

AEPEP 2024

# ANNUAL ENVIRONMENTAL PROTECTION AND ENHANCEMENT PROGRAM (AEPEP)

Graymont (Philippines) Inc.- Lime Milk Plant  
MPP No. 15-2014-IVB (1ST Renewal)  
RTEPZ, Brgy. Rio Tuba, Bataraza, Palawan



## Table of Contents

| No.   | Title   | Page No. |
|-------|---|----------|
| 1.0   | Executive Summary.....                                | 2        |
| 2.0   | Company Profile.....                                  | 3        |
| 3.0   | Project Description.....                              | 4        |
| 4.0   | Project Location.....                                 | 6        |
| 4.1   | Mineral Resources/Ore Reserves.....                   | 16       |
| 4.2   | Access/Transportation.....                            | 16       |
| 4.3   | Power Supply.....                                     | 17       |
| 4.4   | Equipment to be used.....                             | 17       |
| 4.5   | Workforce Information.....                            | 21       |
| 4.6   | Development / Utilization Schedule.....               | 22       |
| 5.0   | Baseline and or Current Information.....              | 25       |
| 5.1   | Land Resources.....                                   | 25       |
| 5.2   | Water Quality and Resources.....                      | 29       |
| 5.3   | Air Quality.....                                      | 31       |
| 5.4   | Ambient Noise Quality.....                            | 34       |
| 5.5   | Biodiversity and Conservation Values.....             | 36       |
| 5.6   | Environmental Research.....                           | 41       |
| 5.7   | Others.....   | 41       |
| 6.0   | Total Cost of AEPEP.....                              | 43       |
| 7.0   | Environmental Impacts and Mitigating Measures.....    | 44       |
| 8.0   | Approach and Scope of Environmental Program.....      | 48       |
| 9.0   | Name and Signature of the Applicant.....              | 54       |
| 10.0  | Bibliography.....                                     | 55       |
| Annex | AEPEP 2024 Physical and Financial Targets Matrix..... | 56       |

## ANNUAL ENVIRONMENTAL PROTECTION AND ENHANCEMENT PROGRAM

### 1.0. Executive Summary

GRAYMONT (PHILIPPINES) INC. (Graymont) is a lime milk plant located within the approximate area of 8.06 hectares at Rio Tuba Export Processing Zone (RTEPZ) in Barangay Rio Tuba, Bataraza, Palawan.

Graymont formerly Unichamp Mineral Philippines Inc. is a subsidiary of the Malaysian-based firm Unichamp Mineral Sdn Bhd (UMSB) and has significant experience in lime manufacturing supplying various industries including mining, mineral extraction, chemical, steel, water treatment, pulp and paper, oil, and gas drilling, agro farming, and sugar milling.

This project produces approximately 134,000-147,000 of calcium oxide (CaO) per year, which is equivalent to 167,000 – 184,000 MT of hydrated lime or milk of lime (dry basis). The produced milk of lime (MOL) is solely intended for the consumption of CBNC to neutralize its wastewater.

Graymont, with MPP No. 15-2014-IVB (1<sup>st</sup> Renewal) is situated at the northeast section of the nickel processing plant of Coral Bay Nickel Corporation (CBNC) and is about 9.5 km away from the limestone quarry site in Sitio Gotok, Barangay Sandoval, Municipality of Bataraza, Province of Palawan.

During the operational phase, identified environmental impacts include generation of solid and hazardous wastes, air, land, and water pollution, and impact to safety and health. This Annual Environmental Protection and Enhancement Program is created to monitor the implementation of the mitigating measures of the identified impacts and enhance the current condition of the environment.

The implementation of the 2024 AEPEP includes the following programs to ensure our compliance with the existing regulatory requirements while we are protecting the environment. To wit:

- A. Land Resources
- B. Water Quality and Resources
- C. Air Quality
- D. Noise and Vibration
- E. Conservation Values
- F. Environmental Research
- G. Other Component

Allotted budget for the implementation the 2024 AEPEP is **₱31,264,536.91 or 6.82%** of the projected 2023 OPEX amounting ₱458,418,321.29.

## 2.0. Company Profile

GRAYMONT (PHILIPPINES) INC. formerly Unichamp Mineral Philippines Inc. is a subsidiary of the Malaysian-based firm Unichamp Mineral Sdn Bhd (UMSB) and now it is acquired by GRAYMONT Ltd.

The project produces approximately 134,000 – 147,000 MT of Calcium Oxide (CaO) per year, which is equivalent to 167,000 – 187,600 DMT of hydrated lime (dry basis).

### Company Information

|                      |   |
|----------------------|---|
| Name:                | GRAYMONT (PHILIPPINES) INC.   |
| Main Office:         | Unit 3004, 30th Floor,<br>NAC Tower Building,<br>32nd Street, Bonifacio<br>Global City, Taguig City |
| Project Site Office: | Rio Tuba Export Processing Zone, Brgy.<br>Rio Tuba, Bataraza, Palawan, 5306                         |
| Telephone:           | +63917825785  |
| Email Address:       | <a href="mailto:clee@graymont.com">clee@graymont.com</a>  |

### Contact Person

Name: Mr. Rommel Ibuna  
Designation: President  
Company: GRAYMONT (PHILIPPINES) INC.  
Main Office: Unit 3004, 30th Floor, NAC  
Tower Building,  
32nd Street, Bonifacio  
Global City, Taguig City  
Telephone: +632 8552-2651, +632 8869-6217  
Email Address: [rommel.ibuna@graymont.com](mailto:rommel.ibuna@graymont.com)

Name: Craig Lee  
Designation: Interim Plant Manager  
Company: GRAYMONT (PHILIPPINES) INC.  
Main Office: RTEPZ, Brgy. Rio Tuba,  
Bataraza, Palawan  
Telephone: +63917825785  
Email Address: [clee@graymont.com](mailto:clee@graymont.com)

### 3.0 Project Description

Graymont formerly Unichamp Mineral Philippines Inc. is a subsidiary of the Malaysian-based firm Unichamp Mineral Sdn Bhd (UMSB) and has significant experience in lime manufacturing supplying various industries including mining, mineral extraction, chemical, steel, water treatment, pulp and paper, oil, and gas drilling, agro farming, and sugar milling.

This project produces approximately 134,000-147,000 of calcium oxide (CaO) per year, which is equivalent to 167,000 – 184,000 MT of hydrated lime or milk of lime (dry basis). The produced milk of lime (MOL) is solely intended for the consumption of CBNC to neutralize its wastewater.

Table 1. Project Permits and details

| <b>Contract/Permit</b>   |  |
|--|--|
| Contract/Permit Number   | 15-2014-IVB (1 <sup>st</sup> Renewal)                                  |
| Contractor/Permit Holder   | GRAYMONT (PHILIPPINES) INC.  |
| Status of MA/FTAA/MPP  | Operational  |
| Date Approved  | November 27, 2019  |
| Date of Expiration   | November 27, 2024  |
| Total Area Covered   | 8.06 hectares  |
| Location of Contract/Permit Area   | Rio Tuba, Export Processing Zone,<br>Brgy. Rio Tuba, Bataraza, Palawan |
| Issuing Office   | Mines and Geosciences Bureau<br>MIMAROPA                               |
| <b>Environmental Compliance Certificate</b>  |  |
| ECC Reference Number   | ECC-CO-1205-0009   |
| Company Name on ECC  | Graymont (Philippines) Inc.  |
| **January 6, 2021, EMB CO granted the change of name of the issued Environmental Compliance Certificate (ECC-CO-1205-0009) from Unichamp Mineral Philippines Inc. to Graymont (Philippines) Inc. |  |
| Date of Issuance   | July 19, 2012,<br>January 6, 2021 (Amended)                            |
| Total Area Covered   | 8.06 hectares  |
| Location of the Project  | Rio Tuba, Export Processing Zone,<br>Brgy. Rio Tuba, Bataraza, Palawan |
| Issuing Office   | Environmental Management Bureau  |
| <b>Ore Supply Agreement (for MPP)</b>  |  |
| Contracted Ore Supplier  | Rio Tuba Nickel Mining Corporation<br>(RTNMC)                          |
| Details of Mining Rights of Ore Supplier   | MPSA-213-2005-IVB  |
| Contracted Ore Supplier  | Philippine Mining Services Corp.                                       |
| Details of Mining Rights of Ore Supplier   | MPSA No. 150-2000-VII  |

## 4.0 Project Location

GRAYMONT (PHILIPPINES) INC. lime milk plant is located within the approximate area of 8.06 hectares at the Rio Tuba Export Processing Zone (RTEPZ) in Barangay Rio Tuba, Municipality of Bataraza, Province of Palawan. The plant site is located at the northeast section of CBNC's nickel processing plant and approximately 9.5 kilometers from the limestone quarry in Gotok. Graymont is covered by the Mineral Processing Permit and its Environmental Compliance Certificate. The project site lies in the following geographic coordinates listed in table 2.

Table 2. Geographic Coordinates

| Points | North Latitudes | East Longitudes  |
|--------|-----------------|------------------|
| 1      | 8° 33' 42.702"  | 117° 25' 34.157" |
| 2      | 8° 33' 38.672"  | 117° 25' 34.157" |
| 3      | 8° 33' 38.672"  | 117° 25' 30.799" |
| 4      | 8° 33' 34.376"  | 117° 25' 30.799" |
| 5      | 8° 33' 34.376"  | 117° 25' 26.311" |
| 6      | 8° 33' 33.562"  | 117° 25' 26.311" |
| 7      | 8° 33' 33.562"  | 117° 25' 23.011" |
| 8      | 8° 33' 35.856"  | 117° 25' 23.011" |
| 9      | 8° 33' 35.856"  | 117° 25' 21.688" |
| 10     | 8° 33' 40.448"  | 117° 25' 21.688" |
| 11     | 8° 33' 42.702"  | 117° 25' 25.893" |





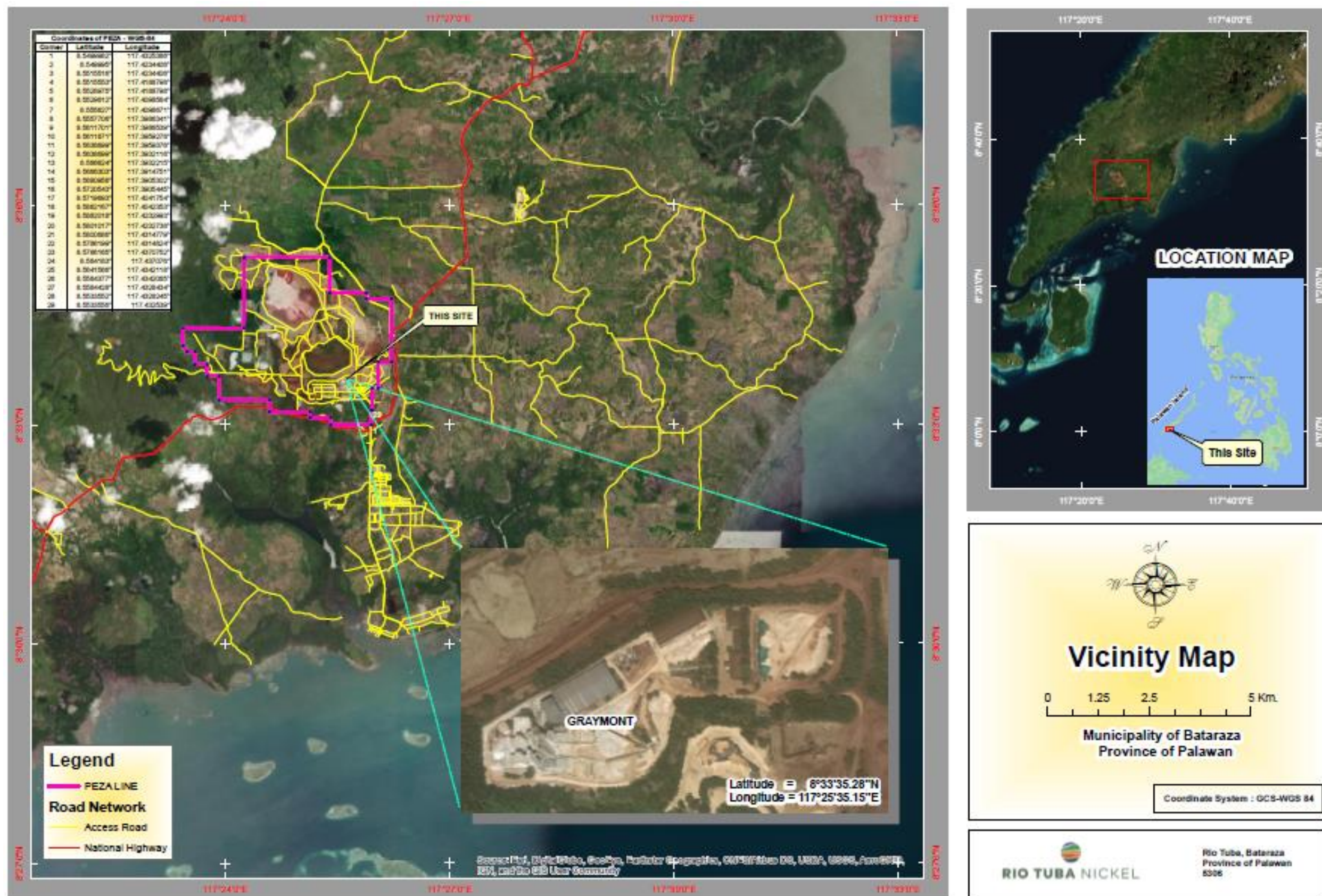


Figure 2. Location Map



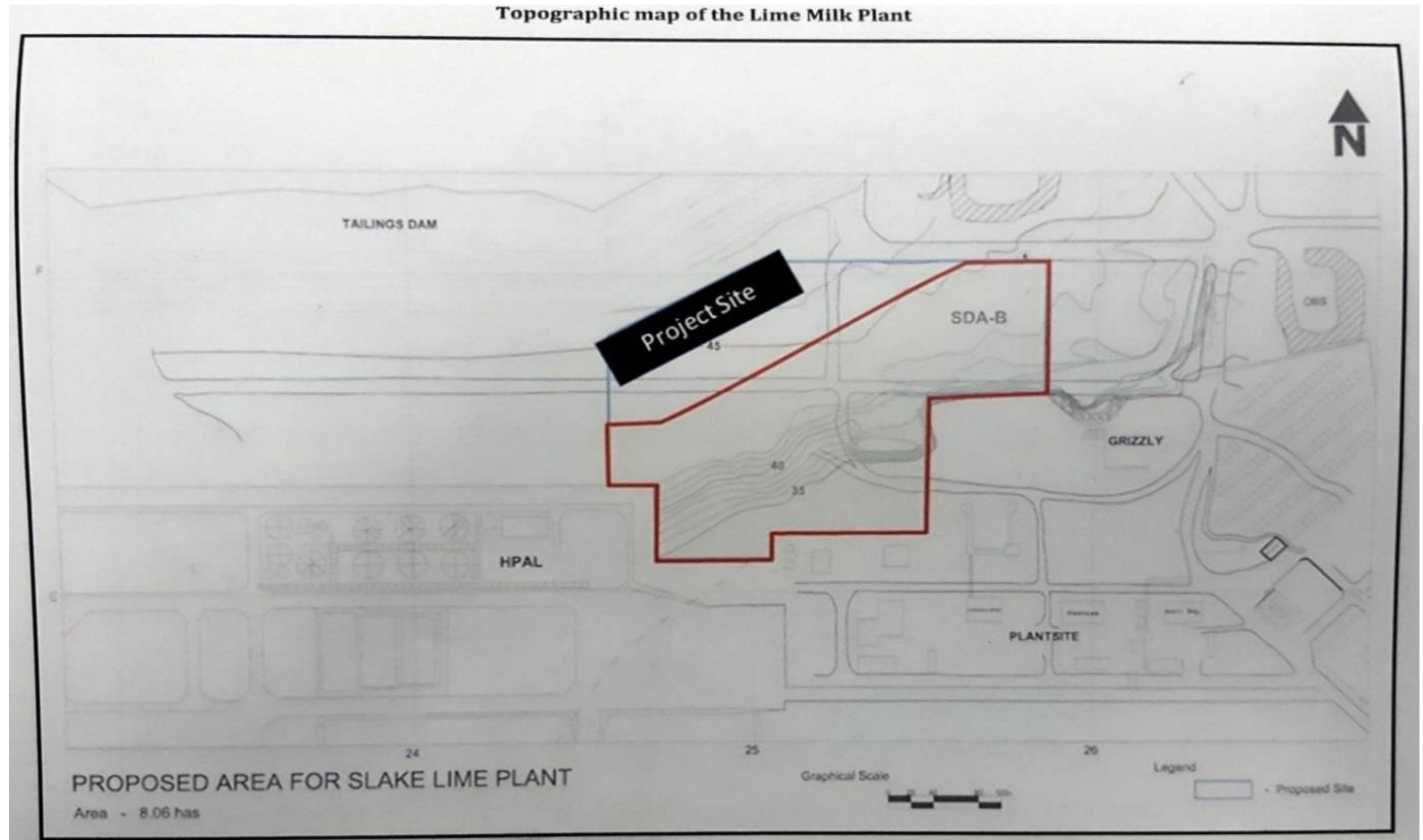


Figure 3. Topographic Map





Figure 4. Geotagged photograph of the Project Area

#### 4.0.1. Estimated Project Cost

The total, actual cost of the Plant is USD 22.608 Million (PhP 998,048.45 million), with the following details:

Table 1. Breakdown of Project Cost

| Particulars                              | USD                  |
|--|----------------------|
| Raw Material Handling Plant              | 608,693.00           |
| Handling Plant                           | 12,251,672.00        |
| Milk of Lime Plant 1 and 2               | 4,095,565.00         |
| Petcoke Grinding Plant                   | 2,334,465.00         |
| Utilities                                | 131,251.00           |
| Substation                               | 1,077,081.00         |
| Office Building, Weighbridge & Warehouse | 246,742.00           |
| Laboratory Building and Equipment        | 170,702.00           |
| Heavy Equipment                          | 416,890.00           |
| General Plant                            | 1,043,539.00         |
| Workshop and Store                       | 231,852.00           |
| Total Project Cost                       | <b>22,608,452.00</b> |

Table 2. Plant Operating Expenses in PhP from October 2021 to September 2022

| PARTICULAR  | October 2021 TO<br>September 2022 |
|---|-----------------------------------|
| Depreciation of machineries and production equipment                                | 92,049,477.32                     |
| Repair and maintenance of machineries and production equipment and spare parts used | 38,259,432.48                     |
| Fuel consumption  | 150,854,437.57                    |
| Labor cost (skilled and laborer)  | 20,289,230.66                     |
| <b>TOTAL</b>  | <b>301,452,578.03</b>             |

#### 4.0.2. Types of Minerals and Ores

The yearly requirement of GRAYMONT is 268,000 to 294,800 MT/year of limestone, which will be sourced from the Gotok Limestone Quarry or other areas that comply with the limestone specification requirements to which the cut-off grade should be 92% CaCO<sub>3</sub>, with <5% SiO<sub>2</sub>, <0.7% MgO, and <3% moisture content.

#### 4.0.3. Mining Method/s

There is no mining activity, hence, no mineral is produced. The main product of the plant is the Milk of Lime (MOL) for the consumption of CBNC in their operations. The raw material processed is limestone which will be sourced from the existing Gotok Limestone Quarry operated by RTNMC and another limestone supply from PMCS.

Table 3. Limestone Requirement for the Year 2023

| Sizes      | Consumption         |
|------------|---------------------|
| 40- 80 mm  | >151,000 metric ton |
| 30 - 55 mm | >118,000 metric ton |

#### 4.0.4. Estimated Production (daily or annual production of mine and output of mill) as per approved ECC.

At normal plant operation of 24 hours a day and seven (7) days a week, except in downtimes for repair and maintenance, the average limestone consumption is at 440 MT/day/line/kiln or 880MT/day for the two (2) feeding systems. The corresponding quicklime output for the two (2) kiln plants will be 44MT/day and the MOL output is 56 MT/day.

Graymont has an annual production rate of 134,000-147,000 MT of Calcium Oxide (CaO) equivalent to 167,000-187,000 MT of hydrated lime.

#### 4.0.5. Mill/Processing Plant

Table 4.Details of Mineral Processing Plant

|                                |  |
|--------------------------------|--|
| Site Location                  | Rio Tuba, Export Processing Zone, Brgy. Rio Tuba, Bataraza, Palawan  |
| Area Covered                   | 8.06 hectares  |
| Type of Process                | Calcining  |
| Plant Capacity                 | 600 MT per year  |
| Process                        | Calcining  |
| Waste and/or tailings disposal | N/A  |
| Water Management               | Water recycling with zero effluent.  |
| Hazardous Waste Management     | The Company established a temporary storage facility for generated hazardous waste and assigned personnel for the maintenance of the facility. |
| Stockpile Management           | The Company ensures that existing stockpile management consider the safety and environmental related factors are complied.                     |



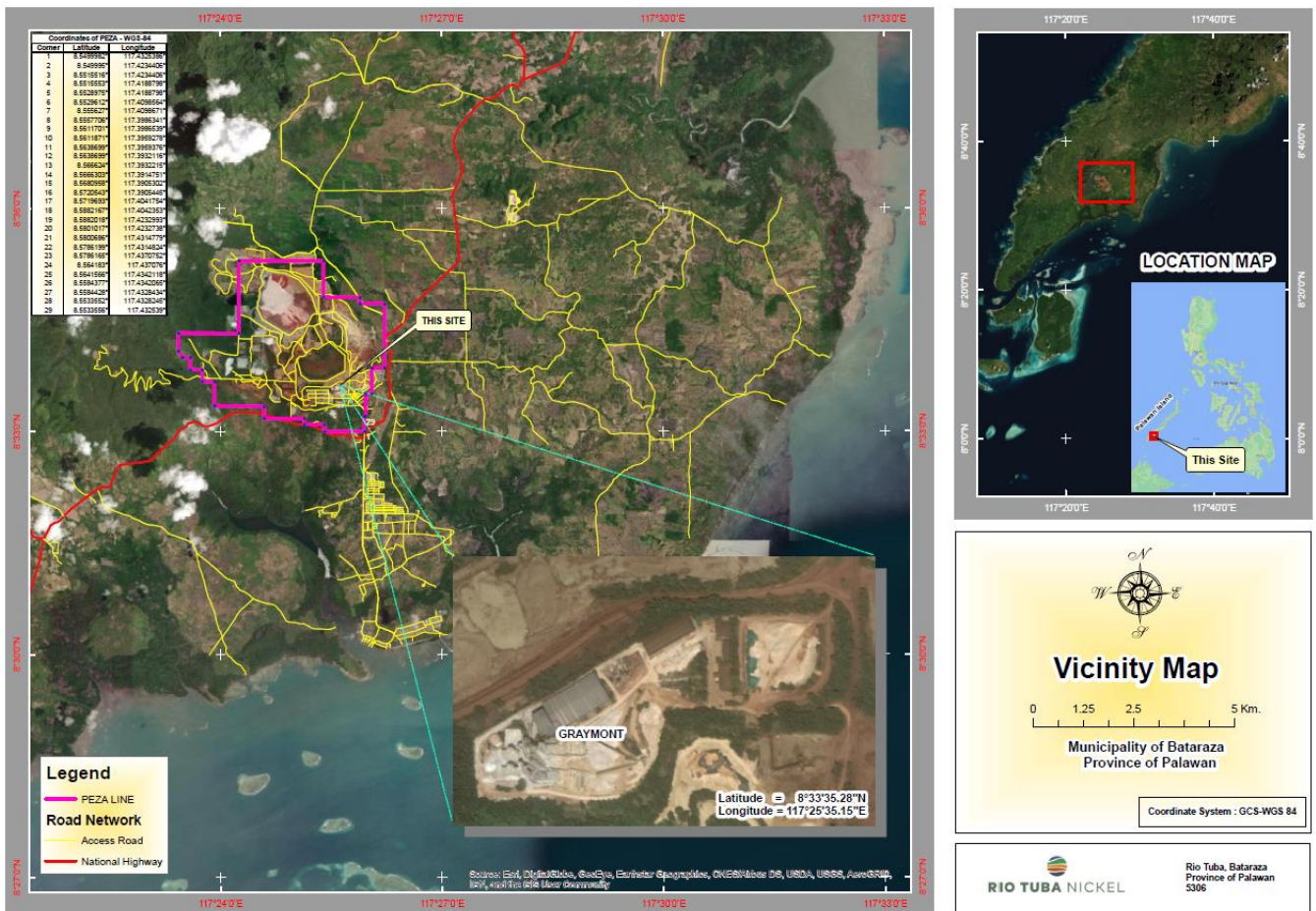


Figure 5. Vicinity Map of GRAYMONT (PHILIPPINES) INC.

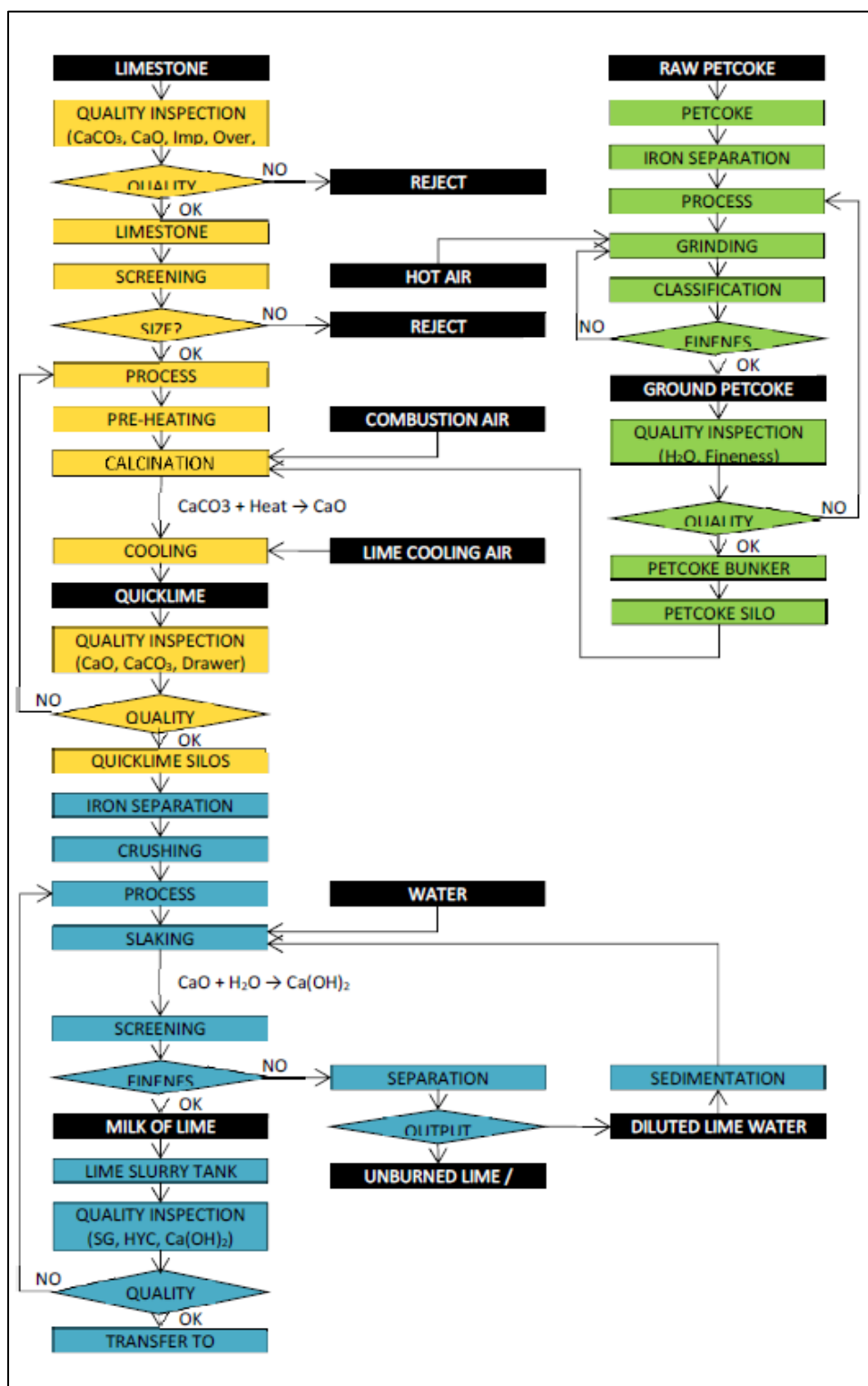


Figure 6. Process Flow



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#### **4.0.6. Proposed mine life (in years)**

The supply agreement between Graymont and CBNC is for period of ten (10) years, with an option to renew for five (5) years.

#### **4.1. Mineral Resources and Ore Reserves**

The plant is wholly dependent on the supply of limestone from Gotok quarry of RTNMC and PMSC.

#### **4.2. Access/Transportation**

##### **4.2.1. Road**

The Municipality of Bataraza is located on the southernmost tip of mainland Palawan. It is approximately 236 km from Puerto Princesa City and about five (5) to six (6) hours by land. From the capital city, the present road conditions to the municipality are relatively good with mostly paved roads to the municipality of Narra while the remaining road stretches to Bataraza are partly paved and undergoing repair.

The proposed lime milk processing plant is located within the RTEPZ at the northeast section of CBNC's nickel processing plant in Barangay Rio Tuba, Bataraza, Palawan. The plant is approximately 9.5 km from the limestone quarry site in Gotok. Access to the site will be by the existing municipal and barangay roads.

##### **4.2.2. Air Access**

Puerto Princesa City, the provincial capital of Palawan, can be reached from Manila by regular commercial plane. It is approximately 185 aerial kilometers southeast of Manila.

##### **4.2.3. Shipping**

Small bancas and pump boats are mode of transportation in the navigable waterways in the area. However, most of these communities are not provided with berthing

structures. The existing port in Brgy. Rio Tuba is owned and operated by RTNMC and CBNC.

### **4.3. Power Supply**

#### **4.3.1. Power Requirements**

Graymont plant requires about 6.5 million kWh for its annual consumption.

#### **4.3.2. Source of power supply**

Graymont will source its power supply directly from CBNC's on-site power plant.

#### **4.3.3. Supply alternatives**

As part of the contingency plan of the project, a 175 KVA diesel engine generator is installed for emergency use in the event of power outage.

### **4.4. Equipment to be used.**

#### **4.4.1. Milling/Processing**

##### **Raw Materials Handling:**

- Weigh bridge
- Grizzly Feeder
- Belt Conveyor
- Divertor

##### **Calcination Process**

- Belt Conveyors (for stockpile, vibrating screen, skip hopper and bucket elevator)
- Stockpile Tunnel
- Vibration Feeders (4)
- Kiln Shells and valves
- SKIP motor
- Brake motor
- Combustion Blowers

- Cooling Lime Blowers
- Lances Cooling Blowers
- Petcoke Transfer Blowers
- Lime Extractor
- Bucket elevators
- Rotary Valve below cyclone
- Filter screw conveyor
- Filter rotary valve
- Circulating pump
- Hydraulic pumps
- Dosing rotary valves
- Agitator silo cone and dosing tank
- Petcoke filter fan
- Screw conveyors
- Quicklime Silo filter blower fan

### **Milk of Lime Process**

- Vibrating feeder silos
- Belt conveyors
- Permanent magnet
- Impact Mill
- Bucket Elevator
- Bag filter fan
- Rotary Feeder
- Screw Conveyor
- Slaker motors
- Dupurit fan
- Vibrating screens
- Agitators
- Warmal Pumps
- Supernatant Water Pumps
- Lime Recycling System
- Lime Slurry Transport System

### **Petcoke Grinding Process**

- Vibrating Feeder
- Belt Conveyor
- Feed hopper filter blower fan
- Belt feeder
- Classifier
- Vertical Mill
- Mill Oil Lubrication
- Hot Gas Generator
- Diesel Pump
- Filter Blower Fan
- Rotary Valve
- Petcoke transport blower
- Diverots
- Bag Filters
- Raw material silo
- Coal Silo
- Cooling Tower
- Fire Fighting System

#### **4.4.2. Laboratory**

Table 5. Laboratory Equipment

| <b>Laboratory Equipment</b> |                 |                |
|-----------------------------|-----------------|----------------|
| <b>List of Equipment</b>    | <b>Quantity</b> | <b>Remarks</b> |
| Analytical Balance          | 2               | Purchased      |
| Autotitrator                | 1               | Purchased      |
| Bomb Calorimeter            | 2               | Purchased      |
| Cross Beater Grinder        | 1               | Purchased      |
| Digital Burette             | 1               | Purchased      |
| Drying Oven                 | 5               | Purchased      |
| Fumehood                    | 1               | Purchased      |
| Furnace                     | 3               | Purchased      |

|                             |   |           |
|-----------------------------|---|-----------|
| Hammer mill/Impact mill     | 1 | Purchased |
| Hot Plate                   | 6 | Purchased |
| Hygrometer                  | 4 | Purchased |
| Industrial Scale            | 1 | Purchased |
| Magnetic Mechanical Stirrer | 2 | Purchased |
| Magnetic Mechanical Shaker  | 1 | Purchased |
| Moisture Balance            | 1 | Purchased |
| pH Meter                    | 1 | Purchased |
| Sonicator                   | 1 | Purchased |
| Top Loading Balance         | 1 | Purchased |

#### 4.4.3. Motorpool

- Workshop and store for spare parts, components, and consumables.

#### 4.4.4. Others

- Warehouse/storage facility for fuel.
- Water tank and water hydrant.
- Security base/guardhouse.
- Equipment for environmental protection (air filters, scrubbers, dust collectors, water sedimentation tank, etc.)
- Electricity substation
- Backup power supply/ stand by generator
- Ancillary equipment such as air compressors, blowers, etc.
- Lime Milk Pipeline and backup pipeline to the CBNC Receiving Tank
- Washing Area 1 and 2
- Magazine Chemical Storage
- Office building and staff canteen

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## **4.5. Workforce Information**

### **4.5.1. Total operational workforce**

A total of 191 jobs were created by the project during the operational phase comprising of personnel for management and support, quality control, production, maintenance including indirect employee. Whenever possible, recruitment will be from the local area. The local hires at the technical and supervisory levels will be sent to affiliate company for training and exposure to the lime manufacturing industry.

For Plant Site Security, a total of eighteen (18) security guards were hired through a security agency. They will work on two (2) shifts (9:00 am to 9:00 pm, and 9:00 pm to 9:00 am).

Site-based MEPEO implements the approved AEPEP based on the targeted budget and schedule. He/She is also responsible for addressing the arising environmental concerns through the execution of adequate and sustainable programs. The MEPEO directly reports to the Plant Manager.

All the projects shall undergo the approval of the Director for Finance, General Administration, and Corporate Affairs.

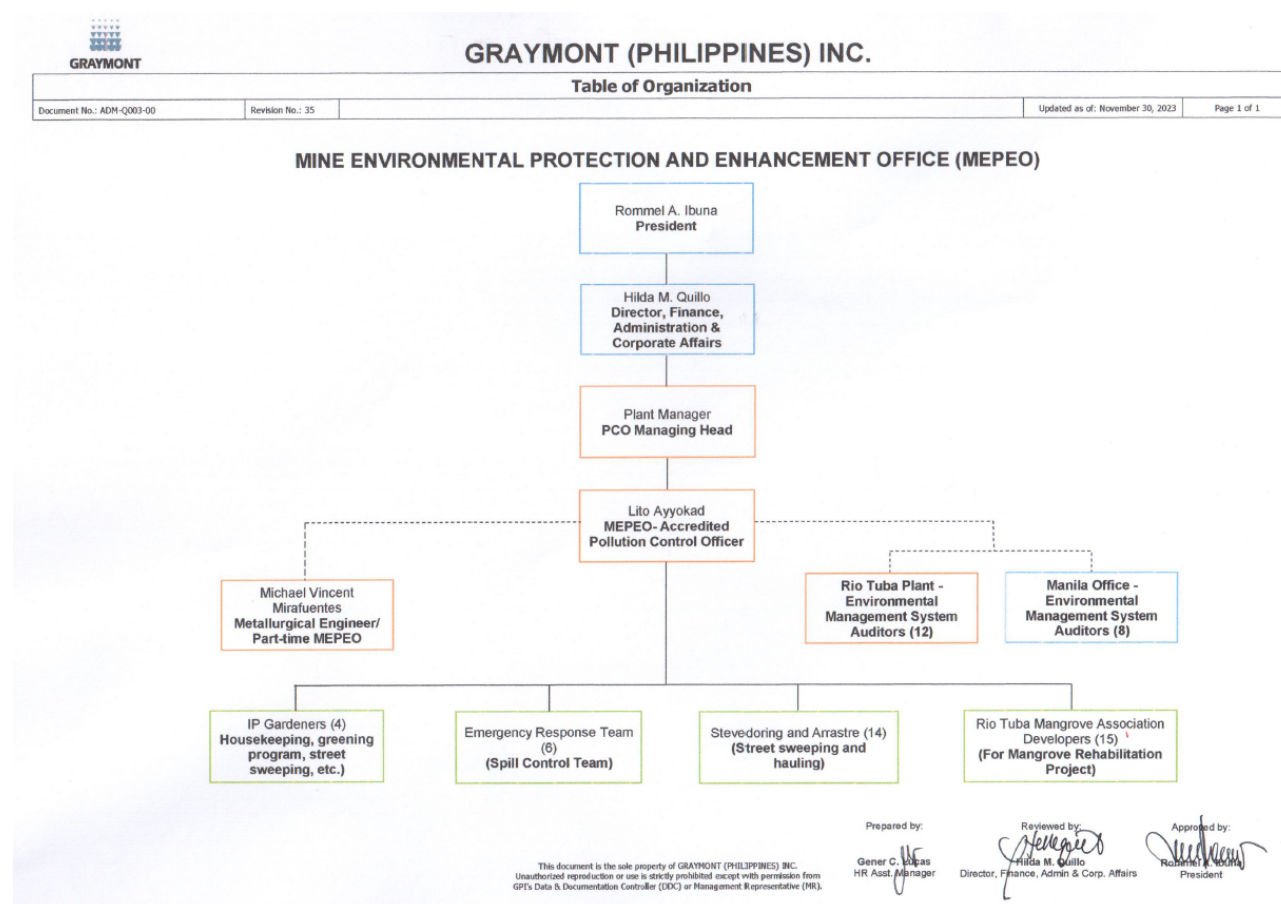


Figure 1. MEPEO Table of Organization

#### 4.5.2. Housing Options

Graymont provides free housing option located in Rio Tuba Townsite, Brgy. Rio Tuba, Bataraza, Palawan for staff residing outside the 250 km radius from barangay Rio Tuba, Bataraza, Palawan. The staff house has a capacity of 21 personnel with available basic amenities.

Proper waste management from collection and disposal is being management by Townsite Management of Rio Tuba Nickel Mining Corporation.

#### 4.6. Development/Utilization schedule

##### 4.6.1. State of Development

- The Milk of Lime Plant has been fully constructed and began its commercial operations in November 2014. The Plant has been operating 24 hours a day since.

#### **4.6.2. Description of Planned Activities**

The kiln and milk of lime processing operates for 24 hours with three (3) shifts, at eight (8) hours per shift. The hydration process, petcoke preparation and raw materials feed will operate for one shift during normal office hours. Other management and support functions of the plant will operate during normal office hours. These functions include the quality control and assurance services, laboratory and testing services, maintenance services, store and warehousing, logistics and purchasing services, safety, health and environment and community relations office.

Graymont operates on the following basis:

##### **A. Production**

- KILN Operations – 3 shifts (8 hours per shift)
- MOL Operations – 3 shift (8 hours per shift)
- Coal/petcoke preparation operations – 1 shift
- Raw materials feeding – 1 shift normal office hours

##### **B. Management and Support Functions**

- Laboratory – normal office hours
- Maintenance – normal office hours
- Store and warehousing – normal office hours
- Logistics and purchasing – normal office hours
- Safety, health, and environment – normal officer hours
- Security – 2 shifts (12 hours per shift)

We have planned schedule shutdown for our KILN and Hydration equipment for preventive and maintenance works.



Table 6. Equipment Plant Shutdown Schedule for 2024

| Equipment | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| KILN 1    |     |     |     |     |     |     |     |     |     |     |     |     |
| KILN 2    |     |     |     |     |     |     |     |     |     |     |     |     |
| MOL 1     |     |     |     |     |     |     |     |     |     |     |     |     |
| MOL 2     |     |     |     |     |     |     |     |     |     |     |     |     |
| PETCOKE   |     |     |     |     |     |     |     |     |     |     |     |     |

Table 7. Disturbed areas vs. rehabilitated areas

|  | Developed/ Disturbed Area              |           | Progressively Rehabilitated            |           |
|--|--|-----------|--|-----------|
|  | Project Component/<br>Area Name/ Level | Area (ha) | Project Component/ Area<br>Name/ Level | Area (ha) |
| Development Stage<br><br>(Note: The duration of Development Stage should be based on the approved Feasibility Study) |  |           |  |           |
| 1  | N/A                                    |           |  |           |
| Operating Stage  |  |           |  |           |
| 2.1  | Limestone feeding system               | 2.2       | Rehabilitated out of 8.06 ha           | 3.0       |
| 2.2  | Fuel grinding plant                    | 0.02258   |  |           |
| 2.3  | Kilns                                  | 0.14186   |  |           |
| 2.4  | Milk of lime plant                     | 0.02328   |  |           |
| 2.5  | Feed hopper                            | 0.015     |  |           |
| 2.6  | Office building                        | 0.045     |  |           |
| 2.7  | Staff canteen                          | 0.015     |  |           |
| 2.8  | Laboratory                             | 0.0225    |  |           |
| 2.9  | Workshop                               | 0.099     |  |           |

|              |  |                |  |               |
|--------------|--|----------------|--|---------------|
| 2.10         | Warehouses for fuel:<br>Petcoke or coal        | 0.245          |  |               |
| 2.11         | Security base/<br>Guardhouse                   | 0.0021         |  |               |
| 2.12         | Storage room for<br>engineering spare<br>parts | 0.0144         |  |               |
| 2.13         | Drainage line                                  | 0.048          |  |               |
| 2.14         | Road network                                   | 0.24           |  |               |
| 2.15         | OSD Tank                                       | 0.028          |  |               |
| 2.16         | Sedimentation pit 1                            | 0.0033         |  |               |
| 2.17         | Silt traps along road<br>drainage              | 0.000543       |  |               |
| 2.18         | Others   | 4.894437       |  |               |
|              |  |                |  |               |
| <b>Total</b> |  | <b>8.06 ha</b> |  | <b>3.0 ha</b> |

## 5.0. Baseline and/or Current Information

### 5.1. Land Resource

The operation of the Milk of Lime project has brought some changes in the land resources environment in the project site. Such changes will cause impacts that need to be mitigated. To address the identified impacts during its operation, some programs were established and need to be implemented. Some of these programs of activities were an off shoot of the previous programs in 2023. These includes the (1) National Greening Program (NGP) with inclusion of the new NGP Site, (2) Bamboo Plantation Program; (3) Nursery Operations, and (4) Other Land Resources Environmental Activities (Table 10). The land resources component of the AEPEP has total annual budget of ₱2,408,570.00.

Table 10. Activities, unit of measure or cost and Financial and Physical Target for Land Resources

| Activities  | Unit of Measure /<br>Unit Cost | Target (Physical/Financial) |
|---|--------------------------------|-----------------------------|
|   |                                | Annual                      |
| <b>• LAND RESOURCES</b>                                     |                                | <b>2,408,570.00</b>         |
| <b>1.National Greening Program (NGP)</b>                    |                                |                             |
| A. Maintenance and Protection of the Plant Periphery        | Hectare                        | <b>3</b>                    |
|   | Mandays                        | <b>324</b>                  |
|   | 355.00                         | <b>115,020.00</b>           |
| B. New NGP Site / MFP                                       |                                |                             |
| 1. Survey, Mapping, and Planning (SMP)                      | Activity                       | <b>2</b>                    |
|   | Hectare                        | <b>30</b>                   |
|   | 550.00                         | <b>36,000.00</b>            |
| 2. Seedling Production                                      | 625                            | <b>18,750</b>               |
|   | 35.00                          | <b>656,250.00</b>           |
| 3. Plantation Establishment (Site Preparation and Planting) | Hectare                        | <b>30.00</b>                |
|   | 6,500.00                       | <b>195,000.00</b>           |
| 4. Maintenance and Protection (year 1)                      | Hectare                        | <b>30</b>                   |
|   | 2,000.00                       | <b>120,000.00</b>           |
| <b>2. Bamboo Plantation Program</b>                         |                                |                             |
| A. Maintenance and Protection (Year 3)                      | Hectare                        | <b>20</b>                   |
|   | 3,500.00                       | <b>280,000.00</b>           |
| B. Fertilizer Application                                   | Hectare                        | <b>20</b>                   |
|   | 42,000.00                      | <b>90,000.00</b>            |
| <b>3. Nursery Operations</b>                                |                                |                             |
| A. Bamboo Propagule Production                              | no. of propagule produced      | <b>5,000</b>                |
|   | 15.00                          | <b>75,000.00</b>            |
| <b>B. Nursery Infrastructure</b>                            |                                |                             |
| 1. Maintenance of Existing Nursery Facility                 | no. of nursery maintained      | <b>1</b>                    |
|   | 355.00                         | <b>234,300.00</b>           |

|  |                 |                   |
|--|-----------------|-------------------|
|  | no. of manday   | <b>660</b>        |
| 2. Improvement of Existing Nursery Facility            | lot             | <b>3</b>          |
|  | 25,000.00       | <b>25,000.00</b>  |
| <b>4. Other Land Resource Environmental Activities</b> |                 |                   |
| A. Purchase of Drone and accessories                   | lot             | <b>1</b>          |
|  | 150,000.00      | <b>150,000.00</b> |
| B. Plantations Validation                              | No. of activity | <b>8</b>          |
|  | 3,000.00        | <b>432,000.00</b> |

The (1) National Greening Program (NGP) maintenance and protection activities such as regular watering, and weeding will be carried out to maintain the 2,801 assorted tree species like Narra, Mahogany, Bamboo, Palawan Cherry, and Odling among others which was planted within the plant site perimeter that serve as noise, vibration, and dust buffers likewise to help enhance the conditions of the environment.

Table 11a. Number seedlings planted in the Plant Periphery

| WITHIN THE PLANT PERIMETER |           |           |           |             |           |                     |                                |             |
|----------------------------|-----------|-----------|-----------|-------------|-----------|---------------------|--------------------------------|-------------|
| Aspect                     | JD17-JJ18 | Recent    |           |             |           | Latest<br>JD21-JJ22 | Sub-total<br>(Recent + Latest) | Grand Total |
|                            |           | JD18-JJ19 | JD19-JJ20 | JD20-JJ2021 | Sub-Total |                     |                                |             |
| No. of Seedlings Planted   | 2,801     | 0         | 0         | 0           | 0         | 0                   | 0                              | 2,801       |
| No. of Seedlings Replanted | 0         | 0         | 0         | 0           | 0         | 0                   | 0                              | 0           |
| No. of Surviving Plants    | 2,705     | 0         | 0         | 0           | 0         | 0                   | 0                              | 2,705       |
| <b>Survival</b>            | <b>97</b> | <b>0</b>  | <b>0</b>  | <b>0</b>    | <b>0</b>  | <b>0</b>            | <b>0</b>                       | <b>97</b>   |

Table 11b. Tree species and spacing planted in the Plant Periphery

| <b>Tree Species</b>                       | <b>Spacing (m x m)</b> |
|---|------------------------|
| Bamboo ( <i>Bambusa sp.</i> )             | 3x3                    |
| Narra ( <i>Pterocarpus indicus</i> )      | 3x3                    |
| Ipil ( <i>Instia bijuga</i> )             | 3x3                    |
| Mangium ( <i>Acacia mangium</i> )         | 3x3                    |
| Palawan Cherry ( <i>Cassia sp</i> )       | 5x5                    |
| Tonkat ali ( <i>Eurycoma longifolia</i> ) | 3x3                    |
| Palomaria ( <i>Calophyllum sp</i> )       | 3x3                    |
| Grasses                                   | 1ftx1ft                |

|                              |         |
|------------------------------|---------|
| Creeping vine                | 1ftx1ft |
| Odling ( <i>Eugenia sp</i> ) | 3x3     |
| Others                       | 3x3,2x2 |

Included in the budget was the establishment of the new NGP site will be in 2024 with an area of 30 hectares upland plantation.

(2) Bamboo Plantation Program. The bamboo plantation was established in 2022. It is located in Sitio Tagpisa, Barangay Ocayan, Bataraza, Palawan. The plantation has a total land area of 20 hectares planted with 4,080 Kawayang tinik or *Bambusa blumeana* species with 7x7 m spacing. This 2024, activities to be conducted in the plantation covers maintenance and protection such as strip brushing, ring weeding, fire line establishment, and fertilizer application. The maintenance and protection, and fertilizer application activities will be carried out in the next year to ensure the 85%-100% survival rate of the planted species. The plantation was being maintained by Rio Tuba Mangrove Ecosystem Developers (RTMED), a registered People's Organization.

Table 12a. Number seedlings planted in the Bamboo Plantation

| 20-HECTARE BAMBOO PLANTATION AREA |                             |            |             |
|-----------------------------------|-----------------------------|------------|-------------|
| Aspect                            | Planted for the Year (2023) |            | Grand Total |
|                                   | JJ-JD2022                   | JJ-JD 2023 |             |
| No. of Seedling Planted           | 4,080                       | 0          | 4,080       |
| No. Seedling Replanted            | 41                          | 0          | 0           |
| No. of Surviving Plants           | 4,039                       | 3,060      | 3,060       |
| <b>Survival (%)</b>               | 100                         | 75         | 75          |

Table 12b. Bamboo species and spacing planted in the Bamboo Plantation.

| Grass Species                              | Spacing (mxm) |
|--|---------------|
| Kawayang Tinik ( <i>Bambusa blumeana</i> ) | 7x7           |

(3) Nursery Operations. Graymont established its own nursery in 2023 and hired two nursery aides to maintain the facility. The nursery has total area of 136 m<sup>2</sup> located at the compound of Apex Ore Trans in Macadam Highway. The nursery operations activities include hiring of nursery aides to maintain and produce the annual target of 6,000 seedlings. Improvement of the nursery was also included in the program.

(4) Other Land Resources Environmental Activities. The purchase of drone is helpful during the conduct of plantations validation, MMT Inspection, DENR-CENRO Inspection, and Patrolling activities.

## **5.2 Water Quality and Resources**

The production of the Milk of Lime Project uses a huge volume of water resources. Water supplied by the supernatant and water coming from the On-Site Detention (OSD) Tank were used and recycle to produce the Milk of Lime. The use of water in the production of the MOL also has an impact to the environment. To address such environmental impact due to use of water resources in the operation, GPI programmed some activities under the Water Quality and Resources Program with an annual budget of ₱9,116,321.31. To wit:

(1) Maintenance of Pollution Control Structure through Desilting- This will be conducted to maintain the 4 existing drainage systems/canals in the plant site which is equivalent to 0.9 kilometers. A contractor was hired to maintain the said drainage system. Road repair and concreting also be done phase by phase to fix the broken roads and get rid from the water ponding problem of the plant especially during rainy days. Continuous desilting of the OSD Tank will be done using the purchased vacuum truck.

(2) Solid Waste Management- Activities under this program include the regular collection and disposal of the generated solid wastes in the plant site. Monitoring of the generation of the solid waste was continuously implemented and reported. Improvement of the MRF and the Scrap yard were also included in the budget for implementation to maintain the proper storage of the generated solid wastes.

(3) Hazardous Waste Management- on the other hand comprise of the proper management of hazardous waste like generation, handling, collection, storage, and disposal. Generated hazardous wastes should be properly accounted for reporting and disposal to an accredited TSD facility. The disposal of the hazardous waste of GPI supports the project of the ABS-CBN's Bantay Langis Program and the Oriental Motolite's Balik Baterya Program wherein GPI will donate the generated used oils and used lead acid batteries in lieu of the free transport and treatment of our other hazardous wastes. The GPIs hazardous waste

transporter is the Genetron International Marketing (GIM) based in the province of Bulacan.

(4) Other Water Quality and Resource Environmental Activities. To ease the plant from frequent flooding, Graymont purchased a vacuum truck to help desilt the onsite detention tank.

Table 13. Activities, Unit of measure/cost, and Financial and Physical Target of Water Quality and Resources

| Activities  | Unit of Measure / Unit Cost | Target (Physical/Financial) |
|---|-----------------------------|-----------------------------|
|   |                             | Annual                      |
| <b>• WATER QUALITY AND RESOURCES</b>                                    |                             | <b>9,16,321.31</b>          |
| <b>1. Maintenance of Pollution Control Structures through Desilting</b> |                             |                             |
| A. Drainage Canal/System  | No. of drainage canal       | <b>4</b>                    |
|   | Kilometer                   | <b>0.9</b>                  |
|   | No. of Mandays              | <b>324</b>                  |
|   | 355.00                      | <b>115,020.00</b>           |
| B. Road Repair and Concreting   | m <sup>2</sup>              | <b>152.50</b>               |
|   | 7,000.00                    | <b>1,100,750.00</b>         |
| C. Desilting Activities   | No. of OSD                  | <b>3</b>                    |
|   | No of activities            | <b>12</b>                   |
|   |                             |                             |
| <b>2. Solid Waste Management</b>  |                             |                             |
| A. Collection/Storage/Handling/ Disposal of Residual Wastes             | Tons                        | <b>15</b>                   |
|   | 3,500.00                    | <b>42,000.00</b>            |
|   | no. of hauling              | <b>15</b>                   |
| B. MRF and Scrapyard  |                             |                             |
| 1. Expansion of MRF   | lot                         | <b>1</b>                    |
|   | 150,000.00                  | <b>150,000.00</b>           |
| 2. Improvement of Scrapyard   | lot                         | <b>1</b>                    |
|   | 350,000.00                  | <b>350,000.00</b>           |

| <b>3. Hazardous Waste Management</b>                                |              |                     |
|---|--------------|---------------------|
| A. Collection / Storage / Handling / Disposal of Hazardous Waste    | Tons         | <b>20</b>           |
| B. Hazardous Waste Storage Facility                                 |              |                     |
| 1. Improvement of the HazWaste Storage Facility (HWSF)              | lot          | <b>1</b>            |
|   | 200,000.00   | <b>200,000.00</b>   |
| <b>4. Other Water Quality and Resource Environmental Activities</b> |              |                     |
| A. Purchase of Vacuum Truck   | lot          | <b>1</b>            |
|   | 7,158,551.31 | <b>7,158,551.31</b> |

### 5.3 Air Quality

Dust has been the major antagonist in the mine site during the operational phase. Some associated impacts and its mitigating measures were identified and enumerated in the succeeding part of this AEPEP.

To address the impacts of the mining operation, the Air Quality components and its activities include (1) Dust Suppression like water spraying of the of the road network and the plant periphery; (2) Air Quality Monitoring such as In-House Air Quality Monitoring, Third Party Stack Sampling and Ambient Air Quality Sampling (3) Other Air Quality Environmental Activities that includes maintenance of the air pollution control devices and road sweeping. The conduct of these activities is necessary to evaluate the efficiency of its performance as air pollution control device/equipment to maintain the quality of air and pass the DENR Standards. This component holds the budget amounting ₱14,425,443.60 for its implementation.

Table 14. Activities, Unit of measure/cost, and Financial and Physical Target of Air Quality.

| <b>Activities</b>    | <b>Unit of Measure<br/>/<br/>Unit Cost</b> | <b>Target<br/>(Physical/Financial)</b> |
|----------------------|--|--|
|                      |  | <b>Annual</b>                          |
| <b>• AIR QUALITY</b> |  | <b>14,425,443.60</b>                   |
| A. Dust Suppression  |  |  |



|   |                            |                   |
|---|----------------------------|-------------------|
| 1. Water Spraying - Plant Periphery           | kilometer                  | <b>0.60</b>       |
|   | no. of activity            | <b>192</b>        |
|   | no. of Mandays             | <b>324</b>        |
|   | 355.00                     | <b>115,020.00</b> |
| <b>B. Air Quality Monitoring</b>              |                            |                   |
| 1. In - House Air Quality Monitoring          | no. of sample              | <b>72</b>         |
|   | 618.8                      | <b>44,553.60</b>  |
|   | Sampling Activity          | <b>12</b>         |
|   | no. of sampling station    | <b>2</b>          |
|   | no. of parameters analyzed | <b>12</b>         |
| 2. Third Party Stack Sampling                 | No. of Sample              | <b>2</b>          |
|   | Sampling Activity          | <b>1</b>          |
|   | no. of sampling station    | <b>2</b>          |
|   | no. of parameters analyzed | <b>4</b>          |
| 3. Ambient Air Quality Sampling               | No. of Sample              | <b>2</b>          |
|   | Sampling Activity          | <b>1</b>          |
|   | no. of sampling station    | <b>2</b>          |
|   | no. of parameters analyzed | <b>4</b>          |
|   | 220,000.00                 | <b>220,000.00</b> |
| C. Other Air Quality Environmental Activities |                            |                   |

|   |                      |                      |
|---|----------------------|----------------------|
| 1. Maintenance of Pollution Control Devices | No of APCD/F         | <b>2</b>             |
|   | 1,800,000.00         | <b>3,600,000.00</b>  |
| 2. Dust Collector                           | No of Dust Collector | <b>2</b>             |
|   | 5,000,000.00         | <b>10,000,000.00</b> |
| 2. Road Sweeping                            |                      |                      |
| a. Daily Road Sweeping                      | kilometer            | <b>0.6</b>           |
|   | 355.00               | <b>115,020.00</b>    |
|   | no. of days          | <b>324</b>           |
| b. Petcoke ash disposal                     | ton                  | <b>6,500</b>         |
|   | 50.90                | <b>330,850.00</b>    |

(1) Dust Suppression Activity include the regular water spraying of the of the plant periphery road network with a length of 0.6.

(2) Air Quality Monitoring - Emissions during calcination, crushing and slaking processes include particulate matter, carbon monoxide, carbon dioxide, sulfur dioxide, nitrogen oxide and sulfur oxides. To measure the concentrations of the enumerated parameters, regular or periodic monitoring will be conducted like In-House Air Quality Monitoring, Third Party Stack Sampling and Ambient Air Quality Sampling. The In-House Air Quality monitoring was conducted every month using the Gastec Tube to measure the presence and concentration of Carbon Monoxide (CO), Sulfur Oxide (SO<sub>x</sub>), and Nitrogen Oxide (NO<sub>x</sub>) in the Air Pollution Control Device installed in the plant. This is to ensure that the quality of air being released to the atmosphere during our operation has passed or within the DENR standards.

Third Party Stack Sampling will be conducted to confirm the result of the conducted in-house air quality monitoring with the same set of parameters tested in the in-house air quality monitoring plus the Particulate Matter (PM). The stack sampling has 2 sampling stations, the same with the sampling stations of the in-house which are the KILN 1 & 2. Stack sampling monitoring by our third-party service provider; the Hi Advance was conducted annually.

Ambient Air Sampling on the other hand measures the quality of air in the environment to check if the operations of the project have affected the quality of air in the surroundings and if it conforms to the standards set by the regulatory agencies such as Environmental Management Bureau. Sampling stations will be in the Bulanjao Golf Course and façade of the administration building in the plant site. The sampling activity tries to measure the concentration of Total Suspended Particulates (TSP), and Ambient Noise. Ambient Air Quality Monitoring is conducted on quarterly basis following the Air dispersion modeling conducted in February to October 2016.

(3) Other Air Quality Environmental Activities. To mitigate the dust emission/ generated from the KILN during the operation of the plant, dust suppression measures were implemented such as installation of dust collector, filter bags, and scrubber were implemented. Hence to ensure the effectiveness of the installed Air Pollution Control Devices, Equipment, and Facility, maintenance activity should be carried out such as regular inspection, cleaning, and change of the filter bags. Regular road sweeping will be conducted especially during the hauling activities to maintain the cleanliness of the road network and plant periphery. Installation of additional dust collectors specifically in the MOL and Petcoke warehouse was included in the 2024 AEPEP Budget.

## **5.4 Ambient Noise Quality**

Operating the plant produces sound, noise, and vibrations that affects human health. To address this issue, mitigating measures should be applied such as monitoring of the noise and vibration level or installation of the control devices in the plant site.

The nearest residential areas are located approximately 1.3 kilometers (Barangay Rio Tuba) to 1.6 kilometers (Sitio Tagpisa) from Graymont (Philippines) Inc. The primary noise contributors are belt conveyors, blowers, compressors, power generators and other plant auxiliaries. To reduce noise, silencing equipment is provided including rubber lining for conveyors. All workers are provided with earmuffs or earplugs for protection.

Table 15 outlined the activities, targets, and budget for the implementation of control measures to mitigate the impact of the noise and vibration identified. These activities

include the monitoring of the Noise and Vibration Level, Mitigating measures like maintenance and calibration of the noise control and monitoring equipment. Monitoring of the noise and vibration level in the plant will be done in a monthly basis. This will be done in-house and conducted in coordination with the safety officer. Mitigating measures such as maintenance of the noise control equipment calibration will be done by the third party. This will ensure the accuracy of the measuring equipment in terms of results. Maintenance of the equipment will be done quarterly while the calibration will be annual or once a year.

Table 15. Activities, Unit of measure/cost, and Financial and Physical Target of Noise and Vibration.

| Activities   | Unit of Measure / Unit Cost | Target (Physical/Financial) |
|--|-----------------------------|-----------------------------|
|  |                             | Annual                      |
| <b>• AMBIENT NOISE QUALITY</b>                                       |                             | <b>4,500.00</b>             |
| A. Ambient Noise Level Monitoring                                    | no. of activity             | <b>12</b>                   |
| B. Ambient Noise Monitoring Measures                                 |                             |                             |
| 1. Maintenance and Calibration of Ambient Noise Monitoring Equipment | no. of equipment            | <b>1</b>                    |
|  | 4,500.00                    | <b>4,500.00</b>             |

To confirm that the noise level is within the standard, the HI Advance conducted the Ambient Noise Level Monitoring at two (2) sampling locations for 1 hour with the sampling period of ten (10) minutes with ten (10) seconds time interval.

The two (2) sampling locations are in (a) In front of Admin Office and (b) Mt. Bulanjao Golf Course. The results of noise level measurement were compared to the standards based on the proposed land use within the sampling location. Both sampling locations were considered as Category C, indicating light industrial area. Confirmatory test was also conducted for the failed results. The median of both stations passed the standard limit based on the NPCC Memorandum Circular Number. 002 Series of 1980.

## 5.5 Biodiversity Conservation and Values

Biodiversity is short for “biological diversity.” It is a big word that essentially means **the variety the living things making up a particular habitat or part of the world**. The biodiversity of plants, animals and other living things greatly impacts a habitat's ability to thrive. It is essential for the processes that support all life on Earth, including humans. Without a wide range of animals, plants, and microorganisms, we cannot have the healthy ecosystems that we rely on to provide us with the air we breathe and the food we eat. The biodiversity **provides raw materials for the survival of the livelihood within it**. Soil fertilization, nutrient recycling, pest and disease regulation, erosion control, and crop and tree pollination are all provided by biodiversity.

Biodiversity underpins the health of the planet and has a direct impact on all our lives. Put simply, reduced biodiversity means millions of people face a future where food supplies are more vulnerable to pests and disease, and where fresh water is in irregular or short supply. The disturbance and loss of biodiversity may have a great impact to the environment.

The loss of Biodiversity needs mitigation such as conservation efforts and protection. Biodiversity conservation protects plant, animal, microbial and genetic resources for food production, agriculture, and ecosystem functions such as fertilizing the soil, recycling nutrients, regulating pests and disease, controlling erosion, and pollinating crops and trees. You can also attract more wild species by **providing water, food, shelter, and privacy**. Protect Habitats. Explore habitats in the area. Help clean up and protect beaches, parks, reserves, and fields where wild plants and animals live.

Table 16 outlines the Conservation Values activities to be implemented to address the pressing issues identified. These activities include (1) Mangrove and Bats Habitat Patrolling, Protection, and Maintenance, (2) Mangrove Plantation Establishment, (3) Validations and other activities, (4) Establishment of Critical Habitat.

Table 16. Activities, Unit of measure/cost, and Financial and Physical Target of Conservation Values

| Activities   | Unit of Measure / Unit Cost | Target (Physical/Financial) |
|--|-----------------------------|-----------------------------|
|  |                             | Annual                      |
| <b>• CONSERVATION VALUES</b>   |                             | <b>2,064,702.00</b>         |
| A. Mangrove and Bats Habitat Patrolling, Protection, and Maintenance | hectare                     | <b>30</b>                   |
|  | 3,000.00                    | <b>360,000.00</b>           |
| B. Mangrove Plantation Establishment (New)                           |                             |                             |
| 1. Survey, Mapping, and Planning (SMP)                               | Activity                    | <b>2</b>                    |
|  | Hectare                     | <b>20</b>                   |
|  | 600.00                      | <b>24,000.00</b>            |
| 2. Seedling Production   | 2,000                       | <b>40,000</b>               |
|  | 15                          | <b>600,000.00</b>           |
| 3. Plantation Establishment (site preparation and planting)          | Hectare                     | <b>20</b>                   |
|  | 6,500.00                    | <b>130,000.00</b>           |
| 4. Maintenance and Protection  | hectare                     | <b>20</b>                   |
|  | 3,000.00                    | <b>80,000.00</b>            |
| D. Validation/Other activities                                       | No. of activity             | <b>8</b>                    |
|  | 3,000.00                    | <b>864,000.00</b>           |
| E. Establishment of Critical Habitat                                 |                             |                             |
| 1. Community Consultation and IEC                                    | no. of activity             | <b>2</b>                    |
|  | 10,000.00                   | <b>20,000.00</b>            |
| 2. Validation/ Inspection, and other activities                      | no. of activity             | <b>2</b>                    |
|  | 75,000.00                   | <b>150,000.00</b>           |
| 3. CNCH Commitment: 10,000 seedlings                                 |                             |                             |

|  |                 |                   |
|--|-----------------|-------------------|
| A. Survey, Mapping, and Planning                           | no. of activity | <b>2</b>          |
|  | hectares        | <b>16</b>         |
|  | 600.00          | <b>19,200.00</b>  |
| B Seedling Production (Donation from City ENRO)            | no. of seedling | <b>10,000</b>     |
| C Plantation Establishment (Site Preparation and Planting) | No. activity    | <b>1</b>          |
|  | Hectare         | <b>16</b>         |
|  |                 | <b>120,000.00</b> |
| D. Meetings/Validation/Inspection                          | No of activity  | <b>5</b>          |
|  | 11,500.00       | <b>57,500.00</b>  |

On October 24, 2018, a tripartite MOA was signed between the DENR – CENRO (Department of Environment and Natural Resources – Community Environment and Natural Resources Office) – Brookes Point, the Rio Tuba Mangrove Ecosystem Developers Inc., and the Graymont (Philippines) Inc. to adopt and rehabilitate thirty hectares (30 ha.) mangrove rehabilitation site located at Barangay Sarong, Bataraza Palawan. The rehabilitated area is being maintained by the contracted People's Organization. To date, approximately 77,700 mangroves distributed in three mangrove species such as *Avicenia sp.*, *Ceriops tagal*, and *Rhizophora apiculata* were planted. Also, notable presence of wildlife such as crabs and bats were observed in the adopted mangrove project.

Table 17a. Number seedlings planted in the Mangrove Plantation

| 30 HECTARES MANGROVE AREA  |           |           |           |             |           |           |                                |             |
|----------------------------|-----------|-----------|-----------|-------------|-----------|-----------|--------------------------------|-------------|
| Aspect                     | JD17-JJ18 | Recent    |           |             |           | Latest    | Sub-total<br>(Recent + Latest) | Grand Total |
|                            |           | JD18-JJ19 | JD19-JJ20 | JD20-JJ2021 | Sub-Total | JD21-JJ22 |                                |             |
| No. of Seedlings Planted   | 0         | 25606     | 49,700    | 0           | 75,306    | 3,894     | 79,200                         | 79,200      |
| No. of Seedlings Replanted | 0         | 0         | 17000     | 22,000      | 39,000    | -         | 39,000                         | 39,000      |
| No. of Surviving Plants    | 0         | 22500     | 46,690    | 0           | 69,190    | 3,505     | 72,695                         | 72,695      |
| <b>Survival</b>            | <b>0</b>  | <b>88</b> | <b>93</b> | <b>90</b>   | <b>91</b> | <b>90</b> | <b>91</b>                      | <b>91</b>   |

Table 17b. Mangrove species and spacing of the planted in the plantation.

| Tree Species                    | Spacing (m x m) |
|---------------------------------|-----------------|
| Pututan ( <i>Avicenia sp.</i> ) | 2x2             |

|  |     |
|--|-----|
| Tangal ( <i>Ceriops tagal</i> )                | 2x2 |
| Bakauan lalaki ( <i>Rhizophora apiculata</i> ) | 2x2 |

(1) Mangrove and Bats Habitat Patrolling, Protection, and Maintenance - Continuous monitoring, patrolling, protection, and maintenance will be conducted in the 30 hectares rehabilitated mangrove area to ensure the sustainability of the project. This will be done by the contracted People's Organization (RTMED).

(2) Mangrove Plantation Establishment – a 20 hectares mangrove plantation will be established in 2024 as our new site for mangrove forest rehabilitation projects. Area of rehabilitation is yet to be identified by MENRO Bataraza.

(3) Validation and Other Activities – Activities conducted during the implementation of the activities stipulated under the Conservation Values will be validated by CENRO Brooke's Point.

(4) Establishment and Declaration of the area as critical habitat. One of the best moves to protect the biodiversity in the area is the declaration of the area as critical habitat. This will ensure the protection of the rehabilitated area through the collective efforts of the environmental stewards such LGUs, Community, Regulatory agencies, NGOs, and the project proponent. Activities to be conducted in relation to this endeavor include but not limited to Information, Education, and Communication Campaign (IEC) where the proponent in coordination with the nominating organization and the regulatory agency will conduct the activity to the host communities for them to understand the objective and the importance of the project. Also, the IEC activity aims to solicit the acceptance of the community to the said project. After all the IECs have been done, the regulatory agency will conduct the validation of the area if it is suitable to be declared as critical habitat. If the area is suitable for the project, then the biodiversity assessment activity will proceed to assess the area in terms of its species richness and diversity, to identify the flora and fauna and found or thriving in the project site and their conservation status. The conduct of the biodiversity assessment will be in coordination with the proponent, regulatory agency (PCSD), and the nominating body (HARRIBON Palawan). The assessment will be conducted by a third-party service provider.



For the implementation of the activities outlined in Table 16, the AEPEP allotted ₱2,064,702.00,000.00 for the Biodiversity and Conservation Values.

## **5.6 Heritage and Cultural Values**

The study in 2010 revealed that there is no ethnic group and scared place in Barangay Rio Tuba. Although projected to be minimal, the project operations may attract migrants from different places, which may affect the cultural traits of the original dwellers. Proper monitoring of migration in the area as well as changes in cultural traits can be done through the Graymont Community Relations and or the Social Development.

## **5.7 Social Values**

In terms of employment, the residents of the host community will be the priority during hiring. The operation of the plant has an indirect business opportunity to the nearby communities and substantially contribute to the Municipality of Bataraza as well as to the Province of Palawan.

There is no significant change or increase in the population in the area where the project operates. Locals are the priority to be hired during the construction period thus resettlement is not necessary. Employees hired outside the province was offered with company staff house.

Lifestyle change comes when individual of a community are exposed to different activities and vices. With the operation of the lime milk plant, lifestyle modification is seen on a positive and negative way. Involvement and exposure to indirect business opportunities help people to become more enthusiastic to improve their lives and experience a better living condition.

However, the downside effect of it having the interest to spend a substantial sum on miscellaneous expenses such as cigarettes and alcoholic drinks or even engrossment to gambling activities. Provision of proper education and livelihood know-hoe activities is one way of preventing these undesirable actions therefore gaining a more peaceful environment.

On the health aspect, sanitation is the key to creating a healthy environment. During construction, exposure to safety hazards can be prevented by the implementation of proper work procedures and protocols. Likewise, only qualified, and authorized personnel will be allowed to operate any equipment in the workplace. More specific practices to be employed would include strict adherence of workers to wearing of protective devices and equipment; conduct of safety awareness seminars and putting primary value on safety placing of safety signage's and warning notices on appropriate and strategic places, and proper observance of environmental sanitation practices.

## 5.8 Environmental Research

The conduct of the environmental research aims to look for opportunities for improvement during the operation of the Milk of Lime Project. This activity is in coordination with the Metallurgical Engineer.

Table 18. Activities, Unit of measure/cost, and Financial and Physical Target of Environmental Research

| Activities               | Unit of Measure /<br>Unit Cost | Target (Physical/Financial) |
|--------------------------|--------------------------------|-----------------------------|
|                          |                                | Annual                      |
| • ENVIRONMENTAL RESEARCH |                                | 5,500.00                    |
| A. Research Study:       | no. of research conducted      | 1                           |
|                          | No. of Report submitted        | 2                           |
|                          | 20,000.00                      | 20,000.00                   |

## 5.9 Others

Other Activities under this AEPEP are the following: (1) Attendance Quarterly Multipartite Monitoring Team (MMT) Meeting and validation-MMT members from different sectors will convene to validate the compliance for the company to the existing regulations being imposed during the operations of the business. (2) Quarterly Mine Rehabilitation Fund Committee (MRFC) Meeting –A venue to resolve findings, issues, and approval of the recommendations being raised by the MMT after their inspection and validation. It is also

a venue for presentation of the accomplishments. (3) Mineral Processing Permit Validation – Validation of compliance to the permit condition and renewal of the permit. This activity was conducted in coordination with the MGB. (4) Attendance to Trainings, Seminar, or Workshops – This is to capacitate the MEPEO or the PCO and keep abreast and updated to all the changes or new regulations. (5) ISO Certifications – Surveillance audit to verify the conformance of the company to the existing laws and regulations as well as to the international standards. (6) Implementation of the Sustainability Initiatives- Implementation of the company or regulatory initiated activities such coastal/river clean up, tree planting, internal and external IECs during environmental celebrations or events, search for Eco Friendly Barangay, and (7) Conduct of Regulatory Inspection by the personnel from EMB apart from the conducted MMT inspection. To facilitate all the above-mentioned activities, a ₱3,225,000.00 was allocated for its implementation.

Table 19. Activities, Unit of measure/cost, and Financial and Physical Target of Others

| Activities   | Unit of Measure / Unit Cost        | Target (Physical/Financial) |
|--|------------------------------------|-----------------------------|
|  |                                    | Annual                      |
| <b>•OTHERS</b>                                       |                                    | <b>3,225,000.00</b>         |
| A. Multipartite Monitoring Team (MMT) Validation     | no. of validation                  | <b>4</b>                    |
|  | 200,000.00                         | <b>1,350,000.00</b>         |
| B. Mine Rehabilitation Fund Committee (MRFC) Meeting | no. of meeting                     | <b>5</b>                    |
|  | 52,500.00                          | <b>1,000,000.00</b>         |
| C. Mineral Processing Permit (MPP) Validation        | no. of validation                  | <b>1</b>                    |
|  | 16,000.00                          | <b>25,000.00</b>            |
| D. Training/Seminar/Workshop                         | no. of training/ seminar/ workshop | <b>4</b>                    |
|  | 25,000.00                          | <b>100,000.00</b>           |
| E. ISO 14001-2015 (EMS)                              | no. of audit                       | <b>1</b>                    |
|  | 300,000.00                         | <b>300,000.00</b>           |

| F. Sustainability Activities            |                            |                   |
|---|----------------------------|-------------------|
| 1.Tree Planting                         | no. of activity            | <b>2</b>          |
|   |                            | <b>55,000.00</b>  |
| 2. Coastal Clean-Up                     | no. of activity            | <b>4</b>          |
|   | 5,000.00                   | <b>35,000.00</b>  |
| 3. Internal IEC                         | no. of activity            | <b>4</b>          |
|   | 5,000.00                   | <b>20,000.00</b>  |
| 4. Search for Eco Friendly Barangay     | No. of activity            | <b>1</b>          |
|   | 300,000.00                 | <b>300,000.00</b> |
| G. Regulatory Inspection and Monitoring | no. of inspection activity | <b>20</b>         |
|   | 1,000.00                   | <b>20,000.00</b>  |

### 6.0 Total Cost of AEPEP

The total cost of AEPEP for year 2024 is **₱31,275,036.91** or **6.82%** of the 2023 projected OPEX costing ₱458,418,321.29. The total cost was distributed for the implementation and management of all the activities for land resources, water quality and resource, air quality, Ambient noise quality, conservation values, environmental research, and other activities.

Table 20. Budget Summary of the AEPEP for 2024

| SUMMARY                               | Annual                |
|---------------------------------------|-----------------------|
| <b>1. Land Resources</b>              | 2,408,570.00          |
| <b>2. Water Quality and Resources</b> | 9,126,821.31          |
| <b>3. Air Quality</b>                 | 14,425,443.60         |
| <b>4. Noise and Vibration</b>         | 4,500.00              |
| <b>5. Conservation Values</b>         | 2,064,702.00          |
| <b>6. Environmental Research</b>      | 20,000.00             |
| <b>7. Others</b>                      | 3,225,000.00          |
| <b>GRAND TOTAL</b>                    | <b>31,275,036.91</b>  |
| <b>OPEX</b>                           | <b>458,418,321.29</b> |
| <b>% of AEPEP Budget wrt OPEX</b>     | <b>6.82%</b>          |

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## **7.0 Environmental Impacts and Mitigating Measures**

Graymont has created a Mine Environmental Protection and Enhancement Office (MEPEO) headed by MEPE Officer, who is primarily in-charge in monitoring the environmental compliance together with the Plant Manager, who is directly in-charge in monitoring activities of the Plant. Support Group from ISO Team, in-charge of auditing the environmental compliance of the Company.

Table 21 presents the summary of sources of impact, and mitigating measures:

Table 21. Sources of impact and mitigating measures

| Sources of Impacts | Parameters Considered            | Purpose of Monitoring                                      | Monitoring Methods | Monitoring Locations | Monitoring Frequency | Activity                        | Affected Resources/ Areas | Foreseen Impacts                                  | Mitigating Measures                         | Estimated Budget |
|--------------------|----------------------------------|--|--------------------|----------------------|----------------------|---------------------------------|---------------------------|---|---|------------------|
| Land Resources     | Vegetative Cover and replacement | To maintain and ensure compliance to rules and regulations | Visual inspection  | Plant site           | Monthly              | Plant Operation and Development | Land Resources            | Loss of vegetation                                | Tree planting, maintenance, and protection. | 35,000.00        |
| Land Resources     | Soil Quality                     | To maintain and ensure compliance to rules and regulations | Visual inspection  | Plant site           | Monthly              | Plant Operation and Development | Land Resources            | Removal of Topsoil/ Subsoil                       | Tree planting, maintenance, and protection. | 35,000.00        |
| Land Resources     | Soil stabilization               | To maintain and ensure compliance to rules and regulations | Visual inspection  | Plant site           | Monthly              | Plant Operation and Development | Land Resources            | Land Erosion                                      | Tree planting, maintenance, and protection. | 35,000.00        |
| Land Resources     | Soil Stabilization and quality   | To maintain and ensure compliance to rules and regulations | Visual inspection  | Plant site           | Monthly              | Plant Operation and Development | Land Resources            | Change in soil properties including contamination | Tree planting, maintenance, and protection. | 35,000.00        |

|                             |                                |  |                             |            |         |                                 |                             |                                       |   |              |
|-----------------------------|--------------------------------|--|-----------------------------|------------|---------|---------------------------------|-----------------------------|---------------------------------------|---|--------------|
| Land Resources              | Soil Stabilization and quality | To maintain and ensure compliance to rules and regulations | Visual inspection           | Plant site | Monthly | Plant Operation and Development | Land Resources              | Change in Landforms and Topography    | Implementation of well-planned decommissioning of mineral processing facilities | 35,000.00    |
| Water Resources and Quality | Water availability             | To maintain and ensure compliance to rules and regulations | Site inspection             | Plant site | Monthly | Plant Operation and Development | Water Resources and Quality | Change in Drainage Pattern            | Implementation of water recycling and practicing zero water discharge.          | 14,000.00    |
| Water Resources and Quality | Water Quality                  | To maintain and ensure compliance to rules and regulations | Water sampling and analysis | Plant site | Monthly | Plant Operation and Development | Water Resources and Quality | Water Contamination                   | Implementation of water recycling and practicing zero water discharge.          | 14,000.00    |
| Water Resources and Quality | Water availability and quality | To maintain and ensure compliance to rules and regulations | Site inspection             | Plant site | Monthly | Plant Operation and Development | Water Resources and Quality | Erosion, Sedimentation, and siltation | Regular maintenance of siltation ponds and drainage canal.                      | 14,000.00    |
| Water Resources and Quality | Water availability and quality | To maintain and ensure compliance to rules and regulations | Site inspection             | Plant site | Monthly | Plant Operation and Development | Water Resources and Quality | Water usage/Balance                   | Implementation of water recycling and practicing zero water discharge.          | 14,000.00    |
| Air Quality                 | Filter bags quality            | To maintain and ensure compliance to rules and regulations | Site / Visual Inspection    | Plant site | Monthly | Plant Operation and Development | Air Quality                 | Dust Generation                       | Road concreting, watering, and sweeping, air quality monitoring                 | 1,059,000.00 |

|   |                         |  |                             |                      |         |                                 |                              |  |  |                |
|---|-------------------------|--|-----------------------------|----------------------|---------|---------------------------------|------------------------------|--|--|----------------|
| Air Quality                               | Filter bags quality     | To maintain and ensure compliance to rules and regulations | Air Sampling and analysis   | Plant site           | Monthly | Plant Operation and Development | Air Quality                  | Gases and Fumes emission   | Air quality monitoring, Regular maintenance of air pollution control equipment       | 1,059,000.00   |
| Noise and Vibration                       | Noise Level             | To maintain and ensure compliance to rules and regulations | Noise sampling and analysis | Plant site           | Monthly | Plant Operation and Development | Noise Quality                | Noise Generation   | Construction of sound barriers for sound absorption and control.                     | 6,000.00       |
| Noise and Vibration                       | Vibration level         | To maintain and ensure compliance to rules and regulations | Vibration monitoring        | Plant site           | Monthly | Plant Operation and Development | Noise Quality                | Vibration  | Implementation of engineering controls   | 6,000.00       |
| Biodiversity Conservation / Consideration | Community requests      | To maintain and ensure compliance to rules and regulations | Site/visual inspection      | Plant site           | Monthly | Plant Operation and Development | Biodiversity                 | Disturbance/Loss of Biodiversity   | Mangrove Planting, Protection and maintenance.                                       | 3,591,500.00   |
| Biodiversity Conservation / Consideration | Biodiversity condition, | To maintain and ensure compliance to rules and regulations | Site/Visual Inspection      | Plant site           | Monthly | Plant Operation and Development | Biodiversity                 | Change in Landscape/ View  | Continuous enhancement of overall landscape and appearance thru planting activities. | 3,591,500.00   |
| Heritage and Cultural Values              | Community relations     | To maintain and ensure compliance to rules and regulations | Meetings with the lps       | Affected Communities | Monthly | Plant Operation and Development | Heritage and Cultural Values | Disturbance of historical, archaeological and cultural sites / resources | Support to indigenous people.  | 355.00/day/pax |



|                              |   |  |                       |                      |         |                                 |                              |  |   |                |
|------------------------------|---|--|-----------------------|----------------------|---------|---------------------------------|------------------------------|--|---|----------------|
| Heritage and Cultural Values | Employment opportunities                  | To maintain and ensure compliance to rules and regulations | Meetings with the lps | Affected Communities | Monthly | Plant Operation and Development | Heritage and Cultural Values | Cultural Change                          | Prioritization of local citizens in employment opportunities    | 355.00/day/pax |
| Social Issues                | Community relations                       | To maintain and ensure compliance to rules and regulations | Meetings with the lps | Affected Communities | Monthly | Plant Operation and Development | Social Issues                | Displacement of Communities              | Implementation of the Social Development and Management Program | 355.00/day/pax |
| Social Issues                | Jobs and livelihood opportunities         | To maintain and ensure compliance to rules and regulations | Meetings with the lps | Affected Communities | Monthly | Plant Operation and Development | Social Issues                | Impact to Livelihood and Social Services | Prioritization of local citizens in employment opportunities    | 355.00/day/pax |
| Social Issues                | Quality Education/opportunity/scholarship | To maintain and ensure compliance to rules and regulations | Meetings with the lps | Affected Communities | Monthly | Plant Operation and Development | Social Issues                | Impact to Recreation and Education       | Funding or construction of recreational and educational sites   | 355.00/day/pax |

## 8.0. Approach and Scope of Environmental Monitoring Program

All mitigating measures to be implemented will be monitored to ensure that the significant impacts identified are prevented/minimized. To provide an effective monitoring program, the following shall be discussed for every aspect (i.e., Land Resource, Water Resource and Quality, Air Quality, Noise and Vibration, Biodiversity Conservation/Consideration, Heritage and Cultural Values, Social Issues, and Research):

Table 22. Key environmental aspects to be monitored by the Company as identified in Environmental Impact Statement (EIS)

| Sources of Impacts | Parameters Considered  | Purpose of Monitoring  | Monitoring Methods                                 | Monitoring Locations  | Monitoring Frequency                                      | Activity        | Affected Resources/ Areas | Foreseen Impacts         | Mitigating Measures  | Estimated Budget |
|--------------------|--|--|--|---|---|-----------------|---------------------------|--------------------------|--|------------------|
| Land Resources     | Volume of Hazardous Waste Generated  | To ensure properly segregated and disposed to sanitary landfill and TSD  | Visual Inspection. Recording of volume waste       | Hazardous Waste Facility  | Monthly   | Plant Operation | Land Resources            | Land and Water Pollution | Proper storage. Secondary bunding / containment, Labels, signages, records | 90,000.00        |
| Land Resources     | Volume of solid wastes generated   | To ensure properly segregated and disposed to sanitary landfill and TSD  | Visual Inspection. Recording of volume waste       | Plant site- Central Solid Waste Area  | Weekly  | Plant Operation | Land Resources            | Land and Water Pollution | Provision of MRF, Siganges, Labels, and Segregation Bins, records          | 52,500.00        |
| Water Resources    | Color, pH, COD, Fecal Coliform, Nitrates, Oil and Grease, Temperature, BOD, Ammonia TSS, Phosphates, Surfactants | To ensure water quality is within DENR Standards                         | Water Sampling and Third party Laboratory Analysis | Water Storage Tank-CBNC; Supernatant Water Tank-CBNC, OSD (On Site Detention) | As need arises and as per requirement of Discharge Permit | Plant Operation | Water Quality             | Water Pollution          | Water quality analysis   | N/A              |
| Water Resources    |  | Effluent should comply with effluent Standards of DENR for Class C water | Visual inspection                                  | Plant-site Drainage system  | As need arises  | Plant Operation | Water Quality             | Water Pollution          | Water quality analysis   | N/A              |



**GRAYMONT**

|       |   |   |                                  |   |                                   |                    |               |                    |                                |            |
|-------|---|---|----------------------------------|---|-----------------------------------|--------------------|---------------|--------------------|--------------------------------|------------|
| Air   | TSP, PM10,<br>NO <sub>2</sub> , SO <sub>2</sub> , | To ensure air<br>quality is<br>within DENR<br>Standards:        | Ambient Air<br>Quality           | Bulanjao Golf<br>Course and<br>Plant site | Annually, or<br>as need<br>arises | Plant<br>Operation | Air Quality   | Air<br>Pollution   | Air Sampling<br>and analysis   | 156,000.00 |
| Air   | NO <sub>x</sub> , SO <sub>x</sub> , CO,<br>PM     | To ensure air<br>quality is<br>within DENR<br>Standards:        | Third party<br>Stack<br>Sampling | Kiln 1 and 2                              | Annual                            | Plant<br>Operation | Air Quality   | Air<br>Pollution   | Air Sampling<br>and analysis   | 156,000.00 |
| Air   | NO <sub>2</sub> , SO <sub>2</sub> , CO            | To ensure air<br>quality is<br>within DENR<br>Standards:        | In-house Air<br>Quality          | Kiln 1 and 2                              | Monthly                           | Plant<br>Operation | Air Quality   | Air<br>Pollution   | Air Sampling<br>and analysis   | 44,553.40  |
| Noise | dB  | To ensure<br>noise level is<br>within<br>government<br>standard | dB Level<br>Monitoring           | Upper Kinurong<br>& Tagpisa               | Annually, or<br>as need<br>arises | Plant<br>Operation | Noise Quality | Noise<br>Pollution | Noise Sampling<br>and Analysis | 10,500.00  |

Table 23. Environmental Monitoring Program

| Sources of Impacts          | Parameters Considered                                     | Purpose of Monitoring                         | Monitoring Methods | Monitoring Locations   | Monitoring Frequency | Activity        | Affected Resources/Areas | Foreseen Impacts                                     | Mitigating Measures                             | Estimated Budget |
|-----------------------------|---|---|--------------------|------------------------|----------------------|-----------------|--------------------------|--|---|------------------|
| Land Resources              | No. of hectares rehabilitated, and seedlings planted      | To ensure compliance to rules and regulations | Records validation | Plant site             | Quarterly            | Plant Operation | Land Resources           | Decrease in vegetation                               | Tree planting, maintenance, and protection.     | 115,020.00       |
| Land Resources              | Solid Waste   | To ensure compliance to rules and regulations | Visual inspection  | MRF                    | Daily                | Plant Operation | Land and Water Resources | Solid waste generation; Land and Water Pollution     | Disposal and spraying of insecticides           | 52,500           |
| Land Resources              | hazardous waste   | To ensure compliance to rules and regulations | Visual inspection  | Haz Waste storage area | Weekly               | Plant Operation | Land and Water Resources | Hazardous waste generation; Land and Water Pollution | Collection by DENR-Accredited Haz Waste treater | N/A              |
| Water Resources and Quality | Color, pH, COD, Fecal Coliform, Nitrates, Oil and Grease, | To ensure compliance to rules and regulations | Water sampling     | OSD Tank               | Quarterly            | Plant Operation | Water Quality            | Stormwater run-off containing sediments              | Maintenance of drainage system and silt ponds   | N/A              |

|                             |  |   |   |                                  |           |                 |                   |                           |  |            |
|-----------------------------|--|---|---|----------------------------------|-----------|-----------------|-------------------|---------------------------|--|------------|
| Water Resources and Quality | Temperature, BOD, Ammonia TSS, Phosphates, Surfactants | To ensure compliance to rules and regulations | Water sampling                            | OSD Tank                         | Quarterly | Plant Operation | Water Quality     | Water Pollution; Effluent | Desilting of drainage canals and sedimentation pits              | N/A        |
| Air Quality                 | NOx, SOx, CO, PM                                       | To ensure compliance to rules and regulations | Stack Sampling                            | Plant site                       | Annual    | Plant Operation | Air Quality       | Air Pollution             | Maintenance of Air Pollution Control Equipment/Devices           | 156,000.00 |
| Air Quality                 | NO2, SO2, CO   | To ensure compliance to rules and regulations | Ambient air quality sampling              | Plant site/ Bulanjao Golf course | Annual    | Plant Operation | Air Quality       | Air Pollution             | Maintenance of Air Pollution Control Equipment/Devices           | 156,000.00 |
| Air Quality                 | NO2, SO2, CO   | To ensure compliance to rules and regulations | Inhouse air quality sampling              | Plant site                       | Monthly   | Plant Operation | Air Quality       | Air Pollution             | Maintenance of Air Pollution Control Equipment/Devices           | 44,553.00  |
| Noise and Vibration         | dB   | To ensure compliance to rules and regulations | Noise level monitoring                    | Plant site                       | Daily     | Plant Operation | Noise Quality     | Noise Generation          | Construction of sound barriers for sound absorption and control. | 10,500.00  |
| Noise and Vibration         | Vibration rate   | To ensure compliance to rules and regulations | Measuring vibration using Vibration meter | RMH Equipment                    | Daily     | Plant Operation | Vibration Quality | Vibration                 | Construction of sound barriers for sound absorption and control. | N/A        |

|   |  |   |                    |  |           |                 |                          |                                    |  |              |
|---|--|---|--------------------|--|-----------|-----------------|--------------------------|------------------------------------|--|--------------|
| Biodiversity Conservation and Consideration | No. of hectares rehabilitated, and seedlings planted | To ensure compliance to rules and regulations | Site validation    | Plant site                                     | Quarterly | Plant Operation | Disturbance Quality      | Disturbance / Loss of Biodiversity | Plantation establishment and protection and maintenance.                             | 3,591,500.00 |
| Biodiversity Conservation and Consideration | No. of hectares rehabilitated, and seedlings planted | To ensure compliance to rules and regulations | Site validation    | Mangrove Site, Brgy. Sarong, Bataraza, Palawan | Quarterly | Plant Operation | Change Quality           | Change in Landscape                | Continuous enhancement of overall landscape and appearance thru planting activities. | 3,591,500.00 |
| Heritage and Cultural Values                | Social and economic activities                       | To ensure compliance to rules and regulations | Records validation | Plant site                                     | Quarterly | Plant Operation | Manpower                 | Employment of IPs                  | Implementation of SDMP   | N/A          |
| Research Proposal/ Activities               | Petcoke Ash Sampling for Beneficial Use              | To ensure compliance to rules and regulations | Records validation | Plant site                                     | Annual    | Plant Operation | Land and Water Resources | Land and Water Pollution; Effluent | Petcoke Ash Sampling for Beneficial Use  | 11,000.00    |

**9. Name and Signature of Applicant or Person(s) preparing the EPEP (Specify PRC and PTR numbers), noted by the President.**

Prepared by:

  
LITO O. AYYOKAD  
MEPEO

PCO Certificate of Accreditation: 2022-R4B-04077

Date of Issue: August 30, 2022

Date of Validity: August 29, 2025

Checked by:

HILDA QUILLO  
Country Manager

Approved by:

ROMMEL IBUNA  
President

#### **10.0. Bibliography**

GAIA South, Inc. Environmental Impact Statement for the proposed Lime Milk Plant in RTEPZ of Unichamp Mineral Philippines, Inc. 2012.

GAIA South, Inc. Executive Summary of the Environmental Impact Statement of CBNC Expansion Project. Retrieved on 11 November 2021 from [http://eia.emb.gov.ph/wpcontent/uploads/2018/05/ExecSumforPublic\\_english.pdf](http://eia.emb.gov.ph/wpcontent/uploads/2018/05/ExecSumforPublic_english.pdf)

Hi Advance Philippines, Incorporated. Ambient Air Sampling and Testing Report for Graymont (Philippines) Inc. January 15, 2021.

Hi Advance Philippines, Incorporated. Ambient Air Sampling and Testing and Noise Level Monitoring Report for Graymont (Philippines) Inc. January 15, 2021.





| Activities  | Unit of Measure /<br>Unit Cost | Target (Physical/Financial) |            |            |            |              | REMARKS / JUSTIFICATIONS   |
|---|--------------------------------|-----------------------------|------------|------------|------------|--------------|--|
|   |                                | 1Q                          | 2Q         | 3Q         | 4Q         | Annual       |  |
| • LAND RESOURCE   | Financial                      | 976,330.00                  | 699,080.00 | 344,080.00 | 389,080.00 | 2,408,570.00 |  |
|   | Physical                       | 20,304.00                   | 1,574.00   | 1,553.00   | 1,573.00   | 24,882.00    |  |
| 1.National Greening Program (NGP)                           | Financial                      | 28,755.00                   | 28,755.00  | 28,755.00  | 28,755.00  | 115,020.00   |  |
|   | Physical                       | 84                          | 84         | 84         | 84         | 327          |  |
| A. Maintenance and Protection of the Plant Periphery        | Hectare                        | 3                           | 3          | 3          | 3          | 3            | a. Enrichment activity as part of the maintenance and protection (weeding, replanting)   |
|   | Mandays                        | 81                          | 81         | 81         | 81         | 324          |  |
|   | 355.00                         | 28,755.00                   | 28,755.00  | 28,755.00  | 28,755.00  | 115,020.00   | b. Labor/manpower cost for the activity  |
| B. New NGP Site / MFP                                       | Financial                      | 692,250.00                  | 195,000.00 | 60,000.00  | 60,000.00  | 1,007,250.00 |  |
|   | Physical                       | 18,782                      | 30         | 30         | 30         | 18,842       |  |
| 1. Survey, Mapping, and Planning (SMP)                      | activity                       | 2                           |            |            |            | 2            | Conduct of activity  |
|   | hectare                        | 30                          |            |            |            | 30           | total area for SMP   |
|   | 600.00                         | 36,000.00                   |            |            |            | 36,000.00    | SMP cost/hectare   |
| 2. Seedling Production                                      | 625                            | 18,750                      |            |            |            | 18,750       | No of seedlings/ hectare (provided by PO contractor)   |
|   | 35.00                          | 656,250.00                  |            |            |            | 656,250.00   | cost per seedling produced   |
| 3. Plantation Establishment (Site preparation and Planting) | hectare                        |                             | 30         |            |            | 30           | Area of the plantation to be established   |
|   | 6,500.00                       | -                           | 195,000.00 | -          | -          | 195,000.00   | cost/hectare   |
| 4. Maintenance and Protection (Year 1)                      | hectare                        |                             |            | 30         | 30         | 30           | Area of the plantation to be maintained  |
|   | 2,000.00                       |                             |            | 60,000.00  | 60,000.00  | 120,000.00   | cost per/hectare   |
| 2. Bamboo Plantation Program                                | Financial                      | 70,000.00                   | 115,000.00 | 70,000.00  | 115,000.00 | 370,000.00   |  |
|   | Physical                       | 20                          | 40         | 20         | 40         | 40           |  |
| A. Maintenance and Protection (Year 3)                      | Hectare                        | 20                          | 20         | 20         | 20         | 20           | a. Outsourced maintenance through the People's Organization: Rio Tuba Mangrove Ecosystem Developers (RTMED)<br>b. Located in So. Tagpisa, Brgy. Ocayan |
|   | 3,500.00                       | 70,000.00                   | 70,000.00  | 70,000.00  | 70,000.00  | 280,000.00   | c. Ring weeding, strip brushing, fire line establishment   |

|   |                           |              |            |            |            |              |   |
|---|---------------------------|--------------|------------|------------|------------|--------------|---|
| B. Fertilizer Application   | Hectare                   |              | 20         |            | 20         | 20           |   |
|   | 45,000.00                 |              | 45,000.00  |            | 45,000.00  | 90,000.00    | d. Cost for materials and labor during fertilizer application   |
| <b>3. Nursery Operations</b>  | Financial                 | 77,325.00    | 102,325.00 | 77,325.00  | 77,325.00  | 334,300.00   |   |
|   | Physical                  | 1,416        | 1,417      | 1,417      | 1,417      | 5,664        |   |
| A. Seedling Production  | no. of seedling produced  | 1,250        | 1,250      | 1,250      | 1,250      | 5,000        | a. Will be produced/provided by the hired nursery aide  |
|   | 15.00                     | 18,750.00    | 18,750.00  | 18,750.00  | 18,750.00  | 75,000       | b. Expenses for the production of seedlings like nursery materials and equipment including seedling bags, nursery tools (grab hoe, garden tool, hose, pails), seeds/saplings. |
| <b>B. Nursery Infrastructure</b>  |                           |              |            |            |            |              |   |
| 1. Maintenance of Existing Nursery Facility                             | no. of nursery maintained | 1            | 1          | 1          | 1          | 1            | a. Nursery size: 136 m <sup>2</sup>   |
|   | 355.00                    | 58,575.00    | 58,575.00  | 58,575.00  | 58,575.00  | 234,300.00   | b. Location: APEX Ore Trans Compound  |
|   | no. of manday             | 165          | 165        | 165        | 165        | 660          | c. Number of manpower   |
| 2. Improvement of Existing Nursery Facility                             | lot                       |              | 1          | 1          | 1          | 3            | c. Materials for the improvement in the structure and surroundings including repair or replacement of accessories such as installation of water hose, signage)                |
|   | 25,000.00                 |              | 25,000.00  |            |            | 25,000.00    |   |
| <b>4. Other Land Resource Environmental Activities</b>                  | Financial                 | 108,000.00   | 258,000.00 | 108,000.00 | 108,000.00 | 582,000.00   |   |
|   | Physical                  | 2            | 3          | 2          | 2          | 9            |   |
| A. Purchase of Drone and accessories                                    | lot                       |              | 1          |            |            | 1            | **Reportorial Requirement (if could have purchased it this year?)   |
|   | 150,000.00                |              | 150,000.00 |            |            | 150,000.00   |   |
| B. Plantations Validation   | No. Activity              | 2            | 2          | 2          | 2          | 8            | CENRO Validation for payment release for the NGP Sites  |
|   | 3,000.00                  | 108,000.00   | 108,000.00 | 108,000.00 | 108,000.00 | 432,000.00   | Expenses during Validation (Meals and Per Diem)   |
| <b>• WATER QUALITY AND RESOURCES</b>                                    | Financial                 | 7,449,806.31 | 905,505.00 | 354,255.00 | 417,255.00 | 9,126,821.31 |   |
|   | Physical                  | 138.90       | 131.40     | 146.90     | 155.90     | 550.40       |   |
| <b>1. Maintenance of Pollution Control Structures through Desilting</b> | Financial                 | 280,755.00   | 184,505.00 | 343,755.00 | 406,755.00 | 1,215,770.00 |   |
|   | Physical                  | 127.90       | 109.40     | 136.90     | 145.90     | 496.40       |   |

|   |                       |            |            |            |            |            |  |
|---|-----------------------|------------|------------|------------|------------|------------|--|
| A. Drainage Canal/System                                    | No. of Drainage canal | 4          | 4          | 4          | 4          | 4          | a. 4 drainage canals with a total length of 0.9 km.<br>b. Labor cost of the contracted employee to maintain the drainage system  |
|   | Kilometer             | 0.9        | 0.9        | 0.9        | 0.9        | 0.9        |  |
|   | No. of Mandays        | 81         | 81         | 81         | 81         | 324        |  |
|   |                       | 355.00     | 28,755.00  | 28,755.00  | 28,755.00  | 115,020.00 |  |
| B. Road Repair and Concreting                               | m <sup>2</sup>        | 36         | 18         | 45         | 54         | 153        | total area to be repaired/concreted<br>1. 3.5m x 5m = 17.5m <sup>2</sup> (Workshop)<br>2. 6m x 6m = 36m <sup>2</sup> (Petcoke area)<br>3. 5m x 9m = 45m <sup>2</sup> (Warehouse)<br>4. 4m x 13.5 = 54m <sup>2</sup> (Laboratory-phase 4) |
|   |                       | 7,000.00   | 252,000.00 | 155,750.00 | 315,000.00 | 378,000.00 | 1,100,750.00   |
| C. Desilting Activities                                     | No. of OSD            | 3          | 3          | 3          | 3          | 3          | standard cost /sqm   |
|   | No of activities      | 3          | 3          | 3          | 3          | 12         |  |
|   |                       |            |            |            |            |            |  |
| 2. Solid Waste Management                                   | Financial             | 10,500.00  | 521,000.00 | 10,500.00  | 10,500.00  | 552,500.00 |  |
|   | Physical              | 6          | 14         | 6          | 6          | 32         |  |
| A. Collection/Storage/Handling/ Disposal of Residual Wastes | Tons                  | 3          | 6          | 3          | 3          | 15         | a. Target based on the average generation in 2022  |
|   |                       | 3,500.00   | 10,500.00  | 21,000.00  | 10,500.00  | 52,500.00  | c. Hauling cost  |
|   | no. of hauling        | 3          | 6          | 3          | 3          | 15         | d. Price will be on per hauling activity not per tons  |
| B. MRF and Scrapyard  |                       |            |            |            |            |            |  |
| 1. Improvement of MRF                                       | lot                   |            | 1          |            |            | 1          | a. Improvement of the structure of the MRF ( flooring and roofing)   |
|   |                       | 150,000.00 | 150,000.00 |            |            | 150,000.00 |  |
| 2. Improvement of Scrapyard                                 | lot                   |            | 1          |            |            | 1          | a. Improvement of the structure (flooring and fencing)   |
|   |                       | 350,000.00 | 350,000.00 |            |            | 350,000.00 |  |
| 3. Hazardous Waste Management                               | Financial             | -          | 200,000.00 | -          | -          | 200,000.00 |  |
|   | Physical              | 4.0        | 8.0        | 4.0        | 4.0        | 21.0       |  |

|  |                            |              |              |            |               |               |  |
|--|----------------------------|--------------|--------------|------------|---------------|---------------|--|
| A. Collection / Storage / Handling / Disposal of Hazardous Waste |                            |              |              |            |               |               | a. 2Q Target was doubled due to the anticipated shutdown and maintenance   |
| 1. HazWaste Generated  | Tons                       | 4            | 8            | 4          | 4             | 20            | b. No budget allotted for the hazwaste disposal due to the agreement with GIM that GPI will support the ABS -CBN's Project (Bantay Langis) and Oriental Motolite's (Balik Baterya) through donation of Used Oil and Battery in lieu of free transport and treatment of the Hazwaste generated by GPI |
| B. Hazardous Waste Storage Facility                              |                            |              |              |            |               |               |  |
| 1. Improvement of the HazWaste Storage Facility (HWSF)           | lot                        |              | 1            |            |               | 1             | Improvement of the secondary containment   |
|  | 200,000.00                 |              | 200,000.00   |            |               | 200,000.00    |  |
| 4. Other Water Quality and Resource Environmental Activities     | Financial                  | 7,158,551.31 | -            | -          | -             | 7,158,551.31  |  |
|  | Physical                   | 1            | 0            | 0          | 0             | 1             |  |
| A. Purchase of Vacuum Truck                                      | lot                        | 1            |              |            |               | 1             | for desliting activities; maintenance of the OSD Tank  |
|  | 7,158,551.31               | 7,158,551.31 |              |            |               | 7,158,551.31  |  |
| • AIR QUALITY  | Financial                  | 157,723.40   | 1,932,273.40 | 157,723.40 | 12,177,723.40 | 14,425,443.60 |  |
|  | Physical                   | 1,987.20     | 1,489.20     | 1,987.20   | 2,007.20      | 7,461.20      |  |
| 1. Dust Suppression  | Financial                  | 28,755.00    | 28,755.00    | 28,755.00  | 28,755.00     | 115,020.00    |  |
|  | Physical                   | 129.60       | 129.60       | 129.60     | 129.60        | 516.60        |  |
| A. Water Sprying of the Plant periphery                          | kilometer                  | 0.6          | 0.6          | 0.6        | 0.6           | 0.6           | a. Water Spraying atleast 4 times in a week at plant site  |
|  | no. of activity            | 48           | 48           | 48         | 48            | 192           | b. payment of the hired manpower for the activity (daily rate)   |
|  | No. of Mandays             | 81           | 81           | 81         | 81            | 324           |  |
|  | 355.00                     | 28,755.00    | 28,755.00    | 28,755.00  | 28,755.00     | 115,020.00    |  |
| 2. Air Quality Monitoring  | Financial                  | 11,138.40    | 11,138.40    | 11,138.40  | 231,138.40    | 264,553.60    |  |
|  | Physical                   | 26           | 26           | 26         | 44            | 116           |  |
| A. In - House Air Quality Monitoring                             | no. of sample              | 18           | 18           | 18         | 18            | 72            | a. 18 Gastec tubes to be used per quarter: 1 parameter/tube; 3 parameters/sampling station; 2 sampling stations  |
|  | 618.8                      | 11,138.40    | 11,138.40    | 11,138.40  | 11,138.40     | 44,553.60     | b. No cost for the sampling, budget is for the gastec tube to be used  |
|  | Sampling Activity          | 3            | 3            | 3          | 3             | 12            | c. 1 sampling activity per month   |
|  | no. of sampling station    | 2            | 2            | 2          | 2             | 2             | d. 2 sampling stations (KILN 1 & 2)  |
|  | no. of parameters analyzed | 3            | 3            | 3          | 3             | 12            | e. 3 parameters / sampling station<br>f. CO, SOx, NOx  |

|  |                            |            |              |            |               |               |  |
|--|----------------------------|------------|--------------|------------|---------------|---------------|--|
| B. Third Party Stack Sampling                        | No. of Sample              |            |              |            | 2             | 2             | a. 1 sample /sampling station  |
|  | Sampling Activity          |            |              |            | 1             | 1             | b. 1 sampling activity   |
|  | no. of sampling station    |            |              |            | 2             | 2             | c. 2 sampling station (KIILN 1 & 2)  |
|  | no. of parameters analyzed |            |              |            | 4             | 4             | d. 4 parameters measured (NOx, SOx, CO, PM)  |
| C. Ambient Air Quality Sampling                      | No. of Sample              |            |              |            | 2             | 2             | a. 1 sample /sampling station  |
|  | Sampling Activity          |            |              |            | 1             | 1             | b. 1 sampling activity   |
|  | no. of sampling station    |            |              |            | 2             | 2             | c. 2 sampling station (Infront of Admin Office and Bulanjao Golf Course)                     |
|  | no. of parameters analyzed |            |              |            | 4             | 4             | d. 4 parameters measured (Noise, PM <sub>10</sub> , NO <sub>2</sub> , SO <sub>2</sub> , TSP) |
|  | 220,000.00                 |            |              |            | 220,000.00    | 220,000.00    | e. Cost for one time sampling for both stack and ambient sampling activity                   |
| <b>3. Other Air Quality Environmental Activities</b> | Financial                  | 117,830.00 | 1,892,380.00 | 117,830.00 | 11,917,830.00 | 14,045,870.00 |  |
|  | Physical                   | 1832       | 1334         | 1832       | 1834          | 6829          |  |
| A. Maintenance of Pollution Control Devices          | No of APCD/F               |            | 2            |            | 2             | 2             | a. KILN 1&2 and Petcoke  |
|  | 1,800,000.00               |            | 1,800,000.00 |            | 1,800,000.00  | 3,600,000.00  | b. replacement of Filter bags  |
| B. Dust Collector (MOL and PetCoke)                  | No of Dust Collector       |            |              |            | 2             | 2             | MOL and Petcoke Dust Collectors  |
|  | 5,000,000.00               |            |              |            | 10,000,000.00 | 10,000,000.00 |  |
| B. Road Sweeping                                     |                            |            |              |            |               |               |  |
| 1. Daily Road Sweeping                               | kilometer                  | 0.6        | 0.6          | 0.6        | 0.6           | 0.6           | a. 0.6 kilometers road network - Plant site  |
|  | 355.00                     | 28,755.00  | 28,755.00    | 28,755.00  | 28,755.00     | 115,020.00    | b. payment of the hired manpower for the activity (daily rate)                               |
|  | no. of days                | 81         | 81           | 81         | 81            | 324           |  |
| C. Petcoke Ash Disposal                              | Tons                       | 1,750      | 1,250        | 1,750      | 1,750         | 6,500         | petcoke ash disposal is per MT   |
|  | 50.90                      | 89,075.00  | 63,625.00    | 89,075.00  | 89,075.00     | 330,850.00    | cost/MT  |

|  |                  |              |            |            |            |              |   |
|--|------------------|--------------|------------|------------|------------|--------------|---|
| • AMBIENT NOISE QUALITY  | Financial        | -            | -          | -          | 4,500.00   | 4,500.00     |   |
|  | Physical         | 3.00         | 3.00       | 3.00       | 4.00       | 13.00        |   |
| 1. Ambient Noise Level Monitoring                                    | Financial        | 0            | 0          | 0          | 0          | 0            | In house activity   |
|  | Physical         | 3            | 3          | 3          | 3          | 12           |   |
|  | no. of activity  | 3            | 3          | 3          | 3          | 12           |   |
| 2. Ambient Noise Monitoring Measures                                 | Financial        | -            | -          | -          | 4,500.00   | 4,500.00     |   |
|  | Physical         | 0            | 0          | 0          | 1          | 1            |   |
| A. Maintenance and Calibration of Ambient Noise Monitoring Equipment | no. of equipment |              |            |            | 1          | 1            | a. 1 equipment will be used<br>b. Annual Maintenance and Calibration of the equipment |
|  | 4,500.00         |              |            |            | 4,500.00   | 4,500.00     | c. Equipment maintenance and calibration cost   |
| • CONSERVATION VALUES  | Financial        | 1,087,200.00 | 312,500.00 | 227,500.00 | 227,500.00 | 2,064,702.00 |   |
|  | Physical         | 50,091.00    | 54.00      | 52.00      | 52.00      | 50,144.00    |   |
| A. Mangrove and Bats Habitat Patrolling, Protection, and Maintenance | hectare          | 30           | 30         | 30         | 30         | 30           | a. Maintenance and protection of the existing Mangrove rehabilitaion area / site.     |
|  | 3,000.00         | 90,000.00    | 90,000.00  | 90,000.00  | 90,000.00  | 360,000.00   | b. Maintenance cost   |
| B. Mangrove Plantation Establishment (New)                           | Financial        | 624,000.00   | -          | -          | -          | 834,002.00   | *Establish new plantation as recommended during audit                                 |
|  | Physical         | 40,022       | 20         | 20         | 20         | 40,062       |   |
| 1. Survey, Mapping, and Planning (SMP)                               | activity         | 2            |            |            |            | 2            | Conduct of activity   |
|  | hectare          | 20           |            |            |            | 20           | total area for SMP  |
|  | 600.00           | 24,000.00    |            |            |            | 24,000.00    | SMP cost/hectare  |
| 2. Seedling Production   | 2,000            | 40,000       |            |            |            | 40,000       | No seedlings/ hectare   |
|  | 15.00            | 600,000.00   |            |            |            | 600,000.00   | cost per seedling produced  |
| 3. Plantation Establishment (Site preparation and Planting)          | hectare          |              | 20         |            |            | 20           | Area of the plantation to be established  |
|  | 6,500.00         | -            | 130,000.00 | -          | -          | 130,000.00   | cost/hectare  |

|  |                              |            |            |            |            |            |   |
|--|------------------------------|------------|------------|------------|------------|------------|---|
| 4. Maintenance and Protection (year 1) - Patrol Work, Replanting, Pest and Disease Control | hectare                      |            |            | 20         | 20         | 20         | Area of the plantation to be maintained   |
|  | 2,000.00                     |            |            | 40,000.00  | 40,000.00  | 80,000.00  | cost per/hectare  |
| C. Validation/Other activities   | No. Activity                 | 2          | 2          | 2          | 2          | 8          | CENRO Validation for payment release  |
|  | 3,000.00                     | 216,000.00 | 216,000.00 | 216,000.00 | 216,000.00 | 864,000.00 | 1. Expenses during Validation (Meals and Per Diem)<br>2. 6 Personnel<br>3. 6 days   |
| D. Establishment of Critical Habitat   | Financial                    | 85,000.00  | 85,000.00  | -          | -          | 170,000.00 |   |
|  | Physical                     | 2          | 2          | 0          | 0          | 4          |   |
| 1. Community Consultation and IEC  | no. of activity              | 1          | 1          |            |            | 2          | a. GPI will be the proponent for this endeavor<br>b. Community consultation and IEC will be conducted in coordination with the PCSD and |
|  | 10,000.00                    | 10,000.00  | 10,000.00  |            |            | 20,000.00  |   |
| 2. Validation/ Inspection, and other activities  | no. of activity              | 1          | 1          |            |            | 2          | c. Validation of the Critical Habitat Project (Board and Lodging of the Validators)   |
|  | 75,000.00                    | 75,000.00  | 75,000.00  |            |            | 150,000.00 |   |
| E. CNCH Commitment: 10,000 seedlings: From SMP to Validation                               | Financial                    | 162,200.00 | 11,500.00  | 11,500.00  | 11,500.00  | 196,700.00 |   |
|  | Physical                     | 10,035     | -          | -          | -          | 10,040     |   |
| 1. Survey, Mapping, and Planning   | No. of activity              | 2          |            |            |            | 2          | Conduct of activity: SMP  |
|  | hectare                      | 16         |            |            |            | 16         | total area for SMP  |
|  | 600.00                       | 19,200.00  |            |            |            | 19,200.00  | SMP cost/hectare  |
| 2. Seedling Production - Donation from City ENRO   | no of seedling to be planted | 10,000     |            |            |            | 10,000     | 1. Species: indigenous (donated from City ENRO)<br>2. Spacing: 4x4<br>3. Seedling/ha: 625   |
| 3. Plantation Establishment (site Preparation and Planting)                                | No of activity               | 1          |            |            |            | 1          | 1 planting activity per quarter   |
|  | hectare                      | 16         |            |            |            | 16         | Area of the plantation to be established  |
|  | 7,500.00                     | 120,000.00 | -          | -          | -          | 120,000.00 | cost/hectare  |



|  |                                    |            |              |            |            |              |  |
|--|------------------------------------|------------|--------------|------------|------------|--------------|--|
| 4. Meetings/ Validation / Inspection                 | No of Activity                     | 2          | 1            | 1          | 1          | 5            |  |
|  | 11,500.00                          | 23,000.00  | 11,500.00    | 11,500.00  | 11,500.00  | 57,500.00    | 1. Travel expenses during activities (meals and snacks, accommodation, transportation)                                 |
| • ENVIRONMENTAL RESEARCH                             | Financial                          | -          | 10,000.00    | -          | 10,000.00  | 20,000.00    |  |
|  | Physical                           | -          | 1.00         | -          | 2.00       | 3.00         |  |
| A. Research Study:                                   | no. of research conducted          |            |              |            | 1          | 1            |  |
|  | No. of Report submitted            |            | 1            |            | 1          | 2            | 1. Semiannual progress report (1)<br>2. Annual Terminal Report (1)   |
|  | 20,000.00                          |            | 10,000.00    |            | 10,000.00  | 20,000.00    |  |
| •OTHERS  | Financial                          | 593,000.00 | 1,537,000.00 | 432,000.00 | 663,000.00 | 3,225,000.00 |  |
|  | Physical                           | 17.00      | 17.00        | 18.00      | 14.00      | 66.00        |  |
| A. Multipartite Monitoring Team (MMT) Validation     | no. of validation                  | 1          | 1            | 1          | 1          | 4            | a. Quarterly MMT meeting and validation  |
|  | 120,000.00                         | 120,000.00 | 990,000.00   | 120,000.00 | 120,000.00 | 1,350,000.00 |  |
| B. Mine Rehabilitation Fund Committee (MRFC) Meeting | no. of meeting                     | 2          | 1            | 1          | 1          | 5            | a. Quarterly MRFC Reporting (Per Diem of attendees)  |
|  | 200,000.00                         | 400,000.00 | 200,000.00   | 200,000.00 | 200,000.00 | 1,000,000.00 | b. Inclusion of the Honorarium of the MRFC Secretariat<br>c. Accommodation<br>d. Travel Expenses (Air and Land Travel) |
| C. Mineral Processing Permit (MPP) Validation        | no. of validation                  | 1          | 0            | 0          | 0          | 1            | a. Annual validation of MPP  |
|  | 25,000.00                          | 25,000.00  |              |            |            | 25,000.00    |  |
| D. Training/Seminar/Workshop                         | no. of training/ seminar/ workshop | 1          | 1            | 1          | 1          | 4            | a. MMT and PCO Conventions, Updates to EMB & MGB laws, EIA Summit, Mining Conference                                   |
|  | 25,000.00                          | 25,000.00  | 25,000.00    | 25,000.00  | 25,000.00  | 100,000.00   |  |
| E. ISO 14001-2015 (EMS)                              | no. of audit                       | 1          |              |            |            | 1            | a. Surveillance audit of the 3 ISO Standards by external auditors (SGS). Q & E MS                                      |
|  | 300,000.00                         |            | 300,000.00   |            |            | 300,000.00   |  |
| F. Sustainability Activities                         | Financial                          | 19,000.00  | 16,000.00    | 81,000.00  | 314,000.00 | 430,000.00   |  |
|  | Physical                           | 7          | 8            | 9          | 7          | 31           |  |
| 1.Tree Planting                                      | no. of activity                    | 1          |              | 1          |            | 2            | a. Local/community and in-house tree planting activities   |
|  |                                    | 5,000.00   |              | 50,000.00  |            | 55,000.00    | b. 2Q Target includes sponsorship / donations during tree planting activities.   |

|  |                 |                      |                     |                     |                      |                      |   |
|--|-----------------|----------------------|---------------------|---------------------|----------------------|----------------------|---|
| 2. Coastal Clean-Up/Clean Up drive                                       | no. of activity | 1                    | 1                   | 1                   | 1                    | 4                    | a. Community and in-house activities during environmental celebrations like World Water Day, International Coastal Clean up Month,      |
|  | 5,000.00        | 5,000.00             | 5,000.00            | 20,000.00           | 5,000.00             | 35,000.00            |   |
| 3. Information, Education, and Communication                             | no. of activity | 1                    | 1                   | 1                   | 1                    | 4                    | a. Environmental related IEC for both internal and external   |
|  | 5,000.00        | 5,000.00             | 5,000.00            | 5,000.00            | 5,000.00             | 20,000.00            |   |
| 4. Search for Eco Friendly Barangay                                      | no. activity    |                      |                     |                     | 1                    | 1                    | a. Meals and accommdation of the validators<br>b. Prices for the winners  |
|  | 300,000.00      |                      |                     |                     | 300,000.00           | 300,000.00           |   |
| G. Regulatory Inspection, Validation, Monitoring, Meeting, and Reporting | no. of activity | 4                    | 6                   | 6                   | 4                    | 20                   | a. EMB Personnel Inspection apart from the MMT Inspection<br>b. SHES Validation<br>c. DENRO Reporting<br>d. CENRO Validation/Inspection |
|  | 1,000.00        | 4,000.00             | 6,000.00            | 6,000.00            | 4,000.00             | 20,000.00            |   |
| <b>Total (Financial)</b>   |                 | <b>10,264,059.71</b> | <b>5,396,358.40</b> | <b>1,515,558.40</b> | <b>13,889,058.40</b> | <b>31,275,036.91</b> |   |
| <b>Total (Physical)</b>  |                 | <b>72,541.10</b>     | <b>3,269.60</b>     | <b>3,760.10</b>     | <b>3,808.10</b>      | <b>83,119.60</b>     |   |

## List of reports submitted and date of submission.

| No. | Type of Report                | Frequency of Submission | Date of Submission |                |               |                |
|-----|-------------------------------|-------------------------|--------------------|----------------|---------------|----------------|
|     |                               |                         | First Quarter      | Second Quarter | Third Quarter | Fourth Quarter |
| 1   | Compliance Monitoring Report  | Quarterly               |                    |                |               |                |
| 2   | Energy Consumption Report     | Quarterly               |                    |                |               |                |
| 3   | National Greening Program     | Quarterly               |                    |                |               |                |
| 4   | AEPEP Progress Report         | Quarterly               |                    |                |               |                |
| 5   | Mine Waste Tailings Report    | Semi-annual             |                    |                |               |                |
| 6   | Mining Forest Program         | Semi-annual             |                    |                |               |                |
| 7   | AEPEP Annual Report           | Annual                  |                    |                |               |                |
| 8   | AEPEP for the succeeding year | Annual                  |                    |                |               |                |