that per share calculations reflect such changes in the number of shares shall be disclosed. In addition, basic and diluted earnings per share of all periods presented shall be adjusted for the effects of errors and adjustments resulting from changes in accounting policies accounted for retrospectively.

Operating Segments

The Group's operating businesses are recognized and managed according to the nature of the products or services offered, with each segment representing a strategic business unit that serves different markets.

Segment assets include operating assets used by a segment and consist principally of operating cash, trade and other receivables, inventories and property, plant and equipment, net of allowances and provisions.

Segment liabilities include all operating liabilities and consist principally of trade and other payables, accrued expenses and bank loans. Segment assets and liabilities do not include deferred taxes.



Segment revenue, expenses and profit include transfers between business segments. The transfers are accounted for at competitive market prices charged to unaffiliated customers for similar products. Such transfers are eliminated in the consolidation.

Events After the Reporting Period

Post year-end events that provide additional information about the Group's position at the end of the reporting period (adjusting events) are reflected in the consolidated financial statements. Post year-end events that are not adjusting events are disclosed when material.

3. Summary of Significant Accounting Judgments, Estimates and Assumptions

The preparation of the consolidated financial statements in accordance with PFRS Accounting Standards requires the Group to make judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, income and expenses and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these judgements, estimates and assumptions could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgments, estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Actual results could differ from such estimates.

Judgments

In the process of applying the Group's accounting policies, management has made following judgments, which have the most significant effect on the amounts recognized in the consolidated financial statements.

Assessing Provisions and Contingencies

The Group is currently involved in various legal proceedings. The estimate of the probable costs for the resolution of these claims has been developed in consultation with outside counsel handling the Group's defense in these matters and is based upon an analysis of potential results. The Group assessed that these proceedings will not have a material adverse effect on its financial position. It is possible, however, that future results of operations could be materially affected by changes in the estimates or in the effectiveness of the strategies relating to these proceedings (see Note 36).

Distinction between Investment Property and Owner-Occupied Property

The Group determines whether a property qualifies as investment property. In making its judgment, the Group considers whether the property is not occupied substantially for use by, or in operations of the Group, not for sale in the ordinary course of business, but is held primarily to earn rental income or capital appreciation. Owner-occupied properties generate cash flows that are attributable not only to the property but also to the other assets used in the production or supply.

Principal versus Agent Considerations

The Group enters into contracts with customers wherein the Group charges the customers for the services rendered. The Group determined that it does not control the goods or services before they are transferred to customers, and it does not have the ability to direct the use of the services or obtain benefits from the services. The following factors indicate that the Group does not control the services before they are being transferred to customers. Therefore, the Group determined that it is an agent in these contracts.



- The Group is not primarily responsible for fulfilling the promise to provide the professional services.
- The Group has no discretion in establishing the price for the services provided. The Group's consideration in these contracts is only based on the difference between the Group and the customer.

The Group determined that it is an agent with respect to the professional fees of its tenant doctors. Meanwhile, the Group concluded that it is the principal in all its other revenue streams.

Assessing Recoverability of Deferred Mine Exploration Costs

The Group reviews the recoverability of deferred mine exploration costs when events or changes in circumstances indicate that the carrying amount of deferred mine exploration costs may exceed its estimated recoverable amount. The Group considers the following factors, among others, in its assessment:

- Status of each mine exploration project and plans on exploration and evaluation activities
- Validity of the licenses, permits and correspondences related to each mine exploration project
- Plans to abandon existing mine areas and plans to discontinue exploration activities
- Availability of information suggesting that the recovery of expenditure is unlikely

The Group's ability to realize its deferred exploration costs depends on the success of exploration and development work in proving the viability of its mining properties to produce minerals in commercial quantities, and the success of converting the Group's exploration permits to new mineral agreements, which cannot be determined at this time. The consolidated financial statements do not include any adjustment that might result from these uncertainties.

As at December 31, 2024 and 2023, deferred mine exploration costs amounted to ₱550.51 million and ₱520.37 million, respectively (see Note 10).

Estimates and Assumptions

The key estimates and assumptions concerning the future and other key sources of estimation uncertainty at reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets within the next financial year, are discussed below. The Group based its assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when these occur.

Provision for ECL on Trade and Other Receivables

The Group uses the simplified approach in the assessment of the ECL for its trade receivables and general approach model for its other receivables excluding advances to officers and employees. An assessment of the ECL relating to this financial asset is undertaken upon initial recognition and each financial year and involves exercise of significant judgment. Key areas of judgment include defining default, determining assumptions to be used such as timing and amounts of expected net recoveries from defaulted accounts, determining debtor's capacity to pay, and incorporating forward looking information.

The Group recognized provision for ECL amounting to ₱4.83 million in 2024 while provision, net of recoveries, amounting to ₱0.92 million in 2023. The carrying amount of trade and other receivables, excluding advances to officers and employees, amounted to ₱683.06 million and ₱601.91 million as at December 31, 2024 and 2023, respectively (see Note 5).



Estimating Ore Reserves

Ore reserves estimates are, to a large extent, based on the interpretation of geological data obtained from drill holes and other sampling techniques and feasibility studies. The Group estimates its ore reserves based on information compiled by appropriately qualified persons relating to the geological data on the size, depth and shape of the ore body, and requires complex geological judgments to interpret the data. The Group also makes estimates and assumptions regarding a number of economic and technical factors affecting ore reserves estimates, such as production rates, grades, foreign exchange rates, production and transport costs, and commodity prices.

These geological, economic and technical estimates and assumptions may change in the future in ways, which can affect the quality and quantity of the ore reserves. The Group reviews and updates estimates as required to reflect actual production, new exploration data or developments and changes in other assumptions or parameters. These estimates will change from time to time to reflect mining activities, analyses of new engineering and geological data, changes in ore reserve and mineral resource holdings, modifications of mining plans or methods, changes in nickel or gold prices or production costs, and other factors.

Changes in the ore reserves estimates may impact the carrying values of mine and mining properties under “property, plant and equipment, liability for mine rehabilitation and decommissioning and depletion charges.

As at December 31, 2024 and 2023, carrying values of mine and mining properties amounted to ₱645.36 million and ₱651.56 million, respectively (see Note 9). Depletion charges recognized amounted to ₱25.67 million, ₱25.92 million and ₱41.76 million in 2024, 2023 and 2022, respectively (see Notes 9 and 25).

As at December 31, 2024 and 2023, liability for mine rehabilitation amounted to ₱53.02 million and ₱62.13 million, respectively (see Note 16).

Estimating Recoverability of Property, Plant and Equipment

The Group assesses impairment on property, plant and equipment whenever events or changes in circumstances indicate that the carrying amount of the property, plant and equipment may not be recoverable.

The factors that the Group considers important which could trigger an impairment review include the following:

- Significant underperformance relative to expected historical or projected future operating results
- Significant changes in the manner of use of the acquired assets or the strategy for overall business, and
- Significant negative industry or economic trends

In determining the present value of estimated future cash flows expected to be generated from the continued use of the property, plant and equipment, the Group is required to make estimates and assumptions such as commodity prices (considering current and historical prices, price trends and related factors), discount rates and foreign currency exchange rates, operating costs, future production levels and costs. These estimates and assumptions are subject to risk and uncertainty. Therefore, there is a possibility that changes in circumstances will impact these projections, which may impact the recoverable amount of assets. In such circumstances, some or all of the carrying amount of the assets may be further impaired or the impairment charge reduced with the impact recognized in the consolidated statement of income.



The Group did not recognize any impairment loss in 2024, 2023 and 2022 on property, plant and equipment.

As at December 31, 2024 and 2023, property, plant and equipment (at cost) amounted to ₱743.91 million and ₱789.94 million, respectively (see Note 9).

Estimating Allowance for Inventory Obsolescence

The Group maintains allowance for inventory losses at a level considered adequate to reflect the excess of cost of inventories over their NRV. NRV of inventories are assessed regularly based on prevailing estimated selling prices of inventories and the corresponding cost of disposal. Decrease in the NRV of inventories resulting in an amount lower than the original acquisition cost is accounted for as an impairment loss that is recognized in profit or loss.

As at December 31, 2024 and 2023, the carrying value of inventories amounted to ₱191.94 million and ₱247.96 million, respectively (see Note 6).

Assessing Impairment of Input VAT and Advances to Contractors and Suppliers

The Group provides allowance for impairment losses on input VAT under other current assets and advances to contractors and supplies and input VAT under noncurrent assets when these can no longer be realized. The amounts and timing of recorded expenses for any period would differ if the Group made different judgments or utilized different estimates. An increase in allowance for probable loss would increase recorded expenses and decrease other current and noncurrent assets.

The total carrying value of input VAT and advances to contractors and suppliers amounted to ₱582.13 million and ₱450.58 million as at December 31, 2024 and 2023, respectively (see Notes 8 and 12).

Revaluation of Property, Plant and Equipment and Investment Properties

The Group carries its investment properties at fair value, with changes in fair value being recognized in the consolidated statement of income. In addition, it measures the land and artworks at revalued amounts, with changes in fair value being recognized in other comprehensive income. The land, artworks and investment properties were valued using the sales comparison approach. The determination of the fair values of these properties involves significant management judgment and estimations. The valuation also requires the assistance of external appraisers whose calculations also depend on certain assumptions, such as sales and listing of comparable properties registered within the vicinity and adjustments to sales price based on internal and external factors.

As at December 31, 2024 and 2023, the appraised value of land and artworks, and investment properties amounted to ₱5,297.36 million and ₱4,774.57 million, respectively (see Notes 9 and 11).

Unit-of-production (UOP) depreciation

Estimated economically recoverable reserves are used in determining the depreciation and/or amortization of mine-specific assets. This results in a depreciation/amortization charge proportional to the depletion of the anticipated remaining life-of-mine production. The life of each item, which is assessed at least annually, has regard to both its physical life limitations and present assessments of economically recoverable reserves of the mine property at which the asset is located. These calculations require the use of estimates and assumptions, including the amount of recoverable reserves and estimates of future capital expenditure. The calculation of the UOP rate of depreciation/amortization could be impacted to the extent that actual production in the future is different from current forecast production based on economically recoverable reserves, or if future capital expenditure estimates change. Changes to economically recoverable reserves could arise due to changes in the factors or assumptions used in estimating reserves, including:



- The effect on economically recoverable reserves of differences between actual commodity prices and commodity price assumptions
- Unforeseen operational issues

Changes in estimates are accounted for prospectively.

As at December 31, 2024 and 2023, the carrying amount of mine and mining properties amounted to ₱645.36 million and ₱651.56 million, respectively (see Note 9).

Leases – Estimating the Incremental Borrowing Rate

The Group cannot readily determine the interest rate implicit in the lease, therefore, it uses its incremental borrowing rate (IBR) to measure lease liabilities. The IBR is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. The IBR therefore reflects what the Group ‘would have to pay’, which requires estimation when no observable rates are available (such as for subsidiaries that do not enter into financing transactions) or when they need to be adjusted to reflect the terms and conditions of the lease (for example, when leases are not in the subsidiary’s functional currency). The Group estimates the IBR using observable inputs (such as market interest rates) when available and is required to make certain entity-specific estimates (such as the subsidiary’s stand-alone credit rating).

The Group’s lease liabilities amounted to ₱15.27 million and ₱8.33 million as at December 31, 2024 and 2023, respectively (see Note 15).

Estimating Liability for Mine Rehabilitation

The Group estimates the costs of mine rehabilitation based on previous experience in rehabilitating fully mined areas in sections of the mine site. These costs are adjusted for inflation factor based on the average annual inflation rate as of adoption date or re-evaluation of the asset dismantlement, removal or restoration costs. Such adjusted costs are then measured at present value using the market interest rate for a comparable instrument adjusted for the Group’s credit standing. While management believes that its assumptions are reasonable and appropriate, significant differences in actual experience or significant changes in the assumptions may materially affect the Group’s liability for mine rehabilitation.

Liability for mine rehabilitation amounted to ₱53.02 million and ₱62.13 million as at December 31, 2024 and 2023, respectively (see Note 16).

Estimating Pension Benefits

The cost of defined benefit pension benefits as well as the present value of the pension obligation are determined using actuarial valuations. The actuarial valuation involves making various assumptions. These include the determination of the discount rates, future salary increases, mortality rates and future pension increases. Due to the complexity of the valuation, the underlying assumptions and its long-term nature, defined benefit obligations are highly sensitive to changes in these assumptions. All assumptions are reviewed at the end of each reporting period.

In determining the appropriate discount rate, management considers the interest rates of government bonds that are denominated in the currency in which the benefits will be paid, with extrapolated maturities corresponding to the expected duration of the defined benefit obligation.

The mortality rate is based on publicly available mortality tables for the Philippines and is modified accordingly with estimates of mortality improvements. Future salary increases, and pension increases are based on expected future inflation rates for the Philippines.



Further details about the assumptions used are provided in Note 29.

Net pension liability of the Group amounted to ₱39.96 million and ₱58.19 million as at December 31, 2024 and 2023 respectively (see Note 29).

Assessing Realizability of Deferred Tax Assets

The Group reviews the carrying amounts of deferred tax assets at each end of the reporting period and reduces deferred tax assets to the extent that it is no longer probable that sufficient future taxable profit will be available to allow all or part of the deferred tax assets to be utilized. Management believes that there is no assurance that the Group will generate sufficient taxable profit to allow all or part of its deferred tax assets to be utilized.

The Group recognized deferred tax assets amounting to ₱103.59 million and ₱105.07 million as at December 31, 2024 and 2023, respectively (see Note 30).

The Group did not recognize deferred tax assets on the remaining unused NOLCO and excess MCIT and deductible temporary differences amounting to ₱407.90 million and ₱399.41 million as at December 31, 2024 and 2023, respectively (see Note 30).

4. Cash and Cash Equivalents

| | 2023 | 2022 |
|---------------------------|-------------------|-----------------|
| Cash on hand and in banks | ₱832,105 | ₱630,810 |
| Short-term deposits | 921,610 | 143,382 |
| | ₱1,753,715 | ₱774,192 |

Cash in banks earn interest at the prevailing bank deposit rates. Cash equivalents are made for varying periods of up to three (3) months depending on the immediate cash requirements of the Group and earn interest at the respective short-term deposit rates.

Interest income from cash and cash equivalents amounted to ₱38.66 million, ₱3.34 million and ₱1.35 million in 2024, 2023, and 2022, respectively (see Note 26).

5. Trade and Other Receivables

| | 2023 | 2022 |
|--|-----------------|-----------------|
| Trade | ₱256,643 | ₱183,429 |
| Nontrade | 251,290 | 230,250 |
| Loan receivable | 246,682 | 258,622 |
| Advances to officers and employees | 60,048 | 146,649 |
| Employee stock ownership incentive plan (ESOIP)
(Note 27) | 58,416 | 58,416 |
| Receivables from lessees of bunkhouses | 9,972 | 9,648 |
| Others | 20,447 | 17,101 |
| | 903,498 | 904,115 |
| Less allowance for ECLs and impairment losses | 162,222 | 157,389 |
| | ₱741,276 | ₱746,726 |

Trade and nontrade receivables, and receivables from lessees of bunkhouses are noninterest-bearing and are generally collectible within a period of one year.



Loan Receivable

On March 3, 2010, MMC granted an unsecured loan facility which is payable on demand, to a third party with an interest rate of 9% per annum. Outstanding receivable from this loan, including accrued interest, amounted to ₱196.92 million and ₱208.86 million, net of allowance amounting to ₱49.76 million as at December 31, 2024 and 2023, respectively. No interest earned for this loan in 2024, 2023 and 2022.

Other receivables comprise various receivables of the Group which are normally settled within the period, while advances to officers and employees pertain to cash advances that are used in the operations of the Group and are subject to liquidation.

Movements in allowance for ECL and impairment losses in 2024 and 2023 are as follows:

| 2024 | | | | | | | | |
|-------------------------------|----------------------|-------------------------|--|--------------------|---------------------|---|--------|----------|
| | Trade
Receivables | Nontrade
Receivables | Advances to
officers and
employees | ESOIP
(Note 27) | Loans
receivable | Receivables
from
lessees of
bunkhouses | Others | Total |
| Balances at beginning of year | ₱32,996 | ₱8,409 | ₱1,830 | ₱58,416 | ₱49,763 | ₱3,855 | ₱2,120 | ₱157,389 |
| Provisions (Note 23) | 4,678 | — | 2 | — | — | 153 | — | 4,833 |
| Balances at end of year | ₱37,674 | ₱8,409 | ₱1,832 | ₱58,416 | ₱49,763 | ₱4,008 | ₱2,120 | ₱162,222 |

| 2023 | | | | | | | | |
|-------------------------------|----------------------|-------------------------|--|--------------------|---------------------|---|--------|----------|
| | Trade
Receivables | Nontrade
Receivables | Advances to
officers and
employees | ESOIP
(Note 27) | Loans
receivable | Receivables
from
lessees of
bunkhouses | Others | Total |
| Balances at beginning of year | ₱31,890 | ₱8,409 | ₱1,830 | ₱58,416 | ₱49,763 | ₱3,855 | ₱2,302 | ₱156,465 |
| Provisions (Note 23) | 1,118 | — | — | — | — | — | — | 1,118 |
| Recoveries (Note 23) | (12) | — | — | — | — | — | (182) | (194) |
| Balances at end of year | ₱32,996 | ₱8,409 | ₱1,830 | ₱58,416 | ₱49,763 | ₱3,855 | ₱2,120 | ₱157,389 |

Except for those impaired accounts, the Group assessed trade and other receivables as collectible and in good standing.

6. Inventories

| | 2024 | 2023 |
|---|-----------|-----------|
| At Cost: | | |
| Beneficiated nickel ore | ₱149,212 | ₱193,506 |
| Quicklime and slakelime | 6,902 | 8,850 |
| Subdivision lots and housing units for sale | 1,122 | 1,122 |
| | 157,236 | 203,478 |
| At NRV: | | |
| Materials and supplies | 191,445 | 201,095 |
| Less provision for inventory obsolescence | (156,741) | (156,614) |
| | 34,704 | 44,481 |
| | ₱191,940 | ₱247,959 |

As at December 31, 2024 and 2023, the NRV of the Group's beneficiated nickel ore, gold button, quicklime and slakelime, and subdivision lots is higher than the related cost.



The amount of beneficiated nickel ore inventory recognized as expense, included in the costs of mine products sold in the consolidated statements of income amounted to ₱224.85 million, ₱120.79 million and ₱152.00 million in 2024, 2023 and 2022, respectively.

The aggregate cost of beneficiated nickel ore inventory that decreased cost of mine products sold amounted to ₱72.13 million in 2023 and increased cost of mine products sold amounted to ₱43.48 million and ₱5.09 million in 2024 and 2022, respectively. (see Note 21).

Movements of provision for inventory obsolescence on materials and supplies are as follows:

| | 2024 | 2023 |
|-------------------------------|-----------------|----------|
| Balances at beginning of year | ₱156,614 | ₱156,614 |
| Provision (Note 23) | 127 | — |
| Balances at end of year | ₱156,741 | ₱156,614 |

Materials and supplies charged to current operations amounted to ₱175.02 million, ₱205.95 million and ₱283.31 million in 2024, 2023 and 2022, respectively (see Notes 21, 22 and 23). There are no purchase commitments related to inventories or inventories pledged as security for liabilities as at December 31, 2024 and 2023.

7. Financial Assets at FVPL

The Group's financial assets at FVPL are investments in UITF.

Movements in financial assets at FVPL are as follows:

| | 2024 | 2023 |
|---------------------------------|-------------------|------------|
| Beginning balance | ₱1,328,780 | ₱1,114,611 |
| Additions | 19,664 | 162,276 |
| Disposals | (699,307) | — |
| Changes in fair value (Note 26) | 55,500 | 51,893 |
| Ending balance | ₱704,637 | ₱1,328,780 |

Movements in cumulative gain from change in fair value are as follows:

| | 2024 | 2023 |
|---------------------------------|-----------------|---------|
| Beginning balance | ₱59,340 | ₱7,447 |
| Realized gain on disposals | (65,462) | — |
| Changes in fair value (Note 26) | 55,500 | 51,893 |
| Ending balance | ₱49,378 | ₱59,340 |



8. Other Current Assets

| | 2024 | 2023 |
|---|-----------------|----------|
| Input VAT - net | ₱172,855 | ₱175,276 |
| Input VAT refund | 112,043 | — |
| CWTs | 40,567 | 28,400 |
| Short-term investments | 26,908 | 407,533 |
| Deferred input VAT | 9,508 | 43,482 |
| Prepaid expenses | 5,300 | 3,714 |
| Others | 12,264 | 10,888 |
| | 379,445 | 669,293 |
| Less allowance for impairment losses on input VAT | 10,729 | 8,724 |
| | ₱368,716 | ₱660,569 |

In 2024, BRMC applied for input VAT refund for the taxable year 2023 amounting to ₱112.04 million. On February 27, 2025, the BIR granted the refund. BRMC determined that input VAT amounting to ₱5.02 million does not have sufficient supports or does not meet invoicing requirement, thus, written off as a loss in 2024 (see Note 23).

In 2023, BRMC applied for input VAT refund for taxable years 2020 and 2022. The BIR disallowed input VAT claims amounting to 7.95 million and ₱12.69 million, thus, written off as a loss in 2023 and 2024, respectively (see Notes 23 and 26).

Short-term investments pertain to time deposits with maturities of more than three (3) months but less than one (1) year and earn interest at the respective short-term placement rates.

Movement in short-term investments are as follows:

| | 2024 | 2023 |
|-------------------|------------------|----------|
| Beginning balance | ₱407,533 | ₱— |
| Additions | 10,194 | 407,533 |
| Disposal | (390,819) | — |
| Ending balance | ₱26,908 | ₱407,533 |

Interest income from short-term investments amounted to ₱3.02 million, ₱6.56 million and nil in 2024, 2023 and 2022, respectively (see Note 26).

Deferred input VAT arises from the Group's unsettled purchase of services and will be claimed as input VAT upon payment.

Others include surety bonds and security deposits. Surety bonds pertain to the agreement to guarantee compliance with MGB in putting a trust fund for Mineral Ore Export Permit issuance. This is valid for one year and is subject for renewal. Security deposits are deposits to satisfy lease obligation of the Group. These are refundable at the end of the lease term.

In 2024 and 2023, the Group recognized provision for impairment losses on input VAT amounting to ₱2.01 million and ₱0.01 million while in 2022, the Group recognized reversal for impairment loss on advances to contractors amounting to ₱39.25 million (see Notes 23 and 26).



Movements of allowance for impairment loss on other current assets are as follows:

| | 2024 | 2023 |
|-------------------------------|---------|--------|
| Balances at beginning of year | ₱8,724 | ₱8,719 |
| Provision (Note 23) | 2,005 | 5 |
| Balances at end of year | ₱10,729 | ₱8,724 |

9. Property, Plant and Equipment

a. Property, plant and equipment – at revalued amount

The Group's property, plant and equipment items carried at revalued amounts are as follows:

| | 2024 | 2023 |
|----------|------------|------------|
| Land | ₱1,919,554 | ₱1,724,475 |
| Artworks | 53,044 | 52,139 |
| | ₱1,972,598 | ₱1,776,614 |

Land – at revalued amount

The Group engaged independent firms of appraisers to determine the fair value of its land and artworks classified under property, plant and equipment in the consolidated statements of financial position. The appraisers determined the fair value of the Group's land based on its market value in 2024 and is categorized under level 3. The assigned values were estimated using the sales comparison approach, which considers the sales of similar or substitute properties and their related market values and establishes value estimates through processes involving comparisons.

| | 2024 | | |
|-------------------------------|---------|-----------------------|------------|
| | Cost | Revaluation increment | Total |
| Balances at beginning of year | ₱68,518 | ₱1,655,957 | ₱1,724,475 |
| Change in fair value | – | 188,854 | 188,854 |
| Reclassification (Note 11) | 6,225 | – | 6,225 |
| Balances at end of year | ₱74,743 | ₱1,844,811 | ₱1,919,554 |

| | 2023 | | |
|-------------------------------|---------|-----------------------|------------|
| | Cost | Revaluation increment | Total |
| Balances at beginning of year | ₱68,398 | ₱1,609,167 | ₱1,677,565 |
| Change in fair value | – | 46,790 | 46,790 |
| Reclassification (Note 11) | 120 | – | 120 |
| Balances at end of year | ₱68,518 | ₱1,655,957 | ₱1,724,475 |

Artworks – at revalued amount

Independent revaluations are performed every three to five years by an independent appraiser. The latest appraisal was performed by Heritage Arts & Antiquities, Inc., an independent appraiser for the year ended December 31, 2024, in which the fair value measurement is categorized under Level 3. The assigned value was estimated using the sales comparison approach, which considers the sales of similar or substitute properties and related market values and establishes value estimates by processes involving comparisons. In general, a property being valued is compared



with sales of similar properties that have been transacted in the open market. Listings and offerings may also be considered.

Carrying values of artworks at revalued amounts amounted to ₱53.04 million and ₱52.14 million as at December 31, 2024 and 2023, respectively.

The artworks would have been recorded at ₱0.90 million in the consolidated statement of financial position had these been carried at cost.

Management assessed that the residual value of the artworks approximates the revalued amount as at December 31, 2024 and 2023, and therefore, no depreciation was recognized in both years.

| | 2024 | | |
|-------------------------------|-------------|----------------------------------|----------------|
| | Cost | Revaluation
increment | Total |
| Balances at beginning of year | ₱896 | ₱51,243 | ₱52,139 |
| Change in fair value | – | 905 | 905 |
| Balances at end of year | ₱896 | ₱52,148 | ₱53,044 |

| | 2023 | | |
|---------------------------------------|-------------|----------------------------------|----------------|
| | Cost | Revaluation
increment | Total |
| Balances at beginning and end of year | ₱896 | ₱51,243 | ₱52,139 |

Movements in the revaluation increment on land and artworks shown as part of other components of equity are as follows:

| | 2024 | 2023 | 2022 |
|--|-------------------|-------------|-------------|
| Beginning balance | ₱1,362,051 | ₱1,325,985 | ₱1,305,820 |
| Revaluation during the year | 142,366 | 36,066 | 20,700 |
| Transfer to retained earnings
(Note 11) | – | – | (535) |
| Ending balance | ₱1,504,417 | ₱1,362,051 | ₱1,325,985 |



b. Property, Plant and Equipment – at cost

| | 2024 | | | | | | | |
|--|----------------------|-----------|--------------------------------------|----------------------------------|--------------------|----------|-------------------------------------|------------|
| | Land
improvements | Buildings | Machinery,
tools and
equipment | Mine and
mining
properties | Port
facilities | CIP | Right-of-use
assets
(Note 15) | Total |
| Cost: | | | | | | | | |
| Beginning balance | ₱75,209 | ₱311,773 | ₱1,043,410 | ₱1,664,511 | ₱117,142 | ₱21,143 | ₱17,157 | ₱3,250,345 |
| Additions | – | 499 | 81 | 1,130 | – | – | 12,335 | 14,045 |
| Derecognition | – | – | – | – | – | – | (5,310) | (5,310) |
| Reclassification | – | – | 449 | 15,768 | – | (16,217) | – | – |
| Change in estimate of the liability for
mine rehabilitation (Note 16) | – | – | – | 2,577 | – | – | – | 2,577 |
| Ending balance | 75,209 | 312,272 | 1,043,940 | 1,683,986 | 117,142 | 4,926 | 24,182 | 3,261,657 |
| Accumulated depreciation and depletion: | | | | | | | | |
| Beginning balance | 75,209 | 311,773 | 1,006,325 | 1,012,954 | 44,422 | – | 9,727 | 2,460,410 |
| Depreciation and depletion (Note 25) | – | 499 | 25,529 | 25,672 | 5,387 | – | 5,557 | 62,644 |
| Derecognition | – | – | – | – | – | – | (5,310) | (5,310) |
| Ending balance | 75,209 | 312,272 | 1,031,854 | 1,038,626 | 49,809 | – | 9,974 | 2,517,744 |
| Net book values | ₱– | ₱– | ₱12,086 | ₱645,360 | ₱67,333 | ₱4,926 | ₱14,208 | ₱743,913 |



| | 2023 | | | | | | | |
|--|----------------------|-----------|--------------------------------------|----------------------------------|-----------------|----------|-------------------------------------|------------|
| | Land
improvements | Buildings | Machinery,
tools and
equipment | Mine and
mining
properties | Port facilities | CIP | Right-of-use
assets
(Note 15) | Total |
| Cost: | | | | | | | | |
| Beginning balance | ₱75,209 | ₱311,390 | ₱1,024,797 | ₱1,633,095 | ₱101,517 | ₱24,912 | ₱31,090 | ₱3,202,010 |
| Additions | – | 196 | 19,658 | 36,356 | – | 12,043 | 2,052 | 70,305 |
| Disposals and derecognition | – | – | (1,045) | – | – | – | (15,985) | (17,030) |
| Reclassification | – | 187 | – | – | 15,625 | (15,812) | – | – |
| Change in estimate of the liability for
mine rehabilitation (Note 16) | – | – | – | (4,940) | – | – | – | (4,940) |
| Ending balance | 75,209 | 311,773 | 1,043,410 | 1,664,511 | 117,142 | 21,143 | 17,157 | 3,250,345 |
| Accumulated depreciation and depletion: | | | | | | | | |
| Beginning balance | 75,209 | 310,757 | 988,594 | 987,031 | 40,091 | – | 20,128 | 2,421,810 |
| Depreciation and depletion (Note 25) | – | 1,016 | 18,776 | 25,923 | 4,331 | – | 5,584 | 55,630 |
| Disposals and derecognition | – | – | (1,045) | – | – | – | (15,985) | (17,030) |
| Ending balance | 75,209 | 311,773 | 1,006,325 | 1,012,954 | 44,422 | – | 9,727 | 2,460,410 |
| Net book values | ₱– | ₱– | ₱37,085 | ₱651,557 | ₱72,720 | ₱21,143 | ₱7,430 | ₱789,935 |



The Group's CIP includes the development of an enhanced mill production line in Balatoc, Benguet to increase the milling capacity of its gold operations.

Proceeds totaling ₱0.11 million and ₱0.16 million in 2023 and 2022, respectively, from the disposal of fully depreciated property, plant and equipment resulted in net gain of ₱0.11 million and ₱0.16 million in 2023 and 2022, respectively (see Note 26). There is no disposal of property, plant and equipment in 2024.

The cost of fully depreciated property, plant and equipment still being used in the Group's operations amounted to ₱725.47 million and ₱701.74 million as at December 31, 2024 and 2023, respectively.

Movements in mine and mining properties in 2024 and 2023 are as follows:

| 2024 | | | | |
|--|----------------------------------|---------------------------------|--|------------|
| | Mine and
mining
properties | Mine
rehabilitation
asset | | Total |
| Cost: | | | | |
| Balances at beginning of year | ₱1,581,835 | ₱82,676 | | ₱1,664,511 |
| Addition | 1,130 | — | | 1,130 |
| Reclassification | 15,768 | — | | 15,768 |
| Change in estimate of the liability
for mine rehabilitation (Note 16) | — | 2,577 | | 2,577 |
| Balances at end of year | 1,598,733 | 85,253 | | 1,683,986 |
| Accumulated depletion: | | | | |
| Balances at beginning of year | 965,973 | 46,981 | | 1,012,954 |
| Depletion (Note 25) | 24,155 | 1,517 | | 25,672 |
| Balances at end of year | 990,128 | 48,498 | | 1,038,626 |
| Net book values | ₱608,605 | ₱36,755 | | ₱645,360 |

| 2023 | | | | |
|--|----------------------------------|-----------------------------|---------------------------------|------------|
| | Mine and
mining
properties | Mine
development
cost | Mine
rehabilitation
asset | Total |
| Cost: | | | | |
| Balances at beginning of year | ₱1,521,554 | ₱23,925 | ₱87,616 | ₱1,633,095 |
| Addition | 36,356 | — | — | 36,356 |
| Reclassification | 23,925 | (23,925) | — | — |
| Change in estimate of the liability
for mine rehabilitation (Note 16) | — | — | (4,940) | (4,940) |
| Balances at end of year | 1,581,835 | — | 82,676 | 1,664,511 |
| Accumulated depletion: | | | | |
| Balances at beginning of year | 941,373 | — | 45,658 | 987,031 |
| Depletion (Note 25) | 24,600 | — | 1,323 | 25,923 |
| Balances at end of year | 965,973 | — | 46,981 | 1,012,954 |
| Net book values | ₱615,862 | ₱— | ₱35,695 | ₱651,557 |



Movements in right-of-use of assets in 2024 and 2023 are as follows:

| | 2024 | | | | |
|-------------------------------|--------------|--------------|--------------------------|--------|---------|
| | Office Space | Clinic Space | Transportation Equipment | Land | Total |
| Cost: | | | | | |
| Balances at beginning of year | ₱4,439 | ₱5,310 | ₱2,052 | ₱5,356 | ₱17,157 |
| Additions | – | 12,335 | – | – | 12,335 |
| Termination | – | (5,310) | – | – | (5,310) |
| Balances at end of year | 4,439 | 12,335 | 2,052 | 5,356 | 24,182 |
| Accumulated depreciation: | | | | | |
| Balances at beginning of year | 2,220 | 4,773 | 239 | 2,495 | 9,727 |
| Depreciation (Note 15) | 887 | 3,760 | 171 | 739 | 5,557 |
| Termination | – | (5,310) | – | – | (5,310) |
| Balances at end of year | 3,107 | 3,223 | 410 | 3,234 | 9,974 |
| Net book values | ₱1,332 | ₱9,112 | ₱1,642 | ₱2,122 | ₱14,208 |

| | 2023 | | | | |
|-------------------------------|--------------|--------------|--------------------------|--------|----------|
| | Office Space | Clinic Space | Transportation Equipment | Land | Total |
| Cost: | | | | | |
| Balances at beginning of year | ₱20,424 | ₱5,310 | ₱– | ₱5,356 | ₱31,090 |
| Additions | – | – | 2,052 | – | 2,052 |
| Termination | (15,985) | – | – | – | (15,985) |
| Balances at end of year | 4,439 | 5,310 | 2,052 | 5,356 | 17,157 |
| Accumulated depreciation: | | | | | |
| Balances at beginning of year | 14,072 | 3,924 | – | 2,132 | 20,128 |
| Depreciation (Note 15) | 4,133 | 849 | 239 | 363 | 5,584 |
| Termination | (15,985) | – | – | – | (15,985) |
| Balances at end of year | 2,220 | 4,773 | 239 | 2,495 | 9,727 |
| Net book values | ₱2,219 | ₱537 | ₱1,813 | ₱2,861 | ₱7,430 |

10. Deferred Mine Exploration Costs

Movements in deferred mine exploration costs are as follows:

| | 2024 | 2023 |
|--------------------------------------|----------|----------|
| Balances at beginning of year | ₱687,356 | ₱659,494 |
| Additions | 27,131 | 28,310 |
| Translation adjustment | 3,007 | (448) |
| Balances at end of year | 717,494 | 687,356 |
| Less allowance for impairment losses | 166,989 | 166,989 |
| Net book value | ₱550,505 | ₱520,367 |

Additions pertain to drilling, hauling, and other ongoing exploration and evaluation activities of the Group.

No movement in allowance for impairment loss on deferred mine exploration costs in 2024 and 2023.



11. Investment Properties

| | 2024 | 2023 |
|-------------------------------|-------------------|------------|
| Balances at beginning of year | ₱2,997,953 | ₱2,991,984 |
| Addition | 18,540 | 6,225 |
| Revaluation (Note 26) | 314,491 | (136) |
| Reclassification (Note 9) | (6,225) | (120) |
| Balances at end of year | ₱3,324,759 | ₱2,997,953 |

Investment properties include parcels of land located in Itogon, Benguet, Irisan, Baguio City and San Pedro, Laguna.

In April 2022, AFCC sold its parcel of land located in Barangay San Antonio, San Pedro, Laguna with an area of 2,045 sqm for ₱2,500 per sqm. The corresponding revaluation increment on this land amounting to ₱0.54 million recognized under other comprehensive income was transferred to retained earnings upon sale. The proceeds from the sale amounted to ₱4.63 million resulting in a gain amounting to ₱0.62 million (see Note 26).

In 2023, AFCC reclassified investment property amounting to ₱0.12 million into property and equipment due to the change in use of the property from being an investment property that is no longer held for long-term capital appreciation.

The Group engaged an independent appraiser to assess the fair market value of land under investment properties as at December 31, 2024 and 2023, respectively. The appraisal was performed by Cuervo Appraisers, Inc. and Top Consult, Inc., an independent appraiser. The fair value of the investment properties was estimated using the sales comparative approach, which considers the sales of similar or substitute properties and related market values and establishes value estimates by processes involving comparisons (level 3).

Movements in accumulated fair valuation gains of investment properties are as follows:

| | 2024 | 2023 |
|-------------------------------|-------------------|------------|
| Balances at beginning of year | ₱1,405,028 | ₱1,405,164 |
| Revaluation (Note 26) | 314,491 | (136) |
| Balances at end of year | ₱1,719,519 | ₱1,405,028 |

12. Other Noncurrent Assets

| | 2024 | 2023 |
|---|-----------------|----------|
| Advances to contractors and suppliers | ₱447,428 | ₱407,665 |
| Mine rehabilitation fund (MRF) | 85,961 | 78,165 |
| CWTs | 75,469 | 97,483 |
| Input VAT | 19,996 | 47,589 |
| Prepaid rent | 2,343 | 2,334 |
| Financial assets at FVOCI | 794 | 1,110 |
| Others | 34,049 | 25,833 |
| | 666,040 | 660,179 |
| Less allowance for ECLs and impairment losses | 159,463 | 171,227 |
| | ₱506,577 | ₱488,952 |



The Group made advance payments to a supplier of aircraft amounting ₱4.05 million and ₱245.95 million in 2023 and 2022, respectively, bringing the total balance to ₱250.00 million and as at December 31, 2024 and 2023, respectively. Meanwhile, the rest of the advances to contractors and supplier are for exploration and other related activities and projects.

In 2014 and 2015, AFCC applied for refund of CWTs totaling ₱51.97 million.

On November 15, 2021, a notice of decision was received which partially granted as refundable amount representing excess and unutilized CWTs for the taxable year 2014 amounting to ₱15.59 million. On May 6, 2022, AFCC filed a Petition for Review with the CTA En Banc to appeal the denial of the Motion for Partial Reconsideration.

On December 7, 2020, AFCC received a notice of decision was received which partially grants the Company ₱9.20 million as refundable amount representing excess and unutilized CWTs for the taxable year 2015. On March 26, 2024, CTA Special First Division issued Amended Writ of Execution to implement the Decision dated December 7, 2020, and ordered the Commission on Internal Revenue to refund AFCC the amount of ₱9.20 million. The Decision dated December 7, 2020, is final and executory. As at March 26, 2025, the Company is currently processing the issuance of the refund with the BIR.

In 2024, AFCC has written off its allowance for unrecoverable CWTs for the taxable year 2015 amounting to ₱9.48 million while BLI has reversed an allowance for impairment of input VAT amounting to ₱2.28 million (see Note 23).

MRF pertains to accounts opened with local banks in compliance with the requirements of DAO No. 2010-21, otherwise known as The Revised Implementing Rules and Regulations of the Philippine Mining Act of 1995. The MRF shall be used for physical and social rehabilitation of areas and communities affected by the mine operations, and for research in the social, technical and preventive aspects of the mine's rehabilitation. The funds earn interest at the respective bank deposit rates. Interest income earned from MRF amounted to ₱0.02 million, ₱0.69 million and ₱0.74 million in 2024, 2023 and 2022, respectively (see Note 26).

Financial assets at FVOCI pertain to investments in nonlisted and listed shares of stock in the Philippine Stock Exchange and Toronto Stock Exchange, which are carried at fair value based on bid market prices.

Movements in financial assets at FVOCI in 2024 and 2023 are as follows:

| | 2024 | 2023 |
|-------------------------------|---------------|--------|
| Balances at beginning of year | ₱1,110 | ₱1,709 |
| Change in fair value | (206) | 43 |
| Disposals | (110) | (642) |
| Balances at end of year | ₱794 | ₱1,110 |

The unrealized gain amounting to ₱0.17 million and ₱0.37 million representing the change in fair value of these financial assets as at December 31, 2024 and 2023 is shown as part of the other components of equity in the consolidated statements of financial position and in the consolidated statements of changes in equity (see Note 18). The fluctuations in value of these investments are also reported as part of other comprehensive income in the consolidated statements of comprehensive income.



Movements in unrealized gains (losses) on financial assets at FVOCI recognized as a separate component of equity are as follows (see Note 18):

| | 2024 | 2023 | 2022 |
|-------------------------------|-------|------|--------|
| Balances at beginning of year | ₱371 | ₱328 | (₱275) |
| Change in fair value | (206) | 43 | 603 |
| Balances at end of year | ₱165 | ₱371 | ₱328 |

In 2023, the Group sold the intangible asset with a net carrying amount of ₱0.23 million for a cash consideration of ₱0.38 million, thus, recognizing a gain amounting to ₱0.15 million (see Note 26).

Others pertain to various assets of the Group, which are individually insignificant and are expected to be realized beyond 12 months after the reporting period.

Movements in the allowance for impairment loss on advances to contractors and suppliers and input VAT are as follows:

| 2024 | | | |
|-------------------------------|---------------------------------------|-----------|----------|
| | Advances to contractors and suppliers | Input VAT | Total |
| Balances at beginning of year | ₱140,976 | ₱30,251 | ₱171,227 |
| Write-off | — | (9,483) | (9,483) |
| Reversal (Note 23) | — | (2,281) | (2,281) |
| Balances at end of year | ₱140,976 | ₱18,487 | ₱159,463 |

| 2023 | | | |
|---------------------------------------|---------------------------------------|-----------|----------|
| | Advances to contractors and suppliers | Input VAT | Total |
| Balances at beginning and end of year | ₱140,976 | ₱30,251 | ₱171,227 |

13. Trade and Other Payables

| | 2024 | 2023 |
|---|----------|----------|
| Trade | ₱277,569 | ₱345,933 |
| Nontrade | 57,674 | 53,003 |
| Accrued expenses: | | |
| Power and utilities | 20,984 | 10,226 |
| Taxes, fees and licenses | 19,969 | 9,872 |
| Payroll | 2,631 | 3,315 |
| Professional fees and contracted services | 998 | 671 |
| Others | 372 | 58 |
| Excise taxes and royalties | 18,782 | 15,716 |
| Contract liabilities – current | 164,579 | — |
| Dividends payable (Note 18) | 35,490 | — |
| Output VAT - net | 2,866 | 60,392 |
| Others | 2,405 | 8,615 |
| | ₱604,319 | ₱507,801 |



Trade payables include import and local purchases of equipment, inventories and various parts and supplies used in the operations of the Group. These are noninterest-bearing and are normally settled in 60 to 90 days' terms.

Nontrade payables represent withholding taxes and other payables to regulatory agencies which are normally settled within one year.

Accrued expenses pertain to liabilities for professional fees, power and utilities, taxes, fees and licenses, unclaimed wages, accrued vacation and sick leave credits, payroll and other administrative expenses which are normally settled within 60-90 days.

Excise taxes and royalties pertain to taxes payable by the Group for its legal obligation arising from the production of mine products.

Contract liabilities pertain to advances from the off take agreements and downpayments made by BRMC's customers for the sale of nickel. On April 11, 2014, BRMC entered into an off-take agreement with a Korean trading company for a total amount of US\$6.00 million in exchange for future shipments. The advances under the said offtake agreement are noninterest-bearing and will be settled through deductions from the selling price of every shipment. (see Note 17).

Movements in contract liabilities are shown below:

| | 2024 | 2023 |
|-----------------------------------|-----------------|-----------|
| Balances at beginning of year | ₱104,596 | ₱203,912 |
| Additions during the year | 136,442 | 155,606 |
| Effect of foreign exchange | (3,019) | (1,640) |
| Revenue recognized | (54,637) | (253,282) |
| Balance at end of year | 183,382 | 104,596 |
| Less noncurrent portion (Note 17) | 18,803 | 104,596 |
| Current portion | ₱164,579 | ₱— |

Others include individually insignificant payables which are normally settled within one year.

14. Loans Payable

| | 2024 | 2023 |
|--------------------------------|-----------|-----------------|
| Secured loan | ₱— | ₱48,348 |
| Unsecured loan | — | 36,715 |
| Accrued interest and penalties | — | 254,175 |
| | ₱— | ₱339,238 |

Secured loan

The Parent Company has a loan secured by investment properties with carrying value of ₱2,553.62 million as at December 31, 2023.

Nominal interest rates vary from floating rate of 91-day Philippine PhP T-bill rate for peso loans and 3-month Sterling Overnight Indexed Average (SONIA) for foreign loans, plus margin of 2.5%.



Unsecured loan

The Parent Company has an unsecured loan from a third party with interest rate of 3% per annum which is due and demandable.

On September 3, 2024, the Parent Company signed an Amendment to Mortgage Trust Indenture and Deed of Chattel Mortgage with Philippine Veterans Bank replacing Philippine National Bank as trustee in connection with the loan.

On October 22, 2024, the Parent Company executed with the remaining creditors a mutual rescission agreement terminating the loans payable and release from mortgage the investment properties by settling its secured and unsecured loans in full amounting to ₱600.00 million and ₱55.15 million, respectively. The carrying amount of secured and unsecured loans paid off amounted to ₱290.60 million and ₱55.15 million, respectively. This resulted to a loss on debt settlement for secured and unsecured loans amounting to ₱309.40 million in 2024 (see Note 26).

Total interest expense recognized in consolidated statement of income amounted to ₱6.55 million, ₱2.20 million and nil in 2024, 2023 and 2022, respectively.

15. Lease Commitments

Lease Agreements

Group as a lessee

The Group has lease contracts for various office spaces, clinic spaces, transportation equipment, and land. The lease terms of these lease contracts are ranging from 2 years to 25 years. The renewals of these leases are subject to the mutual agreement of the parties. Lease payments are fixed.

The Group also has certain leases of clinic space with lease terms of 12 months or less. The Group applies the 'short-term lease' recognition exemption for these leases. The Group's obligations under its leases are secured by the lessor's title to the leased assets.

The following are the amounts recognized in consolidated statement of income:

| | 2024 | 2023 | 2022 |
|--|----------------|---------|---------|
| Depreciation expense of right-of-use assets included in property, plant and equipment (Note 9) | ₱5,557 | ₱5,584 | ₱8,829 |
| Expenses related to short-term leases included in selling and general expenses (Note 23) | 13,219 | 45,299 | 54,646 |
| Expenses related to short-term leases included in cost of services (Note 22) | 3,631 | 6,578 | 4,293 |
| Interest expense on lease liabilities | 814 | 573 | 1,102 |
| Total amount recognized in the consolidated statements of income | ₱23,221 | ₱58,034 | ₱68,870 |



The rollforward analysis of lease liabilities follows:

| | 2024 | 2023 |
|---------------------------------|----------------|---------|
| Balances at beginning of year | ₱8,331 | ₱12,107 |
| Additions | 12,335 | 2,052 |
| Interest expense | 814 | 573 |
| Payments of: | | |
| Principal portion | (5,401) | (5,828) |
| Interest portion | (814) | (573) |
| Balances at the end of the year | 15,265 | 8,331 |
| Less noncurrent portion | 8,158 | 4,093 |
| Current portion | ₱7,107 | ₱4,238 |

Shown below is the maturity analysis of the undiscounted lease payments:

| | 2024 | 2023 |
|-----------------------------|---------------|--------|
| Lease payments due in: | | |
| Less than one year | ₱2,269 | ₱3,717 |
| Between one to two years | 1,793 | 2,269 |
| Between two to three years | 1,281 | 1,793 |
| Between three to four years | 1,376 | 1,281 |
| More than five years | — | 1,376 |

Non-cancellable lease agreements pertain to the Parent's lease of land in Itogon, Benguet for the easement and right of way agreement over the land which the Parent Company needs for its existing water pipelines, and other future installation it may deem desirable for its operations.

Group as a lessor

The Group rented its condominium units under investment properties condominium units as office spaces. The Group has entered into lease contracts, which typically have a lease term of one (1) year. The lease agreements are renewable upon mutual agreement between the Group and its lessees. The Group has determined, based on an evaluation of the terms and conditions of the arrangements, that it retains all the significant risks and rewards of ownership of these properties and so accounts for the leases as operating leases.

Rent income from these leases amounted to ₱0.79 million, ₱0.87 million and ₱0.88 million in 2024, 2023 and 2022, respectively (Note 20).

Future minimum rentals receivable under non-cancellable operating leases as at December 31, 2024 and 2023 are as follows:

| | 2024 | 2023 |
|-----------------|-------------|------|
| Within one year | ₱153 | ₱170 |



16. Liability for Mine Rehabilitation

Movements in this account are as follows:

| | 2024 | 2023 |
|--|-----------------|---------|
| Balances at beginning of year | ₱62,130 | ₱59,056 |
| Actual rehabilitation costs | (14,117) | (6,990) |
| Change in estimate: | | |
| Recognized as adjustment to the mine rehabilitation asset (Note 9) | 2,577 | (4,940) |
| Recognized in consolidated statement of income (Note 26) | (163) | 12,826 |
| Accretion (Note 26) | 2,593 | 2,178 |
| Balances at end of year | 53,020 | 62,130 |
| Less noncurrent portion | 48,151 | 44,347 |
| Current portion | ₱4,869 | ₱17,783 |

This provision is based on the Group's estimates. Assumptions based on the current economic environment have been made, which management believes are reasonable bases upon which to estimate the future liability.

In 2022, the revised Antamok Final Mine Rehabilitation and Decommissioning Plan (FMRDP) was endorsed by the MGB-CAR to the Contingent Liability and Rehabilitation Fund Steering Committee (CLRFSC) for approval based on new development, particularly on the actual rehabilitation needs considering the current physical status and condition of the area. The total cost to be incurred over a 4-year period of rehabilitation was reduced from ₱43.0 million to ₱30.0 million. The aim of the FMRDP is principally to mitigate environmental risks and provide a sustainable final land use over the area. It includes long-term programs including Minahang Bayan. The Parent Company implemented various activities such as continuous propagation of various seedlings in nurseries and maintenance of its established reforestation areas. In 2023, the Parent Company's additional activities included progressive rehabilitation of waste dumps and other areas of the mine.

The final rehabilitation costs are uncertain, and cost estimates can vary in response to many factors, including estimates of the extent and costs of rehabilitation activities, technological changes, regulatory changes and changes in inflation rates (3.20% in 2024 and 3.03% in 2023) and changes in discount rates (4.90% in 2024 and 5.43% 2023).

These uncertainties may result in future actual expenditure differing from the amounts currently provided. Therefore, significant estimates and assumptions are made in determining the provision for mine rehabilitation. As a result, there could be significant adjustments to the provision established that could affect future financial results.

The provision at the end of each reporting period represents management best estimate of the present value of the future rehabilitation cost required. This estimate is reviewed regularly to take into account any material changes in the assumptions. However, actual rehabilitation costs will ultimately depend upon future market prices for the necessary decommissioning works required, which will reflect market conditions at the relevant time. The timing of rehabilitation is likely to depend on when the mine ceases to produce at economically viable rates. This, in turn, will depend upon future gold and nickel prices, which are inherently uncertain.



17. Other Noncurrent Liabilities

| | 2024 | 2023 |
|--|-----------------|----------|
| Contract liabilities (Note 13) | ₱18,803 | ₱104,596 |
| Equity of claimowners in contract operations | 49,136 | 49,136 |
| Deposits for future stock subscriptions | 52,000 | 32,000 |
| | ₱119,939 | ₱185,732 |

Contract liabilities of BRMC may be settled through future nickel ore shipments to its customers. The current portion of the said advances is presented as part of trade and other payables.

As at December 31, 2024 and 2023, the US\$ denominated portion of the advances amounted to US\$1.54 million (₱85.27 million) and US\$1.54 million (₱85.27 million), respectively, while the rest of advances are denominated in peso.

Equity of claim owners in contract operations pertain to the outstanding equity of CMI, gross of advances. Discussions on the settlement of said liability are still on-going as at March 26, 2025.

In 2024, the Parent Company received cash as deposit for future stock subscriptions from Red Earth Mineral Resources Corporation, a third party, amounted to ₱20.00 million (see Note 18). In 2016, deposit for future stock subscriptions was received by BLI from Almega Management and Investment, Inc., a third party, amounted to ₱32.00 million. The related increase in authorized capital stock of BLI has been approved by BLI's BOD and majority of its stockholders on March 16, 2016. As of March 26, 2025, the Parent Company and BLI were yet to submit its application for increase in authorized capital stock with the Philippine SEC.

18. Equity

Capital stock as at December 31, 2024 and 2023 follows:

| | 2024 | | 2023 | |
|------------------------------------|--------------------|-----------------|---------------|----------|
| | No. of shares | Amount | No. of shares | Amount |
| Authorized | | | | |
| Convertible Preferred | | | | |
| Class A – ₱3.43 par value | 19,652,912 | ₱67,500 | 19,652,912 | ₱67,500 |
| Common Class A – ₱1 par value | 430,380,000 | 430,380 | 430,380,000 | 430,380 |
| Common Class B – ₱1 par value | 286,920,000 | 286,920 | 286,920,000 | 286,920 |
| | 736,952,912 | ₱784,800 | 736,952,912 | ₱784,800 |
| Issued | | | | |
| Convertible Preferred Class "A" | 217,061 | ₱745 | 217,061 | ₱745 |
| Common Class "A" | 428,430,802 | 428,431 | 375,430,802 | 375,431 |
| Common Class "B" | 285,101,396 | 285,101 | 248,101,396 | 248,101 |
| Total shares issued and subscribed | 713,749,259 | ₱714,277 | 623,749,259 | ₱624,277 |
| Treasury Shares | | | | |
| Common Class "A" | 310,794 | ₱7,158 | 310,794 | ₱7,158 |
| Common Class "B" | 37,275 | 858 | 37,275 | 858 |
| Total treasury shares | 348,069 | ₱8,016 | 348,069 | ₱8,016 |
| Outstanding | | | | |
| Convertible Preferred Class "A" | 217,061 | ₱745 | 217,061 | ₱745 |
| Common Class "A" | 428,120,008 | 421,273 | 375,120,008 | 368,273 |
| Common Class "B" | 285,064,121 | 284,243 | 248,064,121 | 247,243 |
| Total outstanding shares | 713,401,190 | ₱706,261 | 623,401,190 | ₱616,261 |



The amount of unrestricted retained earnings equivalent to the cost of the treasury shares being held shall be restricted from being declared and issued as dividends.

No movement in the Parent Company's authorized and treasury shares in 2024 and 2023. The movement in the Parent Company's issued shares in 2024, 2023 and 2022 are as follows:

| 2024 | | | |
|---------------------------------|---------------------------------|--|---------------------------|
| | Balance at
beginning of year | Issuance of shares
through subscription | Balance at
end of year |
| Convertible Preferred Class "A" | 217,061 | — | 217,061 |
| Common Class "A" | 375,430,802 | 53,000,000 | 428,430,802 |
| Common Class "B" | 248,101,396 | 37,000,000 | 285,101,396 |
| | 623,749,259 | 90,000,000 | 713,749,259 |

| 2023 | | | |
|---------------------------------|---------------------------------|--|---------------------------|
| | Balance at
beginning of year | Issuance of shares
for stock options
exercised (Note 19) | Balance at
end of year |
| Convertible Preferred Class "A" | 217,061 | — | 217,061 |
| Common Class "A" | 375,307,052 | 123,750 | 375,430,802 |
| Common Class "B" | 247,963,396 | 138,000 | 248,101,396 |
| | 623,487,509 | 261,750 | 623,749,259 |

| 2022 | | | |
|---------------------------------|---------------------------------|--|---------------------------|
| | Balance at
beginning of year | Issuance of shares
for stock options
exercised (Note 19) | Balance at
end of year |
| Convertible Preferred Class "A" | 217,061 | — | 217,061 |
| Common Class "A" | 375,307,052 | — | 375,307,052 |
| Common Class "B" | 247,963,396 | — | 247,963,396 |
| | 623,487,509 | — | 623,487,509 |

The two classes of common shares of the Parent Company are identical in all respects, except that ownership of Common Class A is restricted to Philippine nationals.

The convertible preferred shares are limited to Philippine nationals and convertible into Common Class A shares at a conversion premium of ₱12.83 per share. Each preferred share is convertible into nine (9.4875) Common Class A shares. The convertible preferred shares are also entitled to have one vote for each full share of Common Class A stock into which such share of convertible preferred stock is, at any stockholders' meeting, then convertible. It does not enjoy the same dividend right as the two classes of common stock but is entitled to a fixed cumulative dividend of 8% a year if there is surplus profit and when declared by the BOD.

On March 21, 2018, the BOD approved the increase in the Parent Company's authorized capital stock from ₱717.30 million (consisting of 430,380,000 Common Class A shares and 286,920,000 Common Class B shares, both having a par value of ₱1.00 each) to ₱762.30 million (consisting of 475,380,000 Common Class A shares and 286,920,000 Common Class B shares, both having a par value of ₱1.00 each). The application for the increase was approved by the stockholders during the annual meeting held last November 8, 2018.



On August 29, 2024, the BOD approved the increase in the Parent Company's authorized capital stock of ₱2,400.0 million, which is inclusive of ₱45.0 million capital increase previously approved by the BOD on March 21, 2018, or 2,400,000,000 shares (consisting of 1,440,000,000 Common Class A shares and 960,000,000 Common Class B shares, both having a par value of ₱1.00 each). The increase was approved by the stockholders during the annual meeting held last December 20, 2024.

After the amendment, the total authorized capital stock of the Parent Company will increase from ₱784.80 million to ₱3,184.8 million. As at March 26, 2025, the Company has not yet filed its application for the increase in authorized capital stock with the Philippine SEC.

In 2021, the Parent Company issued 4,086,798 Common Class A shares and 2,713,199 Common Class B shares as a result of employees' exercise of stock options at a total consideration of ₱9.81 million; ₱1.37 million of which were from 431,198 Common Class A shares and from 334,176 Common Class B at an average selling price of ₱1.80 per share and ₱8.45 million from 3,655,600 Common Class A shares and 2,379,023 Common Class B shares at an average exercise price of ₱1.41 per share. As at December 31, 2021, total shares issued and outstanding for Common Class A and B shares are 374,996,258 and 247,926,121 respectively.

In 2023, the Parent Company issued 123,750 Common Class A shares and 138,000 Common Class B shares as a result of employees' exercise of stock options at a total consideration of ₱0.27 million, net of lodging fee of ₱0.10 million, ₱0.17 million of which was from 123,750 Common Class A shares at an average selling price of ₱1.38 per share and ₱0.20 million from 138,000 Common Class B at an average selling price of ₱1.43 per share.

In 2024, Red Earth made additional subscription to the proposed increase in capital stock of 20,000,000 shares (consisting of 13,000,000 Common Class A shares and 7,000,000 Common Class B shares, both having a par value of ₱1.00 each) at subscription price of ₱4.00 per share. The Parent Company received cash amounting to ₱20.0 million as deposit for future stock subscription. The balance of deposit for future stock subscription related to this private placement as December 31, 2024 amounted to ₱20.0 million (see Note 17).

On October 29, 2024, in its special Board meeting, the Company's BOD approved the declaration of cash dividend amounting to ₱143.56 million or equivalent to ₱0.28 per share of the Company's Convertible Preferred Class A shares and ₱0.20 per share of outstanding Common Class A and B shares to stockholders of record as of November 14, 2024 with the payment set date on December 10, 2024. Total amount of dividend paid and still outstanding as at December 31, 2024 amounted to ₱108.07 million and ₱35.49 million, respectively.

On November 5, 2024, Red Earth Mineral Resources Corporation (Red Earth) subscribed to 53,000,000 Common Class A unissued shares and 37,000,000 Common Class B unissued shares of the Parent Company at a subscription price of ₱4.00 per share. The total consideration for this subscription amounted to ₱360.0 million.

As at December 31, 2024, total shares issued and outstanding for Common Class A and B shares are 428,120,008 and 285,064,121 respectively.



Below is the Parent Company's track record of registration of securities under the Philippine SEC:

| Date of Registration
(SEC Approval) | Description | Number of
shares | Par value
per share | Total amount
(in 000's) |
|--|--|---|--|--|
| June 18, 1956 | Capital upon registration:
Common shares | 18,000,000 | ₱1.00 | ₱18,000 |
| November 25, 1960 | Increase in number and par value of
common shares:
Common shares | 20,000,000 | 2.00 | 40,000 |
| November 9, 1964 | Increase in par value of common shares:
Common shares | 20,000,000 | 3.00 | 60,000 |
| October 22, 1968 | Increase in number of common shares and
introduction of preferred shares:
Common shares
Preferred shares | 50,000,000
6,000,000 | 3.00
5.00 | 150,000
30,000 |
| March 12, 1974 | Split of common share into two classes
and change in number and par value and
addition of conversion feature to the
preferred shares:
Common class A
Common class B
Convertible preferred shares | 30,000,000
20,000,000
19,652,912 | 3.00
3.00
3.43 | 90,000
60,000
67,500 |
| July 27, 1989 | Increase in number of common shares
Common class A
Common class B
Convertible preferred shares | 120,000,000
80,000,000
19,652,912 | 3.00
3.00
3.43 | 360,000
240,000
67,500 |
| September 28, 2015 | Increase in number of common shares
Common class A
Common class B
Convertible preferred shares | 143,460,000
95,640,000
19,652,912 | 3.00
3.00
3.43 | 430,380
286,920
67,500 |
| July 29, 2016 | Increase in number of common shares and
reduction in par value
Common class A
Common class B
Convertible preferred shares | 430,380,000
286,920,000
19,652,912 | 1.00
1.00
3.43 | 430,380
286,920
67,500 |
| As at December 31, 2024 | Common class A
Common class B
Convertible preferred shares | 430,380,000
286,920,000
19,652,912 | ₱1.00
1.00
3.43 | ₱430,380
286,920
67,500 |

As at December 31, 2024 and 2023, the Parent Company has 16,857 and 16,870 stockholders, respectively.

As at December 31, 2024 and 2023, the Parent Company has 348,069 shares held in treasury amounting to ₱8.02 million at ₱23 per share

Other Components of Equity

| | 2024 | 2023 |
|--|-------------------|------------|
| Revaluation increment on land and artworks | ₱1,504,417 | ₱1,362,051 |
| Cumulative translation adjustments of foreign subsidiaries | 43,319 | 41,064 |
| Remeasurement gain on pension liability (Note 29) | 20,399 | 15,908 |
| Unrealized gain on financial assets at FVOCI (Note 12) | 165 | 371 |
| Unrealized gain on intangible asset | 108 | 108 |
| | ₱1,568,408 | ₱1,419,502 |



19. Stock Option Plan

Under the 1975 Nonqualified Stock Option Plan (Plan), as amended, 9,906,661 shares of the unissued common stock of the Parent Company have been reserved for stock options to selected managers, directors and consultants of the Parent Company. The option price is payable on exercise date and should not be less than the fair market value of the shares quoted on the date of the grant. The Plan, valid up to May 31, 1998, allows a maximum of 632,500 shares to be available to any one optionee. On May 26, 1998, the BOD and the stockholders approved the extension of the Plan until May 31, 2003, which was extended further on December 18, 2002 with the BOD and the stockholders' approval until May 31, 2008. On December 18, 2007, the BOD and the stockholders approved a further extension of the Plan until May 31, 2013.

On March 23, 2012, the BOD and the stockholders approved the proposed amendments to the existing Amended Stock Option Plan and to extend the termination date of the existing Plan for five years or until May 31, 2018.

The amendments include an increase in the maximum award per employee from 200,000 shares over the life of the plan to 500,000 shares per grant and an increase in the shares reserved for issuance under the Plan from the total of 9,906,661 shares to 22,000,000 shares.

Options granted to Filipino optionees are exercisable in the form of 60% Common Class A and 40% Common Class B shares. Options for Common Class B shares may be exercised only if Common Class A shares had been previously or simultaneously exercised so as to maintain a minimum 60:40 ratio of Common Class A to Common Class B shares.

The options under the Plan are non-transferable and are exercisable to the extent of 30% after one year from the date of the grant, 60% after two years from the date of the grant, and 100% after three years from the date of grant. The options authorized under this plan is exercisable for a period of 10 years from the date of grant.

On November 8, 2018, the BOD and the stockholders approved the proposed amendment to the existing Amended Stock Option Plan to extend the termination date of the existing Plan for five years or until May 31, 2023.

On August 24, 2022, the BOD approved the proposed amendment to the existing Amended Stock Option Plan to extend the termination date of the existing Plan for eight (8) years or until May 31, 2031, which the stockholders ratified on November 9, 2022.

On March 17, 2017, upon endorsement of the Stock Option Committee, the BOD approved a new stock option grant to the Group's qualified directors, officer, employees and consultant, provided they have rendered at least two years of service as of March 11, 2017. Total number of common shares available for distribution under the plan is 8,414,375 shares at an exercise price of ₱1.38 and ₱1.43 for Class "A" and Class "B" shares, respectively.

On March 18, 2021, upon endorsement of the Stock Option Committee, the BOD approved a new stock option grant to the Group's officer, employees and consultant and to all members of the BOD, provided they have rendered at least two years of service as of March 15, 2021. Total number of common shares available for distribution under the plan is 3,003,612 shares at an exercise price of ₱2.19 and ₱2.05 for Class "A" and Class "B" shares, respectively.



Exercisable share options per grant are as follows:

| | | Exercisable share
options as at
January 1, 2024 | Additions | Cancelled/
Expired
in 2024 | Exercisable share
options as at
December 31, 2024 |
|---------|--------------------|---|-----------|----------------------------------|---|
| Class A | - May 2014 Grant | 648,000 | — | (648,000) | — |
| | - March 2017 Grant | 352,475 | — | — | 352,475 |
| | - March 2021 Grant | 1,081,308 | 720,871 | — | 1,802,179 |
| Class B | - May 2014 Grant | 432,000 | — | (432,000) | — |
| | - March 2017 Grant | 237,527 | — | — | 237,527 |
| | - March 2021 Grant | 720,860 | 480,573 | — | 1,201,433 |
| Total | | 3,472,170 | 1,201,444 | (1,080,000) | 3,593,614 |

| | | Exercisable share
options as at
January 1, 2023 | Additions | Exercised in 2023 | Exercisable share
options as at
December 31, 2023 |
|---------|--------------------|---|-----------|-------------------|---|
| Class A | - May 2014 Grant | 648,000 | — | — | 648,000 |
| | - March 2017 Grant | 476,225 | — | (123,750) | 352,475 |
| | - March 2021 Grant | 540,654 | 540,654 | — | 1,081,308 |
| Class B | - May 2014 Grant | 432,000 | — | — | 432,000 |
| | - March 2017 Grant | 375,527 | — | (138,000) | 237,527 |
| | - March 2021 Grant | 360,430 | 360,430 | — | 720,860 |
| Total | | 2,832,836 | 901,084 | (261,750) | 3,472,170 |

On August 31, 2016, the Parent Company's BOD approved the following amendments to the Plan due to the effect of the share split on July 29, 2016:

- change in the exercise price of outstanding options
- change in the maximum number of shares per grant from 500,000 to 1,500,000
- repricing of the unexercised share options brought about by the low turn-out in the availment of the grant due to high exercise price compared to market price. The repricing was based on the closing price on August 18, 2016 of Class A and Class B common shares amounting to ₱2.25 and ₱2.55, respectively, less 25% discount pursuant to the provisions of the amended stock option plan of the Parent Company.
- change in the shares reserved issuance under the Plan from 22,000,000 shares to 66,000,000 shares.

The exercise prices of outstanding options consider the effect of the stock split and the change in exercise prices, are as follows:

| | | At grant date | After effect of stock
split | As modified |
|---------|------------------------|---------------|--------------------------------|-------------|
| Class A | - September 2012 Grant | ₱17.96 | ₱5.99 | ₱1.69 |
| | - May 2014 Grant | 7.13 | 2.38 | 1.69 |
| | - March 2017 Grant | 1.38 | n/a | n/a |
| | - March 2021 Grant | 2.19 | n/a | n/a |
| Class B | - September 2012 Grant | 17.63 | 5.88 | 1.91 |
| | - May 2014 Grant | 7.13 | 2.38 | 1.91 |
| | - March 2017 Grant | 1.43 | n/a | n/a |
| | - March 2021 Grant | 2.05 | n/a | n/a |

Average exercise price per share in 2024 and 2023 amounted to ₱1.92 and ₱1.90, respectively. Total number of shares available for future option grants is 41,069,864 and 39,989,864 shares as at December 31, 2024 and 2023.

Stock option expense relating to the Plan recognized amounted to ₱1.20 million in 2024 and ₱2.26 million in 2023 and 2022 (see Note 24).



A summary of the number of shares under the Plan is shown below:

| | 2024 | 2023 |
|----------------------------------|-------------|-----------|
| Outstanding at beginning of year | 4,673,614 | 4,935,364 |
| Cancellation/expiration | (1,080,000) | — |
| Exercised during the year | — | (261,750) |
| Outstanding at end of year | 3,593,614 | 4,673,614 |
| Exercisable at end of year | 3,593,614 | 3,472,170 |

The Parent Company used the binomial options pricing model to determine the fair value of the stock options.

The following assumptions were used to determine the fair value of the stock options:

| | | Share price | Exercise price | Expected volatility increase (decrease) | Option life | Expected Dividends | Risk-free Interest rate |
|--------------------|---|-------------|----------------|---|-------------|--------------------|-------------------------|
| Sep 9, 2012 Grant | A | 23.95 | 17.96 | 57.35% | 10 years | 0.00% | 4.80% |
| | B | 23.50 | 17.63 | 65.53% | 10 years | 0.00% | 4.80% |
| May 26, 2014 Grant | A | 9.50 | 7.13 | 77.28% | 10 years | 0.00% | 3.90% |
| | B | 9.50 | 7.13 | 84.29% | 10 years | 0.00% | 3.90% |
| May 17, 2017 Grant | A | 1.83 | 1.38 | 95.46% | 10 years | 0.00% | 5.09% |
| | B | 1.90 | 1.43 | 101.96% | 10 years | 0.00% | 5.09% |
| May 18, 2021 Grant | A | 2.92 | 2.19 | (106.57%) | 10 years | 0.00% | 4.44% |
| | B | 2.73 | 2.05 | 92.75% | 10 years | 0.00% | 4.44% |

The expected volatility measured at the standard deviation of expected share price returns was based on the analysis of share prices for the past 365 days. The cost of share-based payment amounted to ₱8.23 million and ₱8.10 million as at December 31, 2024 and 2023, respectively.

20. Revenue

| | 2024 | 2023 | 2022 |
|---|------------|------------|------------|
| Revenue from contracts with customers: | | | |
| Sale of mine products | ₱2,339,861 | ₱2,481,560 | ₱3,967,002 |
| Sale of goods and services | 45,222 | 47,128 | 55,470 |
| Sale of land | — | 1,800 | 1,844 |
| Total revenue from contracts with customers | 2,385,083 | 2,530,488 | 4,024,316 |
| Rental income (Note 15) | 789 | 870 | 879 |
| | ₱2,385,872 | ₱2,531,358 | ₱4,025,195 |

Sale of mine products includes sales of nickel, gold, silver and lime, which are subject to 4% excise tax based on gross revenues in 2024, 2023 and 2022.

As a requirement under DAO No. 2010-21, 'The Mining Act Implementing Rules and Regulations', BRMC pays royalty to the MGB for every shipment of nickel ore equivalent to 5% of the peso equivalent of the nickel ore shipped since the SCNP is within a Mineral Reservation.

Excise taxes and royalty fees related to the sale of mine products amounted to ₱162.31 million, ₱182.43 million and ₱299.75 million in 2024, 2023 and 2022, respectively.



Set out below is the disaggregation of the Group's revenue from contracts with customers in 2024, 2023 and 2022:

| Segments | 2024 | | |
|---|-------------------|-----------------|-------------------|
| | Mining | Health Services | Total |
| Type of product: | | | |
| Nickel | ₱1,451,350 | ₱— | ₱1,451,350 |
| Gold | 790,474 | — | 790,474 |
| Lime | 96,765 | — | 96,765 |
| Silver | 1,272 | — | 1,272 |
| Health services | — | 45,222 | 45,222 |
| Total revenue from contracts with customers | ₱2,339,861 | ₱45,222 | ₱2,385,083 |
| Location of customer: | | | |
| Within the Philippines | ₱888,511 | ₱45,222 | ₱933,733 |
| Outside the Philippines | 1,451,350 | — | 1,451,350 |
| Total revenue from contracts with customers | ₱2,339,861 | ₱45,222 | ₱2,385,083 |
| Timing of revenue recognition: | | | |
| Transferred at a point in time | ₱2,339,861 | ₱— | ₱2,339,861 |
| Transferred overtime | — | 45,222 | 45,222 |
| Total revenue from contracts with customers | ₱2,339,861 | ₱45,222 | ₱2,385,083 |

| Segments | 2023 | | |
|---|-------------------|-----------------|-------------------|
| | Mining | Health Services | Total |
| Type of product: | | | |
| Nickel | ₱1,757,578 | ₱— | ₱1,757,578 |
| Gold | 623,399 | — | 623,399 |
| Lime | 96,516 | — | 96,516 |
| Silver | 4,067 | — | 4,067 |
| Health services | — | 47,128 | 47,128 |
| Land | 1,800 | — | 1,800 |
| Total revenue from contracts with customers | ₱2,483,360 | ₱47,128 | ₱2,530,488 |
| Location of customer: | | | |
| Within the Philippines | ₱725,782 | ₱47,128 | ₱772,910 |
| Outside the Philippines | 1,757,578 | — | 1,757,578 |
| Total revenue from contracts with customers | ₱2,483,360 | ₱47,128 | ₱2,530,488 |
| Timing of revenue recognition: | | | |
| Transferred at a point in time | ₱2,483,360 | ₱— | ₱2,483,360 |
| Transferred overtime | — | 47,128 | 47,128 |
| Total revenue from contracts with customers | ₱2,483,360 | ₱47,128 | ₱2,530,488 |



| Segments | 2022 | | Total |
|---|------------|-----------------|------------|
| | Mining | Health Services | |
| Type of product: | | | |
| Gold | ₱2,952,272 | ₱– | ₱2,952,272 |
| Nickel | 911,594 | – | 911,594 |
| Lime | 99,976 | – | 99,976 |
| Silver | 3,160 | – | 3,160 |
| Health services | – | 55,470 | 55,470 |
| Land | 1,844 | – | 1,844 |
| Total revenue from contracts with customers | ₱3,968,846 | ₱55,470 | ₱4,024,316 |
| Location of customer: | | | |
| Within the Philippines | ₱1,016,574 | ₱55,470 | ₱1,072,044 |
| Outside the Philippines | 2,952,272 | – | 2,952,272 |
| Total revenue from contracts with customers | ₱3,968,846 | ₱55,470 | ₱4,024,316 |
| Timing of revenue recognition: | | | |
| Transferred at a point in time | ₱3,968,846 | ₱– | ₱3,968,846 |
| Transferred overtime | – | 55,470 | 55,470 |
| Total revenue from contracts with customers | ₱3,968,846 | ₱55,470 | ₱4,024,316 |

21. Costs of Mine Products Sold

| | 2024 | 2023 | 2022 |
|--|----------|----------|----------|
| Outside services | ₱328,584 | ₱255,347 | ₱302,738 |
| Materials and supplies (Note 6) | 114,454 | 144,396 | 219,320 |
| Contractor fees | 100,605 | 109,262 | 101,447 |
| Personnel expenses (Note 24) | 77,129 | 94,647 | 86,100 |
| Power, rent and utilities | 56,007 | 58,365 | 107,092 |
| Depreciation and depletion (Note 25) | 35,332 | 28,410 | 54,440 |
| Contractor labor | 24,955 | 13,583 | 23,241 |
| Taxes and licenses | 19,886 | 22,316 | 28,315 |
| Repairs and maintenance | 12,603 | 19,007 | 32,370 |
| Smelting, refining and marketing | 7,958 | 4,858 | 7,154 |
| Travel and transportation | 204 | 212 | 200 |
| Others | 1,040 | 2,197 | 2,882 |
| | 778,757 | 752,600 | 965,299 |
| Net change in benefited
nickel ore (Note 6) | 43,484 | (72,129) | 5,089 |
| | ₱822,241 | ₱680,471 | ₱970,388 |

Outside services pertain to the amounts paid to service providers involved in the mining operations of the Group.

Other expenses consist of various direct charges to cost of mine products, which are individually insignificant.



22. Cost of Services and Other Sales

| | 2024 | 2023 | 2022 |
|--------------------------------------|----------------|---------|---------|
| Materials and supplies (Note 6) | ₱18,910 | ₱20,671 | ₱19,259 |
| Personnel expenses (Note 24) | 18,735 | 20,819 | 19,604 |
| Depreciation and depletion (Note 25) | 18,364 | 13,711 | 8,534 |
| Outside services | 12,109 | 6,899 | 9,648 |
| Retainers and consultancy fees | 9,681 | 10,963 | 15,458 |
| Rent (Note 15) | 3,631 | 6,578 | 4,293 |
| Professional fees | 1,070 | 1,100 | 1,595 |
| Travel and transportation | 957 | 1,242 | 977 |
| Taxes and licenses | 325 | 303 | 159 |
| Repairs and maintenance | 303 | 232 | 136 |
| Cost of real estate sold | — | 387 | 387 |
| Others | 1,276 | 1,151 | 108 |
| | ₱85,361 | ₱84,056 | ₱80,158 |

Others consist of various direct charges, which are individually insignificant.

23. Selling and General Expenses

| | 2024 | 2023 | 2022 |
|--|-----------------|----------|------------|
| Outside services | ₱433,164 | ₱440,555 | ₱572,927 |
| Personnel expenses (Note 24) | 141,701 | 141,154 | 136,625 |
| Taxes and licenses | 51,620 | 31,199 | 26,391 |
| Community development programs | 49,507 | 54,477 | 53,193 |
| Materials and supplies (Note 6) | 41,653 | 40,885 | 44,729 |
| Professional fees | 27,652 | 20,432 | 35,218 |
| Wharfage fees | 18,738 | 19,795 | 10,770 |
| Repairs and maintenance | 18,246 | 23,098 | 17,173 |
| Contract labor | 15,011 | — | 63 |
| Rent (Note 15) | 13,219 | 45,299 | 54,646 |
| Depreciation and depletion (Note 25) | 8,948 | 13,509 | 18,240 |
| Representation | 8,946 | 17,287 | 19,818 |
| Communication, light and power | 8,938 | 10,113 | 15,075 |
| Transportation and travel | 7,450 | 8,698 | 5,592 |
| Loss on disallowance of input VAT
(Note 8) | 5,022 | 7,946 | — |
| Provision of allowance for ECLs – net
(Note 5) | 4,833 | 924 | — |
| Insurance | 1,600 | 3,225 | 4,173 |
| Provision (reversal) for impairment on
input VAT - net (Notes 8 and 12) | (276) | 5 | — |
| Penalties | 223 | 1,431 | — |
| Provision for inventory obsolescence
(Note 6) | 127 | — | — |
| Freight and handling | 4 | 1,111 | 3,959 |
| Subscription and membership fees | — | 2,907 | 2,907 |
| Others | 10,213 | 21,965 | 57,043 |
| | ₱866,539 | ₱906,015 | ₱1,078,542 |



Others consist of various administrative expenses, which are individually insignificant.

24. Personnel Expenses

| | 2024 | 2023 | 2022 |
|--------------------------------|-----------------|----------|----------|
| Salaries and wages | ₱180,467 | ₱220,612 | ₱184,810 |
| Benefits and allowances | 51,727 | 20,819 | 41,014 |
| Pension expense (Note 29) | 4,170 | 12,929 | 14,247 |
| Stock option expense (Note 19) | 1,201 | 2,260 | 2,258 |
| | ₱237,565 | ₱256,620 | ₱242,329 |

Total personnel expenses were distributed as follows:

| | 2024 | 2023 | 2022 |
|--|-----------------|----------|----------|
| Cost of mine products sold (Note 21) | ₱77,129 | ₱94,647 | ₱86,100 |
| Cost of services and other sales (Note 22) | 18,735 | 20,819 | 19,604 |
| Selling and general expenses (Note 23) | 141,701 | 141,154 | 136,625 |
| | ₱237,565 | ₱256,620 | ₱242,329 |

25. Depreciation and Depletion

Total depreciation and depletion are composed of the following (see Notes 6 and 9):

| | 2024 | 2023 | 2022 |
|--------------|----------------|---------|---------|
| Depreciation | ₱36,972 | ₱29,707 | ₱39,498 |
| Depletion | 25,672 | 25,923 | 41,762 |
| | ₱62,644 | ₱55,630 | ₱81,260 |

Depreciation and depletion are broken down as follows:

| | 2024 | 2023 | 2022 |
|--|----------------|---------|---------|
| Cost of mine products sold (Note 21) | ₱35,332 | ₱28,410 | ₱54,440 |
| Cost of services and other sales (Note 22) | 18,364 | 13,711 | 8,534 |
| Selling and general expenses (Note 23) | 8,948 | 13,509 | 18,240 |
| Gold button inventory (Note 6) | — | — | 46 |
| | ₱62,644 | ₱55,630 | ₱81,260 |



26. Other Income (Charges) – net

| | 2024 | 2023 | 2022 |
|--|------------------|----------|----------|
| Gains (losses) on: | | | |
| Revaluation of investment properties
(Note 11) | ₱314,491 | (₱136) | ₱85,332 |
| Settlement of loans (Note 14) | (309,396) | – | – |
| Foreign currency exchange | 11,333 | 8,061 | 39,676 |
| Disposal of property, plant and equipment
(Note 9) | – | 105 | 157 |
| Disposal of intangible asset (Note 12) | – | 150 | – |
| Loss on disallowed input VAT (Note 8) | – | – | (12,687) |
| Write-off of CIP | – | – | (11,395) |
| Sale of investment properties (Note 11) | – | – | 619 |
| Change in fair value of financial assets at FVPL
(Note 7) | 55,500 | 51,893 | 18,213 |
| Interest income (Notes 4, 8 and 12) | 41,699 | 10,592 | 2,089 |
| Accretion on the liability for mine rehabilitation
(Note 16) | (2,593) | (2,178) | (1,746) |
| Change in estimate of liability for mine
rehabilitation (Note 16) | 163 | (12,826) | (16,858) |
| Provision for (recovery of): | | | |
| Impairment on loss on advances to
contractors (Note 8) | – | – | 39,253 |
| Inventory obsolescence | – | – | 18,888 |
| ECLs | – | – | 6,659 |
| Impairment on other noncurrent assets | – | – | (938) |
| Others – net | (4,289) | 1,333 | (3,248) |
| | ₱106,908 | ₱56,994 | ₱164,014 |

Others consist of various income and expenses, which are not directly related to the operations of the Group.

27. ESOIP

The ESOIP, as approved by the stockholders in 1986, allows employees of the Parent Company to buy up to 6,000,000 shares of the Common Class A shares of the Parent Company at either of two prices. If the shares are acquired by the Parent Company from a seller or are treasury shares, these can be bought at acquisition cost. If the shares are sourced from the authorized but unissued shares of the Parent Company, these can be bought at the average closing price quoted in the PSE on the last day that such shares were traded prior to the start of the purchase period. Payment for the shares purchased shall be advanced by the Parent Company on behalf of the employees and repaid through salary deduction without interest. The shares acquired by employees under the ESOIP may be subjected to a holding period from the date of purchase.

In January 1990, the BOD approved the Employees Stock Purchase Plan, which allows the employees of the Parent Company (but excluding directors of the Parent Company) to buy, basically under similar terms and conditions as that of the ESOIP, 2,000,000 shares of the Common Class A shares of the Parent Company.



The balance of the employees' stock ownership pursuant to the said plan shown as part of the trade and other receivables in the consolidated statements of financial position amounted to ₱58.42 million as at December 31, 2024 and 2023 and was provided an allowance for the same amount (see Note 5).

28. Related Party Disclosure

Enterprises and individuals that directly, or indirectly through one or more intermediaries, control or are controlled by, or are under common control with the Group, including holding companies, subsidiaries and fellow subsidiaries, are related parties of the Group. Associates and individuals owning, directly or indirectly, an interest in the voting power of the Group that gives them significant influence over the enterprise, key management personnel, including directors and officers of the Group and close members of the family of these individuals, and companies associated with these individuals also constitute related parties. In considering each possible related entity relationship, attention is directed to the substance of the relationship and not merely the legal form.

The Group's related party transactions which are, individually or in aggregate over a 12-month period, 10% and above of the latest audited consolidated total assets are reviewed and evaluated by the Related Party Transaction Committee and Management Committee. Afterwards, these are approved by at least two-thirds (2/3) vote of the BOD, with at least a majority of the independent directors voting to approve the material related party transaction. In case that a majority of the independent directors' vote is not secured, the material related party transaction may be ratified by the majority vote of the shareholders, or two-thirds (2/3) of the outstanding capital stock.

All intercompany transactions are eliminated at the consolidated level. Items eliminated are separately disclosed in a schedule in accordance with Philippine SEC requirements under the Revised SRC Rule 68.

Compensation of Key Management Personnel of the Group

The Group considered all senior officers as key management personnel. Below are the details of compensation of the Group's key management personnel.

| | 2024 | 2023 | 2022 |
|--------------------------|----------------|---------|---------|
| Short-term benefits | ₱40,133 | ₱39,869 | ₱38,730 |
| Post-employment benefits | 14,445 | 12,297 | 16,638 |
| | ₱54,578 | ₱52,166 | ₱55,368 |

Short-term benefits include salaries and stock compensation expense. Post-employment benefits include net pension expense.

29. Pension Benefits Plans

The existing regulatory framework, RA No. 7641, The Retirement Pay Law, requires a provision for retirement pay to qualified private sector employees in the absence of any retirement plan in the entity, provided however that the employee's retirement benefits under any collective bargaining and other agreements shall not be less than those provided under the law. The law does not require minimum funding of the plan.



The Group noncontributory pension benefit plan covering substantially all of their regular employees. The benefits are based on a certain percentage of the final monthly basic salary for every year of credited service of the employees in accordance with RA 7641. The defined pension benefit obligation is determined using the projected unit credit method.

The following tables summarize the components of net pension benefit in the consolidated statements of income and fund status, and the amounts recognized in the consolidated statements of financial position.

The component of pension expense is as follows:

| | 2024 | 2023 | 2022 |
|----------------------|-----------------|---------|---------|
| Current service cost | ₱10,869 | ₱12,355 | ₱10,597 |
| Net interest cost | 3,518 | 574 | 3,650 |
| Past service cost | (10,217) | — | — |
| Pension expense | ₱4,170 | ₱12,929 | ₱14,247 |

Pension liability as at December 31, 2024 and 2023 are as follows:

| | 2024 | 2023 |
|---|-----------------|----------|
| Present value of defined benefit obligation | 108,377 | ₱114,701 |
| Fair value of plan assets | (68,414) | (56,507) |
| Pension liability | ₱39,963 | ₱58,194 |

Movements of remeasurement gains on pension liability recognized in OCI:

| | 2024 | 2023 | 2022 |
|---|----------------|---------|---------|
| Balances at beginning of year | ₱15,908 | ₱17,633 | ₱10,673 |
| Loss (gain) on remeasurement of pension liability | (5,987) | (2,301) | 9,571 |
| Tax effect | 1,496 | 576 | (2,611) |
| Remeasurement loss (gain) on pension liability - net of tax | 4,491 | (1,725) | 6,960 |
| Balances at end of year | ₱20,399 | ₱15,908 | ₱17,633 |

Changes in the present value of defined benefits obligation are as follow:

| | 2024 | 2023 |
|-------------------------------|-----------------|----------|
| Balances at beginning of year | ₱114,701 | ₱102,004 |
| Interest cost | 6,939 | 1,040 |
| Current service cost | 10,869 | 12,355 |
| Past service cost | (10,217) | — |
| Actuarial losses (gains) | (8,001) | 2,353 |
| Benefits paid | (5,914) | (3,051) |
| Balances at end of year | ₱108,377 | ₱114,701 |



Breakdown of actuarial gains (losses) on defined benefits obligation are as follows:

| | 2024 | 2023 |
|---------------------------------|-----------------|-----------------|
| Change in financial assumptions | (P347) | (P10,414) |
| Experience adjustments | (7,654) | 8,061 |
| | (P8,001) | (P2,353) |

Fair value of plan assets of the Group follows:

| | 2024 | 2023 |
|-----------------------------------|----------------|---------|
| Balances at beginning of year | P56,507 | P45,989 |
| Contributions | 10,500 | 10,000 |
| Remeasurement gain (loss) | (2,014) | 52 |
| Asset return in net interest cost | 3,421 | 466 |
| Balances at end of year | P68,414 | P56,507 |

The Parent Company, BRMC and BLI's plan assets are being managed by a trustee bank. The retirement fund includes cash in bank only as at December 31, 2024 and 2023. The Parent Company, BRMC and BLI has no transactions with its retirement fund and the retirement fund has no investments in shares of stocks of the Parent Company.

The Group expects to contribute P19.91 million to the defined benefits retirement plan in 2025.

Shown below is the maturity analysis of the undiscounted benefit payments as at December 31, 2024 and 2023:

| Plan Year | 2024 | 2023 |
|--------------------------------|-----------------|------------|
| Less than 1 year | P76,327 | P77,668 |
| More than 1 year to 5 years | 6,744 | 14,321 |
| More than 5 years to 10 years | 24,313 | 27,143 |
| More than 10 years to 15 years | 54,539 | 52,333 |
| More than 15 years to 20 years | 106,975 | 124,323 |
| More than 20 years | 573,603 | 735,633 |
| | P842,501 | P1,031,421 |

The overall expected rate of return on assets is determined based on the market prices prevailing on the date applicable to the period over which the obligation is to be settled. The average duration of the defined benefit obligations of the Group is 9-22 years in 2024 and 8-22 years in 2023.

The principal assumptions used in determining the pension liability of the Group's plans are shown below.

| | 2024 | 2023 |
|----------------------|------------------------|-----------------|
| Discount rate | 6.11% to 6.15% | 5.98% to 6.07% |
| Salary increase rate | 5.00% to 11.00% | 5.00% to 11.00% |



The sensitivity analysis below has been determined based on reasonably possible changes of each significant assumption on the pension liability as at the end of the reporting period, assuming if all other assumptions were held constant:

| | | December 31, 2024 |
|-----------------------------|---------------------------------|-------------------------------------|
| | | Present value of the |
| | Increase (decrease) | defined benefit obligation |
| Discount rates | 7.11% to 7.15% (+1.00%) | ₱103,135 |
| | 6.11% to 6.15% (actual) | 108,463 |
| | 5.11% to 5.15% (-1.00%) | 114,309 |
| Salary increase rate | 6.00% to 12.00% (+1.00%) | ₱114,362 |
| | 5.00% to 11.00% (actual) | 108,463 |
| | 4.00% to 10.00% (-1.00%) | 103,378 |
| | | December 31, 2023 |
| | | Present value of the defined |
| | Increase (decrease) | benefit obligation |
| Discount rates | 6.98% to 7.07% (+1.00%) | ₱108,823 |
| | 5.98% to 6.07% (actual) | 114,701 |
| | 4.98% to 5.07% (-1.00%) | 121,776 |
| Salary increase rate | 6.00% to 12.00% (+1.00%) | ₱121,441 |
| | 5.00% to 11.00% (actual) | 114,701 |
| | 4.00% to 10.00% (-1.00%) | 109,002 |

30. Income Taxes

The provision for current and deferred tax in 2024, 2023 and 2022 include the following:

| | 2024 | 2023 | 2022 |
|------------------------------|-----------------|-----------------|-----------------|
| Provision for current taxes: | | | |
| RCIT | ₱110,201 | ₱177,595 | ₱413,073 |
| MCIT | — | 130 | 138 |
| | 110,201 | 177,725 | 413,211 |
| Provision for deferred taxes | 3,102 | 741 | 15,014 |
| Total | ₱113,303 | ₱178,466 | ₱428,225 |



The components of the Group's deferred tax assets and liabilities are as follows:

| | Deferred tax assets – net | | Deferred tax liabilities - net | |
|---|---------------------------|--------|--------------------------------|------------|
| | 2024 | 2023 | 2024 | 2023 |
| <i>Deferred tax assets on:</i> | | | | |
| Allowance for impairment losses on: | | | | |
| Trade and other receivables | ₱10,546 | ₱9,005 | ₱16,170 | ₱16,140 |
| Other current assets | 2,003 | 2,371 | – | – |
| Inventories | – | – | 39,185 | 39,153 |
| Liability for mine rehabilitation | 5,795 | 5,762 | 7,460 | 9,768 |
| Lease liabilities | 2,711 | 608 | 1,105 | – |
| Amortization of past service cost | 2,504 | 882 | 2,472 | 1,229 |
| Unrealized foreign exchange loss | 1,580 | 1,426 | – | – |
| Pension liability | 1,386 | 1,504 | 8,605 | 13,882 |
| Share-based payment | – | – | 2,056 | 2,026 |
| Unearned rental | – | – | 9 | 1,318 |
| | 26,525 | 21,558 | 77,062 | 83,516 |
| <i>Deferred tax liabilities on:</i> | | | | |
| Cumulative fair value gain of financial assets at FVPL | 14,185 | 14,099 | 1,301 | 415 |
| Right-of-use assets | 2,611 | 555 | 941 | 1,169 |
| Unrealized foreign exchange gain | 1,044 | 1,060 | – | – |
| Mine rehabilitation asset | – | 273 | 9,189 | 8,650 |
| Revaluation increment on property, plant and equipment | – | – | 867,501 | 825,212 |
| Revaluation increment on artworks | – | – | 10,430 | 10,249 |
| Unearned revenue | – | – | 22 | – |
| Cumulative translation adjustment of foreign subsidiaries | – | – | 14,439 | 13,688 |
| | 17,840 | 15,987 | 903,823 | 859,383 |
| Net deferred tax assets (liabilities) | ₱8,685 | ₱5,571 | (₱826,761) | (₱775,867) |

The Group did not recognize deferred tax assets relating to the following temporary differences because management believes that it is more likely than not that the carry-forward benefits will not be realized in the near future:

| | 2024 | 2023 | 2022 |
|---|-----------------|----------|----------|
| Allowance for inventory loss impairment loss and others | ₱351,415 | ₱353,194 | ₱353,936 |
| NOLCO | 47,857 | 37,188 | 60,498 |
| Accrued expenses | 8,002 | 8,002 | 8,002 |
| Lease liabilities | 627 | 627 | 387 |
| Unrealized foreign exchange losses | 3 | – | 1 |
| Straight-line amortization of accrued rent | – | – | 250 |
| MCIT | – | 396 | 226 |
| Share-based payment | – | – | 9,198 |
| | ₱407,904 | ₱399,407 | ₱432,498 |

On September 30, 2020, the BIR issued Revenue Regulations No. 25-2020 implementing Section 4(bbbb) of “Bayanihan to Recover As One Act” which states that the NOLCO incurred for taxable years 2020 and 2021 can be carried over and claimed as a deduction from gross income for the next five (5) consecutive taxable years immediately following the year of such loss.



As of December 31, 2024, the Group has incurred NOLCO in taxable years 2021 and 2020 which can be claimed as deduction from the regular taxable income for the next five (5) consecutive taxable years pursuant to the Bayanihan to Recover As One Act, as follows:

| Year Incurred | Availment Period | Amount | NOLCO Applied Previous Year/s | NOLCO Expired | NOLCO Applied Current year | NOLCO Unapplied |
|---------------|------------------|----------------|-------------------------------|---------------|----------------------------|-----------------|
| 2020 | 2021-2025 | ₱18,637 | (₱3,189) | ₱- | (₱491) | ₱14,957 |
| 2021 | 2022-2026 | 4,515 | - | - | - | 4,515 |
| | | ₱23,152 | (₱3,189) | ₱- | (₱491) | ₱19,472 |

As of December 31, 2024, the Group has incurred NOLCO after taxable year 2021 which can be claimed as deduction from the regular taxable income for the next three (3) consecutive taxable years, as follows:

| Year Incurred | Availment Period | Amount | NOLCO Applied Previous Year/s | NOLCO Expired | NOLCO Applied Current year | NOLCO Unapplied |
|---------------|------------------|----------------|-------------------------------|---------------|----------------------------|-----------------|
| 2022 | 2023-2025 | ₱8,308 | ₱- | ₱- | ₱- | ₱8,308 |
| 2023 | 2024-2026 | 8,917 | - | - | - | 8,917 |
| 2024 | 2024-2027 | 11,160 | - | - | - | 11,160 |
| | | ₱28,385 | ₱- | ₱- | ₱- | ₱28,385 |

As of December 31, 2024, the Group has MCIT that can be applied against payment of regular income tax as follows:

| Year Incurred | Availment Period | Amount | MCIT Applied Previous Year/s | MCIT Expired | MCIT Applied Current year | MCIT Unapplied |
|---------------|------------------|-------------|------------------------------|--------------|---------------------------|----------------|
| 2020 | 2021-2023 | ₱- | ₱- | ₱- | ₱- | ₱- |
| 2021 | 2022-2024 | 128 | - | - | (128) | - |
| 2022 | 2023-2025 | 138 | - | - | (138) | - |
| 2023 | 2024-2026 | 130 | - | - | (130) | - |
| | | ₱396 | ₱- | ₱- | (₱396) | ₱- |

Movements of NOLCO are as follow:

| | 2024 | 2023 | 2022 |
|-------------------------------|----------------|---------|----------|
| Balances at beginning of year | ₱37,188 | ₱31,460 | ₱60,498 |
| Additions | 11,160 | 8,917 | 8,308 |
| Application | (491) | (3,189) | - |
| Expirations | - | - | (37,346) |
| Balances at end of year | ₱47,857 | ₱37,188 | ₱31,460 |

Movements of MCIT are as follow:

| | 2024 | 2023 | 2022 |
|-------------------------------|--------------|------|------|
| Balances at beginning of year | ₱396 | ₱345 | ₱226 |
| Expirations | (396) | (79) | (19) |
| Additions | - | 130 | 138 |
| Balances at end of year | ₱- | ₱396 | ₱345 |



The reconciliation of pretax income computed at the statutory income tax rate to provision for income tax shown in the consolidated statements of income is as follows:

| | 2024 | 2023 | 2022 |
|---|-----------------|----------|----------|
| Tax computed at statutory rate | ₱129,997 | ₱169,775 | ₱439,818 |
| Add (deduct) effects of: | | | |
| Nontaxable income | (91,252) | (14,782) | (21,333) |
| Nondeductible expenses | 84,224 | 5,035 | 18,153 |
| Interest income subject to final tax | (9,749) | (1,629) | (522) |
| Unrealized gain on financial assets at FVPL | 3,557 | 14,451 | — |
| Changes in unrecognized deferred tax assets | (2,559) | 4,477 | (17,247) |
| Deductible expenses | (1,252) | — | — |
| Application of MCIT | 396 | — | — |
| Application of NOLCO | (123) | (797) | — |
| Effect of change in tax rates | 64 | — | — |
| Additional of MCIT | — | 1,857 | — |
| Expiration of MCIT | — | 79 | 19 |
| Expiration of NOLCO | — | — | 9,337 |
| | ₱113,303 | ₱178,466 | ₱428,225 |

31. Basic/Diluted EPS

Basic EPS is calculated by dividing the profit attributable to equity holders of the Parent Company by the weighted average number of common shares on issue during the year, excluding any ordinary shares purchased by the Parent Company and held as treasury shares.

In computing for the 2024 and 2023 diluted EPS, the Parent Company considered the effect of stock options outstanding since these are dilutive.

| | 2024 | 2023 | 2022 |
|--|-----------------|----------|------------|
| Net income | ₱435,670 | ₱554,143 | ₱1,331,047 |
| Current dividends on preference shares | (60) | (60) | (60) |
| Adjusted net income | ₱435,610 | ₱554,083 | ₱1,330,987 |

Number of shares for computation of EPS as a result of stock split:

| | 2024 | 2023 | 2022 |
|--|--------------------|-------------|-------------|
| Basic EPS | | | |
| Weighted average common shares issued | 713,532,198 | 623,532,198 | 623,270,448 |
| Less: treasury shares | 348,069 | 348,069 | 348,069 |
| Weighted average common shares outstanding | 713,184,129 | 623,184,129 | 622,922,379 |
| Diluted EPS | | | |
| Weighted average common shares issued | 713,532,198 | 623,532,198 | 623,270,448 |
| Less: treasury shares | 348,069 | 348,069 | 348,069 |
| | 713,184,129 | 623,184,129 | 622,922,379 |
| Convertible preferred shares | 2,059,366 | 2,059,366 | 2,059,366 |
| Stock options | 3,593,614 | 3,472,170 | 2,832,836 |
| Weighted average common shares outstanding | 718,837,109 | 628,715,665 | 627,814,581 |
| Basic EPS | ₱0.61 | ₱0.89 | ₱2.14 |
| Diluted EPS | ₱0.61 | ₱0.88 | ₱2.12 |



32. Segment Information

PFRS 8, *Operating Segments*, requires operating segments to be identified on the basis of internal reports about components of the Group that are regularly reviewed by the chief operating decision maker, who is the President of the Parent Company.

For management purposes, the Group is organized into business units based on its products and services and has four reportable segments, as follows:

- The mining segment is engaged in exploration, nickel and gold mining operations.
- The health services segment is engaged in the business of offering medical and clinical diagnostic examinations and health care services on pre-employment.
- The logistics segment is engaged in logistics services to the supply-chain requirements of various industries.
- The other segments comprise aggregated operating segments of the Group engaged in research, development, real estate and water projects.

Management monitors the operating results of its business units separately for the purpose of making decisions about resource allocation and performance assessment. Segment performance is evaluated based on operating income or loss and is measured consistently with income or loss before income tax as reported in the consolidated financial statements.

Intersegment revenues are eliminated upon consolidation and reflected in the 'eliminations' column. All other adjustments and eliminations are presented in the table below.

Segment assets include operating assets used by a segment and consist principally of operating, trade and other receivables, inventories and property, plant and equipment, net of allowances and provisions. Segment liabilities include all operating liabilities and consist principally of trade and other payables, accrued expenses and bank loans. Segment assets and liabilities do not include deferred taxes.

Business Segments

Segment reporting is consistent in all periods presented as there are no changes in the structure of the Group's internal organization that will cause the composition of its reportable segment to change.

| | 2024 | | | | | | |
|--|---------------------|-----------------|-------------------|-------------------|---------------------|---------------------|--------------------|
| | Mining | Health services | Logistics | Others | Total | Eliminations | Consolidated |
| Revenue | | | | | | | |
| External customers | ₱2,339,861 | ₱45,222 | ₱— | ₱918 | ₱2,386,001 | (₱129) | ₱2,385,872 |
| Interest income | 36,959 | — | 512 | 1,881 | 39,352 | 2,347 | 41,699 |
| Inter-segment | — | — | 139,850 | 2,807 | 142,657 | (142,657) | — |
| Other income | 477,421 | — | 91 | 113,637 | 590,949 | (212,823) | 378,126 |
| | 2,854,041 | 45,222 | 140,453 | 119,243 | 3,158,959 | (353,262) | 2,805,697 |
| Cost and Expenses | | | | | | | |
| Interest expense | 7,004 | — | — | 351 | 7,355 | — | 7,355 |
| Direct costs | 801,030 | — | 33,683 | 33,314 | 868,027 | (14,121) | 853,906 |
| Selling and general expenses | 1,068,473 | 761 | 26,807 | 16,429 | 1,112,470 | (255,491) | 856,979 |
| Accretion expense | 2,593 | — | — | — | 2,593 | — | 2,593 |
| Impairment losses | 589 | — | — | 23 | 612 | — | 612 |
| Depreciation, depletion and amortization (Note 25) | 107,255 | — | 13,392 | 6,003 | 126,650 | (64,006) | 62,644 |
| Excise taxes and royalty fees (Note 20) | 162,311 | — | — | — | 162,311 | — | 162,311 |
| Other expenses | 314,418 | 13 | 30 | 3,314 | 317,775 | (7,451) | 310,324 |
| Income before tax | 389,386 | 44,448 | 66,541 | 59,809 | 561,166 | (12,193) | 548,973 |
| Provision for income tax | 100,917 | — | 14,623 | (2,301) | 113,239 | 10 | 113,303 |
| Net income | ₱289,397 | ₱44,448 | ₱51,918 | ₱62,110 | ₱447,873 | (₱12,203) | ₱435,670 |
| Operating assets | ₱13,101,952 | ₱2,321 | ₱454,833 | ₱2,061,852 | ₱15,620,958 | (₱4,762,322) | ₱10,858,636 |
| Operating liabilities | (₱1,920,844) | (₱619) | (₱254,235) | (₱934,001) | (₱3,109,699) | ₱2,238,344 | (₱871,355) |
| Other disclosure: | | | | | | | |
| Capital expenditure | ₱16,065 | ₱— | ₱12,776 | ₱— | ₱28,841 | ₱— | ₱28,841 |



| 2023 | | | | | | | |
|--|--------------|-----------------|------------|------------|--------------|--------------|--------------|
| | Mining | Health services | Logistics | Others | Total | Eliminations | Consolidated |
| Revenue | | | | | | | |
| External customers | P2,481,560 | P47,128 | P— | P2,670 | P2,531,358 | P— | P2,531,358 |
| Interest income | 9,848 | 3 | 2 | 739 | 10,592 | — | 10,592 |
| Inter-segment | — | — | 156,295 | 3,276 | 159,571 | (159,571) | — |
| Other income | 698,969 | 2 | 12 | 80,961 | 779,944 | (736,961) | 42,983 |
| | 3,190,377 | 47,133 | 156,309 | 87,646 | 3,481,465 | (896,532) | 2,584,933 |
| Cost and Expenses | | | | | | | |
| Interest expense | 2,575 | 131 | 68 | 2 | 2,776 | — | 2,776 |
| Direct costs | 691,493 | 36,715 | 46,826 | 387 | 775,421 | (53,015) | 722,406 |
| Selling and general expenses | 1,095,738 | 4,840 | 8,598 | 6,114 | 1,115,290 | (243,446) | 871,844 |
| Accretion expense | 2,178 | — | — | — | 2,178 | — | 2,178 |
| Impairment losses | 843 | — | — | 80 | 923 | — | 923 |
| Depreciation, depletion and amortization (Note 25) | 106,403 | 1,865 | 13,609 | 1,826 | 123,703 | (68,073) | 55,630 |
| Excise taxes and royalty fees (Note 20) | 182,425 | — | — | — | 182,425 | — | 182,425 |
| Other expenses | 28,087 | — | 1,665 | 3,594 | 33,346 | (19,204) | 14,142 |
| Income before tax | 1,080,635 | 3,582 | 85,543 | 75,643 | 1,245,403 | (512,794) | 732,609 |
| Provision for income tax | 155,347 | 128 | 21,716 | 1,275 | 178,466 | — | 178,466 |
| Net income | P925,288 | P3,454 | P63,827 | P74,368 | P1,066,937 | (P512,794) | P554,143 |
| Operating assets | P12,343,859 | P36,280 | P424,751 | P1,923,452 | P14,728,342 | (P4,396,294) | P10,332,048 |
| Operating liabilities | (P1,795,417) | (P62,713) | (P279,160) | (P871,614) | (P3,008,904) | P1,814,138 | (P1,194,766) |
| Other disclosure: | | | | | | | |
| Capital expenditure | P71,900 | P137 | P24,526 | P— | P96,563 | P— | P96,563 |

| 2022 | | | | | | | |
|--|--------------|-----------------|------------|------------|--------------|--------------|--------------|
| | Mining | Health services | Logistics | Others | Total | Eliminations | Consolidated |
| Revenue | | | | | | | |
| External customers | P3,967,002 | P55,470 | P— | P2,723 | P4,025,195 | P— | P4,025,195 |
| Interest income | 1,631 | 3 | 2 | 453 | 2,089 | — | 2,089 |
| Inter-segment | — | — | 165,882 | — | 165,882 | (165,882) | — |
| Other income | 840,489 | 22 | 2,304 | 18,573 | 861,388 | (640,740) | 220,648 |
| | 4,809,122 | 55,495 | 168,188 | 21,749 | 5,054,554 | (806,622) | 4,247,932 |
| Cost and Expenses | | | | | | | |
| Interest expense | 1,102 | — | — | — | 1,102 | — | 1,102 |
| Direct costs | 952,312 | 40,254 | 31,032 | 386 | 1,023,984 | (36,412) | 987,572 |
| Selling and general expenses | 1,284,869 | 5,761 | 21,968 | 13,289 | 1,325,887 | (265,581) | 1,060,306 |
| Impairment losses | — | — | — | — | 1,746 | — | 1,746 |
| Accretion expense | — | — | — | 196 | 196 | — | 196 |
| Depreciation, depletion and amortization (Note 25) | 134,589 | 1,268 | 10,117 | 1,953 | 147,927 | (66,667) | 81,260 |
| Excise taxes and royalty fees (Note 20) | 299,747 | — | — | — | 299,747 | — | 299,747 |
| Other expenses | 44,938 | 24 | 10,714 | 1,042 | 56,718 | 13 | 56,731 |
| Income (loss) before tax | 2,091,565 | 8,188 | 94,357 | 3,137 | 2,197,247 | (437,975) | 1,759,272 |
| Provision for income tax | 89,943 | 138 | 11,860 | 6 | 101,883 | — | 101,883 |
| Net income (loss) | P2,001,622 | P8,114 | P82,497 | P3,131 | P2,095,364 | (P437,975) | 1,657,389 |
| Operating assets | P10,093,544 | P31,131 | P414,919 | P1,409,636 | P11,026,296 | (P4,553,726) | P7,372,570 |
| Operating liabilities | (P2,617,380) | (P75,897) | (P365,202) | (P878,517) | (P3,920,256) | P2,203,530 | (P1,716,726) |
| Other disclosure: | | | | | | | |
| Capital expenditure | P41,652 | P2,752 | P27,999 | P4,201 | P76,604 | P— | P76,604 |

Notes to operating segments:

- Inter-segment revenue, cost and expenses, assets and liabilities are eliminated upon consolidation and reflected in the 'eliminations' column.
- Capital expenditures consist of additions to property, plant and equipment and deferred mine exploration costs.
- Further information of the Group's revenue about products and services as well as geographical areas are presented in Note 20.



- d. Gross revenues from each of the customers from the mining segment that exceeded 10% of the Group's revenue for the years ended December 31, 2024, 2023 and 2022 are presented below:

| | 2024 | 2023 | 2022 |
|------------|-------------------|-------------------|-------------------|
| Customer 1 | ₱790,474 | ₱623,399 | ₱911,594 |
| Customer 2 | 1,451,350 | 1,744,009 | 2,920,734 |
| | ₱2,241,824 | ₱2,367,408 | ₱3,832,328 |

33. Financial Risk Management Objectives and Policies

The Group has various other financial instruments such as cash and cash equivalents, trade receivables, receivable from lessees of bunkhouses, and loan receivable under "other noncurrent assets", trade and accrued expenses under trade and other payables and lease liabilities, which arise directly from its operations. Other financial assets include financial assets at FVPL and FVOCI.

The significant risks arising from the Group's financial instruments are liquidity risk, credit risk and interest rate risk. The BOD reviews and agrees policies for managing each of these risks and these are summarized below.

Liquidity Risk

Liquidity risk arises from the possibility that the Group may encounter difficulties in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's objective is to maintain a balance between continuity of funding and flexibility through the use of bank loans and availment of suppliers' credit. The long-term relationship of the Group to its suppliers gives it the advantage to negotiate the payment terms.

As part of its liquidity risk management, the Group has access to sufficient external funding and loans payable maturing within 12 months can be rolled over with existing lenders. It also continuously assesses conditions in the financial markets for opportunities to avail bank loans and capital market issues. Accordingly, its loan maturity profile is regularly reviewed to ensure availability of funding through an adequate amount of credit facilities with financial institutions. As at December 31, 2024 and 2023, cash and cash equivalents may be withdrawn anytime while quoted FVOCI may be converted to cash by selling them during the normal trading hours in any business day.

The tables below summarize the maturity profile of the Group's financial liabilities as of December 31, 2024 and 2023 based on contractual undiscounted cash flows. The table also analyses the maturity profile of the Group's financial assets in order to provide a complete view of the Group's contractual commitments. The analysis into relevant maturity groupings is based on the remaining period at the end of the reporting period to the contractual maturity dates

| | 2024 | | | | |
|--|-------------------|-------------------|-----------------|--------------------|-------------------|
| | On demand | 0-90 days | 91-365 days | More than one year | Total |
| <i>Financial assets</i> | | | | | |
| Cash and cash equivalents | | | | | |
| Cash on hand and in banks | ₱832,105 | ₱— | ₱— | ₱— | ₱832,105 |
| Short-term deposits | — | 921,610 | — | — | 921,610 |
| Trade and other receivables* | 104,557 | 439,800 | 196,919 | — | 741,276 |
| FVPL | 704,637 | — | — | — | 704,637 |
| Short-term deposits under "other current assets" | — | — | 26,908 | — | 26,908 |
| FVOCI | — | — | — | 794 | 794 |
| | ₱1,641,299 | ₱1,361,410 | ₱223,827 | ₱794 | ₱3,227,330 |



| | 2024 | | | | |
|--|------------|------------|-------------|--------------------|------------|
| | On demand | 0-90 days | 91-365 days | More than one year | Total |
| <i>Financial liabilities</i> | | | | | |
| Trade and other payables | | | | | |
| Trade | P– | P277,569 | P– | P– | P277,569 |
| Nontrade** | 3,721 | – | – | – | 3,721 |
| Accrued expenses | – | 23,615 | 28,691 | – | 52,306 |
| Lease liabilities | – | 2,269 | – | 4,450 | 6,719 |
| Other noncurrent liabilities | | | | | |
| Equity of claimowners in contract operations | – | – | – | 49,136 | 49,136 |
| | 3,721 | 303,453 | 28,691 | 53,586 | 389,451 |
| Net financial assets (liabilities) | P1,637,578 | P1,057,957 | P195,136 | (P52,792) | P2,837,879 |

*Excluding advances to officers and employees

**Excluding statutory payables

| | 2023 | | | | |
|--|------------|------------|-------------|--------------------|------------|
| | On demand | 0-90 days | 91-365 days | More than one year | Total |
| <i>Financial assets</i> | | | | | |
| Cash and cash equivalents | | | | | |
| Cash on hand and in banks | P630,810 | P– | P– | P– | P630,810 |
| Short-term deposits | – | 143,382 | – | – | 143,382 |
| Trade and other receivables* | 330,074 | 62,974 | 208,859 | – | 601,907 |
| FVPL | 1,328,780 | – | – | – | 1,328,780 |
| Short-term deposits under “other current assets” | – | – | 407,533 | – | 407,533 |
| FVOCI | – | – | – | 1,110 | 1,110 |
| | 2,289,664 | 206,356 | 616,392 | 1,110 | 3,113,522 |
| <i>Financial liabilities</i> | | | | | |
| Loans payable | 339,238 | – | – | – | 339,238 |
| Trade and other payables | | | | | |
| Trade | – | 345,933 | – | – | 345,933 |
| Nontrade** | 4,093 | – | – | – | 4,093 |
| Accrued expenses | – | 14,212 | 9,930 | – | 24,142 |
| Lease liabilities | – | 929 | 2,788 | 6,719 | 10,436 |
| Other noncurrent liabilities | | | | | |
| Equity of claimowner in contract operations | – | – | – | 49,136 | 49,136 |
| | 343,331 | 361,074 | 12,718 | 55,855 | 772,978 |
| Net financial assets (liabilities) | P1,946,333 | (P154,718) | P603,674 | (P54,745) | P2,340,544 |

*Excluding advances to officers and employees

**Excluding statutory payables

Credit Risk

Credit risk refers to the potential loss arising from any failure by counterparties to fulfill their obligations as these falls due. It is inherent to the business that potential losses may arise due to the failure of its customers and counterparties to fulfill their obligations on maturity dates or due to adverse market conditions.

The Group trades only with recognized, creditworthy third parties. It is the Group’s policy that all customers who wish to trade on credit terms are subject to credit verification procedures.

With respect to credit risk arising from other financial assets of the Group, which comprise of cash and cash equivalents, trade receivables, receivables from lessees of bunkhouses and loans receivable under trade and other receivables and advances under other noncurrent assets, the Group’s exposure



to credit risk arises from default of the counterparty, with a maximum exposure equal to the carrying amount of these instruments.

Since the Group trades only with recognized third parties, there is no requirement for collateral.

The table below shows the maximum exposure to credit risk for the components of the consolidated statements of financial position. The maximum exposure is shown at each instrument's carrying amount, before the effect of mitigation through the use of master netting and collateral agreements.

| | 2024 | 2023 |
|--|-------------------|------------|
| Cash and cash equivalents | | |
| Cash in banks | ₱832,105 | ₱630,028 |
| Short-term deposits | 921,610 | 143,382 |
| Trade and other receivables, except advances to officers and employees | 741,276 | 601,907 |
| Short-term investments under "other current assets" | 26,908 | 407,533 |
| | ₱2,521,899 | ₱1,782,850 |

Impairment of financial assets

The Group has financial assets consisting of cash and cash equivalents, trade receivables, receivables from lessees of bunkhouses, and loans receivable that are subjected to ECL model.

General Approach

Cash and cash equivalents

The ECL relating to the cash of the Group is minimal as these are deposited in reputable banks which have good credit rating, and are considered to have lower credit risk.

Other receivables and loans receivable

The Group has an allowance for ECLs for these financial assets amounting to ₱122.72 million and ₱122.56 million as at December 31, 2024 and 2023, respectively.

Simplified Approach

Trade receivables

An impairment analysis is performed at each reporting date using a provision matrix to measure expected credit losses. The provision rates are based on days past due of trade receivables. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions.

The Group establishes credit limits at the level of the individual borrower, corporate relationship and industry sector. It also provides for credit terms with the consideration for possible application of intercompany accounts between affiliated companies. Also, the Group transacts only with related parties and recognized third parties, hence, there is no requirement for collateral.



Below is the information about the credit risk exposure on the Group's trade receivables using a provision matrix:

As at December 31, 2024

| | Current | Past due | | | Specific Identification | Total |
|--|---------|----------|---------|----------|-------------------------|----------|
| | | 30 days | 60 days | >90 days | | |
| Expected credit loss rate | 0% | 4% | 6% | 22% | 100% | |
| Estimated total gross carrying amount at default | ₱85,566 | ₱20,352 | ₱31,690 | ₱114,213 | ₱4,823 | ₱256,644 |
| | ₱— | ₱954 | ₱1,582 | ₱30,315 | ₱4,823 | ₱37,674 |

As at December 31, 2023

| | Current | Past due | | | Specific Identification | Total |
|--|---------|----------|---------|----------|-------------------------|----------|
| | | 30 days | 60 days | >90 days | | |
| Expected credit loss rate | 2% | 7% | 6% | 23% | 100% | |
| Estimated total gross carrying amount at default | ₱43,243 | ₱20,723 | ₱1,290 | ₱113,350 | ₱4,823 | ₱183,429 |
| | ₱1,042 | ₱1,419 | ₱74 | ₱25,638 | ₱4,823 | ₱32,996 |

Market Risks

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to interest rate risk relates primarily to the Group's long-term debt obligations with floating interest rates.

As at December 31, 2024 and 2023, the Group's exposure to the risk for changes in market interest rate relates primarily to its secured bank loans. The Group regularly monitors its interest due to exposure from interest rates movements.

The Group's unsecured loans payable are both payable on demand. Nominal interest rates vary from floating rate of 91-day Philippine Php T-bill rate for peso loans and 3-month SONIA foreign loans, plus a margin of 3.5% for unsecured loans. The Group has no material exposure to interest rate risk as at December 31, 2024 and 2023.

Foreign Currency Risk

Foreign currency risk is the risk to earnings or capital arising from changes in foreign exchange rates. The Group takes on exposure to effects of fluctuations in the prevailing foreign currency exchange rates on its financial performance and cash flows.

The Group has transactional currency exposures. Such exposure arises from the sale of gold and nickel ore and the purchase of certain goods and services denominated in US\$.

All sales of gold and nickel ore are denominated in US\$. Dollar conversion of metal sales to Philippine peso is based on the prevailing exchange rate at the time of sale.

The Group's policy is to maintain foreign currency exposure within acceptable limits. The Group believes that its profile of foreign currency exposure on its assets and liabilities is within conservative limits for an institution engaged in the type of business in which the Group is involved. The Group did not seek to hedge the exposure on the change in foreign exchange rates between the US\$ and the Philippine peso. The Group believes that active currency hedging would not provide long-term benefits to stockholders.



The Group's foreign currency-denominated monetary assets and liabilities as at December 31, 2024 and 2023 follow:

| | 2024 | | 2023 | |
|---|---------|-----------------|----------|-----------------|
| | US\$ | Peso equivalent | US\$ | Peso equivalent |
| Cash in banks | \$5,015 | ₱290,106 | \$5,581 | ₱309,020 |
| Trade receivables under "trade and other receivables" | 1,478 | 85,473 | 538 | 13,178 |
| Short-term investments | — | — | 6,000 | 332,220 |
| Interest receivables | 11 | 652 | 34 | 1,883 |
| Total monetary assets | \$6,504 | ₱376,231 | \$12,153 | ₱656,301 |

As at December 31, 2024 and 2023, the exchange rates of the Philippine peso to the US\$ based on the Bankers Association of the Philippines are ₱57.85 and ₱55.37, respectively.

The sensitivity to a reasonably possible change in the US\$ exchange rate, with all other variables held constant, of the Group's income before income tax as at December 31, 2024 and 2023 is as follows:

| | Change in dollar exchange rate | Increase (decrease) of income before income tax |
|------|--------------------------------|---|
| 2024 | Strengthens by 2.08% | ₱14,229 |
| | Weaken by -1.82% | (12,458) |
| 2023 | Change in dollar exchange rate | Increase (decrease) of income before income tax |
| | Strengthens by 0.60% | ₱1,993 |
| | Weaken by -2.56% | (8,510) |

Equity Price Risk

Equity price risk is the risk to earnings or capital arising from changes in stock exchange indices relating to its quoted equity securities. The Group's exposure to equity price risk relates primarily to its quoted shares under financial assets at FVOCI.

The Group's policy is to maintain its risk to an acceptable level. Movement of share prices is monitored regularly to determine impact on the consolidated statement of financial position.

Since the amount of financial assets at FVOCI subject to equity price risk is not significant relative to the consolidated financial statements, management deemed that it is not necessary to disclose equity price risk sensitivity analysis for 2024 and 2023.



Capital Management

The Group maintains a capital base to cover risks inherent in the business. The primary objective of the Group's capital management is to optimize the use and earnings potential of the Group's resources, ensuring that the Group complies with externally imposed capital requirements, if any, and considering changes in economic conditions and the risk characteristics of the Group's activities.

The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions. To maintain or adjust the capital structure, the Group may obtain additional advances from stockholders or issue new shares. No changes were made in the objectives, policies or processes in 2024, 2023 and 2022. The Group monitors capital using the consolidated financial statements. As at December 31, 2024 and 2023, the Group has met its capital management objectives.

The following table summarizes the total capital considered by the Group:

| | 2024 | 2023 |
|-----------------------------|-------------------|------------|
| Capital stock | ₱714,277 | ₱624,277 |
| Capital surplus | 686,627 | 415,547 |
| Retained earnings | 6,199,684 | 5,907,571 |
| Cost of share-based payment | 8,225 | 8,104 |
| Other components of equity | 1,568,408 | 1,419,502 |
| Treasury shares | (8,016) | (8,016) |
| | ₱9,169,205 | ₱8,366,985 |

Further, the Group monitors capital using debt to equity ratio, which is total liabilities divided by total equity. Debt to equity ratios of the Group as at December 31, 2024 and 2023 are as follows:

| | 2024 | 2023 |
|----------------------------|-------------------|------------|
| Total liabilities (a) | ₱1,698,116 | ₱1,970,633 |
| Total equity (b) | 9,169,205 | 8,366,985 |
| Debt-to-equity ratio (a/b) | 0.19:1 | 0.24:1 |

34. Changes in Liabilities arising from Financing Activities

Movements on the reconciliation of liabilities arising from financing activities are as follows:

| | January 1,
2024 | Cash flows | Additions | Others | December 31,
2024 |
|--|--------------------|-------------------|-----------------|-----------------|----------------------|
| Loans payable | ₱339,238 | (655,150) | ₱— | ₱315,912 | ₱— |
| Dividends payable | — | (108,068) | 143,557 | — | 35,489 |
| Lease liabilities-current | 4,238 | (5,401) | — | 8,270 | 7,107 |
| Lease liabilities-net of current portion | 4,093 | — | 12,335 | (8,270) | 8,158 |
| | ₱347,569 | (₱768,619) | ₱155,892 | ₱315,912 | (₱50,754) |

| | January 1, 2023 | Cash flows | Additions | Others | December 31,
2023 |
|--|-----------------|-----------------|---------------|----------------|----------------------|
| Loans payable | ₱337,035 | ₱— | ₱— | ₱2,203 | ₱339,238 |
| Lease liabilities-current | 6,309 | (5,828) | — | 3,757 | 4,238 |
| Lease liabilities-net of current portion | 5,798 | — | 2,052 | (3,757) | 4,093 |
| | ₱349,142 | (₱5,828) | ₱2,052 | ₱2,203 | ₱347,569 |



Others include interest expense (see Notes 14 and 15).

35. Fair Value Measurement

Fair Values

Set out below is a comparison by category and class of carrying amounts and estimated fair values of the Group's significant financial assets and liabilities as at December 31, 2024 and 2023:

| | Carrying amounts | | Fair values | |
|--------------------------|------------------|------------|-----------------|------------|
| | 2024 | 2023 | 2024 | 2023 |
| Financial Assets: | | | | |
| FVPL | ₱704,637 | ₱1,328,780 | ₱704,637 | ₱1,328,780 |
| FVOCI | 794 | 1,110 | 794 | 1,110 |
| Loan receivable | 196,919 | 208,859 | 196,919 | 208,859 |

The following methods and assumptions were used to estimate the fair value of each class of financial instruments for which it is practicable to estimate such value:

Cash and cash equivalents, Trade receivables and receivables from lessees of bunkhouses under Trade and Other Receivables, Loan receivable and Advances under Other Current Assets, and trade and accrued expenses under Trade and Other Payables

The fair values of these instruments approximate their carrying amounts as of reporting date due to the short-term nature.

Equity of claimowner in contract operations under Other Noncurrent Liabilities

The estimated fair value of equity of claimowner is based on the discounted value of future cash flows using the interest rate of 1% per annum.

Financial assets measured at FVPL

The fair value of investments is based on published net asset value per unit or the price per unit of the UITF.

Financial assets measured at FVOCI

The fair value of investments that are actively traded in organized markets is determined by reference to quoted market bid prices at the close of business on reporting date.

Fair Value Hierarchy

Set out below is the fair value hierarchy of the Group's assets measured at fair value.

| | 2024 | | |
|------------------------------|--|--|--|
| | Fair value measurement using | | |
| | Quoted prices in
active market
(Level 1) | Significant
observable
inputs
(Level 2) | Significant
unobservable
inputs
(Level 3) |
| Land at revalued amounts | ₱— | ₱— | ₱1,919,554 |
| Artworks at revalued amounts | — | — | 53,044 |
| Investment properties | — | — | 3,324,759 |
| Financial assets at FVPL | 704,637 | — | — |
| Financial assets at FVOCI | 794 | — | — |
| Lease liabilities | — | — | 15,565 |



| | 2023 | | |
|------------------------------|--|--|--|
| | Fair value measurement using | | |
| | Quoted prices in
active market
(Level 1) | Significant
observable
inputs
(Level 2) | Significant
unobservable
inputs
(Level 3) |
| Land at revalued amounts | ₱— | ₱— | ₱1,724,475 |
| Artworks at revalued amounts | — | — | 52,139 |
| Investment properties | — | — | 2,997,953 |
| Financial assets at FVPL | 1,328,780 | — | — |
| Financial assets at FVOCI | 1,110 | — | — |
| Lease liabilities | — | — | 8,331 |

Sensitivity of the fair value measurements that are categorized within Level 3

A 5% increase (decrease) in internal factors used in determining the price per square meter such as use, size and location would decrease (increase) the fair value of land at revalued amounts and investment properties by ₱249.27 million (₱245.52 million) and ₱641.87 million (₱615.14 million) as at December 31, 2024 and 2023, respectively.

A 5% increase (decrease) in leeway discount in determining the price of each artwork would decrease (increase) the fair value of artworks by ₱3.08 million (₱3.08 million) as at December 31, 2024 and 2023.

As at December 31, 2024 and 2023, the fair value of land at revalued amounts, artworks at revalued amounts and investment property are calculated using the sales comparative approach, which resulted in measurement being classified as Level 3 in the fair value hierarchy.

As at December 31, 2024 and 2023, the Group's financial assets at FVPL and FVOCI are classified under Level 1 of the fair value hierarchy since these are based on quoted market prices or binding dealer price quotations.

There are no other assets and liabilities measured at fair value using any of the valuation techniques as at December 31, 2024 and 2023. There were no transfers between levels in 2024 and 2023.

36. Agreements and Contingencies

- a. The Parent Company and certain subsidiaries are contingently liable for liabilities arising from lawsuits or claims (mostly labor, civil, mines administrative and ports related cases) filed by third parties, which are either pending decision by the courts or are subject to settlement agreements. The outcome of these lawsuits or claims cannot be presently determined. In the opinion of management and its legal counsel, the eventual liability from these lawsuits or claims, if any, will not have a material effect on the consolidated financial statements.



INDEPENDENT AUDITOR'S REPORT ON SUPPLEMENTARY SCHEDULES

The Board of Directors and Stockholders
Benguet Corporation
7th Floor Universal Re-Building
106 Paseo de Roxas, Makati City

We have audited in accordance with Philippine Standards on Auditing, the consolidated financial statements of Benguet Corporation (the Company) as at December 31, 2024 and 2023, and for each of the three years in the period ended December 31, 2024, and have issued our report thereon dated March 26, 2025. Our audits were made for the purpose of forming an opinion on the basic consolidated financial statements taken as a whole. The schedules listed in the Index to the Supplementary Schedules are the responsibility of the Company's management. These schedules are presented for purposes of complying with the Revised Securities Regulation Code Rule 68, and are not part of the basic consolidated financial statements. These schedules have been subjected to the auditing procedures applied in the audit of the basic consolidated financial statements and, in our opinion, fairly state, in all material respects, the financial information required to be set forth therein in relation to the basic consolidated financial statements taken as a whole.

SYCIP GORRES VELAYO & CO.

Peter John R. Ventura

Peter John R. Ventura

Partner

CPA Certificate No. 0113172

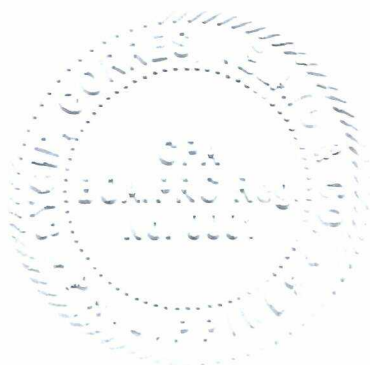
Tax Identification No. 301-106-741

BOA/PRC Reg. No. 0001, April 16, 2024, valid until August 23, 2026

BIR Accreditation No. 08-001998-158-2024, October 2, 2024, valid until October 1, 2027

PTR No. 10465400, January 2, 2025, Makati City

March 26, 2025



INDEPENDENT AUDITOR'S REPORT ON COMPONENTS OF FINANCIAL SOUNDNESS INDICATORS

The Board of Directors and Stockholders
Benguet Corporation
7th Floor Universal Re-Building
106 Paseo de Roxas, Makati City

We have audited in accordance with Philippine Standards on Auditing, the consolidated financial statements of Benguet Corporation (the Company) as at December 31, 2024 and 2023 and for each of the three years in the period ended December 31, 2024, and have issued our report thereon dated March 26, 2025. Our audits were made for the purpose of forming an opinion on the basic consolidated financial statements taken as a whole. The Supplementary Schedule on Financial Soundness Indicators, including their definitions, formulas, calculation, and their appropriateness or usefulness to the intended users, are the responsibility of the Company's management. These financial soundness indicators are not measures of operating performance defined by Philippine Financial Reporting Standards (PFRS) Accounting Standards and may not be comparable to similarly titled measures presented by other companies. This schedule is presented for the purpose of complying with the Revised Securities Regulation Code Rule 68 issued by the Securities and Exchange Commission, and is not a required part of the basic consolidated financial statements prepared in accordance with PFRS Accounting Standards. The components of these financial soundness indicators have been traced to the Company's consolidated financial statements as at December 31, 2024 and 2023 and for each of the three years in the period ended December 31, 2024 and no material exceptions were noted.

SYCIP GORRES VELAYO & CO.

Peter John R. Ventura

Peter John R. Ventura
Partner

CPA Certificate No. 0113172

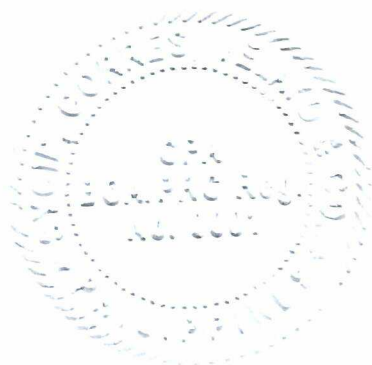
Tax Identification No. 301-106-741

BOA/PRC Reg. No. 0001, April 16, 2024, valid until August 23, 2026

BIR Accreditation No. 08-001998-158-2024, October 2, 2024, valid until October 1, 2027

PTR No. 10465400, January 2, 2025, Makati City

March 26, 2025



BENGUET CORPORATION AND SUBSIDIARIES
FINANCIAL RATIOS
PURSUANT TO REVISED SRC RULE 68
DECEMBER 31, 2024

| Ratio | Formula | December 2024 | December 2023 | 2024 | 2023 |
|--|---|--|--|---------------|--------|
| <u>Profitability Ratio</u> | | | | | |
| Return to assets | $\frac{\text{Net income}}{\text{Total average asset}}$ | $\frac{\text{₱435,670}}{10,602,470}$ | $\frac{\text{₱554,143}}{10,123,347}$ | 4.11% | 5.47% |
| Return on equity | $\frac{\text{Net income}}{\text{Total shareholder's equity}}$ | $\frac{\text{₱435,670}}{9,169,205}$ | $\frac{\text{₱554,143}}{8,366,985}$ | 4.75% | 6.62% |
| Gross profit margin | $\frac{\text{Total revenue} - \text{Less: Cost of mine products sold} - \text{Cost of services and other sales} - \text{Excise tax and royalties' fees}}{\text{Total revenue}}$ | $\frac{\text{₱2,385,872} - 822,241 - 85,361 - 162,311}{2,385,872}$ | $\frac{\text{₱2,531,358} - 680,471 - 84,056 - 182,425}{2,531,358}$ | 55.16% | 62.59% |
| | $\frac{\text{Gross Profit}}{\text{Total revenue}}$ | $\frac{1,069,913}{2,385,872}$ | $\frac{946,952}{2,531,358}$ | | |
| | $\frac{\text{Gross Profit}}{\text{Total revenue}}$ | $\frac{1,315,959}{2,385,872}$ | $\frac{1,584,406}{2,531,358}$ | | |
| Operating profit margin | $\frac{\text{Total revenue} - \text{Less: Operating costs and expenses}}{\text{Total revenue}}$ | $\frac{\text{₱2,385,872} - 1,936,452}{2,385,872}$ | $\frac{\text{₱2,531,358} - 1,852,967}{2,531,358}$ | 18.84% | 26.80% |
| | $\frac{\text{Operating income}}{\text{Total revenue}}$ | $\frac{449,420}{2,385,872}$ | $\frac{678,391}{2,531,358}$ | | |
| Net Profit Margin | $\frac{\text{Net income}}{\text{Total revenue}}$ | $\frac{\text{₱435,670}}{2,385,872}$ | $\frac{\text{₱554,143}}{2,531,358}$ | 18.26% | 21.89% |
| <u>Liquidity and Solvency Ratio</u> | | | | | |
| Current ratio | $\frac{\text{Total current assets}}{\text{Total current liabilities}}$ | $\frac{\text{₱3,760,284}}{655,144}$ | $\frac{\text{₱3,758,226}}{902,400}$ | 5.74:1 | 4.16:1 |

| | | | | | |
|-------------|---------------------------|------------|------------|---------------|--------|
| Quick ratio | Total current assets | ₱3,760,284 | ₱3,758,226 | 3.81:1 | 1.69:1 |
| | Less: Inventories | 191,940 | 247,959 | | |
| | Other current assets | 1,073,353 | 1,989,349 | | |
| | | 1,265,293 | 2,237,308 | | |
| | Quick assets | 2,494,991 | 1,520,918 | | |
| | | | | | |
| | Quick assets | 2,494,991 | 1,520,918 | | |
| | Total current liabilities | 655,144 | 902,400 | | |

| | | | | | |
|----------------|-------------------|-------------|-------------|---------------|--------|
| Solvency Ratio | Total assets | ₱10,867,321 | ₱10,337,618 | 6.40:1 | 5.25:1 |
| | Total liabilities | 1,698,116 | 1,970,633 | | |

Financial Leverage Ratio

| | | | | | |
|-----------------------|--------------|-------------|-------------|---------------|--------|
| Asset to equity ratio | Total assets | ₱10,867,321 | ₱10,337,618 | 1.19:1 | 1.24:1 |
| | Total equity | 9,169,205 | 8,366,985 | | |

| | | | | | |
|------------|-------------------|------------|------------|---------------|--------|
| Debt ratio | Total liabilities | ₱1,698,116 | ₱1,970,633 | 0.16:1 | 0.19:1 |
| | Total assets | 10,867,321 | 10,337,618 | | |

| | | | | | |
|----------------------|-------------------|------------|------------|---------------|--------|
| Debt to equity ratio | Total liabilities | ₱1,698,116 | ₱1,970,633 | 0.19:1 | 0.24:1 |
| | Total equity | 9,169,205 | 8,366,985 | | |

| | | | | | |
|-------------------------|---------------------------------------|----------|----------|----------------|----------|
| Interest Coverage ratio | Income before income tax and interest | ₱541,618 | ₱735,385 | 73.64:1 | 264.91:1 |
| | Total interest expense | 7,355 | 2,776 | | |

BENGUET CORPORATION AND SUBSIDIARIES

INDEX TO THE SUPPLEMENTARY SCHEDULES

FOR THE YEAR ENDED DECEMBER 31, 2024

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| Supplementary Schedules Required by Annex 68-J | |
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| Guarantees of securities of other issuers | F |
| Capital stock | G |
| Schedule of external auditor fee-related information | H |

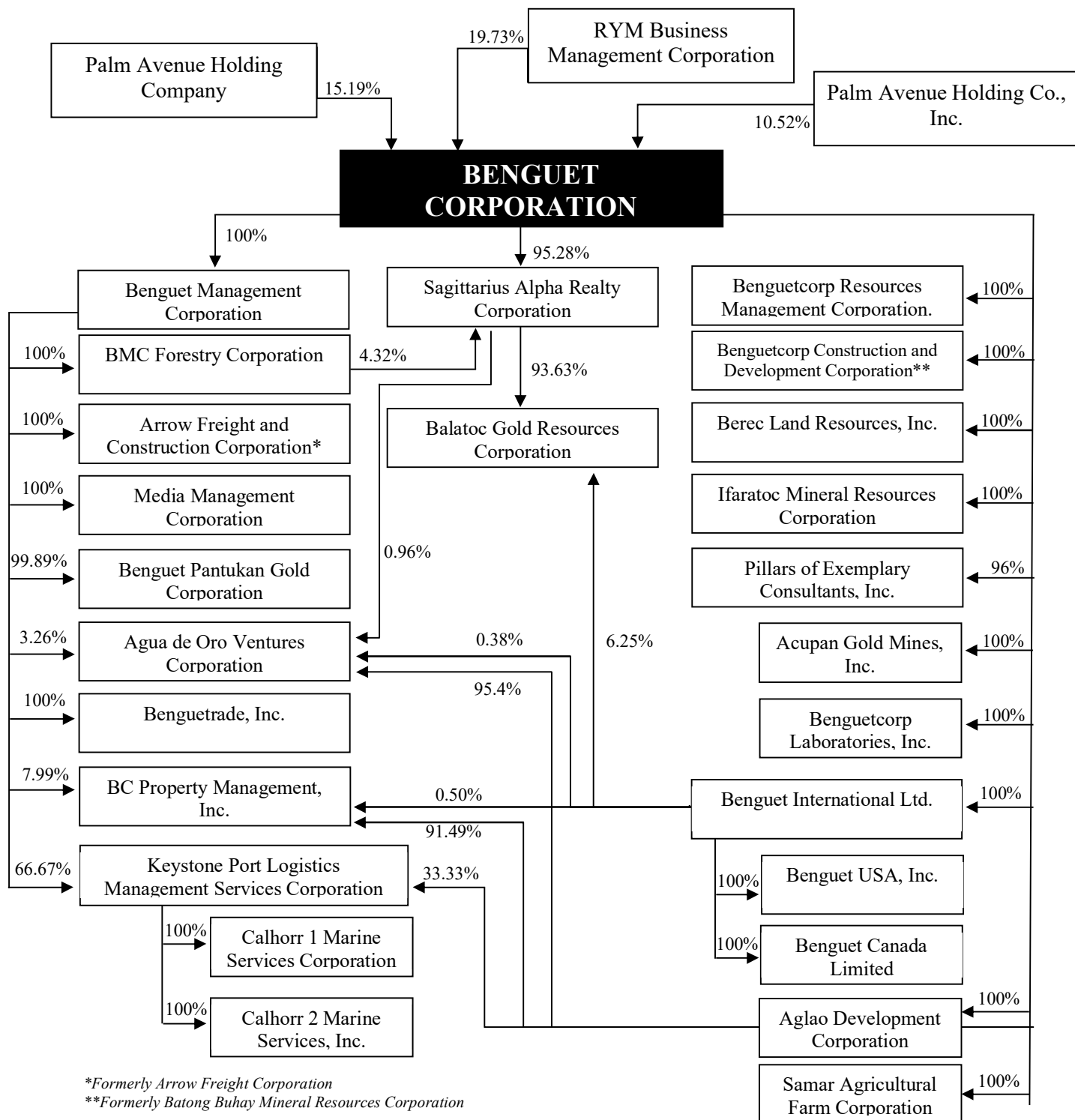
SCHEDULE I
Reconciliation of Retained Earnings Available for Dividend Declaration

For the reporting period ended December 31, 2024
(Amount in Thousands)

Benguet Corporation
7th Floor Universal Re-Building, 106 Paseo de Roxas, Makati City

| | |
|---|-------------------|
| Unappropriated Retained Earnings, beginning | ₱2,070,835 |
| Add: Category A: Items that are directly credited to unappropriated retained earnings: | |
| Reversal of Retained Earnings Appropriation/s | — |
| Effect of restatements or prior-period adjustments | — |
| Others | — |
| Less: Category B: Items that are directly debited to unappropriated retained earnings | |
| Dividend declaration during the reporting period | 143,557 |
| Retained earnings appropriated during the reporting period | — |
| Effect of restatements or prior-period adjustments | — |
| Others | — |
| Subtotal | 143,557 |
| Unappropriated retained earnings, as adjusted | 1,927,278 |
| Add: Net income actually earned/realized during the period | 83,363 |
| Less: Category C.1: Unrealized income recognized in profit or loss during the reporting period | |
| Unrealized fair value gain of Investment Property | 283,735 |
| Adjusted Net income | (200,372) |
| Add: Category D: Non-actual losses recognized in profit or loss during the reporting period | |
| Loss on fair value adjustment of investment property | — |
| Add: Category F: Other items that should be excluded from the determination of the amount of retained earnings available for dividend distribution | |
| Net movement in recognized deferred tax asset not considered in the reconciling items under the previous categories | 4,715 |
| Net movement in recognized deferred tax liability related to excess of mine rehabilitation asset over liability for mine rehabilitation | 1,103 |
| Subtotal | 5,818 |
| TOTAL RETAINED EARNINGS, END AVAILABLE FOR DIVIDEND | ₱1,732,724 |

SCHEDULE II
BENGUET CORPORATION AND SUBSIDIARIES
MAP SHOWING THE RELATIONSHIPS OF THE
COMPANIES WITHIN THE GROUP
PURSUANT TO SRC RULE 68, AS AMENDED
DECEMBER 31, 2024



SCHEDULE A

BENGUET CORPORATION AND SUBSIDIARIES
FINANCIAL ASSETS
DECEMBER 31, 2024
(Amounts in Thousands)

| Name of Issuing Entity and Association of Each Issue | Number of Share or
Principal Amount of
Bonds and Notes | Amount in the
Statement of
Financial Position | Income Received
and Accrued |
|--|--|---|--------------------------------|
| Financial assets at amortized cost | | | |
| A. Cash in banks | | | |
| BDO Unibank, Inc. | — | 593,094 | 14,115 |
| Malayan Savings Bank | — | 4,939 | 117 |
| Metropolitan Bank & Trust Company | — | 18,401 | 438 |
| Union Bank of the Philippines | — | 141 | 3 |
| China Banking Corporation | — | 187 | 4 |
| Philippine National Bank | — | 7,986 | 190 |
| Rizal Commercial Banking Corporation | — | 184,341 | 4,383 |
| United Coconut Planters Bank | — | — | — |
| Landbank of the Philippines | — | 20,837 | 495 |
| Others | — | 835 | 20 |
| B. Short Term Deposits | | | |
| BDO Unibank, Inc. | 310,000 | 329,103 | 7,826 |
| Malayan Savings Bank | 90,000 | 92,317 | 2,195 |
| Metropolitan Bank & Trust Company | 500,000 | 500,049 | 11,891 |
| Others | — | 141 | 3 |
| C. Trade and Other receivables | | | |
| Trade | — | 218,969 | — |
| Loan receivable | — | 196,919 | — |
| Nontrade | — | 242,881 | — |
| Receivables from lessees of bunkhouses | — | 5,964 | — |
| Others | — | 18,327 | — |
| D. Short-term investments under “other current assets” | 10,000 | 26,908 | — |
| E. Financial assets at fair value through profit or loss (FVPL) | — | — | — |
| Unit Investment Trust Fund | — | 704,637 | — |
| F. Financial assets at fair value through Other Comprehensive Income (FVOCI) | | | |
| PLDT, Inc. | — | 267 | — |
| Sherwood Hills Development, Incorporated | — | 300 | — |
| TVI Pacific | — | 227 | — |

SCHEDULE B

BENGUET CORPORATION AND SUBSIDIARIES
AMOUNTS RECEIVABLE FROM DIRECTORS, OFFICERS, EMPLOYEES, RELATED PARTIES AND PRINCIPAL STOCKHOLDERS
(OTHER THAN RELATED PARTIES)
DECEMBER 31, 2024
(Amounts in Thousands)

| Name and Designation of Debtor | Balance at beginning period | Additions | Amounts collected / settlements | Amounts written off | Current | Not current | Balance at end period |
|--|-----------------------------|-----------|---------------------------------|---------------------|---------|-------------|-----------------------|
| Max D. Arceno
<i>SVP - Accounting & Treasurer</i> | ₱392 | ₱— | ₱— | ₱— | ₱392 | ₱— | ₱392 |
| Reynaldo P. Mendoza
<i>EVP & Asst. Corporate Secretary</i> | 1,281 | 8 | 13 | — | 1,276 | — | 1,276 |
| Cynthia Lazaro
<i>Sec. Mgr - Insurance (Treasury)</i> | 536 | — | 1 | — | 535 | — | 535 |
| Sheena Irish Barra
<i>Division Manager – Accounting & Budget</i> | 403 | 8 | 43 | — | 368 | — | 368 |
| Eden Barcelona
<i>Section Manager-Stockholders Relation Office</i> | 111 | 200 | 85 | — | 226 | — | 226 |
| Marlene Q. Villanueva
<i>Unit Manager – Purchasing Assistant</i> | 99 | — | 44 | — | 55 | — | 55 |
| Jessa P. Repasa
<i>Asst. Unit Manager – Admin. Asst. to the President</i> | 195 | 8 | 111 | — | 92 | — | 92 |
| Maricel Ulep
<i>Group Asst for SVP-Finance & SVP Nickel Op'n</i> | 119 | — | — | — | 119 | — | 119 |
| Gaudencio P. Repasa
<i>Company Driver – Admin</i> | — | 50 | 17 | — | 33 | — | 33 |

SCHEDULE C

BENGUET CORPORATION AND SUBSIDIARIES
AMOUNTS RECEIVABLE FROM RELATED PARTIES
WHICH ARE ELIMINATED DURING THE
CONSOLIDATION OF FINANCIAL STATEMENTS
DECEMBER 31, 2024
(Amounts in Thousands)

| Name and Designation of Debtor | Balance at
Beginning period | Additions | Amounts
collected/
settlements | Amounts
Written off | Current | Not Current | Balance
at end period |
|---|--------------------------------|-----------|--------------------------------------|------------------------|------------|-------------|--------------------------|
| Benguetcorp Resources Management Corporation | ₱32,021 | ₱139,763 | 601,407 | ₱– | (₱429,623) | ₱– | (₱429,623) |
| Balatoc Gold Resources Corporation | 78,626 | 1 | – | – | 78,627 | – | 78,627 |
| Benguetrade, Inc. | 15,560 | – | 201 | – | 15,359 | – | 15,359 |
| Benguetcorp Laboratories, Inc. | 48,547 | – | 4,781 | – | 43,766 | – | 43,766 |
| Berec Land Resources, Inc. | (35,147) | – | 2,122 | – | (37,269) | – | (37,269) |
| BC Property Management, Inc. | 30,584 | 63 | – | – | 30,647 | – | 30,647 |
| Ifaratoc Mineral Resources Corporation | 36,196 | – | 20 | – | 36,176 | – | 36,176 |
| Benguet-Pantukan Gold Corporation | 29,746 | 113 | – | – | 29,859 | – | 29,859 |
| BMC Forestry Corporation | (23,275) | – | 3,760 | – | (27,035) | – | (27,035) |
| Media Management Corporation | 100,183 | 2 | – | – | 100,185 | – | 100,185 |
| Arrow Freight Corporation | (5,393) | 890 | 780 | – | (5,283) | – | (5,283) |
| Benguet Management Corporation | 100,416 | 215 | – | – | 100,631 | – | 100,631 |
| Agua de Oro Ventures Corporation | 12,970 | 6 | – | – | 12,976 | – | 12,976 |
| Keystone Port Logistics Management Services Corporation | 18,818 | – | 28 | – | 18,790 | – | 18,790 |
| BenguetCorp International Limited | 8,653 | 778 | – | – | 9,431 | – | 9,431 |
| Sagittarius Alpha Realty Corporation | (100,890) | – | 9 | – | (100,899) | – | (100,899) |
| Batong Buhay Mineral Resources Corporation | 3,216 | 2 | – | – | 3,218 | – | 3,218 |
| Acupan Gold Mines, Inc. | 81 | 40 | – | – | 121 | – | 121 |
| Pillars of Exemplary Consultants, Inc. | 865 | 47 | – | – | 912 | – | 912 |
| Samar Agricultural Farm Corporation | – | 802 | – | – | 802 | – | 802 |
| | ₱351,777 | ₱142,722 | ₱613,108 | ₱– | (₱118,609) | ₱– | (₱118,609) |

SCHEDULE D

**BENGUET CORPORATION AND SUBSIDIARIES
LONG-TERM DEBT
DECEMBER 31, 2024
(Amounts in Thousands)**

| Title of issue and
type of obligation | Amount authorized by indenture | Amount shown under the caption
'Current Portion of long-term
borrowings' in related balance sheet | Amount shown under the caption
'Long-term borrowings - net of current
portion' in related balance sheet |
|--|--------------------------------|---|---|
| <div>NOT APPLICABLE</div> | | | |

SCHEDULE E

**BENGUET CORPORATION AND SUBSIDIARIES
INDEBTEDNESS TO RELATED PARTIES
(LONG-TERM LOANS FROM RELATED COMPANIES)
DECEMBER 31, 2024**

| Name of related party | Balance at beginning of period | Balance at end of period |
|-----------------------|--------------------------------|--------------------------|
| | NOT APPLICABLE | |

SCHEDULE F

**BENGUET CORPORATION AND SUBSIDIARIES
GUARANTEES OF SECURITIES OF OTHER ISSUERS
DECEMBER 31, 2024**

| Name of issuing entity of
securities guaranteed by the
Group for which this statement
is filed | Title of issue of each class of
securities guaranteed | Total amount guaranteed and
outstanding | Amount owed by person for
which statement is filed | Nature of guarantee |
|---|--|--|---|---------------------|
| NOT APPLICABLE | | | | |

SCHEDULE G**BENGUET CORPORATION AND SUBSIDIARIES
CAPITAL STOCK
DECEMBER 31, 2024**

The Parent Company's authorized share capital is ₱784.8 million divided into 737.0 million shares consisting of 19.7 million Convertible Preferred Class A shares with par value of ₱3.43 each and 430.4 million Class A common shares and 286.9 million Class B common shares with par value of ₱1.00 each. As at December 31, 2024, shares issued and outstanding totaled 713,401,190 held by 16,857 shareholders.

| Title of Issue | Number of shares
authorized | Number of shares issued
and outstanding as shown
under related financial
condition caption | Number of shares
reserved for option,
warrants, conversions
and other rights | No of shares held by: | | |
|-----------------------------|--------------------------------|---|---|-----------------------|---------------------------|-------------|
| | | | | Affiliates | Directors and
Officers | Others |
| Convertible Preferred Stock | | | | | | |
| Class A | 19,652,912 | 217,061 | — | — | — | 217,061 |
| Common Stock | | | | | | |
| Class A | 430,380,000 | 428,120,008 | — | — | 920,655 | 427,199,353 |
| Class B | 286,920,000 | 285,064,121 | — | — | 479,007 | 284,585,114 |

SCHEDULE H


BENGUET CORPORATION AND SUBSIDIARIES
SCHEDULE OF EXTERNAL AUDITOR FEE-RELATED INFORMATION
DECEMBER 31, 2024

| | Current Year
(2024) | Prior Year
(2023) |
|---------------------------------------|------------------------|----------------------|
| Total Audit Fees | ₱5,540,000 | ₱5,320,000 |
| Non-audit service fees: | | |
| Tax Services | — | — |
| All other services | — | — |
| Total Non-audit fees | — | — |
| Total Audit and Non-audit fees | ₱5,540,000 | ₱5,320,000 |

| | Current Year
(2024) | Prior Year
(2023) |
|---|------------------------|----------------------|
| Audit and Non-audit fees of other related entities | | |
| Audit fees | ₱— | ₱— |
| Non-audit service fees: | | |
| Other assurance services | — | — |
| Tax services | — | — |
| All other services | — | — |
| Total Audit and Non-Audit Fees of other related entities | ₱— | ₱— |

Eleanor Detran

From: eafs@bir.gov.ph
Sent: Tuesday, April 29, 2025 1:55 PM
To: BenguetCorp Accounting
Cc: BenguetCorp Accounting
Subject: Your BIR AFS eSubmission uploads were received

 You don't often get email from eafs@bir.gov.ph. [Learn why this is important](#)
Hi BENGUET CORPORATION,

Valid files

- EAFS000051037AFSTY122024.pdf
- EAFS000051037OTHTY122024.pdf
- EAFS000051037ITRTY122024.pdf
- EAFS000051037RPTTY122024.pdf
- EAFS000051037TCRTY122024-01.pdf

Invalid file

- <None>

Transaction Code: **AFS-0-9DJAB9KB06F9H97CAMQQ3MYWS0A6FGA88J**
Submission Date/Time: **Apr 29, 2025 01:55 PM**
Company TIN: **000-051-037**

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- The submitted forms, documents and attachments are complete, truthful and correct based on the personal knowledge and the same are from authentic records;
- The submission is without prejudice to the right of the BIR to require additional document, if any, for completion and verification purposes;
- The hard copies of the documents submitted through this facility shall be submitted when required by the BIR in the event of audit/investigation and/or for any other legal purpose.

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BenguetCorp

STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS

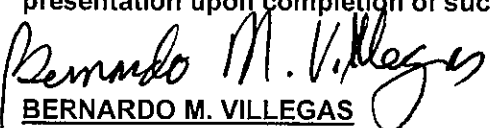
The management of BENGUET CORPORATION (the "Company") is responsible for the preparation and fair presentation of the financial statements including the schedules attached therein, for the years ended December 31, 2024 and 2023, in accordance with the prescribed financial reporting framework indicated therein, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is responsible for overseeing the Company's financial reporting process.

The Board of Directors reviews and approves the financial statements including the schedules attached therein, and submits the same to the stockholders.

Sycip Gorres Velayo & Co., the independent auditor appointed by the stockholders, has audited the financial statements of the Company in accordance with Philippine Standards on Auditing, and in its report to the stockholders, has expressed its opinion on the fairness of presentation upon completion of such audit.


BERNARDO M. VILLEGAS
Chairman of the Board


LINA G. FERNANDEZ
President


MAX D. ARCEÑO
Senior Vice President-Finance & Treasurer

Signed this March 26, 2025.

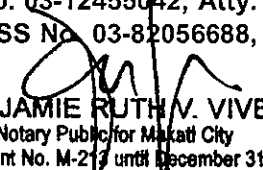
ACKNOWLEDGMENT

REPUBLIC OF THE PHILIPPINES)
City of Makati) S.S.

SUBSCRIBED AND SWORN to before me this MAR 26 2025 at Makati City, affiants exhibited to me their valid identification: Mr. Bernardo M. Villegas with SSS No. 03-12455042; Atty. Lina G. Fernandez with SSS No. 03-7537025-8; and Mr. Max D. Arceño with SSS No. 03-82056688, all issued by the Office of the Social Security System, Philippines.

Doc. No. 36;
Page No. 9;
Book No. I;
Series of 2025.

DOCUMENTARY STAMP TAX PAID
SERIAL NO. 20167137
DATE: MAR 26 2025


ATTY. JAMIE RUTH M. VIVERO
Notary Public for Makati City
Appointment No. M-213 until December 31, 2026
O.S. Tantulco & Associates, 3rd Floor, Universal Re Building,
106 Paseo de Roxas, Makati City
Roll No. 80094

Universal Re-Building, 106 Paseo de Roxas, 1226 Makati City Philippines
MCPO Box 3488 • Phone: +632.812.1380 • Fax: +632.752.0777
IBP No. 486926, December 20, 2024, Leyte
PTR No. MKT 10469748, Makati City, January 8, 2025
MCLE Compliance VII - 0015422 valid until April 14, 2028

COVER SHEET

for

AUDITED FINANCIAL STATEMENTS

| | | | | | | | | | |
|---|---|---|---|---|--|--|--|--|--|
| 1 | 1 | 3 | 4 | 1 | | | | | |
|---|---|---|---|---|--|--|--|--|--|

[illegible][illegible]

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|---|---|---|---|
| A | A | F | S |
|---|---|---|---|

| | | | |
|----------|----------|----------|----------|
| C | R | M | D |
|----------|----------|----------|----------|

| | | | |
|---|---|---|--|
| N | / | A | |
|---|---|---|--|

COMPANY INFORMATION

bccorpsec@benguetcorp.com

(02) 8812-1380

| | |
|--|-----|
| | N/A |
|--|-----|

| |
|--------|
| 16,857 |
|--------|

December 20

December 31

| CONTACT PERSON INFORMATION | |
|----------------------------|--|
| NAME | |
| PHONE | |
| EMAIL | |
| ADDRESS | |
| CITY | |
| STATE | |
| ZIP | |
| COUNTRY | |

The designated contact person **MUST** be an Officer of the Corporation

Mr. Reynaldo P. Mendoza

rey_men777@yahoo.com

(02) 8812-1220

| |
|-----|
| N/A |
|-----|

| CONTACT PERSON's ADDRESS | |
|---------------------------------|--|
| | |

5 Atipolo Bend St. Phase 2, Greenwoods Executive Village, Cainta, Rizal

NOTE 1: In case of death, resignation or cessation of office of the officer designated as contact person, such incident shall be reported to the Commission within thirty (30) calendar days from the occurrence thereof with information and complete contact details of the new contact person designated.

2: All Boxes must be properly and completely filled-up. Failure to do so shall cause the delay in updating the corporation's records with the Commission and/or non-receipt of Notice of Deficiencies. Further, non-receipt of Notice of Deficiencies shall not excuse the corporation from liability for its deficiencies.



INDEPENDENT AUDITOR'S REPORT

The Board of Directors and Stockholders
Benguet Corporation
7th Floor, Universal Re-Building
106 Paseo de Roxas, Makati City

Report on the Audit of the Parent Company Financial Statements

Opinion

We have audited the parent company financial statements of Benguet Corporation (the Company), which comprise the parent company statements of financial position as at December 31, 2024 and 2023, and the parent company statements of income, parent company statements of comprehensive income, parent company statements of changes in equity and parent company statements of cash flows for the years then ended, and notes to the parent company financial statements, including material accounting policy information.

In our opinion, the accompanying parent company financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2024 and 2023, and its financial performance and its cash flows for the years then ended in accordance with Philippine Financial Reporting Standards (PFRS) Accounting Standards.

Basis for Opinion

We conducted our audits in accordance with Philippine Standards on Auditing (PSAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Parent Company Financial Statements* section of our report. We are independent of the Company in accordance with the Code of Ethics for Professional Accountants in the Philippines (Code of Ethics) together with the ethical requirements that are relevant to our audit of the parent company financial statements in the Philippines, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Parent Company Financial Statements

Management is responsible for the preparation and fair presentation of the parent company financial statements in accordance with PFRS Accounting Standards, and for such internal control as management determines is necessary to enable the preparation of parent company financial statements that are free from material misstatement, whether due to fraud or error.



In preparing the parent company financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Parent Company Financial Statements

Our objectives are to obtain reasonable assurance about whether the parent company financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with PSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these parent company financial statements.

As part of an audit in accordance with PSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the parent company financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the parent company financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the parent company financial statements, including the disclosures, and whether the parent company financial statements represent the underlying transactions and events in a manner that achieves fair presentation.



We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Report on the Supplementary Information Required Under Revenue Regulations 15-2010

The supplementary information required under Revenue Regulations 15-2010 for purposes of filing with the Bureau of Internal Revenue is presented by the management of Benguet Corporation in a separate schedule. Revenue Regulations 15-2010 requires the information to be presented in the notes to parent company financial statements. Such information is not a required part of the basic financial statements. The information is also not required by the Revised Securities Regulation Code Rule 68. Our opinion on the parent company financial statements is not affected by the presentation of this information in a separate schedule.

The engagement partner on the audit resulting in this independent auditor's report is
Peter John R. Ventura.

SYCIP GORRES VELAYO & CO.

Peter John R. Ventura

Peter John R. Ventura

Partner

CPA Certificate No. 0113172

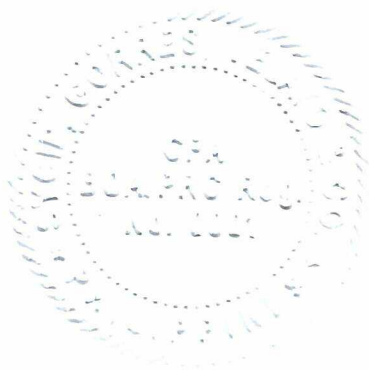
Tax Identification No. 301-106-741

BOA/PRC Reg. No. 0001, April 16, 2024, valid until August 23, 2026

BIR Accreditation No. 08-001998-158-2024, October 2, 2024, valid until October 1, 2027

PTR No. 10465400, January 2, 2025, Makati City

March 26, 2025



BENGUET CORPORATION

PARENT COMPANY STATEMENTS OF FINANCIAL POSITION

(Amounts in Thousands, Except Number of Shares)

| | December 31 | |
|---|-------------------|-------------------|
| | 2024 | 2023 |
| ASSETS | | |
| Current Assets | | |
| Cash and cash equivalents (Note 4) | ₱453,658 | ₱227,097 |
| Trade and other receivables (Note 5) | 329,495 | 395,252 |
| Inventories (Note 6) | 40,584 | 52,168 |
| Amounts owed by related parties (Note 24) | 370,377 | 373,316 |
| Financial assets at fair value through profit or loss (FVPL) (Note 7) | — | 21,441 |
| Other current assets (Note 8) | 82,770 | 146,893 |
| Total Current Assets | 1,276,884 | 1,216,167 |
| Noncurrent Assets | | |
| Investments in subsidiaries (Note 9) | 2,497,130 | 2,494,630 |
| Property, plant, and equipment (Note 10) | | |
| At revalued amount | 1,687,394 | 1,574,558 |
| At cost | 428,935 | 444,376 |
| Investment properties (Note 32) | 2,837,355 | 2,553,620 |
| Deferred mine exploration costs (Note 11) | 475,597 | 449,037 |
| Other noncurrent assets (Note 12) | 417,032 | 313,081 |
| Total Noncurrent Assets | 8,343,443 | 7,829,302 |
| TOTAL ASSETS | ₱9,620,327 | ₱9,045,469 |
| LIABILITIES AND EQUITY | | |
| Current Liabilities | | |
| Trade and other payables (Note 13) | ₱187,968 | ₱146,149 |
| Loans payable (Note 14) | — | 327,299 |
| Amounts owed to related parties (Note 24) | 611,232 | 164,028 |
| Liability for mine rehabilitation – current (Note 16) | 4,869 | 17,783 |
| Lease liabilities - current (Note 31) | 942 | 2,695 |
| Total Current Liabilities | 805,011 | 657,954 |
| Noncurrent Liabilities | | |
| Pension liability (Note 26) | 34,419 | 54,555 |
| Liability for mine rehabilitation - net of current portion (Note 16) | 24,972 | 21,290 |
| Lease liabilities - net of current portion (Note 31) | 3,479 | 2,576 |
| Deferred tax liabilities - net (Note 27) | 748,590 | 714,006 |
| Deposit for future stock subscription (Note 17) | 20,000 | — |
| Other noncurrent liability (Note 15) | 49,136 | 49,136 |
| Total Noncurrent Liabilities | 880,596 | 841,563 |
| Total Liabilities | 1,685,607 | 1,499,517 |
| Equity | | |
| Capital stock (Note 17) | 714,277 | 624,277 |
| Capital surplus | 686,627 | 415,547 |
| Cost of share-based payment (Note 18) | 8,225 | 8,104 |
| Other components of equity: | | |
| Revaluation increment on land (Note 10) | 1,435,696 | 1,351,069 |
| Unrealized gain on transfer of mining rights (Note 1) | 1,000,000 | 1,000,000 |
| Remeasurement gain on pension liability (Note 26) | 18,162 | 15,031 |
| Unrealized loss on financial assets at FVOCI (Note 12) | (177) | (180) |
| Retained earnings | 4,079,926 | 4,140,120 |
| | 7,942,736 | 7,553,968 |
| Treasury shares (Note 17) | (8,016) | (8,016) |
| Total Equity | 7,934,720 | 7,545,952 |
| TOTAL LIABILITIES AND EQUITY | ₱9,620,327 | ₱9,045,469 |

See accompanying Notes to Parent Company Financial Statements.



BENGUET CORPORATION**PARENT COMPANY STATEMENTS OF INCOME****(Amounts in Thousands)**

| | Years Ended December 31 | |
|---|--------------------------------|-----------------|
| | 2024 | 2023 |
| REVENUE (Note 19) | ₱888,511 | ₱723,982 |
| OPERATING COSTS AND EXPENSES | | |
| Cost of mine products sold (Note 20) | 593,782 | 546,103 |
| Selling, general and administrative (Note 21) | 263,502 | 237,094 |
| Taxes on sale of mine products (Note 19) | 31,642 | 25,464 |
| | 888,926 | 808,661 |
| INTEREST EXPENSE (Notes 14 and 31) | 7,294 | 2,521 |
| OTHER INCOME - net (Note 23) | 109,179 | 625,267 |
| INCOME BEFORE INCOME TAX | 101,470 | 538,067 |
| PROVISION FOR INCOME TAX (Note 27) | 18,107 | 10,070 |
| NET INCOME | ₱83,363 | ₱527,997 |

See accompanying Notes to Parent Company Financial Statements.

BENGUET CORPORATION**PARENT COMPANY STATEMENTS OF COMPREHENSIVE INCOME****(Amounts in Thousands)**

| | Years Ended December 31 | |
|--|--------------------------------|-----------------|
| | 2024 | 2023 |
| NET INCOME | ₱83,363 | ₱527,997 |
| OTHER COMPREHENSIVE INCOME (LOSS) - NET OF TAX | | |
| <i>Items not to be reclassified to profit or loss in subsequent periods:</i> | | |
| Revaluation of land (Note 10) | 84,627 | 45,174 |
| Remeasurement gain (loss) on pension liability (Note 26) | 3,131 | (2,024) |
| Unrealized gain on financial assets at FVOCI (Note 12) | 3 | 42 |
| TOTAL OTHER COMPREHENSIVE INCOME | 87,761 | 43,192 |
| TOTAL COMPREHENSIVE INCOME | ₱171,124 | ₱571,189 |

See accompanying Notes to Parent Company Financial Statements.

BENGUET CORPORATION

PARENT COMPANY STATEMENTS OF CHANGES IN EQUITY

FOR THE YEARS ENDED DECEMBER 31, 2024 AND 2023

(Amounts in Thousands)

| | Capital stock
(Note 17) | Capital surplus | Cost of share-based payment
(Note 18) | Other components of equity | | | | Total other comprehensive income | Retained earnings | Treasury stock
(Note 17) | Total |
|---|----------------------------|-----------------|--|--|--|---|--|----------------------------------|-------------------|-----------------------------|-------------------|
| | | | | Unrealized losses on financial assets at FVOCI (Note 12) | Unrealized gain from transfer of mining right (Note 1) | Revaluation increment on land (Note 10) | Remeasurement gains on pension liability (Note 26) | | | | |
| Balances at January 1, 2023 | ₱624,015 | ₱415,110 | ₱6,275 | (₱222) | ₱1,000,000 | ₱1,305,895 | ₱17,055 | ₱2,322,728 | ₱3,612,123 | (₱8,016) | ₱6,972,235 |
| Stock options expense (Notes 18 and 22) | – | – | 2,260 | – | – | – | – | – | – | – | 2,260 |
| Stock options exercised (Note 17) | 262 | 437 | (431) | – | – | – | – | – | – | – | 268 |
| Net income | – | – | – | – | – | – | – | – | 527,997 | – | 527,997 |
| Other comprehensive income (loss) | – | – | – | 42 | – | 45,174 | (2,024) | 43,192 | – | – | 43,192 |
| Total comprehensive income | – | – | – | 42 | – | 45,174 | (2,024) | 43,192 | 527,997 | – | 571,189 |
| Balances at December 31, 2023 | ₱624,277 | ₱415,547 | ₱8,104 | (₱180) | ₱1,000,000 | ₱1,351,069 | ₱15,031 | ₱2,365,920 | ₱4,140,120 | (₱8,016) | ₱7,545,952 |
| Stock issuance (Note 17) | 90,000 | 270,000 | – | – | – | – | – | – | – | – | 360,000 |
| Stock options expired (Note 18) | – | 1,080 | (1,080) | – | – | – | – | – | – | – | – |
| Stock options expense (Notes 18 and 22) | – | – | 1,201 | – | – | – | – | – | – | – | – |
| Dividend declaration (Note 17) | – | – | – | – | – | – | – | – | (143,557) | – | (143,557) |
| Net income | – | – | – | – | – | – | – | – | 83,363 | – | 83,363 |
| Other comprehensive income | – | – | – | 3 | – | 84,627 | 3,131 | 87,761 | – | – | 87,761 |
| Total comprehensive income | – | – | – | 3 | – | 84,627 | 3,131 | 87,761 | (60,194) | – | 27,567 |
| Balances at December 31, 2024 | ₱714,277 | ₱686,627 | ₱8,225 | (₱177) | ₱1,000,000 | ₱1,435,696 | ₱18,162 | ₱2,453,681 | ₱4,079,926 | (₱8,016) | ₱7,934,720 |

See accompanying Notes to Parent Company Financial Statements.



BENGUET CORPORATION**PARENT COMPANY STATEMENTS OF CASH FLOWS****(Amounts in Thousands)**

| | Years Ended December 31 | |
|---|--------------------------------|------------------|
| | 2024 | 2023 |
| OPERATING ACTIVITIES | | |
| Income before tax | ₱101,470 | ₱538,067 |
| Adjustments for: | | |
| Loss on debt settlement (Note 23) | 309,396 | — |
| Revaluation loss (gain) on investment properties (Notes 23 and 32) | (283,735) | 20,140 |
| Depreciation and depletion (Notes 6, 10, 20 and 21) | 21,603 | 19,779 |
| Movements in pension liability | (15,961) | 7,379 |
| Movements in liability for mine rehabilitation | (12,836) | 6,563 |
| Interest expense (Notes 14 and 31) | 7,294 | 2,521 |
| Interest income (Notes 4, 8, 12 and 23) | (3,208) | (4,450) |
| Stock options expense (Notes 18 and 22) | 1,201 | 2,260 |
| Unrealized foreign exchange gains (Note 23) | (3) | (82) |
| Dividend income (Notes 9 and 23) | — | (518,333) |
| Unrealized gain on financial assets at FVPL (Notes 7 and 23) | — | (638) |
| Operating income before working capital changes | 125,221 | 73,206 |
| Decrease (increase) in: | | |
| Trade and other receivables | 65,757 | (102,240) |
| Inventories | 11,584 | 3,844 |
| Other current assets | 37,069 | 49,036 |
| Increase (decrease) in trade and other payables | 12,845 | (44,177) |
| Net cash generated from (used in) operations | 252,476 | (20,331) |
| Interest paid | (7,294) | (318) |
| Interest received | 3,208 | 4,450 |
| Net cash generated from (used in) operating activities | 248,390 | (16,199) |
| INVESTING ACTIVITIES | | |
| Additions to: | | |
| Deferred mine exploration costs (Note 11) | (26,560) | (27,245) |
| Short-term investments (Note 8) | (10,000) | (24,280) |
| Mine rehabilitation fund | (7,779) | — |
| Property, plant and equipment (Note 10) | (2,559) | (43,011) |
| Investment in subsidiaries (Note 9) | (2,500) | (11,875) |
| Financial assets at FVPL (Note 7) | — | (20,005) |
| Proceed from: | | |
| Disposal of short-term investments (Note 8) | 24,280 | — |
| Disposal of financial assets at FVPL (Note 7) | 21,441 | — |
| Dividends income (Notes 9 and 23) | — | 518,333 |
| Decrease (increase) in | | |
| Amounts owed by related parties | 2,939 | 1,957 |
| Other noncurrent assets | (96,169) | (13,045) |
| Payments of advances to supplier of aircraft (Note 12) | — | (4,054) |
| Net cash generated from (used in) investing activities | (96,907) | 376,775 |
| FINANCING ACTIVITIES | | |
| Increase (decrease) in amounts owed to related parties | 447,204 | (289,812) |
| Proceeds from | | |
| Stock issuance (Note 17) | 360,000 | — |
| Deposit for future stock subscription (Note 17) | 20,000 | — |
| Exercise of stock option (Note 17) | — | 268 |
| Payments of: | | |
| Loans payable (Note 14) | (643,211) | — |
| Dividends (Note 17) | (108,068) | — |
| Principal portion of lease liabilities (Note 31) | (850) | (1,495) |
| Net cash generated from (used in) financing activities | 75,075 | (291,039) |
| NET INCREASE IN CASH AND CASH EQUIVALENTS | 226,558 | 69,537 |
| EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS | 3 | 82 |
| CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR | 227,097 | 157,478 |
| CASH AND CASH EQUIVALENTS AT END OF YEAR (Note 4) | ₱453,658 | ₱227,097 |

See accompanying Notes to Financial Statements.



BENGUET CORPORATION

NOTES TO PARENT COMPANY FINANCIAL STATEMENTS

(Amounts in Thousands, Except Number of Shares, Per Share Data and When Indicated)

1. Corporate Information, Status of Business Operations and Authorization for the Issuance of the Parent Company Financial Statements

Corporate Information

Benguet Corporation (the Company) was incorporated in the Philippines on August 12, 1903 and was listed in the Philippine Stock Exchange (PSE) on January 4, 1950.

The Company is currently engaged in gold and other metallic and nonmetallic mineral production, exploration, research and development and natural resource projects.

The Company's registered office address is 7th Floor, Universal Re-Building, 106 Paseo de Roxas, 1226 Makati City.

Status of Business Operations

Quasi-reorganization

On December 5, 2011, the Philippine Securities and Exchange Commission (SEC) approved the application of the Company for quasi-reorganization to wipe out its deficit as at December 31, 2010 against its capital surplus and revaluation increment as follows:

| | <i>Prior to quasi-reorganization</i> | <i>Effect of quasi-reorganization</i> | <i>After quasi-reorganization</i> |
|-----------------------|--------------------------------------|---------------------------------------|-----------------------------------|
| Capital surplus | ₱1,153,579 | (₱1,153,579) | ₱— |
| Revaluation increment | 1,561,048 | (1,010,848) | 550,200 |
| Deficit | (2,164,427) | 2,164,427 | — |

For purposes of dividend declaration, the retained earnings of the Company shall be restricted to the extent of the deficit wiped out by the revaluation increment amounting to ₱1.01 billion until the asset to which the revaluation increment relates is disposed. In addition, the retained earnings of the Company shall be restricted further by the accumulated fair valuation gains of investment properties amounting to ₱1,262.69 million and ₱978.96 million as at December 31, 2024 and 2023, respectively (see Note 32).

On December 10, 2010, the Company and Benguetcorp Resources Management Corporation (BRMC) entered into a Deed of Exchange, whereby the Company transferred its interest in the nickel laterite mine in Sta. Cruz, Zambales. The transfer covers Mineral Production Sharing Agreement (MPSA) No. 226-2005-III, mine technical data and all related environmental and other permits of the nickel laterite mine valued at a total of ₱1,000,000. BRMC issued 1,000,000,000 ordinary shares to the Company, with par value of ₱1.00 per share, as consideration for the transfer. The transfer of the MPSA was approved by the Mines and Geosciences Bureau (MGB) on January 16, 2012.



Business Operations

Significant developments in the Company's operations follow:

a. Mining Projects

Benguet Gold Operations (BGO)

The Company produces gold from the Benguet mines, consisting of the Acupan and Kelly underground mines which were suspended in 1992, following the 1991 earthquake, that flooded the said underground mines. In 2003, BGO resumed operations and production is partly carried out through independent mining contractors in Acupan Contract Mining Project (ACMP) which is a community-based underground mining project.

The Company is currently working on exploration and drilling programs to upgrade BGO's capacity. The exploration and geology group completed the design for the surface and underground diamond drilling program for the Phase 1 of the Greater Acupan Project.

The related feasibility study for Greater Acupan Project was approved in 2013 and the Company is still raising the necessary funds to start the execution of the project.

On October 28, 2016, the Company received from the DENR the mine audit report dated October 21, 2016, which was conducted pursuant to DENR Memorandum Circular No. 2016-01 requiring audit of all operating mines. The audit report recommended the suspension of the Company's mining operations and required the Company to submit an explanation.

On November 1, 2016, the Company submitted an explanation to the DENR stating that there are no legal and factual bases to suspend the Company's operations.

On February 14, 2017, the Company received from DENR cancellation order dated February 8, 2017 which cancel the patent authority to undertake mining operations (PC-ACMP-002-CAR) in BGO for violation of mining and environmental laws, rules and regulations.

On February 22, 2017, the Company filed a Notice of Appeal before the Office of the President, which stayed the execution of the cancellation order. On March 22, 2017, the Company submitted to the Office of the President its Appeal Memorandum. As of March 26, 2025, the Office of the President has not yet resolved the appeal.

In November 2019, the DENR directed the regional offices of the Mines and Geosciences Bureau (MGB) and Environmental Management Bureau (EMB) to validate the environmental compliance of BGO as input to early resolution of the appeal. In January 2020, MGB submitted a favorable validation report to DENR. and recommended to set aside the cancellation order which was favorably acted upon. Hence, as at December 31, 2024, the Company continues to mine and operate.

On April 17, to 18, 2024, NQA Philippines, Inc. (NQA), an independent evaluation and certification body, conducted ISO 14001:2015 Surveillance Audit for BGO. The ISO certification is valid until March 15, 2025. As at March 26, 2025, BGO is in the process of rescheduling its recertification with NQA.



Irisan Lime Project (ILP)

The Company's ILP in Irisan, Baguio is engaged in the production and trading of quicklime. ILP produced 6,177 tons and 6,553 tons of quicklime in 2024 and 2023, respectively. On March 22, 2022, the Mineral Processing Permit (MPP) for the ILP was renewed for a period of five years or until March 21, 2027.

Benguet Antamok Gold Operation (BAGO)

The Company's BAGO in Itogon, Benguet has been suspended since August 1998. BAGO has an estimated resource of about 12.4 million tons, averaging 3.45 grams of gold per ton, at the end of 1999. Pursuant to DAO No. 2010-04, the Company's Application for Mineral Production Sharing Agreement (APSA) in the Cordillera Administrative Region (CAR) was denied on February 8, 2011. Subsequently, the Company filed an appeal on April 15, 2011 with MGB Central Office and elevated the appeal to the DENR. On October 5, 2021, the DENR granted the appeal and the APSA was reinstated back to the Company.

In October 2016, a leak occurred in BAGO's tailings dam, which affected the Liang River. In response to the DENR show cause letter dated November 23, 2016, the Company explained that there was no negligence because the incident was due to force majeure and the tailings leak was immediately remediated. The Company also emphasized that it has no existing mining operations in BAGO as it has long been suspended. The BAGO open pit mine and the BAGO underground mine has not operated since 1998 and 1989, respectively. The Company contended that its infrastructure in BAGO is under care and maintenance. On January 1, 2017, the case was elevated to the Pollution Adjudication Board (PAB) from the Environmental Management Bureau (EMB), where the Company submitted its Position Paper. No subsequent updates as of March 26, 2025.

Masinloc Chromite Operation (MCO)

From 1934 to 2007, the Company managed the Coto Mine under an operating agreement with its claim owner, Consolidated Mines, Inc. (CMI). With the expiration of the operating agreement last July 8, 2007, the Company has transferred back the mine to CMI. As at March 26, 2025, the Company is still engaged in discussion with CMI over the liquidation of MCO's assets.

b. Exploration, Research and Development Projects

Balatoc Tailings Project (BTP)

The Company's Board of Directors (BOD) approved an initial ₱10.00 million research and development fund for the BTP in Itogon, Benguet for the study on the feasibility of reprocessing 16.70 million tons of tailings resource with an average of 0.69 grams gold per ton and is estimated to contain 371,000 ounces of gold. A core research and development team, together with the Beijing Geological Research Institute of Mining and Metallurgy, has done the analysis toward the preparation and completion of the bankable feasibility study.

On October 21, 2009, the Company appointed ATR Kim Eng Capital Partners, Inc. as financial advisor to raise additional development capital for the BTP.

On the same date, the Company entered into a processing agreement with the Balatoc Gold Resources Corporation (BGRC), a subsidiary, to implement the BTP. The Company has completed the bankable feasibility study of the BTP and engaged external Competent Persons to prepare and review reports as required under the Philippine Mineral Reporting Code modeled after the Joint Ore Reserve Committee of Australia.



In September 2010, the Company signed a Deed of Assignment with BGRC to transfer MPP No. 13-2010-CAR covering the BTP subject to approval by the DENR. The MPP allows reprocessing of the impounded mill tailings from the Acupan mines for recovery of residual gold. In November 2011, the transfer of the MPP was approved by the DENR-MGB.

BGRC continued the activities on expansion and rehabilitation of its penstocks at Tailings Pond Nos. 2 and 3 and earthmoving works on the silt dam at Gold Creek and the Ambalanga River pumping station, and the ridge enhancement works on Tailings Ponds Nos. 2 and 3.

On January 17, 2013, the Company's BOD authorized and approved the deed of exchange between the Company and BGRC covering all of the Company's rights and interest in BTP in exchange of BGRC's shares.

Following the expiration of MPP No. 13-2010-CAR, BGRC reconveyed to the Company on March 16, 2016 and this was approved by the DENR-MGB on May 31, 2016.

Antamok Tailings Project (ATP)

The ATP, which targeted the BAGO mill tailings pond, was conceived as a possible additional resource that could be developed similar to the Balatoc Tailings Project. The BAGO tailings pond, located a few hundred meters downstream from the BAGO open pit mine, contains some 7.64 million tons of tailings produced from the BAGO milling operations. In addition, a considerable tonnage of extraneous materials, estimated at about 1.95 million tons washed from the BAGO pit over the years from the Otek marginal grade material dump and from the numerous illegal miners' workings, found its way into the pond and is now resting on top of the tailings deposit. A preliminary sampling of these extraneous materials showed that these can be considered for exploitation together with the original tailings in the pond. More core drilling, however, may be required to firm up the resource estimate of these impounded materials.

The Company has approved an initial ₱7.50 million research fund for the ATP for the feasibility study on the reprocessing. The Company is conducting a feasibility study on the reprocessing of tailings from the BAGO, which are impounded in the tailings pond downstream of the old BAGO mill. The initial drilling conducted to test the impounded materials indicates a grade of 4.0 grams of gold per ton.

Surigao Coal Prospect (SCP)

Pre-development activities for the SCP were put on hold in 2011 due to DENR Circular Executive Order (EO) 23, series of 2011, which declares a moratorium on the cutting of timber in the natural and residual forests. The City Environment and Natural Resources Office of the Municipality of Lianga denied the Company's request for a tree inventory, which is preparatory to the application for a cutting permit. The decision was reversed in January 2012 after the issuance of a memorandum from the Executive Secretary, which exempted exploration and mining activities from the said EO. The Company is in the process of completing the requirements to secure permits for the development of the project. A preliminary hydrology study was done at the nearby Hubo river's water source to assess if the volume capacity of the river system can support a hydro plant, which will complement the Coal Power Plant Study. The Company's application for new Coal Operating Contract (CoC) with the Department of Energy can now proceed with the submission of Certificate of No Mining Ban from the provincial Local Government Unit (LGU).



Ampucao Copper-Gold Prospect (Ampucao Prospect)

The Ampucao Prospect is partly located inside the contract claims of Pugo Mining Company in the southern part of Benguet's Acupan gold mine. The initial exploration work conducted by the Company's geologists indicates a porphyry copper-gold mineralization hosted in diorite below the 2000 level. Two test holes have been programmed to be drilled within the area but have been put on-hold pending the approval of the Exploration Permit Application (EXPA).

Pantangan Gold Prospect (PGP)

The PGP in Balanga, Bataan consists of 1,410 hectares covered by MPSA No. 154-2000-III. The property is under an operating agreement with Option to Purchase, with Balanga Bataan Minerals Corporation, signed in March 1996. Surface mineralization consists of quartz and clay veins, ranging from 0.70 meters to 10 meters wide, with gold and silver values. The Company has implemented drilling programs in the property starting in 2020. On October 14, 2024, the DENR approved the renewal of the MPSA for the second 25 year term commencing March 31, 2025.

Recent geological works in the Pantangan property have also led to the identification of two parcels composed of Block-1 and Block-3 area called PAB-1 and PAB-2 located inside the mineral tenement hosting high quality mountain rock deposits with favorable potential for rock aggregates. The potential rock formations are composed of consolidated volcanic conglomerate and massive andesite units based on their actual ground analysis. The large-scale quarry in PAB-1 and PAB-2 within the MPSA still needs drilling for Declaration of Mining Project Feasibility (DMPF).

On the aggregates prospect outside the MPSA, the Company continues to do topographical/road surveys and apply for permits including for road-right-of-way in the 40-hectares and 30-hectares Quarry Permit Area (QPA). The MGB has issued area clearance in the 30-hectares QPA, EMB has approved the ECC, and NCIP has given a certificate of non-coverage. The Company is working on LGU consent and tree inventory.

BOLCO Gold Prospect (BOLCO)

BOLCO in R.T. Lim, Zamboanga Sibugay consists of 340.3 hectares of land area and is under an operating agreement with Orelina Mining Corporation (OMC). An exploration program to evaluate the mineral potential of the main structure at depth is being undertaken following the DENR approval of the Exploration Permit (EP) on December 5, 2023. Before, the APSA was denied on May 12, 2010 and subject of an appeal on January 30, 2013, until it was reinstated by the DENR on November 4, 2020. It was afterwards converted to EXPA.

Financial and Technical Assistance Agreement (FTAA) Application

The Company and its subsidiary, Sagittarius Alpha Realty Corporation (SARC) have two pending FTAA applications consisting of land area totaling 72,806,291 hectares. The Company's FTAA application in Ilocos Norte (denominated as AFTA-003-I) and Apayao (denominated as AFTA No. 00033-CAR) are undergoing Free, Prior and Informed consent requirement through the Regional Office of the National Commission of Indigenous Peoples. Exploration work for the two areas will be undertaken as soon as the applications have been approved by the Philippine government.



c. Water Projects

Baguio City Bulk Water Supply Project (BCBWSP)

On August 16, 2005, the BOD of the Baguio Water District (BWD) issued to the Company a Notice of Award covering the BCBWSP. The Company's proposal is to convert its mined-out 440 Vein Open Pit into a water reservoir to supply 50,000 cubic meters of potable water per day to Baguio City.

On September 7, 2007, the BWD issued Board Resolution Number 30-2007, which resolved to terminate the bulk water supply contract negotiation and to scrap the project. The Company filed request for reconsideration on September 13, 2007.

On November 29, 2007, the BWD issued a Board Resolution denying the request for reconsideration. The Company then filed a case against BWD with the Regional Trial Court.

In 2020, pursuant to a Memorandum of Agreement (MOA) with Manila Water Company, Inc. (MWCI) regarding the assignment of water rights in Laboy River in connection with MWCI's bulk water supply proposal to Baguio City, the Company withdrew the case against BWD without prejudice to filing of a new case for recovery of cost and damages due to the aborted bidding award. The MOA with MWCI lapsed in 2023 and the Company invoked the long stop date of 3 years to demand reversion of water rights over Laboy River. In February 2024, MWCI and the Company executed a Deed of Assignment for the reconveyance of the Water Permit subject for National Water and Resources Board (NWRB) approval of the transfer. I

d. Land Development Projects

Kelly Special Economic Zone (KSEZ)

The Company has approved an initial budget of ₱4.90 million for the feasibility study covering the KSEZ and the potential of other real estate properties of the Company. On March 18, 2022, the Company transferred a portion of the said properties to Agua de Oro Ventures Corporation (ADOVC), a wholly owned subsidiary of BMC. The capital expenditures related to the implementation of the project will then be infused as equity of the Company in ADOVC. As at March 26, 2025, the said project has not yet materialized.

Authorization for the Issuance of the Parent Company Financial Statements

The parent company financial statements as at and for the years ended December 31, 2024 and 2023 were authorized for issuance by the BOD on March 26, 2025.

2. Summary of Material Accounting Policies

Basis of Preparation

The parent company financial statements have been prepared on a historical cost basis, except for land classified as property, plant and equipment which has been measured at revalued amount, and financial assets at fair value through profit or loss (FVPL), financial assets at fair value through other comprehensive income (FVOCI) and investment properties, which have been measured at fair value. The parent company financial statements are presented in Philippine peso, which is the Company's functional and presentation currency. All amounts are rounded to the nearest thousands (₱000), except as otherwise indicated.



Statement of Compliance

The parent company financial statements have been prepared in accordance with Philippine Financial Reporting Standard (PFRS) Accounting Standards.

New Standards, Interpretations and Amendments

The accounting policies adopted are consistent with those of the previous financial year, except for the adoption of amended standards effective in 2024. The Company has not early adopted any standard, interpretation or amendment that has been issued but is not yet effective. Adoption of these amended standards did not have an impact on the parent company financial statements:

- Amendments to PAS 1, *Classification of Liabilities as Current or Non-current*
- Amendments to PFRS 16, *Lease Liability in a Sale and Leaseback*
- Amendments to PAS 7 and PFRS 7, *Disclosures: Supplier Finance Arrangements*

Standards Issued but not yet Effective

Pronouncements issued but not yet effective are listed below. Unless otherwise indicated, the Company does not expect that the future adoption of the said pronouncements will have a significant impact on the parent company financial statements. The Company intends to adopt the following pronouncements when they become effective.

Effective beginning on or after January 1, 2025

- Amendments to PAS 21, *Lack of exchangeability*

Effective beginning on or after January 1, 2026

- Amendments to PFRS 9 and PFRS 7, *Classification and Measurement of Financial Instruments*
- Amendments to PFRS 9 and PFRS 7, *Contracts Referencing Nature-dependent Electricity*
- Annual Improvements to PFRS Accounting Standards—Volume 11
 - Amendments to PFRS 1, *Hedge Accounting by a First-time Adopter*
 - Amendments to PFRS 7, *Gain or Loss on Derecognition*
 - Amendments to PFRS 9, *Lessee Derecognition of Lease Liabilities and Transaction Price*
 - Amendments to PFRS 10, *Determination of a 'De Facto Agent'*
 - Amendments to PAS 7, *Cost Method*

Effective beginning on or after January 1, 2027

- PFRS 17, *Insurance Contracts*
- PFRS 18, *Presentation and Disclosure in Financial Statements*
- PFRS 19, *Subsidiaries without Public Accountability*

Deferred effectivity

- Amendments to PFRS 10, *Consolidated Financial Statements*, and PAS 28, *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*



Financial Instruments

Financial Assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, and subsequently measured at amortized cost, FVOCI, and FVPL.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Company's business model for managing them. With the exception of trade receivables that do not contain significant financing component or for which the Company has applied the practical expedient, the Company initially measures a financial asset at fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or which the Company has applied the practical expedient are measured at transaction price determined under PFRS 15.

In order for a financial asset to be classified and measured at amortized cost or FVOCI, it needs to give rise to cash flows that are 'solely payments of principal and interest on the principal amount outstanding' (the SPPI criterion). This assessment is referred to as the SPPI test and is performed at an instrument level. Financial assets with cash flows that are not SPPI are classified and measured at FVPL, irrespective of the business model.

The Company's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both. Financial assets classified and measured at amortized cost are held within a business model with the objective to hold financial assets in order to collect contractual cash flows while financial assets classified and measured at FVOCI are held within a business model with the objective of both holding to collect contractual cash flows and selling.

Subsequent Measurement

The subsequent measurement of financial assets depends on their classification as follows:

- *Financial assets at amortized cost (debt instruments)*
Financial assets at amortized cost are subsequently measured using the effective interest rate (EIR) method and are subject to impairment. Gains and losses are recognized in the Company statement of income when the asset is derecognized, modified or impaired.

The Company's financial assets at amortized cost include cash and cash equivalents, trade and other receivables (excluding advances to officers and employees), short-term investments and refundable deposits which are included under "Other current assets" and "Other noncurrent assets", respectively in the parent company statements of financial position, and amounts owed by related parties (see Notes 4, 5, 8, and 24).

- *Financial assets at FVPL*
Financial assets at FVPL are carried in the parent company statement of financial position at fair value with net changes in fair value recognized in the parent company statement of income.

The Company's financial assets at FVPL include its investments in unit investment trust fund (UITF) (see Note 7).



- *Financial assets at FVOCI (equity instruments)*

Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the parent company statement of income when the right of payment has been established, except when the Company benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded OCI. Equity instruments designated at FVOCI are not subject to impairment assessment.

The Company's financial assets at FVOCI include investment in quoted shares which is included under "Other Noncurrent assets" in the parent company statements of financial position (see Note 12).

Impairment

The Company recognizes an allowance for expected credit losses (ECLs) for all debt instruments not held at FVPL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Company expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

For cash and cash equivalents and short-term investments, the Company applies the low credit risk simplification. The probability of default and loss given defaults are publicly available and are considered to be low credit risk investments. It is the Company's policy to measure ECLs on such instruments on a 12-month basis. However, when there has been a significant increase in credit risk since origination, the allowance will be based on the lifetime ECL. The Company uses publicly available ratings to determine whether the debt instrument has significantly increased in credit risk and to estimate ECLs.

For trade receivables, the Company applies a simplified approach in calculating ECLs. Therefore, the Company does not track changes in credit risk, but instead recognized a loss allowance based on lifetime ECL at each reporting date. The Company has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

For amounts owed by related parties, other receivables, and refundable deposits, the Company calculates ECLs at initial recognition by considering the consequences and probabilities of possible defaults only for the next 12 months, rather than the life of the asset. It continues to apply this method until a significant increase in credit risk has occurred, at which point the loss allowance is measured based on lifetime ECLs.

At each reporting date, the Company assesses whether there has been a significant increase in credit risk for financial assets since initial recognition by comparing the risk of default occurring over the expected life between the reporting date and the date of initial recognition. The Company considers reasonable and supportable information that is relevant and available without undue cost or effort for this purpose. This includes quantitative and qualitative information and forward-looking analysis.

Exposures that have not deteriorated significantly since origination, or where the deterioration remains within the Company's investment grade criteria are considered to have a low credit risk. The provision for credit losses for these financial assets is based on a 12-month ECL. The low credit risk exemption has been applied on debt investments that meet the investment grade criteria of the Company from the time of origination.



An exposure will migrate through the ECL stages as asset quality deteriorates. If, in a subsequent period, asset quality improves and also reverses any previously assessed significant increase in credit risk since origination, then the loss allowance measurement reverts from lifetime ECL to 12-months ECL.

The Company considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Company may also consider a financial asset to be in default when internal or external information indicates that the Company is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Company. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Financial Liabilities

Initial recognition, measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at FVPL, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

Subsequent Measurement - Financial liabilities at amortized cost (loans and borrowings)

After initial measurement, loans and borrowings and payables are subsequently measured at amortized cost using the EIR method.

Derecognition - Financial liabilities at amortized cost (loans and borrowings)

Derecognition of a financial liability occurs when the liability is removed from the balance sheet. This typically happens when the obligation specified in the contract is discharged, cancelled, or expires. Financial liability is derecognized through payment, or the terms of the liability are modified, and the modification results in a substantial change in the cash flows. The difference between the carrying amount of a financial liability derecognized and the consideration paid is recognized in profit or loss.

The Company's financial liabilities include trade and other payables (excluding payables to government agencies), loans payable, lease liabilities, amounts owed to related parties, and other noncurrent liability (see Notes 13, 14, 15, 24 and 31).

Fair Value Measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible to the Company. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.



A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use. The Company uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 - Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 - Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognized in the parent company financial statements at fair value on a recurring basis, the Company determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

For the purpose of fair value disclosures, the Company has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy.

Inventories

Inventories are valued at the lower of cost or net realizable value (NRV). Costs incurred in bringing each product to its present location and condition are accounted for as follows:

| | | |
|---------------------------|---|---|
| Materials and supplies | - | at purchase price less purchase discount, returns and rebates on a first-in, first-out method |
| Quicklime and slaked lime | - | at cost on a moving average production method |
| Gold buttons | - | at cost on a moving average production method |

NRV for materials and supplies represents the current replacement cost. NRV of gold buttons is the estimated selling price in the ordinary course of business less estimated costs of completion and the estimated costs necessary to make the sale.

Value Added Tax (VAT)

Revenues, expenses, and assets are recognized net of the amount of VAT, if applicable.

When VAT from sales of goods and/or services (output VAT) exceeds VAT passed on from purchases of goods or services (input VAT), the excess is recognized as payable in the parent company statement of financial position. When VAT passed on from purchases of goods or services (input VAT) exceeds VAT from sales of goods and/or services (output VAT), the excess is recognized as an asset in the parent company statement of financial position to the extent of the recoverable amount.



Investments in Subsidiaries

The investment in subsidiaries is carried in the parent company statement of financial position at cost less any impairment in value. Dividends received are recognized as income.

Property, Plant and Equipment

Property, plant and equipment, except land, are stated at cost, excluding the costs of day-to-day servicing, less accumulated depreciation, depletion and amortization and accumulated impairment in value. Such cost includes the cost of replacing part of such property, plant and equipment and borrowing costs for long-term construction projects if the recognition criteria are met.

When significant parts of property, plant and equipment are to be replaced at intervals, the Company recognizes such parts as individual assets with specific useful lives and depreciates them accordingly. Likewise, when a major inspection is performed, its cost is recognized in the carrying amount of the property, plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in the parent company statement of income as incurred. The present value of the expected cost for the decommissioning of an asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

Construction in progress (CIP) is stated at cost. This includes costs of construction and other direct costs related to the asset being constructed. CIP is not depreciated until such time that the relevant asset is completed, transferred to the appropriate account and put into operational use.

Land is carried at revalued amount less any impairment in value. Valuations are performed with sufficient frequency to ensure that the carrying amount of a revalued asset does not differ materially from its fair value.

The increment, net of deferred tax liability, resulting from the revaluation of land is credited to revaluation increment on land under the other components of equity caption included in the equity section in the parent company statement of financial position. However, to the extent that it reverses a revaluation deficit of the same asset previously recognized in the parent company statement of income, the increase is recognized in parent company statement of income. A revaluation deficit is recognized in the parent company statement of income, except to the extent that it offsets an existing surplus on the same asset recognized in the revaluation increment. Upon derecognition of the revalued property, the relevant portion of the revaluation increment realized in respect of previous valuations is released from the revaluation increment directly to retained earnings.

Depreciation and amortization are computed on a straight-line basis over the estimated useful lives of the assets as follows:

| <u>Category</u> | <u>Number of years</u> |
|--------------------------------|------------------------|
| Land improvements | 10-25 |
| Buildings | 10-20 |
| Machinery, tools and equipment | 2-15 |

Depreciation of an item of property, plant and equipment begins when it becomes available for use, i.e., when it is in the location and condition necessary for it to be capable of operating in the manner intended by management. Depreciation, depletion and amortization ceases at the earlier of the date that the item is classified as held for sale (or included in a disposal Company that is classified as held for sale) in accordance with PFRS 5 and the date the asset is derecognized.



The useful lives and depreciation methods are reviewed periodically to ensure that the periods and methods of depreciation are consistent with the expected pattern of economic benefits from items of property, plant and equipment.

Right-of-Use Assets

The Company recognizes right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are initially measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The initial cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, lease payments made at or before the commencement date less any lease incentives received and estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease, unless those costs are incurred to produce inventories.

Unless the Company is reasonably certain to obtain ownership of the leased asset at the end of the lease term, the recognized right-of-use assets are depreciated on a straight-line basis over the shorter of their estimated useful life and lease term, as follows:

| Right-of-use asset | Number of years |
|--------------------------------|-----------------|
| Land | 15-25 |
| Office space | 3-8 |
| Machinery, tools and equipment | 2 |

Right-of-use assets are subject to impairment.

An item of property, plant and equipment and any significant part initially recognized is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the parent company statement of income in the year the asset is derecognized.

Fully depreciated assets are retained in the accounts until these are no longer in use. No further depreciation is charged to current operation for these items.

Mine and Mining Properties

Capitalized expenditure is assessed for impairment and is transferred from deferred exploration costs to mine development costs when it has been established that a mineral deposit is commercially mineable, development sanctioned, and a decision has been made to formulate a mining plan (which occurs upon completion of a positive economic analysis of the mineral deposit).

After transfer of the deferred exploration costs, all subsequent expenditure on the construction, installation or completion of infrastructure facilities is capitalized in mine development costs. Development expenditure includes costs considered integral to the development of the mine. Any costs incurred in testing the assets to determine if they are functioning as intended, are capitalized while any proceeds received from selling any product during testing shall be recognized in profit or loss.

No depletion is charged during the mine exploration or development phases.



When the Company has already achieved commercial levels of production, mine development costs are moved to mine and mining properties. Commercial production is deemed to have commenced when management determines that the completion of operational commissioning of major mine and plant components is completed, operating results are being achieved consistently for a period of time and that there are indicators that these operating results will be continued.

The carrying value of mine and mining properties represents total expenditures incurred to date on the area of interest, less accumulated depletion and any impairment.

When a mine construction project moves into the production phase, the capitalization of certain mine construction costs ceases, and costs are either regarded as part of the cost of inventory or expensed, except for costs which qualify for capitalization relating to mining asset additions, improvements or new developments, underground mine development or mineable reserve development.

Mine and mining properties are subject to depletion, which is computed using the units-of production method based on the economically recoverable reserves. Mine and mining properties include the initial estimate of provision for mine rehabilitation and decommissioning, for which the Company is constructively liable.

Investment Properties

Investment properties consist of assets that are held for rentals or for capital appreciation or both.

Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at fair value, which reflects market conditions at the reporting date. Gains or losses arising from changes in the fair values of investment properties are recognized in the parent company statements of income in the year in which they arise, including the corresponding tax effect. Fair values are determined based on the revaluation performed by an accredited external independent appraiser.

Investment properties are derecognized either when they have been disposed of, or when they are permanently withdrawn from use and no future economic benefit is expected from their disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the parent company statements of income in the period of derecognition.

Transfers are made to or from investment properties only when there is a change in use. For a transfer from investment property to owner-occupied property, the deemed cost for subsequent accounting is the fair value at the date of change in use. If owner-occupied property becomes an investment property, the Company accounts for such property in accordance with PAS 16, *Property, Plant and Equipment* up to the date of change in use.

Deferred Mine Exploration Costs

Exploration and evaluation activity involve the search for mineral resources, the determination of technical feasibility and the assessment of commercial viability of an identified resource.

Exploration and evaluation activity include:

- Researching and analyzing historical exploration data
- Gathering exploration data through geophysical studies
- Exploratory drilling and sampling
- Determining and examining the volume and grade of the resource
- Surveying transportation and infrastructure requirements
- Conducting market and finance studies



License costs paid in connection with a right to explore in an existing exploration area are capitalized and amortized over the term of the permit.

Once the legal right to explore has been acquired, exploration and evaluation expenditure is charged to profit or loss as incurred, unless the Company concludes that a future economic benefit is more likely than not to be realized. These costs include directly attributable employee remuneration, materials and fuel used, surveying costs, drilling costs and payments made to contractors.

In evaluating whether the expenditures meet the criteria to be capitalized, several different sources of information are used. The information that is used to determine the probability of future benefits depends on the extent of exploration and evaluation that has been performed.

Expenditure on exploration and evaluation is accounted for in accordance with the area of interest method. Exploration and evaluation expenditure is capitalized provided the rights to tenure of the area of interest is current and either: the exploration and evaluation activities are expected to be recouped through successful development and exploitation of the area of interest or, alternatively, by its sale; or exploration and evaluation activities in the area of interest have not, at the reporting date, reached a stage that permits a reasonable assessment of the existence or otherwise of economically recoverable reserves, and active and significant operations in, or relating to, the area of interest are continuing.

When the technical feasibility and commercial viability of extracting a mineral resource have been demonstrated, then, any fulfillment exploration and evaluation expenditure is reclassified as mine properties and mine development costs included as part of property, plant and equipment. Prior to reclassification, exploration and evaluation expenditure is assessed for impairment.

When a project is abandoned, the related deferred mine exploration costs are written off. Exploration areas are considered permanently abandoned if the related permits of the exploration have expired and/or there are no definite plans for further exploration and/or development.

Impairment of Nonfinancial Assets

The Company assesses, at the end of each reporting period, whether there is an indication that an asset may be impaired. If any such indication exists, or when annual impairment testing for an asset is required, the Company makes an estimate of the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. The recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Company bases its impairment calculation on most recent budgets and forecast calculations, which are prepared separately for each of the Company's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years.



Impairment losses of continuing operations, including impairment on inventories, are recognized in the parent company statements of income in expense categories consistent with the function of the impaired asset, except for properties previously revalued with the revaluation taken to OCI. For such properties, the impairment is recognized in OCI up to the amount of any previous revaluation.

For the other assets, an assessment is made at each end of the reporting period to determine whether there is an indication that previously recognized impairment losses no longer exist or have decreased. If such indication exists, the Company estimates the asset's or CGU's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, depletion or amortization, had no impairment loss been recognized for that asset in prior years. Such reversal is recognized in the parent company statements of income unless the asset is carried at revalued amount, in which case, the reversal is treated as a revaluation increase.

Deferred Mine Exploration Costs

The Company assesses whether facts and circumstances suggest that the carrying amount of deferred mine exploration costs may exceed its recoverable amount. Below are some of the facts and circumstances, which the Company considers in determining whether there is impairment on deferred mine exploration costs:

- the period for which the Company has the right to explore in the specific area has expired during the period or will expire in the near future, and is not expected to be renewed
 - substantive expenditure on further exploration for and evaluation of mineral resources in the specific area is neither budgeted nor planned
 - exploration for and evaluation of mineral resources in the specific area have not led to the discovery of commercially viable quantities of mineral resources and the entity has decided to discontinue such activities in the specific area, and
 - sufficient data exist to indicate that, although a development in the specific area is likely to proceed, the carrying amount of the deferred mine exploration costs is unlikely to be recovered in full of successful development or by sale
-
- Full provision is made for the impairment unless it is probable that such costs are expected to be recouped through successful exploration and development of the area of interest, or alternatively, by its sale. If the project does not prove to be viable or is abandoned, all revocable cost associated with the project and the related impairment provisions are written off.

Recovery of impairment losses recognized in prior years is recorded if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognized. The recovery is recorded in the parent company statements of income.

Provisions

General

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as interest expense in the parent company statements of income.



When the Company expects some or all of the provision to be reimbursed, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the parent company statements of income, net of any reimbursement.

Liability for Mine Rehabilitation

Mine rehabilitation costs will be incurred by the Company either while operating, or at the end of the operating life of, the Company's facilities and mine properties. The Company assesses its mine rehabilitation provision at each reporting date. The Company recognizes a rehabilitation provision where it has a legal and constructive obligation as a result of past events, and it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount of obligation can be made. The nature of these restoration activities includes: dismantling and removing structures; rehabilitating mines and tailings dams; dismantling operating facilities; closing plant and waste sites; and restoring, reclaiming and re-vegetating affected areas.

The obligation generally arises when the asset is installed or the ground/environment is disturbed at the mining operation's location. When the liability is initially recognized, the present value of the estimated costs is capitalized by increasing the carrying amount of the related mining assets to the extent that it was incurred as a result of the development or construction of the mine. Any rehabilitation obligations that arise through the production of inventory are recognized as part of the related inventory item. Additional disturbances that arise due to further development or construction at the mine are recognized as additions or charges to the corresponding assets and rehabilitation liability when these occur. Costs related to restoration of site damage (subsequent to start of commercial production) that is created on an ongoing basis during production are provided for at their net present values and recognized in profit or loss as extraction progresses.

Changes in the estimated timing of rehabilitation or changes to the estimated future costs are dealt with prospectively by recognizing an adjustment to the rehabilitation liability and a corresponding adjustment to the asset to which it relates, if the initial estimate was originally recognized as part of an asset measured in accordance with PAS 16.

Pension and Other Post-employment Benefits

The Company has noncontributory, defined benefit pension plan, covering all permanent, regular and full-time employees.

The net defined benefit liability or asset is the aggregate of the present value of the defined benefit obligation at the end of the reporting period reduced by the fair value of plan assets, adjusted for any effect of limiting a net defined benefit asset to the asset ceiling. The asset ceiling is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan.

The cost of providing benefits under the defined benefit plan is determined using the projected unit credit method.

Remeasurements, comprising of actuarial gains or losses, the effect of the ceiling, excluding amounts included in net interest on the net defined benefit liability and the return on plan assets (excluding amounts included in the net interest on the net defined benefit liability), are recognized immediately in the parent company statements of financial position with a corresponding debit or credit to retained earnings through OCI in the period in which these occur. Remeasurements are not reclassified to parent company statement of income in subsequent periods.



Past services costs are recognized in the parent company statement of income on the earlier of:

- The date of the plan amendment or curtailment, and
- The date that the Company recognizes related restructuring costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Company recognizes the following changes in the net defined benefit obligation under costs of mine products sold, costs of services and selling and general expenses in the parent company statement of income:

- Service costs comprising current service costs, past-service costs, gains and losses on curtailments and non-routine settlements
- Net interest expense or income

Plan assets are assets that are held by a long-term employee benefit fund or qualifying insurance policies. Plan assets are not available to the creditors of the Company, nor can they be paid directly to the Company. Fair value of plan assets is based on market price information. When no market price is available, the fair value of plan assets is estimated by discounting expected future cash flows using a discount rate that reflects both the risk associated with the plan assets and the maturity or expected disposal date of those assets (or, if they have no maturity, the expected period until the settlement of the related obligations). If the fair value of the plan assets is higher than the present value of the defined benefit obligation, the measurement of the resulting defined benefit asset is limited to the present value of economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan.

Share-based Payment Transactions

Employees (including senior executives) of the Company receive remuneration in the form of share-based payment transactions, whereby employees render services as consideration for equity instruments (equity-settled transactions).

The cost of equity-settled transactions is determined by the fair value at the date when the grant is made using an appropriate valuation model.

That cost is recognized, together with a corresponding increase in equity, over the period in which the performance and/or service conditions are fulfilled, in employee benefits expense. The cumulative expense recognized for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Company's best estimate of the number of equity instruments that will ultimately vest. The expense or credit in the parent company statement of income for a period represents the movement in cumulative expense recognized as at the beginning and end of that period and is recognized in employee benefits.

No expense is recognized for awards that do not ultimately vest, except for equity settled transactions for which vesting is conditional upon a market or non-vesting condition. These are treated as vesting irrespective of whether or not the market or non-vesting condition is satisfied, provided that all other performance and/or service conditions are satisfied.

Where the terms of an equity-settled award are modified, the minimum expense recognized is the expense computed based on the grant date fair value of the unmodified award, provided the original terms of the award are met. An additional expense, measured as at the date of modification, is recognized for any modification that increases the total fair value of the share-based payment transaction, or is otherwise beneficial to the employee. Where an award is cancelled by the Company or by the counterparty, any remaining element of the fair value of the award is expensed immediately through the parent company statement of income.



When the terms of an equity-settled award are cancelled, it is treated as if it had vested on the date of cancellation, and any expense not yet recognized for the award is recognized immediately. However, if a new award is substituted for the cancelled award and designated as a replacement award on the date that it is granted, the cancelled and new awards are treated as if they were a modification of the original award, as described in the previous paragraph.

Where an equity-settled award expires or is cancelled, its cost is transferred to additional paid-in capital.

Forfeitures revise the expense to reflect the best available estimate of the number of equity instruments expected to vest.

Foreign Currency-denominated Transactions and Translations

Transactions in foreign currencies are initially recorded by the Company using the functional currency exchange rate at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognized in the parent company statement of income with the exception of monetary items that are designated as part of the hedge of the Company's net investment of foreign operation. These are recognized in OCI until the net investment is disposed of, at which time, the cumulative amount is reclassified to the parent company statements of income. Tax charges and credits attributable to exchange differences on those monetary items are also recorded in OCI.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined. The gain or loss on translation of non-monetary items measured at fair value is treated in line with the recognition of the gain or loss on the change in fair value of the item (i.e., translation differences on items whose fair value gain or loss is recognized in OCI or parent company statement of income are also recognized in OCI or parent company statement of income, respectively).

Income Taxes

Current Tax

Current tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the tax authority. The income tax rates and income tax laws used to compute the amount are those that have been enacted or substantively enacted at the end of the reporting period.

Current income tax relating to items recognized directly in equity is recognized in equity and not in the parent company statements of income. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred Tax

Deferred tax is provided using the liability method on temporary differences at the reporting period between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognized for all taxable temporary differences.



Deferred tax assets are recognized for all deductible temporary differences, to the extent that it is probable that sufficient future taxable profit will be available against which the deductible temporary differences can be utilized.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient future taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at the end of each reporting period and are recognized to the extent that it has become probable that sufficient future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized, or the liability is settled, based on tax rates and tax laws that have been enacted or substantively enacted at the end of the reporting period.

Deferred tax relating to items recognized outside profit or loss is recognized outside profit or loss. Deferred tax items are recognized in correlation to the underlying transactions either in other comprehensive income or directly in equity.

Capital Stock and Capital Surplus

Common and preferred shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction from proceeds. The excess of proceeds from issuance of shares over the par value of shares less any incremental costs directly attributable to the issuance, net of tax, is credited to capital surplus.

Revenue Recognition

The Company is principally engaged in the business of producing gold and limes. Revenue from contracts with customers is recognized when control of the goods or services is transferred to the customer at an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services.

The Company has generally concluded that it is the principal in its revenue contracts because it typically controls the goods or services before transferring them to the customer.

Sale of Mine Products

Revenue from sale of mine products is recognized at the point in time when the control of the asset is transferred to the customer which is normally at the time of shipment, and the selling prices are known or can be reasonably estimated. Revenue from sale of gold is measured at the prevailing international gold buying price and prevailing Philippine peso to United States dollar buying rate set by the BSP Treasury department on a daily basis and is recognized based on the initial weight and assay tests, which represent the best estimate. Subsequent adjustments to revenue due to quantity and/or quality changes are recognized upon determination of the final weight and assay tests.

BSP Refining Charges

BSP refining charges are deducted from revenue to arrive at revenue from contracts with customers since BSP refining charges are necessary expenses by BSP in determining the final gold content.

Contingencies

Contingent liabilities are not recognized in the financial statements. These are disclosed unless the possibility of an outflow of resources embodying economic benefits is remote. Contingent assets are not recognized in the financial statements but are disclosed in the notes to parent company financial statements when an inflow of economic benefits is probable.



Events After the Reporting Period

Events after the end of the reporting period up to the auditor's report that provide additional information about the Company's position at the reporting period (adjusting events) are reflected in the parent company financial statements. Events after the end of the reporting period up to the auditor's report that are not adjusting events are disclosed in the notes to parent company financial statements when material.

3. Summary of Significant Accounting Judgments, Estimates and Assumptions

The preparation of the parent company financial statements in accordance with PFRS Accounting Standards requires the Company to make judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, income and expenses and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these judgements, estimates and assumptions could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgments, estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Actual results could differ from such estimates.

Judgments

In the process of applying the Company's accounting policies, management has made the judgment below, apart from those involving estimations, that have the most significant effect on the amounts recognized in the parent company financial statements.

Assessing Provisions and Contingencies

The Company is currently involved in various legal proceedings. The estimate of the probable costs for the resolution of these claims has been developed in consultation with outside counsel handling the Company's defense in these matters and is based upon an analysis of potential results. The Company currently assessed that these proceedings will not have a material adverse effect on its financial position. It is possible, however, that future results of operations could be materially affected by changes in the estimates or in the effectiveness of the strategies relating to these proceedings (see Note 33).

Distinction between Investment Property and Owner-Occupied Property

The Company determines whether a property qualifies as investment property. In making its judgment, the Company considers whether the property is not occupied substantially for use by, or in operations of the Company, not for sale in the ordinary course of business, but is held primarily to earn rental income or capital appreciation. Owner-occupied properties generate cash flows that are attributable not only to the property but also to the other assets used in the production or supply of goods and services.

Assessing Recoverability of Deferred Mine Exploration Costs

The Company reviews the recoverability of deferred mine exploration costs when events or changes in circumstances indicate that the carrying amount of deferred mine exploration costs may exceed its estimated recoverable amount.



The Company considers the following factors, among others, in its assessment:

- Status of each mine exploration project and plans on exploration and evaluation activities
- Validity of the licenses, permits and correspondences related to each mine exploration project
- Plans to abandon existing mine areas and plans to discontinue exploration activities
- Availability of information suggesting that the recovery of expenditure is unlikely

The Company's ability to realize its deferred exploration costs depends on the success of exploration and development work in proving the viability of its mining properties to produce minerals in commercial quantities, and the success of converting the Company's exploration permits to new mineral agreements, which cannot be determined at this time. The parent company financial statements do not include any adjustment that might result from these uncertainties.

As at December 31, 2024 and 2023, deferred mine exploration costs amounted to ₱475.60 million and ₱449.04 million, respectively (see Note 11).

Estimates and Assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the end of the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets within the next financial year, are discussed below. The Company based its assumptions and estimates on parameters available when the parent company financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Company. Such changes are reflected in the assumptions when these occur.

Provision for ECL on Trade and Other Receivables, Amounts owed by related parties, and Refundable Deposits under "Other Noncurrent Assets"

The Company uses the simplified approach in the assessment of the ECL of its trade receivables and general approach for its other receivables, amounts owed by related parties, and refundable deposits under "other noncurrent assets". An assessment of the ECL relating to these financial assets is undertaken upon initial recognition and each financial year and involves exercise of significant judgment. Key areas of judgment include defining default, determining assumptions to be used such as timing and amounts of expected net recoveries from defaulted accounts, determining debtor's capacity to pay, and incorporating forward looking information.

The carrying amount of trade and other receivables, amounts owed by related parties, and refundable deposits under "Other Noncurrent assets" amounted to ₱678.91 million and ₱669.61 million, net of allowance for ECL of ₱175.83 million and ₱175.68 million, as at December 31, 2024 and 2023, respectively (see Notes 5, 12, and 24).

Assessing Impairment of Input VAT under Other Current Assets and Advances to Suppliers and Contractors under Other Noncurrent Assets

The Company provides allowance for impairment losses on input VAT under other current assets and advances to suppliers and contractors under "Other noncurrent assets" when these can no longer be realized. The amounts and timing of recorded expenses for any period would differ if the Company made different judgments or utilized different estimates. An increase in allowance for probable loss would increase recorded expenses and decrease other current and noncurrent assets.

No provision for impairment losses was recognized in 2024 and 2023.

The total carrying value of input VAT under other current assets and advances to suppliers and contractors under noncurrent assets amounted to ₱353.86 million and ₱309.50 million as at December 31, 2024 and 2023, respectively (see Notes 8 and 12).



Estimating Ore Reserves

Ore reserves estimates are, to a large extent, based on the interpretation of geological data obtained from drill holes and other sampling techniques and feasibility studies. The Company estimates its ore reserves based on information compiled by appropriately qualified persons relating to the geological data on the size, depth and shape of the ore body, and requires complex geological judgments to interpret the data. The Company also makes estimates and assumptions regarding a number of economic and technical factors affecting ore reserves estimates, such as production rates, grades, foreign exchange rates, production and transport costs, and commodity prices.

These geological, economic and technical estimates and assumptions may change in the future in ways, which can affect the quality and quantity of the ore reserves. The Company reviews and updates estimates as required, but at least annually, to reflect actual production, new exploration data or developments and changes in other assumptions or parameters. These estimates will change from time to time to reflect mining activities, analyses of new engineering and geological data, changes in ore reserve and mineral resource holdings, modifications of mining plans or methods, changes gold prices or production costs, and other factors.

Changes in the ore reserves estimates may impact the carrying values of property, plant and equipment, provision for mine rehabilitation and decommissioning, recognition of deferred tax assets and depreciation and depletion charges.

As at December 31, 2024 and 2023, carrying values of mine and mining properties amounted to ₱408.66 million and ₱414.15 million, respectively (see Note 10). Depletion charges recognized amounted to ₱10.23 million and ₱11.20 million in 2024 and 2023, respectively (see Note 10).

As at December 31, 2024 and 2023, liability for mine rehabilitation amounted to ₱29.84 million and ₱39.07 million, respectively (see Note 16).

Estimating Recoverability of Property, Plant and Equipment

The Company assesses impairment on property, plant and equipment whenever events or changes in circumstances indicate that the carrying amount of the property, plant and equipment may not be recoverable. The factors that the Company considers important which could trigger an impairment review include the following:

- Significant underperformance relative to expected historical or projected future operating results
- Significant changes in the manner of use of the acquired assets or the strategy for overall business, and
- Significant negative industry or economic trends

In determining the present value of estimated future cash flows expected to be generated from the continued use of the property, plant and equipment, the Company is required to make estimates and assumptions such as commodity prices (considering current and historical prices, price trends and related factors), discount rates and foreign currency exchange rates, operating costs, future production levels and costs. These estimates and assumptions are subject to risk and uncertainty. Therefore, there is a possibility that changes in circumstances will impact these projections, which may impact the recoverable amount of assets. In such circumstances, some or all of the carrying amount of the assets may be further impaired or the impairment charge reduced with the impact recognized in the parent company statement of income.

The Company did not recognize any impairment loss in 2024 and 2023 on property, plant and equipment.



As at December 31, 2024 and 2023, property, plant and equipment at cost amounted to ₱428.94 million and ₱444.38 million, respectively (see Note 10).

Revaluation of Property, Plant and Equipment and Investment Properties

The Company carries its investment properties at fair value, with changes in fair value being recognized in the parent company statements of income. In addition, it measures its land under property, plant and equipment at revalued amounts, with changes in fair value being recognized in OCI. The land and investment properties were valued using the sales comparison approach. The determination of the fair values of these properties involves significant management judgment and estimations. The valuation also requires the assistance of external appraisers whose calculations also depend on certain assumptions, such as sales and listing of comparable properties registered within the vicinity and adjustments to sales price based on internal and external factors.

As at December 31, 2024 and 2023, the total fair value of the Company's land under property, plant and equipment, and investment properties amounted to ₱4,524.75 million and ₱4,128.18 million, respectively (see Notes 10 and 32).

Estimating Allowance for Inventory Obsolescence

The Company maintains an allowance for inventory losses at a level considered adequate to reflect the excess of cost of inventories over their NRV. NRV of inventories are assessed regularly based on prevailing estimated selling prices of inventories and the corresponding cost of disposal. Decrease in the NRV of inventories resulting in an amount lower than the original acquisition cost is accounted for as an impairment loss that is recognized in profit or loss.

As at December 31, 2024 and 2023, the carrying value of inventories amounted to ₱40.58 million and ₱52.17 million, respectively (see Note 6).

Unit-of-production (UOP) depreciation

Estimated economically recoverable reserves are used in determining the depreciation and/or amortization of mine-specific assets. This results in a depreciation/amortization charge proportional to the depletion of the anticipated remaining life-of-mine production. The life of each item, which is assessed at least annually, has regard to both its physical life limitations and present assessments of economically recoverable reserves of the mine property at which the asset is located. These calculations require the use of estimates and assumptions, including the amount of recoverable reserves and estimates of future capital expenditure. The calculation of the UOP rate of depreciation/amortization could be impacted to the extent that actual production in the future is different from current forecast production based on economically recoverable reserves, or if future capital expenditure estimates change. Changes to economically recoverable reserves could arise due to changes in the factors or assumptions used in estimating reserves, including:

- The effect on economically recoverable reserves of differences between actual commodity prices and commodity price assumptions
- Unforeseen operational issues

Changes in estimates are accounted for prospectively.

As at December 31, 2024 and 2023, the carrying amount of mine and mining properties amounted to ₱371.90 million and ₱379.55 million, respectively. Carrying amount of mine rehabilitation asset amounted to ₱36.76 million and ₱34.60 million as of December 31, 2024 and 2023, respectively. The carrying amount of mine development cost amounted to nil million as of December 31, 2024 and 2023 (see Note 10).

Estimating Liability for Mine Rehabilitation



The Company estimates the costs of mine rehabilitation based on previous experience in rehabilitating fully mined areas in sections of the mine site. These costs are adjusted for inflation factor based on the average annual inflation rate as of adoption date or re-evaluation of the asset dismantlement, removal or restoration costs. Such adjusted costs are then measured at present value using the market interest rate for a comparable instrument adjusted for the Company's credit standing. While management believes that its assumptions are reasonable and appropriate, significant differences in actual experience or significant changes in the assumptions may materially affect the Company's liability for mine rehabilitation.

Liability for mine rehabilitation amounted to ₱29.84 million and ₱39.07 million as at December 31, 2024 and 2023, respectively (see Note 16).

Estimating Pension Benefits

The cost of defined benefit pension plans as well as the present value of the pension obligation are determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These include the determination of the discount rates, future salary increases, mortality rates and future pension increases. Due to the complexity of the valuation, the underlying assumptions and its long-term nature, defined benefit obligations are highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date.

In determining the appropriate discount rate, management considers the interest rates of government bonds that are denominated in the currency in which the benefits will be paid, with extrapolated maturities corresponding to the expected duration of the defined benefit obligation.

The mortality rate is based on publicly available mortality tables for the specific country and is modified accordingly with estimates of mortality improvements. Future salary increases and pension increases are based on expected future inflation rates for the specific country.

Further details about the assumptions used are provided in Note 26.

Net pension liability amounted to ₱34.42 million and ₱54.56 million as at December 31, 2024 and 2023, respectively (see Note 26).

Assessing Realizability of Deferred Tax Assets

The Company reviews the carrying amounts of the deferred tax assets at each end of the reporting date and reduces deferred tax assets to the extent that it is probable that sufficient future taxable profits will be available against which these can be utilized. Management believes that there is no assurance that the Company will generate sufficient taxable profit to allow all or part of its deferred tax assets to be utilized.

The Company recognized deferred tax assets amounting to ₱77.05 million and ₱83.27 million as at December 31, 2024 and 2023, respectively (see Note 27).

The Company did not recognize deferred tax assets on deductible temporary differences amounting to ₱326.88 million as at December 31, 2024 and 2023 (see Note 27).



4. Cash and Cash Equivalents

| | 2024 | 2023 |
|------------------|-----------------|----------|
| Cash on hand | ₱469 | ₱470 |
| Cash in banks | 414,746 | 141,698 |
| Cash equivalents | 38,443 | 84,929 |
| | ₱453,658 | ₱227,097 |

Cash in banks earn interest at the prevailing bank deposit rates. Cash equivalents are made for varying periods of up to three (3) months depending on the immediate cash requirements of the Company and earn interest at the respective short-term deposit rates.

Interest income pertaining to cash in banks and cash equivalents totaled to ₱3.08 million and ₱1.73 million in 2024 and 2023, respectively (see Note 23).

5. Trade and Other Receivables

| | 2024 | 2023 |
|---|-----------------|----------|
| Trade receivables | | |
| External | ₱30,400 | ₱29,979 |
| Related parties (Note 24) | 24,943 | 33,491 |
| Nontrade | 239,656 | 219,784 |
| Advances to officers and employees | 30,196 | 108,189 |
| Employee stock ownership incentive plan (ESOIP) (Note 25) | 58,416 | 58,416 |
| Receivables from lessees of bunkhouses | 9,972 | 9,648 |
| Others | 600 | 280 |
| | 394,183 | 459,787 |
| Less allowance for ECLs | 64,688 | 64,535 |
| | ₱329,495 | ₱395,252 |

Trade and nontrade receivables, and receivables from lessees of bunkhouses are noninterest-bearing and are generally collectible within a period of one year. Advances to officers and employees pertain to cash advances used in the operations which are generally subject to liquidation.

Other receivables comprise mainly of receivables that are considered to be individually insignificant.

Movements of allowance for ECLs on trade and other receivables are as follows:

| | 2024 | | | |
|-------------------------------|-------------------|--|----------------|----------------|
| | Trade receivables | Receivables from lessees of bunkhouses | ESOIP | Total |
| Balances at beginning of year | ₱2,264 | ₱3,855 | ₱58,416 | ₱64,535 |
| Provision (Note 21) | — | 153 | — | 153 |
| Balances at end of the year | ₱2,264 | ₱4,008 | ₱58,416 | ₱64,688 |



| | 2023 | | | |
|-------------------------------|----------------------|--|---------|---------|
| | Trade
receivables | Receivables
from lessees of
bunkhouses | ESOIP | Total |
| Balances at beginning of year | ₱2,448 | ₱3,855 | ₱58,416 | ₱64,719 |
| Reversal (Note 21) | (184) | — | — | (184) |
| Balances at end of the year | ₱2,264 | ₱3,855 | ₱58,416 | ₱64,535 |

Except for those impaired accounts, the Company assessed trade and other receivables as collectible and in good standing.

6. Inventories

| | 2024 | 2023 |
|---|-----------|-----------|
| At cost: | | |
| Quicklime and slaked lime | ₱6,902 | ₱8,850 |
| At NRV: | | |
| Materials and supplies | 190,422 | 199,930 |
| Less allowance for impairment losses on
materials and supplies | (156,740) | (156,612) |
| | 33,682 | 43,318 |
| | ₱40,584 | ₱52,168 |

The gold buttons produced by the Company in 2024 and 2023 have also been sold during those years.

Movements of allowance for impairment losses on inventories are as follows:

| | 2024 | 2023 |
|----------------------------------|----------|----------|
| Balance at beginning of the year | ₱156,612 | ₱156,612 |
| Provision (Note 21) | 128 | — |
| Balance at end of the year | ₱156,740 | ₱156,612 |

Materials and supplies charged to current operations amounted to ₱120.36 million and ₱149.51 million in 2024 and 2023, respectively (see Notes 20 and 21).

The Company has no inventories pledged as security for liabilities nor any purchase commitments related to inventories as at December 31, 2024 and 2023.

7. Financial Assets at FVPL

The Company's financial assets at FVPL are investments in unit investment trust funds (UITF), which are carried at fair value based on published net asset value per unit or the price per unit of the UITF.



Movements in financial assets at FVPL in 2024 and 2023 are as follows:

| | 2024 | 2023 |
|-----------------------|-----------------|----------------|
| Beginning balance | ₱21,441 | ₱798 |
| Disposals | (21,441) | — |
| Additions | — | 20,005 |
| Changes in fair value | — | 638 |
| Ending balance | ₱— | ₱21,441 |

Movements in cumulative gains from change in fair value are as follows:

| | 2024 | 2023 |
|-----------------------|--------------|-------------|
| Beginning balance | ₱638 | ₱— |
| Disposals | (638) | — |
| Changes in fair value | — | 638 |
| Ending balance | ₱— | ₱638 |

8. Other Current Assets

| | 2024 | 2023 |
|------------------------|----------------|-----------------|
| CWTs | ₱35,605 | ₱65,515 |
| Input VAT – net | 29,870 | 52,585 |
| Short-term investments | 10,000 | 24,280 |
| Prepaid expenses | 818 | 580 |
| Others | 6,477 | 3,933 |
| | ₱82,770 | ₱146,893 |

Movements in short-term investments in 2024 and 2023 are as follows:

| | 2024 | 2023 |
|-------------------|-----------------|----------------|
| Beginning balance | ₱24,280 | ₱— |
| Additions | 10,000 | 23,000 |
| Interest | — | 1,280 |
| Disposals | (24,280) | — |
| Ending balance | ₱10,000 | ₱24,280 |

The short-term investments has a 92-days having 5% gross rate in 2024 and 91-days term having 4.8% and 5.5% gross rate in 2023. Interest income on these short-term investments totaled to ₱0.13 million in 2024 and ₱2.06 million, which consists of ₱1.28 million interest received upon maturity in 2023 (see Note 23).

9. Investments in Subsidiaries

The Company holds investments in subsidiaries that are all incorporated in the Philippines and are engaged in the business related to exploration and development, management services, health services and real estate holding.



The following are the subsidiaries of the Company as at December 31, 2024 and 2023:

| | Nature of business | Country of incorporation | Effective percentage of ownership |
|--|--|--------------------------|-----------------------------------|
| BRMC | Mining operations | Philippines | 100.00 |
| BMC | Foundry | Philippines | 100.00 |
| Agua de Oro Ventures Corporation (ADOVC) | Selling of treated and untreated water | Philippines | 100.00 |
| BC Property Management Inc. (BCPMI) | Management services | Philippines | 100.00 |
| Benguetcorp International Limited (BIL) | Holding company | Hong Kong | 100.00 |
| Benguetcorp Laboratories, Inc. (BLI) | Health services | Philippines | 100.00 |
| Berec Land Resources Inc. (BLRI) | Exploration and development | Philippines | 100.00 |
| Benguetcorp Construction and Development Corporation (BCDC)) | Real estate holding | Philippines | 100.00 |
| SARC | Exploration and development | Philippines | 100.00 |
| Ifarotoc Mineral Resources Corporation (IMRC) | Logistics | Philippines | 100.00 |
| Keystone Port Logistics and Management Services Corporation (KPLSMC) | Exploration and development | Philippines | 100.00 |
| Acupan Gold Mines Inc. (AGMI) | Professional services | Philippines | 100.00 |
| Pillars of Exemplary Consultants, Inc. (PECI) | Professional services | Philippines | 100.00 |
| Samar Agricultural Farm Corporation (SAFC) | Agricultural | Philippines | 100.00 |
| Aglao Development Corporation (ADC) | Land use development | Philippines | 100.00 |

The details of investments in subsidiaries as at December 31, 2024 and 2023 are as follows:

| | 2024 | 2023 |
|--------------------------------------|-------------------|------------|
| Acquisition cost of investments: | | |
| BRMC | ₱1,250,000 | ₱1,250,000 |
| BMC | 600,000 | 600,000 |
| ADOVC | 262,996 | 262,996 |
| BCPMI | 143,071 | 143,071 |
| BIL | 115,565 | 115,565 |
| BLI | 56,889 | 56,889 |
| BLRI | 39,463 | 39,463 |
| BCDC | 14,375 | 14,375 |
| SARC | 7,046 | 7,046 |
| IMRC | 2,500 | 2,500 |
| KPLMSC | 2,500 | 2,500 |
| AGMI | 2,500 | 2,500 |
| SAFC | 2,500 | — |
| PECI | 1,130 | 1,130 |
| ADC | 225 | 225 |
| | 2,500,760 | 2,498,260 |
| Less allowance for impairment losses | 3,630 | 3,630 |
| | ₱2,497,130 | ₱2,494,630 |

BMC was organized primarily to invest in projects and enterprises that diversify, stabilize and strengthen the investment portfolio of the Benguet Group. As at December 31, 2024 and 2023, BIL, BCDC, AGMI, which were established to operate mining prospects, are still pre-operating.



Movement of investment in subsidiaries are as follows:

| | 2024 | 2023 |
|--------------------------------------|-------------------|------------|
| Beginning balance | ₱2,498,260 | ₱2,080,093 |
| Additions | 2,500 | 418,167 |
| Ending balance | 2,500,760 | 2,498,260 |
| Less allowance for impairment losses | 3,630 | 3,630 |
| | ₱2,497,130 | ₱2,494,630 |

In 2024 and 2023, the Company had additional investments in SAFC amounting to ₱2.50 million and BCDC amounting to ₱11.88 million, respectively, in exchange of cash.

In 2023, the Company had additional investments in ADOVC and BCPMI amounting to ₱263.0 million and ₱143.07 million, respectively, in exchange for land (see Note 32).

On March 29, 2022, BRMC declared cash dividends amounting to ₱500.0 million. These cash dividends were paid on eight (8) equal installments amounting to ₱62.50 million starting May 2022 to December 2022.

On March 28, 2023, BRMC declared cash dividends amounting to ₱500.0 million. These cash dividends were paid in eight (8) equal installments amounting to ₱62.50 million starting May 2023 to December 2023.

On March 29, 2023, KPLMSC declared cash dividends amounting to ₱18.33 million. These cash dividends were paid in two (2) equal installments amounting to ₱9.17 million in May 2023 and June 2023.

There was no movement in allowance for impairment losses on investments in subsidiaries in 2024 and 2023.

10. Property, Plant and Equipment

a. Land - at revalued amount

Revalued amount of land as at December 31, 2024 and 2023 amounted to ₱1,687.39 million and ₱1,574.56 million, respectively.

The revaluation increment, recognized as a separate component of equity, amounted to ₱1,435.70 million and ₱1,351.07 million as at December 31, 2024 and 2023, and is not available for distribution to stockholders until the related assets are sold.

On February 7, 2025 and February 22, 2024, the Company engaged Cuervo Appraisers Inc., an independent firm of appraisers, to determine the fair value of the land as at December 31, 2024 and 2023, respectively. The fair value was estimated using the sales comparison approach, which considers the sales of similar or substitute properties and the related market values and establishes value estimates by processes involving comparisons (level 3). In general, a property being valued is compared with sales of similar properties that have been transacted in the open market. Listings and offerings may also be considered. The Company recognized unrealized valuation gain in OCI amounting to ₱112.84 million and ₱60.23 million in 2024 and 2023, respectively.



Movements in the revaluation increment on land shown as part of other components of equity follow:

| | |
|---|-------------|
| Balance before the quasi-reorganization | ₱1,561,048 |
| Effect of the quasi-reorganization in 2011 (Note 1) | (1,010,848) |
| Balance after the quasi-reorganization | 550,200 |
| Revaluation increment in: | |
| 2011 | 148,638 |
| 2013 | 85,900 |
| 2018 | 75,716 |
| 2019 | 251,499 |
| 2021 | 174,215 |
| 2022 | 19,727 |
| 2023 | 45,174 |
| 2024 | 84,627 |
| Balance as at December 31, 2024 | ₱1,435,696 |



b. Property, Plant and Equipment – at cost

| | 2024 | | | | | |
|--|----------------------|-----------|--------------------------------------|----------------------------------|------------------------|------------|
| | Land
improvements | Buildings | Machinery,
tools and
equipment | Mine
and mining
Properties | Right-of-use
assets | Total |
| Cost: | | | | | | |
| Beginning balances | ₱78,441 | ₱279,542 | ₱752,951 | ₱1,182,905 | ₱7,409 | ₱2,301,248 |
| Additions | – | 499 | 929 | 1,131 | – | 2,559 |
| Reclassification | – | (449) | 449 | – | – | – |
| Change in estimate of liability for
mine rehabilitation (Note 16) | – | – | – | 3,603 | – | 3,603 |
| Ending balances | 78,441 | 279,592 | 754,329 | 1,187,639 | 7,409 | 2,307,410 |
| Accumulated depreciation and depletion: | | | | | | |
| Beginning balances | 75,751 | 276,273 | 733,361 | 768,754 | 2,733 | 1,856,872 |
| Depreciation and depletion
(Notes 20 and 21) | 588 | 1,769 | 8,107 | 10,228 | 911 | 21,603 |
| Ending balances | 76,339 | 278,042 | 741,468 | 778,982 | 3,644 | 1,878,475 |
| Net book values | ₱2,102 | ₱1,550 | ₱12,861 | ₱408,657 | ₱3,765 | ₱428,935 |



| | 2023 | | | | | |
|--|----------------------|-----------|--------------------------------------|----------------------------------|------------------------|------------|
| | Land
improvements | Buildings | Machinery,
tools and
equipment | Mine
and mining
Properties | Right-of-use
assets | Total |
| Cost: | | | | | | |
| Beginning balances | ₱78,441 | ₱279,040 | ₱747,839 | ₱1,151,755 | ₱8,946 | ₱2,266,021 |
| Additions | – | 502 | 6,157 | 36,352 | 2,052 | 45,063 |
| Disposal and derecognition | – | – | (1,045) | – | (3,589) | (4,634) |
| Change in estimate of liability for
mine rehabilitation (Note 16) | – | – | – | (5,202) | – | (5,202) |
| Ending balances | 78,441 | 279,542 | 752,951 | 1,182,905 | 7,409 | 2,301,248 |
| Accumulated depreciation and depletion: | | | | | | |
| Beginning balances | 75,164 | 274,828 | 729,260 | 757,551 | 4,924 | 1,841,727 |
| Depreciation and depletion
(Notes 20 and 21) | 587 | 1,445 | 5,146 | 11,203 | 1,398 | 19,779 |
| Disposal | – | – | (1,045) | – | (3,589) | (4,634) |
| Ending balances | 75,751 | 276,273 | 733,361 | 768,754 | 2,733 | 1,856,872 |
| Net book values | ₱2,690 | ₱3,269 | ₱19,590 | ₱414,151 | ₱4,676 | ₱444,376 |



The Company's CIP pertains to the development of a continuous mill production line in Balatoc, Benguet to increase the milling capacity of its gold operations.

The cost of fully depreciated property and equipment still being used in the Company's operations amounted to ₱362.91 million and ₱355.39 million as at December 31, 2024 and 2023, respectively.

Components of mine and mining properties are as follows:

| | 2024 | | | |
|------------------------------|----------------------------------|---------------------------------|--|------------|
| | Mine and
mining
properties | Mine
rehabilitation
asset | | Total |
| Cost: | | | | |
| Beginning balances | ₱1,110,311 | ₱72,594 | | ₱1,182,905 |
| Additions | 1,131 | — | | 1,131 |
| Change in estimate (Note 16) | — | 3,603 | | 3,603 |
| Ending balances | 1,111,442 | 76,197 | | 1,187,639 |
| Accumulated depletion: | | | | |
| Beginning balances | 730,761 | 37,993 | | 768,754 |
| Depletion (Note 20) | 8,779 | 1,449 | | 10,228 |
| Ending balances | 739,540 | 39,442 | | 778,982 |
| Net book values | ₱371,902 | ₱36,755 | | ₱408,657 |

| | 2023 | | | | |
|------------------------------|----------------------------------|-----------------------------|---------------------------------|--|------------|
| | Mine and
mining
properties | Mine
development
cost | Mine
rehabilitation
asset | | Total |
| Cost: | | | | | |
| Beginning balances | ₱1,050,030 | ₱23,929 | ₱77,796 | | ₱1,151,755 |
| Additions | 36,352 | — | — | | 36,352 |
| Reclassification | 23,929 | (23,929) | — | | — |
| Change in estimate (Note 16) | — | — | (5,202) | | (5,202) |
| Ending balances | 1,110,311 | — | 72,594 | | 1,182,905 |
| Accumulated depletion: | | | | | |
| Beginning balances | 720,812 | — | 36,739 | | 757,551 |
| Depletion (Note 20) | 9,949 | — | 1,254 | | 11,203 |
| Ending balances | 730,761 | — | 37,993 | | 768,754 |
| Net book values | ₱379,550 | ₱— | ₱34,601 | | ₱414,151 |

Components of right-of-use-assets are as follows:

| | 2024 | | | |
|-------------------------------|--------------------------------------|--------|--|--------|
| | Machinery,
tools and
equipment | Land | | Total |
| Cost: | | | | |
| Beginning and ending balances | ₱2,052 | ₱5,357 | | ₱7,409 |
| Accumulated depreciation: | | | | |
| Beginning balances | 238 | 2,495 | | 2,733 |
| Depreciation (Note 31) | 171 | 740 | | 911 |
| Ending balances | 409 | 3,235 | | 3,644 |
| Net book values | ₱1,643 | ₱2,122 | | ₱3,765 |



| | 2023 | | | |
|---------------------------|--------------|--------------------------------------|--------|---------|
| | Office Space | Machinery,
tools and
equipment | Land | Total |
| Cost: | | | | |
| Beginning balances | ₱3,589 | ₱— | ₱5,357 | ₱8,946 |
| Additions | — | 2,052 | — | 2,052 |
| Derecognition | (3,589) | — | — | (3,589) |
| Ending balances | — | 2,052 | 5,357 | 7,409 |
| Accumulated depreciation: | | | | |
| Beginning balances | 2,792 | — | 2,132 | 4,924 |
| Depreciation (Note 31) | 797 | 238 | 363 | 1,398 |
| Derecognition | (3,589) | — | — | (3,589) |
| Ending balances | — | 238 | 2,495 | 2,733 |
| Net book values | ₱— | ₱1,814 | ₱2,862 | ₱4,676 |

Depreciation and depletion charges were distributed as follows:

| | 2024 | 2023 |
|---|---------|---------|
| Cost of mine products sold (Note 20) | ₱16,895 | ₱13,944 |
| Selling, general and administrative expenses
(Note 21) | 4,708 | 5,835 |
| | ₱21,603 | ₱19,779 |

11. Deferred Mine Exploration Costs

Movements in deferred mine exploration costs are as follows:

| | 2024 | 2023 |
|--------------------------------------|----------|----------|
| Balances at beginning of year | ₱616,021 | ₱588,776 |
| Additions | 26,560 | 27,245 |
| Balances at end of year | 642,581 | 616,021 |
| Less allowance for impairment losses | 166,984 | 166,984 |
| Net book value | ₱475,597 | ₱449,037 |

Additions pertain to drilling, hauling, and other ongoing exploration and evaluation activities of the Company.

There was no movement in allowance for impairment losses on deferred mine exploration costs in 2024 and 2023.



12. Other Noncurrent Assets

| | 2024 | 2023 |
|---------------------------------------|-----------------|----------|
| Advances to contractors and suppliers | ₱455,887 | ₱408,811 |
| Mine rehabilitation funds (MRF) | 54,149 | 46,370 |
| CWTs | 29,097 | — |
| Input VAT | 19,996 | — |
| Refundable deposits | 9,229 | 9,229 |
| Financial assets at FVOCI | 566 | 563 |
| | 568,924 | 464,973 |
| Less allowance for impairment losses | 151,892 | 151,892 |
| | ₱417,032 | ₱313,081 |

The Company made advance payments to a supplier of aircraft amounting nil and ₱4.05 million in 2024 and 2023, respectively, bringing the total balance to ₱250.0 million as at December 31, 2024 and 2023, respectively. Meanwhile, the rest of the advances to contractors and supplier are for exploration and other related activities and projects.

MRFs pertain to accounts opened with a local bank in compliance with the requirements of DAO No. 2010-21, otherwise known as ‘The Revised Implementing Rules and Regulations of the Philippine Mining Act of 1995’. The MRFs shall be used for physical and social rehabilitation of areas and communities affected by the mine operations, and for research in the social, technical and preventive aspects of the mine’s rehabilitation. Interest income pertaining to MRF amounted to nil and ₱0.66 million in 2024 and 2023, respectively (see Note 23).

Refundable deposits pertain to amounts deposited with the Company’s power providers and are refundable upon termination of the related service agreements.

There was no movement in allowance for impairment losses on other noncurrent assets in 2024 and 2023.

Financial assets at FVOCI pertain to investments in non-listed and listed shares of stock in the Philippine Stock Exchange, which are carried at fair value based on bid market prices.

Movements in financial assets at FVOCI are as follows:

| | 2024 | 2023 |
|------------------------------|-------------|------|
| Balance at beginning of year | ₱563 | ₱521 |
| Unrealized valuation gain | 3 | 42 |
| Balance at end of year | ₱566 | ₱563 |

Movements in the unrealized loss on financial assets at FVOCI are as follows:

| | 2024 | 2023 |
|------------------------------|---------------|--------|
| Balance at beginning of year | (₱180) | (₱222) |
| Unrealized valuation gain | 3 | 42 |
| Balance at end of year | (₱177) | (₱180) |



13. Trade and Other Payables

| | 2024 | 2023 |
|------------------------------------|-----------------|----------|
| Trade payables | | |
| External | ₱60,689 | ₱29,863 |
| Related parties (Note 24) | 2,299 | 2,147 |
| Nontrade | 54,611 | 53,993 |
| Dividends payable (Note 17) | 35,490 | — |
| Accrued expenses | 27,517 | 53,586 |
| Payables to officers and employees | 2,470 | 95 |
| Others | 4,892 | 6,465 |
| | ₱187,968 | ₱146,149 |

Trade payables, accrued expenses, and other payables pertain to operating expenses payable to various suppliers and contractors, accrual of professional fees, amounts and other expenses of the Company which are noninterest-bearing and are normally settled in 60 to 90 days terms.

Payables to officers and employees include unclaimed wages, accrued vacation and sick leave credits and accrued payroll, which are payable within 30 days.

Non-trade payables include withholding taxes and other government payables which are normally settled in 30 to 90 days.

14. Loans Payable

| | 2024 | 2023 |
|--------------------------------|-----------|----------|
| Secured loan | ₱— | ₱48,368 |
| Unsecured loan | — | 36,695 |
| Accrued interest and penalties | — | 242,236 |
| | ₱— | ₱327,299 |

Secured loan

The Company has a secured loan being renegotiated and is undergoing restructuring. Nominal interest rates vary from floating rate of 91-day Philippine PhP T-bill rate for peso loans and 3-month Sterling Overnight Indexed Average (SONIA) for foreign loans, plus margin of 2.5%.

In 2024 and 2023, the loan was secured by investment properties with carrying value of ₱2,837.36 million and ₱2,553.62 million, respectively (See Note 32).

Unsecured loan

The Company has an unsecured loan from a third party with interest rate of 3% per annum, which is due and demandable.

Interest expense from the unsecured loan amounted to ₱6.52 million and ₱2.20 million in 2024 and 2023, respectively.

In October 2024, the Company settled all its secured and unsecured loans for a consideration of ₱600.0 million and ₱43.21 million, respectively. The carrying amount of secured and unsecured loans paid off amounted to ₱290.60 million and ₱43.21 million, respectively. This resulted to loss on debt settlement for secured and unsecured loans amounting to ₱309.40 million and nil, respectively.



The settlement of secured loans resulted in the release of mortgage over certain investment properties as at December 31, 2024.

15. Other Noncurrent Liability

Other noncurrent liability pertains to the Company's outstanding liability to CMI, gross of advances, for which discussions are still on-going. The said liability amounted to ₱49.14 million as at December 31, 2024 and 2023 (see Note 1).

16. Liability for Mine Rehabilitation

| | 2024 | 2023 |
|---|-----------------|---------|
| Balances at beginning of year | ₱39,073 | ₱37,712 |
| Actual rehabilitation costs | (14,115) | (6,990) |
| Effect of change in estimate: | | |
| Recognized as adjustment to the mine rehabilitation asset (Note 10) | 3,603 | (5,202) |
| Recognized in profit or loss (Note 23) | 203 | 12,826 |
| Accretion (Note 23) | 1,077 | 727 |
| Balances at end of year | 29,841 | 39,073 |
| Less noncurrent portion | 24,972 | 21,290 |
| Current portion | ₱4,869 | ₱17,783 |

This provision is based on the Company's internal estimates. Assumptions, based on the current economic environment, have been made which management believes are a reasonable basis upon which to estimate the future liability.

In 2022, the revised Antamok Final Mine Rehabilitation and Decommissioning Plan (FMRDP) was endorsed by the MGB-CAR to the Contingent Liability and Rehabilitation Fund Steering Committee (CLRFSC) for approval based on new development, particularly on the actual rehabilitation needs considering the current physical status and condition of the area. The total cost to be incurred over a 4-year period of rehabilitation was reduced from ₱43.0 million to ₱30.0 million. The aim of the FMRDP is principally to mitigate environmental risks and provide a sustainable final land use over the area. It includes long-term programs including Minahang Bayan. The Company implemented various activities such as continuous propagation of various seedlings in nurseries and maintenance of its established reforestation areas. During 2024, the Company's additional activities included progressive rehabilitation of waste dumps and other areas of the mine.

The final rehabilitation costs are uncertain, and cost estimates can vary in response to many factors, including estimates of the extent and costs of rehabilitation activities, technological changes, regulatory changes, changes in inflation rates (3.01% in 2024 and 3.03% in 2023) and changes in discount rates (5.95% in 2024 and 5.43% in 2023).

These uncertainties may result in future actual expenditure differing from the amounts currently provided. Therefore, significant estimates and assumptions are made in determining the provision for mine rehabilitation. As a result, there could be significant adjustments to the provision established that could affect future financial results.



The provision at the end of each reporting period represents management best estimate of the present value of the future rehabilitation cost required. This estimate is reviewed regularly to take into account any material changes in the assumptions. However, actual rehabilitation costs will ultimately depend upon future market prices for the necessary decommissioning works required, which will reflect market conditions at the relevant time. The timing of rehabilitation is likely to depend on when the mine ceases to produce at economically viable rates. This, in turn, will depend upon future gold and nickel prices, which are inherently uncertain.

17. Equity

Capital stock as at December 31, 2024 and 2023 follows:

| | 2024 | | 2023 | |
|------------------------------------|--------------------|-----------------|---------------|----------|
| | No. of shares | Amount | No. of shares | Amount |
| Authorized | | | | |
| Convertible Preferred | | | | |
| Class A – ₱3.43 par value | 19,652,912 | ₱67,500 | 19,652,912 | ₱67,500 |
| Common Class A – ₱1 par value | 430,380,000 | 430,380 | 430,380,000 | 430,380 |
| Common Class B – ₱1 par value | 286,920,000 | 286,920 | 286,920,000 | 286,920 |
| | 736,952,912 | ₱784,800 | 736,952,912 | ₱784,800 |
| Issued | | | | |
| Convertible Preferred Class “A” | 217,061 | ₱745 | 217,061 | ₱745 |
| Common Class “A” | 428,430,802 | 428,431 | 375,430,802 | 375,431 |
| Common Class “B” | 285,101,396 | 285,101 | 248,101,396 | 248,101 |
| Total shares issued and subscribed | 713,749,259 | ₱714,277 | 623,749,259 | ₱624,277 |
| Treasury Shares | | | | |
| Common Class “A” | 310,794 | ₱7,158 | 310,794 | ₱7,158 |
| Common Class “B” | 37,275 | 858 | 37,275 | 858 |
| Total treasury shares | 348,069 | ₱8,016 | 348,069 | ₱8,016 |
| Outstanding | | | | |
| Convertible Preferred Class “A” | 217,061 | ₱745 | 217,061 | ₱745 |
| Common Class “A” | 428,120,008 | 421,273 | 375,120,008 | 368,273 |
| Common Class “B” | 285,064,121 | 284,243 | 248,064,121 | 247,243 |
| Total outstanding shares | 713,401,190 | ₱706,261 | 623,401,190 | ₱616,261 |

The amount of unrestricted retained earnings equivalent to the cost of the treasury shares being held shall be restricted from being declared and issued as dividends.

There was no movement in the Company’s authorized and treasury shares in 2024 and 2023. The movement in the Company’s issued shares in 2024 and 2023 are as follows:

| | 2024 | | |
|---------------------------------|------------------------------|---|------------------------|
| | Balance at beginning of year | Issuance of shares through subscription | Balance at end of year |
| Convertible Preferred Class “A” | 217,061 | – | 217,061 |
| Common Class “A” | 375,430,802 | 53,000,000 | 428,430,802 |
| Common Class “B” | 248,101,396 | 37,000,000 | 285,101,396 |
| | 623,749,259 | 90,000,000 | 713,749,259 |



| | 2023 | | |
|---------------------------------|---------------------------------|--|---------------------------|
| | Balance at
beginning of year | Issuance of shares
for stock options
exercised (Note 17) | Balance at end of
year |
| Convertible Preferred Class "A" | 217,061 | — | 217,061 |
| Common Class "A" | 375,307,052 | 123,750 | 375,430,802 |
| Common Class "B" | 247,963,396 | 138,000 | 248,101,396 |
| | 623,487,509 | 261,750 | 623,749,259 |

The two classes of common shares of the Company are identical in all respects, except that ownership of Common Class A shares is restricted to Philippine nationals.

The convertible preferred shares are limited to Philippine nationals and convertible into Common Class A shares at a conversion premium of ₱12.83 per share. Each preferred share is convertible into 9.4875 Common Class A shares. A convertible preferred share is also entitled to have one vote for each full share of Common Class A stock into which such convertible preferred share is, at any stockholders' meeting, then convertible. It does not enjoy the same dividend right as the two classes of common stock but is entitled to a fixed cumulative dividend of 8% a year, if there is surplus profit and when declared by the BOD.

On March 21, 2018, the BOD approved the increase in the Company's authorized capital stock from ₱717.30 million (consisting of 430,380,000 Common Class A shares and 286,920,000 Common Class B shares, both having a par value of ₱1.00 each) to ₱762.30 million (consisting of 475,380,000 Common Class A shares and 286,920,000 Common Class B shares, both having a par value of ₱1.00 each). The application for the increase was approved by the stockholders during the annual meeting held last November 8, 2018.

On August 29, 2024, the BOD approved the increase in the Company's authorized capital stock of ₱2,400.0 million, which is inclusive of ₱45.0 million capital increase previously approved by the BOD on March 21, 2018, or 2,400,000,000 shares (consisting of 1,440,000,000 Common Class A shares and 960,000,000 Common Class B shares, both having a par value of ₱1.00 each). The application for the increase was approved by the stockholders during the annual meeting held last December 20, 2024.

After the amendment, the total authorized capital stock of the Company will increase from ₱784.80 million to ₱3,184.8 million.

As at March 26, 2025, the Company has not yet filed its application for the increase in authorized capital stock with the Philippine SEC.

In 2021, the Company issued 4,086,798 Common Class A shares and 2,713,199 Common Class B shares as a result of employees' exercise of stock options at a total consideration of ₱9.81 million shares, ₱1.37 million of which were from 431,198 Common Class A shares and 334,176 Common Class B shares at an average selling price of ₱1.80 per share and 8.45 million from 3,655,600 Common Class A shares and 2,379,023 Common Class B shares at an average exercise price of ₱1.41 per share. In 2021, the total shares issued and outstanding for Common Class A and Common Class B shares are 374,996,258 and 247,926,121 shares, respectively.

In 2023, the Company issued 123,750 Common Class A shares and 138,000 Common Class B shares as a result of employees' exercise of stock options at a total consideration of ₱0.27 million, net of lodging fee of ₱0.10 million, ₱0.17 million of which was from 123,750 Common Class A shares at an



average selling price of ₱1.38 per share and ₱0.20 million from 138,000 Common Class B at an average selling price of ₱1.43 per share.

On October 29, 2024, in its special Board meeting, the Company's BOD approved the declaration of cash dividend amounting to ₱143.56 million or equivalent to ₱0.28 per share of the Company's Convertible Preferred Class A shares and ₱0.20 per share of outstanding Common Class A and B shares to stockholders of record as of November 14, 2024 with the payment set date on December 10, 2024. Total amount of dividend paid and still outstanding as at December 31, 2024 amounted to ₱108.07 million and ₱35.49 million, respectively.

On November 5, 2024, Red Earth Mineral Resources Corporation (Red Earth) subscribed to 53,000,000 Common Class A unissued shares and 37,000,000 Common Class B unissued shares of the Company at a subscription price of ₱4.00 per share. The total consideration for this subscription amounted to ₱360.0 million .

In 2024, Red Earth made additional subscription to the proposed increase in capital stock of 20,000,000 shares (consisting of 13,000,000 Common Class A shares and 7,000,000 Common Class B shares, both having a par value of ₱1.00 each) at subscription price of ₱4.00 per shares. The Company received cash amounting to ₱20.0 million as deposit for future subscription. The balance of deposit for future subscription as at December 31, 2024 and 2023 amounted to ₱20.0 million and nil, respectively.

As at December 31, 2024, total shares issued and outstanding for Common Class A and B shares are 428,120,008 and 285,064,121 respectively.

Below is the Company's track record of registration of securities under the Philippine SEC:

| Date of Registration
(SEC Approval) | Description | Number of
shares | Par value
per share | Total amount
(in 000's) |
|--|--|--|------------------------|------------------------------|
| June 18, 1956 | Capital upon registration:
Common shares | 18,000,000 | ₱1.00 | ₱18,000 |
| November 25, 1960 | Increase in number and par value of
common shares:
Common shares | 20,000,000 | 2.00 | 40,000 |
| November 9, 1964 | Increase in par value of common shares:
Common shares | 20,000,000 | 3.00 | 60,000 |
| October 22, 1968 | Increase in number of common shares and
introduction of preferred shares:
Common shares
Preferred shares | 50,000,000
6,000,000 | 3.00
5.00 | 150,000
30,000 |
| March 12, 1974 | Split of common share into two classes
and change in number and par value and
addition of conversion feature to the
preferred shares:
Common class A
Common class B
Convertible preferred shares | 30,000,000
20,000,000
19,652,912 | 3.00
3.00
3.43 | 90,000
60,000
67,500 |
| July 27, 1989 | Increase in number of common shares
Common class A
Common class B
Convertible preferred shares | 120,000,000
80,000,000
19,652,912 | 3.00
3.00
3.43 | 360,000
240,000
67,500 |
| September 28, 2015 | Increase in number of common shares
Common class A
Common class B
Convertible preferred shares | 143,460,000
95,640,000
19,652,912 | 3.00
3.00
3.43 | 430,380
286,920
67,500 |
| July 29, 2016 | Increase in number of common shares and
reduction in par value
Common class A
Common class B
Convertible preferred shares | 430,380,000
286,920,000
19,652,912 | 1.00
1.00
3.43 | 430,380
286,920
67,500 |



| Date of Registration
(SEC Approval) | Description | Number of
shares | Par value
per share | Total amount
(in 000's) |
|--|------------------------------|---------------------|------------------------|----------------------------|
| As at December 31, 2024
and 2023 | Common class A | 430,380,000 | ₱1.00 | ₱430,380 |
| | Common class B | 286,920,000 | 1.00 | 286,920 |
| | Convertible preferred shares | 19,652,912 | 3.43 | 67,500 |

As at December 31, 2024 and 2023, the Company has 16,857 and 16,870 stockholders, respectively. As at December 31, 2024 and 2023, the Company has 348,069 shares held in treasury amounting to ₱8.02 million at ₱23 per share.

18. Stock Option Plan

Under the 1975 Nonqualified Stock Option Plan (Plan), as amended, 9.9 million shares of the unissued common shares of the Company have been reserved for stock options to selected managers, directors and consultants of the Company. The option price is payable on the exercise date and should not be less than the fair market value of the shares quoted on the date of the grant. The Plan, valid up to May 31, 1998, allows a maximum of 632,500 shares to be available to any one optionee. On May 26, 1998, the BOD and the stockholders approved the extension of the Plan until May 31, 2003, which was extended further on December 18, 2002 with the BOD and the stockholders' approval until May 31, 2008. On December 18, 2007, the BOD and the stockholders approved a further extension of the Plan until May 31, 2013.

On March 23, 2012, the BOD and the stockholders approved the proposed amendments to the existing Amended Stock Option Plan and to extend the termination date of the existing Plan for five years or until May 31, 2018. The amendments include an increase in the maximum award per employee from 200,000 shares over the life of the plan to 500,000 shares per grant and an increase in the shares reserved for issuance under the Plan from the total of 9,906,661 to 22,000,000 shares.

Options granted to Filipino optionees are exercisable in the form of 60% Common Class A and 40% Common Class B shares. Options for Common Class B shares may be exercised only if Common Class A shares had been previously or simultaneously exercised to maintain a minimum 60:40 ratio of Common Class A to Common Class B shares.

The options under the Plan are non-transferable and are exercisable to the extent of 30% after one year from the date of the grant, 60% after two years from the date of the grant, and 100% after three years from the date of grant. The options authorized under this plan is exercisable for a period of 10 years from the date of grant.

On November 8, 2018, the BOD and the stockholders approved the proposed amendment to the existing Amended Stock Option Plan to extend the termination date of the existing Plan for five years or until May 31, 2023.

On August 24, 2022, the BOD approved the proposed amendment to the existing Amended Stock Option Plan to extend the termination date of the existing Plan for eight (8) years or until May 31, 2031, which the stockholders ratified on November 9, 2022.

On March 17, 2017, upon endorsement of the Stock Option Committee, the BOD approved a new stock option grant to the Company's qualified directors, officer, employees and consultant, provided they have rendered at least two years of service as of March 11, 2017. Total number of common shares available for distribution under the plan is 8,414,375 shares at an exercise price of ₱1.38 and ₱1.43 for Class "A" and Class "B" shares, respectively.



On March 18, 2021, upon endorsement of the Stock Option Committee, the BOD approved a new stock option grant to the Company's officer, employees and consultant and to all members of the BOD, provided they have rendered at least two years of service as of March 15, 2021. Total number of common shares granted for distribution under the plan is 3,003,612 shares at an exercise price of ₱2.19 and ₱2.05 for Class "A" and Class "B" shares, respectively.

Exercisable shares per grant are as follows:

| | | Exercisable share
options as at
January 1, 2024 | Additions | Cancelled/
Expired in 2024 | Exercisable share
options as at
December 31, 2024 |
|--------------|--------------------|---|------------------|-------------------------------|---|
| Class A | - May 2014 Grant | 648,000 | — | (648,000) | — |
| | - March 2017 Grant | 352,475 | — | — | 352,475 |
| | - March 2021 Grant | 1,081,308 | 720,871 | — | 1,802,179 |
| Class B | - May 2014 Grant | 432,000 | — | (432,000) | — |
| | - March 2017 Grant | 237,527 | — | — | 237,527 |
| | - March 2021 Grant | 720,860 | 480,573 | — | 1,201,433 |
| Total | | 3,472,170 | 1,201,444 | (1,080,000) | 3,593,614 |

| | | Exercisable share
options as at
January 1, 2023 | Additions | Exercised in 2023 | Exercisable share
options as at
December 31, 2023 |
|--------------|--------------------|---|----------------|-------------------|---|
| Class A | - May 2014 Grant | 648,000 | — | — | 648,000 |
| | - March 2017 Grant | 476,225 | — | (123,750) | 352,475 |
| | - March 2021 Grant | 540,654 | 540,654 | — | 1,081,308 |
| Class B | - May 2014 Grant | 432,000 | — | — | 432,000 |
| | - March 2017 Grant | 375,527 | — | (138,000) | 237,527 |
| | - March 2021 Grant | 360,430 | 360,430 | — | 720,860 |
| Total | | 2,832,836 | 901,084 | (261,750) | 3,472,170 |

On August 31, 2016, the Company's BOD approved the following amendments to the Plan due to the effect of the share split on July 29, 2016:

- change in the exercise price of outstanding options
- change in the maximum number of shares per grant from 500,000 to 1,500,000
- repricing of the unexercised share options brought about by the low turn-out in the availment of the grant due to high exercise price compared to market price. The repricing was based on the closing price on August 18, 2016 of Class A and Class B common shares amounting to ₱2.25 and ₱2.55, respectively, less 25% discount pursuant to the provisions of the amended stock option plan of the Company.
- change in the shares reserved issuance under the Plan from 22,000,000 shares to 66,000,000 shares.

The exercise prices of outstanding options are as follows:

| | At grant date | After effect of stock
split | As modified |
|--------------------------------|---------------|--------------------------------|-------------|
| Class A - September 2012 Grant | ₱17.96 | ₱5.99 | ₱1.69 |
| - May 2014 Grant | 7.13 | 2.38 | 1.69 |
| - March 2017 Grant | 1.38 | n/a | n/a |
| - March 2021 Grant | 2.19 | n/a | n/a |
| Class B - September 2012 Grant | 17.63 | 5.88 | 1.91 |
| - May 2014 Grant | 7.13 | 2.38 | 1.91 |
| - March 2017 Grant | 1.43 | n/a | n/a |
| - March 2021 Grant | 2.05 | n/a | n/a |



Average exercise price per share in 2024 and 2023 amounted to ₱1.92 and ₱1.90, respectively. Total number of shares available for future option grants is 41,069,864 and 39,989,864 shares as at December 31, 2024 and 2023.

Stock option expense relating to the Plan recognized amounted to ₱3.01 million and ₱2.26 million in 2024 and 2023 (see Note 22).

A summary of the number of shares under the Plan is shown below:

| | 2024 | 2023 |
|----------------------------------|-------------|-----------|
| Outstanding at beginning of year | 4,673,614 | 4,935,364 |
| Expiration | (1,080,000) | — |
| Exercised during the year | — | (261,750) |
| Outstanding at end of year | 3,593,614 | 4,673,614 |
| Exercisable at end of year | 3,593,614 | 3,472,170 |

The Company used the binomial options pricing model to determine the fair value of the stock options at grant date.

The following assumptions were used to determine the fair value of the stock options at grant date:

| | | Share Price | Exercise price | Expected volatility | Option life | Expected Dividends | Risk-free Interest rate |
|--------------------|---|-------------|----------------|---------------------|-------------|--------------------|-------------------------|
| Sep 9, 2012 Grant | A | 23.95 | 17.96 | 57.35% | 10 years | 0.00% | 4.80% |
| | B | 23.50 | 17.63 | 65.53% | 10 years | 0.00% | 4.80% |
| May 26, 2014 Grant | A | 9.50 | 7.13 | 77.28% | 10 years | 0.00% | 3.90% |
| | B | 9.50 | 7.13 | 84.29% | 10 years | 0.00% | 3.90% |
| May 17, 2017 Grant | A | 1.83 | 1.38 | 95.46% | 10 years | 0.00% | 5.09% |
| | B | 1.90 | 1.43 | 101.96% | 10 years | 0.00% | 5.09% |
| May 18, 2021 Grant | A | 2.92 | 2.19 | (106.57%) | 10 years | 0.00% | 4.44% |
| | B | 2.93 | 2.05 | 92.75% | 10 years | 0.00% | 4.44% |

The expected volatility measured at the standard deviation of expected share price returns was based on the analysis of share prices for the past 365 days. The cost of share-based payment amounted to ₱9.35 million and ₱8.10 million as at December 31, 2024 and 2023, respectively (see Note 17).

19. Revenue

Revenue of the Company pertains to sale of gold to the Bangko Sentral ng Pilipinas (BSP), which is subject to 4% excise tax based on gross revenues, and sale of silver and lime to outside customers.

| | 2024 | 2023 |
|---|----------|----------|
| Revenue from contracts with customers | | |
| Sale of gold | ₱790,474 | ₱623,399 |
| Sale of lime | 96,765 | 96,516 |
| Sale of silver | 1,272 | 4,067 |
| Total revenue from contracts with customers | ₱888,511 | ₱723,982 |



Set out below is the disaggregation of the Company's revenue from contracts with customers in 2024 and 2023:

| | 2024 | 2023 |
|---|-----------------|----------|
| Type of customer: | | |
| Government | ₱790,474 | ₱623,399 |
| Private corporations | 98,037 | 100,583 |
| Total revenue from contracts with customers | ₱888,511 | ₱723,982 |

In 2024 and 2023, the Company recognized excise taxes on sale of mine products amounting to ₱31.64 million and ₱25.46 million, respectively.

20. Cost of Mine Products Sold

| | 2024 | 2023 |
|---|-----------------|----------|
| Outside services | ₱328,233 | ₱229,616 |
| Materials and supplies (Note 6) | 112,151 | 140,826 |
| Personnel expenses (Note 22) | 59,910 | 77,494 |
| Power and utilities | 55,810 | 58,104 |
| Depreciation and depletion (Notes 6 and 10) | 16,895 | 13,944 |
| Repairs and maintenance | 12,603 | 19,007 |
| Smelting, refining and marketing | 7,958 | 4,858 |
| Freight and handling | 162 | 143 |
| Taxes, fees and licenses | 4 | 12 |
| Others | 56 | 2,099 |
| | ₱593,782 | ₱546,103 |

Outside services pertain to amounts paid to contractors and consultants involved in the mining operations of the Company.

Other expenses include postage, insurance and maintenance expenses, which are individually insignificant.

21. Selling, General and Administrative Expenses

| | 2024 | 2023 |
|---|-----------------|----------|
| Personnel expenses (Note 22) | ₱125,740 | ₱125,052 |
| Outside services | 45,821 | 29,342 |
| Taxes, fees and licenses | 22,425 | 6,902 |
| Security expenses | 12,225 | 11,065 |
| Environmental protection and enhancement
program expense | 12,175 | 13,497 |
| Materials and supplies (Note 6) | 8,207 | 8,685 |
| Social development and management program | 5,617 | 6,768 |
| Power consumption | 5,602 | 5,753 |
| Travel and transportation | 5,148 | 5,612 |
| Depreciation and depletion (Note 10) | 4,708 | 5,835 |
| Rent and utilities | 3,591 | 3,230 |

(Forward)



| | 2024 | 2023 |
|---|-----------------|-----------------|
| Subscription and membership | ₱2,498 | ₱3,228 |
| Repairs and maintenance | 2,824 | 2,738 |
| Legal and audit expense | 2,175 | 491 |
| Insurance expense | 1,457 | 2,973 |
| Provision (reversal) of allowance for ECL on trade and other receivables (Note 5) | 153 | (184) |
| Provision for impairment losses on inventories (Note 6) | 128 | — |
| Freight and handling | 10 | 11 |
| Others | 2,998 | 6,096 |
| | ₱263,502 | ₱237,094 |

In 2024 and 2023, rent and utilities include expenses relating to short-term leases amounting to ₱2.13 million and ₱1.03 million, respectively (see Note 31).

Others consist of mainly of costs incurred for entertainment amusement and representation and other various incidental expenses which are individually insignificant.

22. Personnel Expenses

| | 2024 | 2023 |
|--------------------------------|-----------------|-----------------|
| Salaries and wages | ₱139,498 | ₱153,422 |
| Benefits and allowances | 43,023 | 35,968 |
| Net pension expense (Note 26) | 1,928 | 10,896 |
| Stock option expense (Note 18) | 1,201 | 2,260 |
| | ₱185,650 | ₱202,546 |

The above amounts were distributed as follows:

| | 2024 | 2023 |
|--|-----------------|-----------------|
| Selling, general and administrative expenses (Note 21) | ₱125,740 | ₱125,052 |
| Cost of mine products sold (Note 20) | 59,910 | 77,494 |
| | ₱185,650 | ₱202,546 |

23. Other Income (Charges) – net

| | 2024 | 2023 |
|---|------------|----------|
| Loss on debt settlement | (₱309,396) | ₱— |
| Revaluation gain (loss) on investment properties (Note 32) | 283,735 | (20,140) |
| Marketing fee (Note 24) | 139,763 | 141,205 |
| Interest income (Notes 4, 8 and 12) | 3,208 | 4,450 |
| Accretion expense (Note 16) | (1,077) | (727) |
| Change in estimate of liability for mine rehabilitation (Note 16) | (203) | (12,826) |

(Forward)



| | 2024 | 2023 |
|---|-----------------|-----------------|
| Foreign currency exchange gain - net | ₱3 | ₱82 |
| Unrealized gain on financial assets at FVPL
(Note 7) | — | 638 |
| Dividend income (Note 9) | — | 518,333 |
| Others – net | (6,854) | (5,748) |
| | ₱109,179 | ₱625,267 |

Others include contractor identification processing, permits for peddlers, various miscellaneous income and incidental expenses that are individually insignificant.

24. Related Party Disclosures

Enterprises and individuals that directly, or indirectly through one or more intermediaries, control or are controlled by, or are under common control with the Company, including holding companies, subsidiaries and fellow subsidiaries, are related parties of the Company. Associates and individuals owning, directly or indirectly, an interest in the voting power of the Company that gives them significant influence over the enterprise, key management personnel, including directors and officers of the Company and close members of the family of these individuals, and companies associated with these individuals also constitute related parties. In considering each possible related entity relationship, attention is directed to the substance of the relationship and not merely the legal form.

The Company's related party transactions which are, individually or in aggregate over a 12-month period, 10% and above of the latest audited total assets are reviewed and evaluated by the Related Party Transaction Committee and Management Committee. Afterwards, these are approved by at least two-thirds (2/3) vote of the BOD, with at least a majority of the independent directors voting to approve the material related party transaction. In case that a majority of the independent directors' vote is not secured, the material related party transaction may be ratified by the majority vote of the shareholders, or two-thirds (2/3) of the outstanding capital stock.

In the normal course of business, the Company has dealings with its related parties as follows:

- a. In 2021, the Company entered into a marketing agreement with BRMC for five (5) years commencing January 1, 2021 and may be extended upon mutual agreement of the parties.
- b. On January 1, 2021, the Company entered into a contract agreement with BMC Forestry Corporation, for the management of the former's property (i.e., Irian Lime Kilns) for its Lime operations in Itogon, Benguet. Said contract shall continue to exist for a period of 5 years. BMC Forestry Corporation is compensated with a management fee equal to 10% of the managed properties' 'net profit before tax and before management fee'. The Company incurred management fee expense amounting to ₱2.81 million and ₱3.28 million in 2024 and 2023, respectively.
- c. In 2011, Arrow Freight and Construction Corporation (AFCC), a wholly owned subsidiary of BMC, started providing trucking services to the Company for the delivery of equipment to various sites.
- d. The Company provides and receives unsecured noninterest bearing cash advances to and from its subsidiaries for working capital requirements, which are settled in cash.



Outstanding payables from these transactions in the normal course of business are as follows:

| Category | Year | Income
(Note 23) | Outstanding
balance | Terms | Conditions |
|--|------|---------------------|------------------------|---|--|
| <i>Trade receivables to related parties (Note 5)</i> | | | | | |
| BRMC | 2024 | ₱139,763 | ₱24,943 | Payable on demand;
noninterest-bearing | Unsecured;
no guarantees,
Not impaired |
| | 2023 | ₱141,205 | ₱33,491 | | |
| | | | | | |
| Category | Year | Expense | Outstanding
balance | Terms | Conditions |
| <i>Trade payables to related parties (Note 13)</i> | | | | | |
| AFCC | 2024 | ₱890 | ₱2,276 | Payable on demand;
noninterest-bearing | Unsecured;
no guarantees |
| | 2023 | ₱1,379 | ₱2,147 | | |
| IMRC | 2024 | 129 | 23 | Payable on demand;
noninterest-bearing | Unsecured;
no guarantees |
| | 2023 | — | — | | |
| Total | 2024 | ₱1,019 | ₱2,299 | | |
| | 2023 | ₱1,379 | ₱2,147 | | |

The parent company statements of financial position include the following amounts resulting from advances to and from related parties:

| Category | Year | Amount/
Volume | Outstanding
balance | Terms | Conditions |
|--|------|-------------------|------------------------|---|---|
| <i>Amounts owed by related parties</i> | | | | | |
| BMC | 2024 | ₱215 | ₱100,631 | Payable on demand;
noninterest-bearing | Unsecured
no guarantees;
impaired |
| | 2023 | ₱99 | ₱100,416 | | |
| Media Management Corporation
(MMC) | 2024 | 2 | 100,185 | Payable on demand;
noninterest-bearing | Unsecured
no guarantees;
impaired |
| | 2023 | – | 100,183 | | |
| BGRC | 2024 | 1 | 78,627 | Payable on demand;
noninterest-bearing | Unsecured
no guarantees;
impaired |
| | 2023 | 61 | 78,626 | | |
| BLI | 2024 | – | 43,766 | Payable on demand;
noninterest-bearing | Unsecured
no guarantees;
impaired |
| | 2023 | 2,696 | 48,547 | | |
| IMRC | 2024 | 3 | 36,199 | Payable on demand;
noninterest-bearing | Unsecured
no guarantees;
not impaired |
| | 2023 | 70 | 36,196 | | |
| BCPMI | 2024 | 63 | 30,647 | Payable on demand;
noninterest-bearing | Unsecured
no guarantees;
not impaired |
| | 2023 | 41 | 30,584 | | |
| BPGC | 2024 | 113 | 29,859 | Payable on demand;
noninterest-bearing | Unsecured
no guarantees;
impaired |
| | 2023 | 52 | 29,746 | | |
| KPLMSC | 2024 | – | 18,790 | Payable on demand;
noninterest-bearing | Unsecured
no guarantees;
not impaired |
| | 2023 | 11 | 18,818 | | |
| BTI | 2024 | – | 15,359 | Payable on demand;
noninterest-bearing | Unsecured
no guarantees;
impaired |
| | 2023 | – | 15,560 | | |
| ADOVC | 2024 | 5 | 12,976 | Payable on demand;
noninterest-bearing | Unsecured
no guarantees;
not impaired |
| | 2023 | 274 | 12,971 | | |

(Forward)



| Category | Year | Amount/
Volume | Outstanding
balance | Terms | Conditions |
|--|------|-------------------|------------------------|---------------------|--------------------------------|
| <i>Amounts owed by related parties</i> | | | | | |
| BIL | 2024 | ₱778 | ₱9,431 | Payable on demand; | Unsecured |
| | 2023 | ₱811 | ₱8,653 | noninterest-bearing | no guarantees;
impaired |
| BCDC | 2024 | 2 | 3,218 | Payable on demand; | Unsecured |
| | 2023 | — | 3,216 | noninterest-bearing | no guarantees;
not impaired |
| PECI | 2024 | 47 | 912 | Payable on demand; | Unsecured |
| | 2023 | 51 | 865 | noninterest-bearing | no guarantees;
not impaired |
| SAFC | 2024 | 802 | 802 | Payable on demand; | Unsecured |
| | 2023 | — | — | noninterest-bearing | no guarantees;
not impaired |
| AGMI | 2024 | 40 | 121 | Payable on demand; | Unsecured |
| | 2023 | 81 | 81 | noninterest-bearing | no guarantees;
not impaired |
| | 2024 | 2,071 | 481,523 | | |
| | 2023 | 4,247 | 484,462 | | |
| Less allowance for ECLs | 2024 | | 111,146 | | |
| | 2023 | | 111,146 | | |
| Total | 2024 | ₱2,071 | ₱370,377 | | |
| | 2023 | ₱4,247 | ₱373,316 | | |

As at December 31, 2024 and 2023, the Company has allowance for ECL amounting to ₱111.15 million, covering amounts which management believes may no longer be recovered.

| Category | Year | Amount/
Volume | Outstanding
balance | Terms | Conditions |
|--|------|-------------------|------------------------|---------------------|---------------------------------|
| <i>Amounts owed to related parties</i> | | | | | |
| BRMC | 2024 | ₱453,096 | ₱454,566 | Payable on demand; | Unsecured |
| | 2023 | ₱— | ₱1,470 | noninterest-bearing | no guarantees;
no impairment |
| SARC | 2024 | 9 | 100,899 | Payable on demand; | Unsecured |
| | 2023 | 3,020 | 100,890 | noninterest-bearing | no guarantees;
no impairment |
| BLRI | 2024 | — | 33,025 | Payable on demand; | Unsecured |
| | 2023 | — | 35,147 | noninterest-bearing | no guarantees;
no impairment |
| BMC Forestry Corporation (BFC) | 2024 | — | 19,515 | Payable on demand; | Unsecured |
| | 2023 | — | 23,275 | noninterest-bearing | no guarantees;
no impairment |
| AFCC | 2024 | — | 3,227 | Payable on demand; | Unsecured |
| | 2023 | 600 | 3,246 | noninterest-bearing | no guarantees;
no impairment |
| Total | 2024 | ₱453,105 | ₱611,232 | | |
| | 2023 | ₱3,620 | ₱164,028 | | |

In 2024, the Company made a contribution to defined benefit obligation of BCLI and BRMC amounting to ₱10.05 million while in 2023, the Company transferred out a portion of defined benefit obligation to BCLI and BRMC employees amounting to ₱8.54 million as this amount pertains to the employees of these related parties.



Compensation of Key Management Personnel

The Company considered all senior officers as key management personnel. Below are the details of the compensation of the Company's key management personnel.

| | 2024 | 2023 |
|--------------------------|----------------|---------|
| Short-term benefits | ₱40,133 | ₱39,869 |
| Post-employment benefits | 14,445 | 12,297 |
| | ₱54,578 | ₱52,166 |

25. ESOIP

The ESOIP, as approved by the stockholders in 1986, allows employees of the Company to buy up to 6,000,000 shares of the Common Class A shares of the Company at either of two prices. If the shares are acquired by the Company from a seller or are treasury shares, these can be bought at acquisition cost. If the shares are sourced from the authorized but unissued shares of the Company, these can be bought at the average closing price quoted in the PSE on the last day that such shares were traded prior to the start of the purchase period. Payment for the shares purchased shall be advanced by the Company on behalf of the employees and repaid through salary deduction without interest. The shares acquired by employees under the ESOIP may be subjected to a holding period from the date of purchase.

In January 1990, the BOD approved the Employees Stock Purchase Plan, which allows the employees of the Company (but excluding directors of the Company) to buy, basically under similar terms and conditions as that of the ESOIP, 2,000,000 shares of the Common Class A shares of the Company.

The balance of the employees' stock ownership pursuant to the said plans shown as part of the trade and other receivables in the parent company statements of financial position amounted to ₱58.42 million as at December 31, 2024 and 2023 and was provided an allowance for the same amount (see Note 5).

26. Pension Benefits Plan

The Company maintains a qualified, noncontributory pension plan covering substantially all of its regular employees.

The following tables summarize the components of net pension expense in the parent company statements of income and fund status, and the amounts recognized in the parent company statements of financial position.

Net pension expense (see Note 22):

| | 2024 | 2023 |
|----------------------|-----------------|---------|
| Current service cost | ₱8,846 | ₱7,747 |
| Past service cost | (10,217) | — |
| Net interest cost | 3,299 | 3,149 |
| Net pension expense | ₱1,928 | ₱10,896 |



Pension liability as at December 31, 2024 and 2023

| | 2024 | 2023 |
|-----------------------------|-----------------|----------|
| Present value of obligation | ₱97,283 | ₱101,011 |
| Fair value of plan assets | (62,864) | (46,456) |
| Pension liability | ₱34,419 | ₱54,555 |

Reconciliation of other comprehensive income

| | 2024 | 2023 |
|--|----------------|---------|
| Balances at beginning of year | ₱15,031 | ₱17,055 |
| Gain (loss) on remeasurement | 4,174 | (2,699) |
| Tax effect | (1,043) | 675 |
| Remeasurement gain (loss) – net of tax | 3,131 | (2,024) |
| Balances at end of year | ₱18,162 | ₱15,031 |

Changes in the present value of defined benefit obligation

| | 2024 | 2023 |
|----------------------------------|-----------------|----------|
| Balances at beginning of year | ₱101,011 | ₱99,011 |
| Transferred obligation (Note 24) | – | (8,544) |
| Current service cost | 8,846 | 7,747 |
| Past service cost | (10,217) | – |
| Interest cost | 6,111 | 6,405 |
| Remeasurement gains | (5,630) | (91) |
| Benefits paid | (2,838) | (3,517) |
| Balances at end of year | ₱97,283 | ₱101,011 |

Breakdown of remeasurement loss (gain) on defined benefit obligation

| | 2024 | 2023 |
|---------------------------------|-----------------|---------|
| Change in financial assumptions | (₱308) | ₱4,839 |
| Experience adjustments | (5,322) | (4,930) |
| Remeasurement gains | (₱5,630) | (₱91) |

Changes in the fair value of plan assets

| | 2024 | 2023 |
|-----------------------------------|----------------|---------|
| Balances at beginning of year | ₱46,456 | ₱45,990 |
| Asset return in net interest cost | 2,812 | 3,256 |
| Contribution | 15,052 | – |
| Remeasurement loss | (1,456) | (2,790) |
| Balances at end of year | ₱62,864 | ₱46,456 |

The Company's plan assets are being managed by a trustee bank. The retirement fund includes cash in bank only as at December 31, 2024 and 2023. The Company has no transactions with its retirement fund. The retirement fund has no investments in shares of stocks of the Company.

In 2024 and 2023, the Company directly paid ₱2.84 million and ₱3.52 million, respectively, to the beneficiaries of the pension benefits plan.



The Company is expected to contribute ₱15.60 million to the defined benefits retirement plan in 2025.

Shown below is the maturity analysis of the undiscounted benefit payments as at December 31, 2024 and 2023:

| Plan year | 2024 | 2023 |
|--------------------------------|----------------|----------------|
| Less than 1 year | ₱73,969 | ₱71,484 |
| More than 1 year to 5 years | 5,997 | 13,934 |
| More than 5 years to 10 years | 15,303 | 18,326 |
| More than 10 years to 15 years | 38,195 | 37,032 |
| More than 15 years to 20 years | 91,514 | 104,791 |
| More than 20 years | 383,067 | 545,773 |

The principal assumptions used in determining the pension benefits obligation of the Company's plan is shown below.

| | 2024 | 2023 |
|----------------------|--------------|-------|
| Discount rate | 6.12% | 6.05% |
| Salary increase rate | 5.00% | 5.00% |

The sensitivity analysis below has been determined based on reasonably possible changes of each significant assumption on the pension liability as at the end of the reporting period, assuming if all other assumptions were held constant:

| December 31, 2024 | | |
|----------------------|-----------------------|---|
| | Increase (decrease) | Present value of the defined benefit obligation |
| Discount rates | 7.05% (+1.00%) | ₱93,258 |
| | 6.05% actual | 97,283 |
| | 5.05% (-1.00%) | 102,071 |
| Salary increase rate | 6.00% (+1.00%) | ₱102,170 |
| | 5.00% actual | 97,283 |
| | 4.00% (-1.00%) | 93,061 |
| December 31, 2023 | | |
| | Increase (decrease) | Present value of the defined benefit obligation |
| Discount rates | 7.05% (+1.00%) | ₱96,300 |
| | 6.05% actual | 101,011 |
| | 5.05% (-1.00%) | 106,671 |
| Salary increase rate | 6.00% (+1.00%) | ₱106,383 |
| | 5.00% actual | 101,011 |
| | 4.00% (-1.00%) | 96,465 |

The average duration of the defined benefit obligation is 18 years and 19 years as at December 31, 2024 and 2023, respectively.



27. Income Taxes

The provision for current and deferred tax in 2024 and 2023 follows:

| | 2024 | 2023 |
|------------------------------|----------------|---------|
| Provision for current taxes | | |
| Regular corporate income tax | ₱12,775 | ₱13,353 |
| Provision for deferred taxes | 5,332 | (3,283) |
| | ₱18,107 | ₱10,070 |

The Company did not recognize deferred tax assets relating to the following temporary differences because management believes that it is more likely than not that the carry-forward benefits will not be realized in the near future:

| | 2024 | 2023 |
|-------------------------------------|-----------------|----------|
| Allowance for impairment losses on: | | |
| Deferred mine exploration costs | ₱166,984 | ₱166,984 |
| Other noncurrent assets | 151,892 | 151,892 |
| Accrued expenses | 8,002 | 8,002 |
| | ₱326,878 | ₱326,878 |

The components of the Company's net deferred tax liabilities are as follows:

| | 2024 | 2023 |
|---|-----------------|----------|
| Deferred tax liabilities: | | |
| Revaluation increment on land in OCI | ₱815,514 | ₱787,305 |
| Mine rehabilitation asset | 9,189 | 8,650 |
| Right-of-use assets | 941 | 1,169 |
| Unrealized foreign exchange gain | — | 21 |
| Unrealized gain on change in fair value of financial assets at FVPL | — | 128 |
| | ₱825,644 | ₱797,273 |
| Deferred tax assets: | | |
| Allowance for impairment losses on: | | |
| Inventories | ₱39,185 | ₱39,153 |
| Trade and other receivables | 16,172 | 16,134 |
| Pension liability | 8,605 | 13,639 |
| Liability for mine rehabilitation | 7,460 | 9,768 |
| Amortization of past service cost | 2,471 | 1,229 |
| Shared-based payment | 2,056 | 2,026 |
| Lease liabilities | 1,105 | 1,318 |
| | 77,054 | 83,267 |
| Deferred tax liabilities – net | ₱748,590 | ₱714,006 |



The reconciliation of income tax computed at the statutory tax rates to provision for income tax as shown in the parent company statements of income is summarized as follows:

| | 2024 | 2023 |
|---|-----------------|-----------|
| Tax at statutory rate | ₱25,368 | ₱134,517 |
| Add (deduct) tax effects of: | | |
| Nontaxable income | (70,934) | (129,583) |
| Nondeductible expenses | 64,444 | 5,581 |
| Interest income subject to final tax | (802) | (1,113) |
| Unrealized gain in investment in financial asset
at FVPL | 159 | — |
| Unrealized gain in investment in financial asset
at FVPL | (128) | 128 |
| Changes in unrecognized deferred tax assets | — | (1,569) |
| Others | — | 2,109 |
| Provision for income tax | ₱18,107 | ₱10,070 |

28. Financial Risk Management Objectives and Policies

The Company has various financial instruments such as cash and cash equivalents, trade and other receivables (excluding advances to officers and employees), amounts owed by/to related parties, trade and other payables (excluding payables to government agencies), loans payable, lease liabilities, and other noncurrent liability which arise directly from its operations. Other financial assets include financial assets at FVPL and FVOCI.

The risks arising from the Company's financial instruments are liquidity risk, credit risk, foreign currency risk, interest rate risk and equity price risk. The BOD reviews and agrees policies for managing each of these risks and these are summarized below.

Liquidity Risk

Liquidity risk arises from the possibility that the Company may encounter difficulties in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's objective is to maintain a balance between continuity of funding and flexibility through the use of bank loans and availment of suppliers' credit. The long-term relationship of the Company to its suppliers gives it the advantage to negotiate the payment terms.

As part of its liquidity risk management, the Company has access to sufficient external funding and loans payable maturing within 12 months can be rolled over with existing lenders. It also continuously assesses conditions in the financial markets for opportunities to avail bank loans and capital market issues. Accordingly, its loan maturity profile is regularly reviewed to ensure availability of funding through an adequate amount of credit facilities with financial institutions. As at December 31, 2024 and 2023, cash in bank and cash equivalents may be withdrawn anytime while investments in financial assets at FVPL and FVOCI may be converted to cash by selling them during the normal trading hours in any business day.



The tables below summarize the maturity profile of the Company's financial liabilities as of December 31, 2024 and 2023 based on contractual undiscounted cash flows. The table also analyses the maturity profile of the Company's financial assets in order to provide a complete view of the Company's contractual commitments. The analysis into relevant maturity groupings is based on the remaining period at the end of the reporting period to the contractual maturity dates.

| | 2024 | | | Total |
|---|------------------|----------------|----------------|------------------|
| | On demand | Within 90 days | Over 90 days | |
| <i>Financial assets</i> | | | | |
| Cash and cash equivalents | ₱415,215 | ₱38,443 | ₱— | ₱453,658 |
| Trade and other receivables* | 215,940 | 24,943 | 58,416 | 299,299 |
| Short-term investments | — | — | 10,000 | 10,000 |
| Amounts owed by related parties | 370,377 | — | — | 370,377 |
| FVOCI | 566 | — | — | 566 |
| Refundable deposits | — | — | 9,229 | 9,229 |
| | 1,002,098 | 63,386 | 77,645 | 1,143,129 |
| <i>Financial liabilities</i> | | | | |
| Trade and other payables** | 70,350 | 27,517 | — | 97,867 |
| Amounts owed to related parties | 611,232 | — | — | 611,232 |
| Lease liability | — | 1,239 | 3,916 | 5,155 |
| Other noncurrent liability | — | — | 49,136 | 49,136 |
| | 681,582 | 28,756 | 53,052 | 763,390 |
| Net financial assets (liabilities) | ₱320,516 | ₱34,630 | ₱24,593 | ₱379,739 |

*excluding advances to officers and employees

**excluding nontrade payables

| | 2023 | | | Total |
|---|-----------------|------------------|-----------------|-----------------|
| | On demand | Within 90 days | Over 90 days | |
| <i>Financial assets</i> | | | | |
| Cash and cash equivalents | ₱142,168 | ₱— | ₱84,929 | ₱227,097 |
| Trade and other receivables* | 195,156 | 33,491 | 58,416 | 287,063 |
| Short-term investments | — | — | 24,280 | 24,280 |
| Amounts owed by related parties | 373,315 | — | — | 373,315 |
| FVPL | 21,441 | — | — | 21,441 |
| FVOCI | 563 | — | — | 563 |
| Refundable deposits | — | — | 9,229 | 9,229 |
| | 732,643 | 33,491 | 176,854 | 942,988 |
| <i>Financial liabilities</i> | | | | |
| Loans payable | 327,299 | — | — | 327,299 |
| Trade and other payables** | 38,570 | 53,586 | — | 92,156 |
| Amounts owed to related parties | 164,028 | — | — | 164,028 |
| Lease liability | — | 2,097 | 5,155 | 7,252 |
| Other noncurrent liability | — | — | 49,136 | 49,136 |
| | 529,897 | 55,683 | 54,291 | 639,871 |
| Net financial assets (liabilities) | ₱202,746 | (₱22,192) | ₱122,563 | ₱303,117 |

*excluding advances to officers and employees

**excluding nontrade payables

Credit Risk

Credit risk refers to the potential loss arising from any failure by counterparties to fulfill their obligations, as and when these falls due. It is inherent to the business as potential losses may arise due to the failure of its customers and counterparties to fulfill their obligations on maturity dates or due to adverse market conditions.

The Company trades only with recognized, creditworthy third parties. It is the Company's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. With respect to credit risk arising from financial assets of the Company, the Company's exposure to credit



risk arises from default of the counterparty, with a maximum exposure equal to the carrying amount of these instruments.

Since the Company trades only with recognized third parties, there is no requirement for collateral.

The table below shows the maximum exposure to credit risk of the components of the parent company statements of financial position. The maximum exposure is shown at each instrument's carrying amount, before the effect of mitigation through the use of master netting and collateral agreements.

| | 2024 | 2023 |
|------------------------------------|-------------------|----------|
| Cash in banks and cash equivalents | ₱453,189 | ₱226,627 |
| Trade and other receivables | 299,299 | 287,063 |
| Short-term investments | 10,000 | 24,280 |
| Amounts owed by related parties | 370,377 | 373,315 |
| FVPL | — | 21,441 |
| FVOCI | 566 | 563 |
| Refundable deposits | 9,229 | 9,229 |
| | ₱1,142,660 | ₱942,518 |

**excluding advances to officers and employees*

Impairment of financial assets

The Company has financial assets consisting of cash and cash equivalents, short-term investments amount owed by related parties, trade and other receivables and refundable deposits that are subjected to ECL model.

General Approach

Cash and cash equivalents and Short-term investments

The ECL relating to the cash of the Company is minimal as these are deposited in reputable banks which have good credit rating and are considered to have lower credit risk.

Amounts owed by related parties, Other receivables and Refundable deposits

The Company provided an allowance for ECLs for these financial assets amounting to ₱173.57 million and ₱173.42 million in 2024 and 2023, respectively.

Simplified Approach

Trade receivables

An impairment analysis is performed at each reporting date using a provision matrix to measure expected credit losses. The provision rates are based on days past due of trade and other receivables. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions.

The Company establishes credit limits at the level of the individual borrower, corporate relationship and industry sector. It also provides for credit terms with the consideration for possible application of intercompany accounts between affiliated companies. Also, the Company transacts only with related parties and recognized third parties, hence, there is no requirement for collateral.



Below is the information about the credit risk exposure on the Company's trade receivables using a provision matrix:

As at December 31, 2024

| | Current | Past due | | | Specific Identification | Total |
|--|---------|----------|---------|----------|-------------------------|---------|
| | | 30 days | 60 days | >90 days | | |
| Expected credit loss rate | 0% | 0% | 0% | 2% | 100% | |
| Estimated total gross carrying amount at default | ₱9,433 | ₱12,498 | ₱6,171 | ₱25,426 | ₱1,815 | ₱55,343 |
| | ₱— | ₱— | ₱— | ₱449 | ₱1,815 | ₱2,264 |

As at December 31, 2023

| | Current | Past due | | | Specific Identification | Total |
|--|---------|----------|---------|----------|-------------------------|---------|
| | | 30 days | 60 days | >90 days | | |
| Expected credit loss rate | 0% | 0% | 0% | 1% | 100% | |
| Estimated total gross carrying amount at default | ₱28,164 | ₱— | ₱— | ₱33,491 | ₱1,815 | ₱63,470 |
| | ₱— | ₱— | ₱— | ₱449 | ₱1,815 | ₱2,264 |

Trade receivables are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery is that the debtors or a group of debtors is experiencing financial difficulty, default or delinquency in interest or principal payments.

Impairment losses on trade receivables are presented as impairment losses within operating profit. Subsequent recoveries of amounts previously written off are credited against the same line item.

Market Risks

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Company's exposure to interest rate risk relates primarily to the Company's long-term debt obligations with floating interest rates.

As at December 31, 2024 and 2023, the Company's exposure to the risk for changes in market interest rate relates primarily to its secured bank loans with floating interest rates. The Company regularly monitors its interest due to exposure from interest rates movements.

The Company's secured bank loans are payable on demand. Nominal interest rates vary from floating rate of 91-day Philippine Treasury Bill (PhP T-bill) rate for peso loans and 3-month LIBOR foreign loans, plus a margin of 3.5%. The Company has no material exposure to interest rate risk as at December 31, 2024 and 2023.

There is no other impact on the Company's equity other than those already affecting the profit or loss. Based on the historical movement of the interest rates, management believes that the reasonably possible change for the next quarter would result in an increase (decrease) of 100 basis points for USD LIBOR and 100 basis points for PhP T-bill.

Foreign Currency Risk

Foreign currency risk is the risk to earnings or capital arising from changes in foreign exchange rates. The Company takes on exposure to effects of fluctuations in the prevailing foreign currency exchange rates on its financial performance and cash flows. The Company has transactional currency exposures. Such exposure arises from the sale of gold. All sales of gold are denominated in US\$. Dollar conversion of metal sales to Philippine peso is based on the prevailing exchange rate at the time of sale.



The Company's policy is to maintain foreign currency exposure within acceptable limits. The Company believes that its profile of foreign currency exposure on its assets and liabilities is within conservative limits for an institution engaged in the type of business in which the Company is involved.

The Company did not seek to hedge the exposure on the change in foreign exchange rates between the US\$ and the Philippine peso. The Company does not generally believe that active currency hedging would provide long-term benefits to stockholders.

The Company's foreign-currency-denominated monetary assets is cash in banks with US\$45,643 equivalent to ₱2.60 million and US\$7 equivalent to ₱388 as at December 31, 2024 and 2023, respectively.

As at December 31, 2024 and 2023, the exchange rates of the Philippine peso to the US\$ based on Philippine Dealing System exchange rates at closing date are ₱57.85 and ₱55.37, respectively.

The amount of foreign-currency-denominated monetary assets subject to foreign currency risk is immaterial relative to the Company financial statements taken as a whole, management opted not to disclose foreign currency risk sensitivity analysis for 2024 and 2023.

Equity Price Risk

Equity price risk is the risk that the fair values of equities decrease as a result of changes in the levels of equity indices and the value of the listed shares. The non-trading equity price risk exposure arises from the Company's quoted equity investments at FVOCI.

The Company's policy is to maintain the risk to an acceptable level. Movement of share price is monitored regularly to determine impact on the parent company statement of financial position.

Since the amount of financial assets subject to equity price risk is immaterial relative to the parent company financial statements taken as a whole, management opted not to disclose equity price risk sensitivity analysis for 2024 and 2023.

29. Capital Management

The Company maintains a capital base to cover risks inherent in the business. The primary objective of the Company's capital management is to ensure that the Company has available funds in order to continuously operate and support its exploration activities. The Company manages its capital structure and makes adjustments, in light of changes in economic conditions. To maintain or adjust the capital structure, the Company may obtain additional advances from stockholders or issue new shares. No changes were made in the objectives, policies or processes in 2024 and 2023.

The following table summarizes the total capital considered by the Company:

| | 2024 | 2023 |
|-----------------------------|-------------------|-------------------|
| Capital stock | ₱714,277 | ₱624,277 |
| Capital surplus | 686,627 | 415,547 |
| Cost of share-based payment | 8,225 | 8,104 |
| Other components of equity | 2,453,681 | 2,365,920 |
| Retained earnings | 4,079,926 | 4,140,120 |
| Treasury shares | (8,016) | (8,016) |
| | ₱7,934,720 | ₱7,545,952 |



Further, the Company monitors capital using debt to equity ratio, which is the total liabilities divided by total equity. Debt to equity ratio of the Company as at December 31, 2024 and 2023 follows:

| | 2024 | 2023 |
|----------------------------|-------------------|------------|
| Total liabilities (a) | ₱1,685,607 | ₱1,499,517 |
| Total equity (b) | 7,934,720 | 7,545,952 |
| Debt-to-equity ratio (a/b) | 0.21:1 | 0.20:1 |

30. Fair Value Measurement

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair values are obtained from quoted market prices, discounted cash flow models and option pricing models, as appropriate.

Set out below is a comparison by category and class of carrying amounts and estimated fair values of the Company's significant financial assets and liabilities as at December 31, 2023 and 2024:

| | Carrying Amount | | Fair Values | |
|-------------------------|-----------------|--------|-------------|--------|
| | 2024 | 2023 | 2024 | 2023 |
| <i>Financial assets</i> | | | | |
| FVOCI | ₱566 | ₱563 | ₱566 | ₱563 |
| FVPL | — | 21,441 | — | 21,441 |

The following methods and assumptions were used to estimate the fair value of each class of financial instruments for which it is practicable to estimate such value:

Cash and cash equivalents, Trade and other receivables, Short-term investments, and Amounts owed by related parties

The fair values of these instruments approximate their carrying amounts as of the reporting date due to their short-term nature.

Financial assets at FVOCI

The fair value of investments that are actively traded in organized markets is determined by reference to quoted market bid prices at the close of business on reporting date.

Financial assets at FVPL

The carrying values of financial assets at FVPL are measured at fair value and is computed based on certain valuation techniques.

Land at revalued amount and investment property

The fair value of land at revalued amounts and investment property is calculated using the sales comparative approach, which results in measurements being classified as level 3 in the fair value hierarchy.

Loans payable

Where the repricing of the variable-rate interest-bearing loan is frequent (i.e., three-month repricing), the carrying value approximates the fair value. Otherwise, the fair value is determined by discounting the principal plus the known interest payment using current market rates.



Fair Value Hierarchy

Set out below is the fair value hierarchy of the Company's assets measured at fair value.

| 2024 | | | |
|---------------------------|--|--|--|
| | Fair value measurement using | | |
| | Quoted prices in
active market
(Level 1) | Significant
observable
inputs
(Level 2) | Significant
unobservable
inputs
(Level 3) |
| Land at revalued amounts | P– | P– | P1,687,394 |
| Investment properties | – | – | 2,837,355 |
| Financial assets at FVOCI | 566 | – | – |
| | P566 | P– | P4,524,749 |
| | | | |
| 2023 | | | |
| | Fair value measurement using | | |
| | Quoted prices in
active market
(Level 1) | Significant
observable
inputs
(Level 2) | Significant
unobservable
inputs
(Level 3) |
| Land at revalued amounts | P– | P– | P1,574,558 |
| Investment properties | – | – | 2,553,620 |
| Financial assets at FVOCI | 563 | – | – |
| Financial assets at FVPL | 21,441 | – | – |
| | P22,004 | P– | P4,128,178 |

Sensitivity of the fair value measurements that are categorized within Level 3

A 5% increase (decrease) in internal factors used in determining the price per square meter such as use, size and location would decrease (increase) the fair value of land by P226.12 million (P228.47 million) and P205.84 million (P217.20 million) as at December 31, 2024 and 2023, respectively.

As at December 31, 2024 and 2023, the fair value of land at revalued amounts, and investment property are calculated using the sales comparative approach, which resulted in measurement being classified as Level 3 in the fair value hierarchy.

Significant unobservable inputs used include value adjustments due to location, size, neighborhood data, and bargaining allowance. Each of these factors includes an adjustment ranging from 10% to 20% of the asking prices per square meter of comparable lots used which range from P1,000 to P2,000 per square meter. Significant increases (decreases) in each estimated value adjustment would result in a significantly higher (lower) fair value on a linear basis.

As at December 31, 2024 and 2023, the Company's financial assets at FVOCI is classified under Level 1 of the fair value hierarchy since these are based on quoted market prices or binding dealer price quotations.

There are no other assets and liabilities measured at fair value using any of the valuation techniques as at December 31, 2024 and 2023. There were no transfers between levels in 2024 and 2023.



31. Lease Commitments

Company as a lessee

The Company has lease contracts for various office spaces, machinery, tools and equipment, and land, which generally have lease terms, as follows:

| Lease | Lease terms |
|--------------------------------|----------------|
| Land | 15 to 25 years |
| Office spaces | 3-8 years |
| Machinery, tools and equipment | 2 years |

The Company also has certain leases of land and machinery, tools and equipment with lease terms of 12 months or less. The Company applies the 'short-term lease' recognition exemption for these leases. The Company's obligations under its leases are secured by the lessor's title to the leased assets.

In 2021, the Company signed a lease agreement with Perea Realty and Development Corporation for the rental of its office space at Universal Re Building for three (3) years starting July 1, 2020 and expiring on June 30, 2023. On March 18, 2024, the lease agreement was subsequently renewed for a period of one (1) year commencing July 1, 2023 and expiring on June 30, 2024. It was further renewed for another year starting July 1, 2024 and expiring on June 30, 2025. The monthly rental for the leased office space is ₱0.18 million excluding VAT and association dues. The Company has a security deposit amounting to ₱0.24 million which is set to be refunded at the end of the lease term, net of any unpaid charges.

The following are the amounts recognized in the parent company statements of income:

| | 2024 | 2023 |
|--|---------------|--------|
| Depreciation expense of right-of-use assets included in property and equipment (Note 10) | ₱911 | ₱1,398 |
| Interest expense on lease liabilities | 368 | 318 |
| Expenses relating to short-term leases included in selling, general and administrative costs | 2,132 | 1,025 |
| Total amount recognized in company statements of income | ₱3,411 | ₱2,741 |

The carrying amount of PFRS 16 lease liabilities as at December 31, 2024 and 2023 are as follows:

| | 2024 | 2023 |
|--|---------------|---------|
| Beginning balances | ₱5,271 | ₱4,714 |
| Additions | — | 2,052 |
| Interest | 368 | 318 |
| Payments of: | | |
| Interest portion | (368) | (318) |
| Principal portion | (850) | (1,495) |
| Ending balances | 4,421 | 5,271 |
| Less current portion | 942 | 2,695 |
| Lease liabilities - net of current portion | ₱3,479 | ₱2,576 |



The lease liabilities were measured at the present value of the remaining lease payments discounted at the Company's incremental borrowing rates as at January 1, 2021. The weighted average incremental borrowing rates applied to the lease liabilities on January 1, 2021 was 9.39%.

Shown below is the maturity analysis of lease liabilities pertaining to contractual undiscounted cash flows:

| | 2024 | 2023 |
|------------------------------|---------------|---------------|
| 1 year | ₱1,239 | ₱2,097 |
| more than 1 years to 2 years | 1,259 | 1,239 |
| more than 2 years to 3 years | 1,281 | 1,259 |
| more than 3 years to 4 years | 1,028 | 1,281 |
| more than 5 years | 348 | 1,376 |

32. Investment Properties

On February 22, 2024 and January, 16, 2023, the Company engaged an independent appraiser to assess the fair market value of land under investment properties as at December 31, 2024 and 2023, respectively. The appraisal was performed by Cuervo Appraisers, Inc. The fair value of the investment properties was estimated using the sales comparative approach, which considers the sales of similar or substitute properties and related market values and establishes value estimates by processes involving comparisons (Level 3).

The Company recognized revaluation gain amounting to ₱283.74 million in 2024 and revaluation loss amounting to ₱20.14 million in 2023 (see Note 23). As at December 31, 2024 and 2023, the Company's retained earnings shall be restricted for dividend declaration to the extent of the accumulated revaluation gains amounting to ₱1,262.69 million and ₱978.96 million, respectively.

Direct operating expenses from these investment properties is nil in 2024 and 2023.

Movements of investment properties are as follows:

| | 2024 | 2023 |
|--------------------------------------|-------------------|------------|
| Balances at beginning of year | ₱2,553,620 | ₱2,979,827 |
| Transfer to related parties (Note 9) | — | (406,067) |
| Revaluation (Note 23) | 283,735 | (20,140) |
| Balances at end of year | ₱2,837,355 | ₱2,553,620 |

In 2023, the Company entered into an agreement to assign to ADOVC a 360,000 sq. m. land located in Itogon, Benguet with a fair market value of ₱263.0 million in exchange for 248,780 common shares in ADOVC. In the same year, the Company entered into an agreement to transfer to BCPMI a 180,000 sq. m. land located in Itogon, Benguet with a fair market value of ₱143.07 million in exchange for 1,075,100 common shares in BCPMI.



Movements in accumulated revaluation gains on investment properties are as follows:

| | 2024 | 2023 |
|-----------------------------------|-------------------|------------|
| Balances at beginning of year | ₱978,956 | ₱1,405,163 |
| Realized gain | — | (406,067) |
| Revaluation gain (loss) (Note 23) | 283,735 | (20,140) |
| Balances at end of year | ₱1,262,691 | ₱978,956 |

33. Agreements and Contingencies

- The Company is contingently liable on lawsuits or claims filed by third parties, which are either pending decision by the courts or are subject to settlement agreements. The outcome of these lawsuits or claims cannot be presently determined. In the opinion of management and its legal counsel, the eventual liability from these lawsuits or claims, if any, will not have a material effect on the parent company financial statements.
- In 2011, the Company signed a 20-year power supply agreement with Therma Luzon, Inc. (TLI), a wholly owned subsidiary of Aboitiz Power Corporation, to supply reliable power to its current and future mining operations in Itogon, Benguet. The contract provides for a payment discount of 0.5% on its monthly billing if the Company pays TLI on or before the 15th of the payment month. Electrical charges in 2024 and 2023 amounted to ₱7.70 million and ₱9.12 million, respectively.

34. Changes in Liabilities Arising from Financing Activities

Movements on the reconciliation of liabilities arising from financing activities are as follows:

| | 2024 | | | |
|--|-----------------|-------------------|-----------------|-----------------|
| | January 1 | Cash flows | Others | December 31 |
| Loans payable | ₱327,299 | (₱643,211) | ₱315,912 | ₱— |
| Amounts owed to related parties | 164,028 | 447,204 | — | 611,232 |
| Lease liabilities - current | 2,695 | (850) | (903) | 942 |
| Lease liabilities – net of current portion | 2,576 | — | 903 | 3,479 |
| Deposit for future stock subscription | — | 20,000 | — | 20,000 |
| Dividend payables | — | (108,068) | 143,557 | 35,489 |
| | ₱496,598 | (₱284,925) | ₱459,469 | ₱671,142 |

| | 2023 | | | |
|--|-----------------|-------------------|----------------|-----------------|
| | January 1 | Cash flows | Others | December 31 |
| Loans payable | ₱325,096 | ₱— | ₱2,203 | ₱327,299 |
| Amounts owed to related parties | 445,297 | (289,812) | 8,543 | 164,028 |
| Lease liabilities - current | 1,288 | (1,495) | 2,902 | 2,695 |
| Lease liabilities – net of current portion | 3,426 | — | (850) | 2,576 |
| | ₱775,107 | (₱291,307) | ₱12,798 | ₱496,598 |



Others pertain to the interest expense related to the loans payable and lease liabilities, additions to lease liabilities, transfer of pension liability to related parties and accretion expense related to the liability for mine rehabilitation which are recognized in the parent company statements of income.

35. Operating Segments

Operating segments are components of an enterprise for which separate financial information is available that is evaluated regularly reviewed by the chief operating decision-maker, who is the President of the Company.

The Company identified its operating segments based on the products it offers. The following are the operating segments as at December 31, 2024 and 2023:

| 2024 | | | | | |
|-----------------------|--------------------|-------------------------|-----------|--------------|--------------|
| | Mine
operations | Quicklime
operations | Total | Eliminations | Consolidated |
| Revenue | ₱791,746 | ₱100,023 | ₱891,769 | (₱3,258) | ₱888,511 |
| Cost and Expenses | 654,415 | 80,154 | 734,569 | 154,357 | 888,926 |
| Net income (loss) | 122,159 | 14,969 | 137,128 | (53,765) | 83,363 |
| Operating assets | 1,375,275 | 362,032 | 1,737,307 | 7,883,020 | 9,620,327 |
| Operating liabilities | 119,098 | 45,701 | 164,799 | 1,520,808 | 1,685,607 |

| 2023 | | | | | |
|-----------------------|--------------------|-------------------------|-----------|--------------|--------------|
| | Mine
operations | Quicklime
operations | Total | Eliminations | Consolidated |
| Revenue | ₱627,466 | ₱96,516 | ₱723,982 | ₱— | ₱723,982 |
| Cost and Expenses | 617,745 | 72,044 | 689,789 | 118,872 | 808,661 |
| Net income (loss) | (14,457) | 26,147 | 11,690 | 516,307 | 527,997 |
| Operating assets | 1,215,818 | 355,600 | 1,571,418 | 7,474,051 | 9,045,469 |
| Operating liabilities | 103,622 | 50,221 | 153,843 | 1,345,674 | 1,499,517 |

