

ANNUAL ENVIRONMENTAL PROTECTION AND ENHANCEMENT PROGRAM (AEPEP) (CY 2024)

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MINES AND GEOSCIENCES BUREAU - MIMAROPA REGION

Mindoro Crushing Plant Project
Sitio Pagkakaisa Brgy. Manguyang, Gloria, Oriental Mindoro

Submitted by:



1.0 CORPORATE INFORMATION

1.1 *Project name*

Mindoro Crushing Plant Project

1.2 *Company name and address(es)*

Montalban Concrete and Asphalt Inc. (MOCAI)

Head Office: First Solid Compound, Paliparan 1, Dasmariñas, Cavite

Tel. No: 552-5292

Project Site: Sitio Pagkakaisa, Brgy. Manguyang, Gloria, Oriental Mindoro

1.3 *Contact/title*

Ms. Nancy Ong Hsieh
President

Mr. Rizaldy F. Masiglat
Plant Manager/MEPEO

Ms. Merdia Jamae A. Mayores
PCO/Asst. MEPEO

2.0 PROJECT DESCRIPTION

2.1 *Project details*

The **Mindoro Crushing Plant Project of Montalban Concrete and Asphalt Inc. (MOCAI)** is an existing sand and gravel crushing plant with a Supply Agreement with MOCAI CP-ORM-184, a legal CSAG permit holder. The Project is located in Sitio Pagkakaisa, Barangay Manguyang, Municipality of Gloria, Province of Oriental Mindoro. The processed (crushed) sand and gravel product is mainly supplied to MOCAI's Asphalt Batching Plant and other clients in need of aggregates to support the growing construction industry in the Province of Mindoro and its neighboring province/s.

2.1.1 Project location

The existing crushing plant facilities for this project is situated on a parcel of land (Lot No, 1408, Cad. 691-D) owned by MOCAI located in Sitio Pagkakaisa Barangay Manguyang, Municipality of Gloria, Province of Oriental Mindoro. Bounded on the South East, along line 1-2 by Lot No. 1410, cad 691-D along lines 2-3-4 by Lot No. 1405, Cad 691-D ; on the South, along line 4-5 by Lot No. 1406, Cad-691 D; on the West, along line 5-6 by Lot No. 1407 cad 691-D; and on the North, along the line 6-1 by Lot No. 1409, cad 691-D, Gloria Cadastre, containing an area of Thirty Eight Thousand One Hundred Twenty Nine(38,129) square meters.

The province of Oriental Mindoro is on the eastern portion of the Mindoro island which is about 140 kilometers southwest of Manila. The province is composed of 14 municipalities and one component city. Calapan City is the only city and the capital of Oriental Mindoro.

The municipality of Gloria is located 76 kilometres from the provincial capital Calapan City. At present, Gloria has twenty-seven (27) barangays: nine (9) barangays are situated along the national highway; six (6) coastal barangays are located on the eastern side of the municipality while the remaining twelve (12) interior barangays are on the western side. Brgy. Manguyang is one of the interior barangays and is the southwestmost barangay of Gloria municipality.



Figure 1: Vicinity Map – Sitio Pagkakaisa Brgy. Manguyang, Gloria Oriental Mindoro

MONTALBAN CONCRETE and ASPHALT INC.

Sitio Pagkakaissa, Brgy. Manguyong, Gloria, Oriental Mindoro

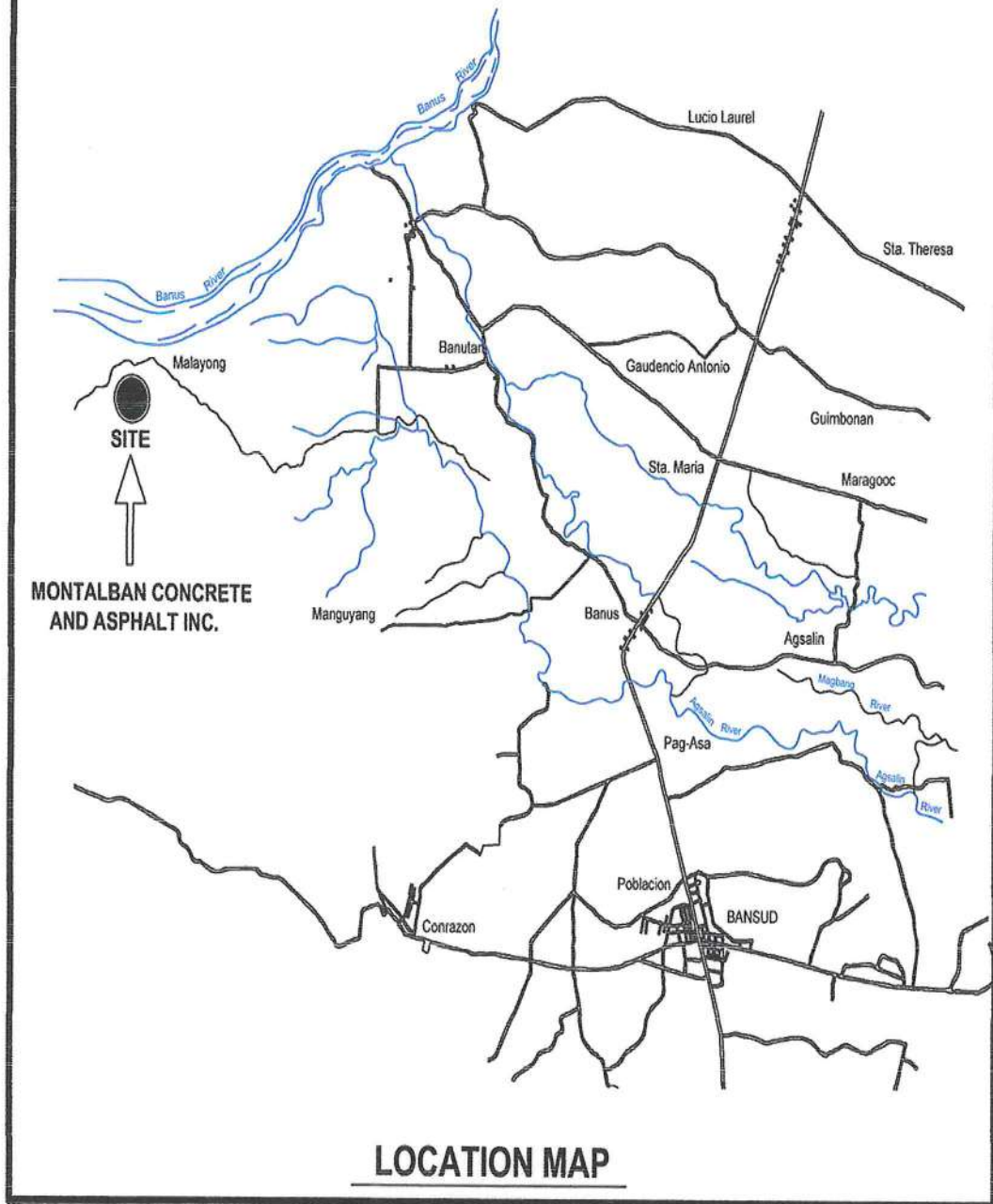


Figure 2: Location Map



Figure 3: Actual Photograph of the Area

2.1.2 Estimated capital cost

The estimated capital cost for the project is Sixteen Million Nine Hundred Thirty-Six Thousand Nine Hundred Eighty-Four Pesos (P 16,936,984.00) which include land acquisition & development, equipment, materials and supplies, cost of development and other incidental expenses such as location survey, permitting, operating capital, etc.

2.1.3 Minerals (types to be mined)

The minerals or rock to be processed is sand & gravel. The company also owns a Commercial Sand and Gravel permit in the area where source of feed materials to the crushing plant will originate. Sand & gravel is the type of deposit abundant in nearby Banus River as evidenced by the numerous quarrying sites in the locality.

The project is aimed at crushing and screening-washing of sand and gravel materials to produce products suitable for the asphalt batching plant, also located on the same property.

2.1.4 Estimated production (daily or annual mill/plant throughput)

The crushing plant's rated capacity is 250 tons per hour (tph). However, historical data of production in the conducted test-runs of the surplus-acquired crushing plant shows about 60% machine efficiency thus the actual production capacity is 150 tph. The daily production at an 8-hour operation is about 1,200 tons or equivalent to produce a total of 600 cubic meters (at Specific Gravity of 2) per day of sand and gravel that is approximately equivalent to 12,000 cubic meters per month (20 operating days per month) of aggregate products and annual production of 144,000 cubic meters.

Direct processing cost is projected to be in the range of one hundred twenty-three pesos (P 124.00) per cubic meter broken down into:

Power Cost	-	P 16.00/cubic meter
Fuel/Lube Cost	-	P 64.00/cubic meter
Maintenance cost	-	P 1.00/cubic meter
Labor	-	P 43.00/ cubic meter
Total	-	P 124.00/ cubic meter

The crushing plant is designed to produce products to feed the asphalt batching plant, also located on the same property.

2.1.5 Process plant/mill (type of process)

This AEPEP is intended only for the crushing plant operations of MOCAI. The company will source its raw materials from MOCAI CP-ORM-184.

The crushing-screening plant installed is rated at 250 tons per hour (TPH) capacity but, it has a production capacity of 150 TPH based on 60% actual machine efficiency.

The detailed process flow description is as follows:

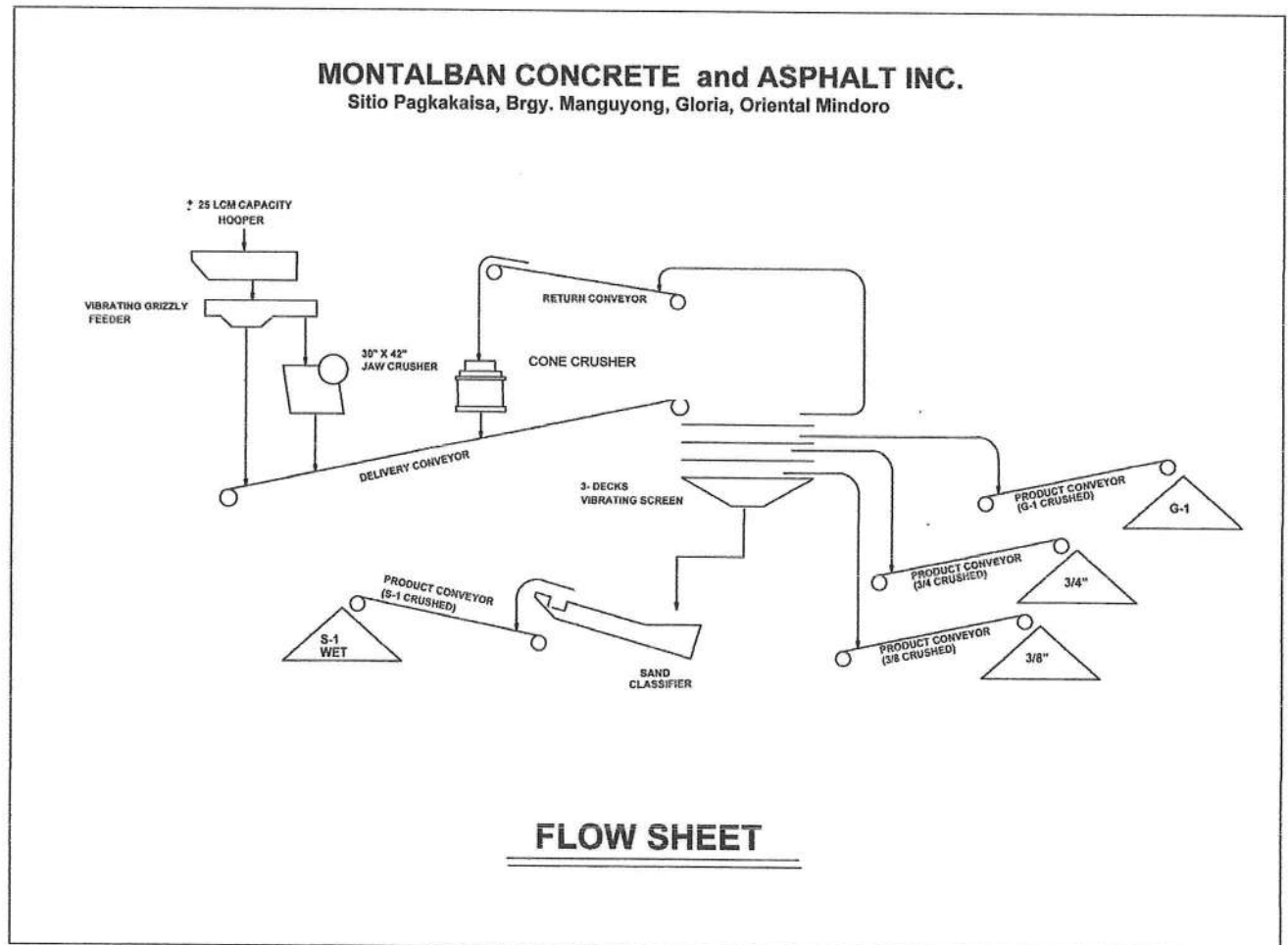


Figure 4: Process Flow

Run-of-quarry materials delivered from nearby quarry is either dumped in the ore yard stockpile or directly dumped into a feed hopper having a capacity of 25 loose cubic meter then pass to a 24" X 10' vibrating grizzly feeder. The grizzly oversize is crushed by 30" x 42" primary jaw crusher. The jaw crusher product joins the vibrating grizzly undersize then fed to a 6' x 14' 3-decker scalping screen. The upper deck scalper product (oversize) is further crushed in a cone crusher, and return to main conveyor fed to scalping screen. The 2nd deck

scalper product (oversize) is also further crushed in the cone crusher. Product of cone crusher and undersize of scalping screen is fed and screened in a 3-decker vibrating screen for final size classification.

The oversize of the 3rd deck of the 3-decker vibrating screen is where the 3/4 Product is drawn out. The oversize of the 2nd deck screen is where the 3/8 Product is drawn out. The undersize of sizing screen including wash water are discharged through a launder going to a fabricated dewatering wheel classifier. The product of the classifier is stockpiled as sand (fine aggregates or s-1). The overflow from classifier is discharged to a series of settling ponds to settle the sludge. The clear water from the third stage settling pond is pumped back to the plant for re-use. Make-up water is pumped from the Banus River to the crushing plant only as necessary.

2.2 Access/transportation

2.2.1 Road (preference and alternates)

The project is accessible from the capital city of Calapan through the Strong Republic Nautical Highway or national road that cuts across the Province of Oriental Mindoro.

2.2.2 Air access (origin and destination points)

The province of Oriental Mindoro has three domestic airports, namely: Calapan, Pinamalayan and Wasig Airports. All three airports only cater small planes and choppers. Among the three, Pinamalayan Airport is the nearest to the project area.

2.2.3 Shipping (preferred port facilities, alternates)

Calapan and Roxas Ports are the two major ports of Oriental Mindoro. Other government ports are located in Pola, Bulalacao and Mansalay while Puerto Galera has two ports. Pinamalayan and Bansud each has its own ports. Calapan Port provides venue for the transport of cargoes and passengers to

Metro Manila and other provinces in Luzon via Batangas port. Said port is equipped with berthing areas for fast craft, conventional and Roll-on Roll-off (RoRo) vessels, passenger terminal shed and a Passenger Terminal Building (PTB) with complete amenities.

Crushing Plant products will be hauled to the Bansud port and will be loaded to barges or cargo vessels.

2.3 Power supply

2.3.1 Requirements

The power requirement of the plant is by electric generating sets. For this purpose, Two (2) units of generator sets are installed to supply electric power requirement of the plant such as 275KVA and 100KVA. The total connected load of the plant is 510 horsepower or 380.60kilowatts.

2.3.2 Supply alternatives

Not Applicable

2.4 Milling equipment

2.4.1 List of mobile/fix equipment

- One (1) unit 25 lcm capacity feed hopper
- One (1) unit 24" X 10' vibrating grizzly feeder
- One (1) unit 30" x 42" primary jaw crusher
- One (1) unit 6' x 14' 3-decker vibrating screen
- One (1) unit cone crusher

2.4.2 List of all diesel powered equipment

- Three (3) units Generating set with rated capacity of 275 KVA and 400 KW
- Two (2) units Front wheel loader
- Two (2) units Hydraulic Excavator

- Two (2) units Dump Trucks
- Two (2) units light (service) vehicles

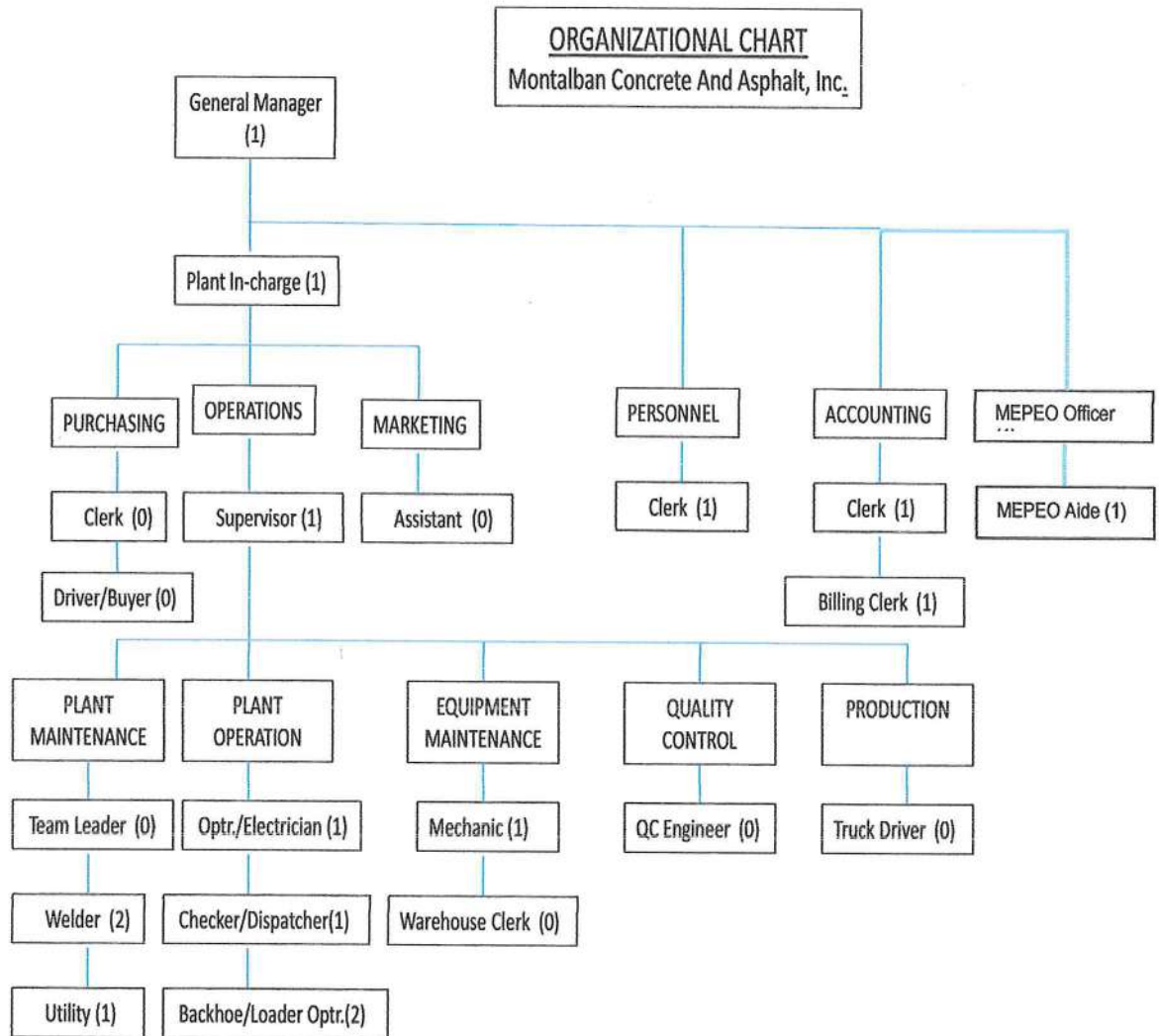
2.5 Workforce information

2.5.1 Total operational workforce

Table 1: Manpower Requirement

POSITION	NO.
General Manager	1
Plant in-charge	1
Mine Environmental Protection and Enhancement Officer (MEPEO)	1
MEPE Aide	1
Operations Supervisor/Safety Inspector	1
HRD clerk	1
Accounting	
Accounting Clerk	1
Billing Clerk	1
Plant maintenance	
Welders	2
Utility/Plant crew	1
Plant Operations	
Plant operator/electrician	1
Checkers	1
Backhoe operator	1
Loader operator	1
Equipment maintenance	
Mechanic	1
TOTAL	16

Figure 5: Organizational Chart



2.5.2 Housing options (camp, neighbouring communities, new town)

The company provides temporary housing facilities for its staff and labourers whose residence are far from the project site. A steel container converted into an office-bunkhouse for the office employees, operators, mechanics and laborers are provided by the company at the plant site.

2.6 Development schedule

2.6.1 Site construction/development start up (quarter/year)

The construction/development of the plant site commenced in June 2017 after the acquisition of crushing plant facility and other equipment. The development was an on-and-off activity due to other priority projects of the company. The crushing plant installation and land improvements were completed in May 2018 and subsequently started test/trial runs until April 2019. During its construction and development, the following are the work activities schedule:

- Acquisition of Crushing Plant Facility
- Acquisition of Other Equipment
- Installation of the Plant
- Land Improvements
- Levelling and clearing of ground in accordance with the lay-out of the plant.
- Excavation of ground for the concrete foundation construction;
- Installation and erection of plant and equipment and piping systems
- Excavation and construction of Zero Discharge settling pond
- Test/Trial run of plant

The development schedules were accomplished after the approval of the ECC and the issuance of MGB Region IV-B of the permit to operate mechanical/electrical installation.

Table 2 : Development Schedule

	June 2017	May 2018	April 2019	May 2019	June 2019	July 2019	Aug 2019	Sept 2019
Acquisition of Crushing Plant Facility	█							
Acquisition of Other Equipment	█							
Installation of the Plant	█	█						
Land Improvements	█	█	█					
Test-Runs		█	█	█	█	█	█	█
Permitting		█	█	█	█	█	█	█
Mobilization of Other Equipment							█	█
Hiring of Employees							█	█
Commercial Operation								█

2.6.2 Production start-up (quarter/year)

During the first year of its operation after the commissioning, its production capacity is not yet in full and is increasing gradually. Table below is the plant production schedule after its commissioning:

Table 3: Production Schedule

Month	Production Volume (m3)
1 st	1,000
2 nd	1,500
3 rd	2,000
4 th	2,000
5 th	3,000
6 th	3,000
7 th	4,000
8 th	4,500
9 th	5,000
10 th	10,000

For CY 2024, annual production will be limited to 56,160 cu m., unless the demand for aggregates increase and if the company will secure new supply agreements with legal sand and gravel quarries.

ENVIRONMENTAL IMPACTS AND CONTROL

2.7 *Land resources*

2.7.1 Acceptable impacts associated during the construction, development and mineral processing:

2.7.1.1 Overburden Soil piles

Clearing operations for the plant site will not generate substantial spoil piles as it will involve a small area. Few plant/vegetative cover consisting of mainly of cogon and grasses will be uprooted and damaged.

2.7.1.2 Haul-roads

The site is located in an area where there is an existing road network therefore no additional road shall be constructed to access the site.

2.7.1.3 Stockpiles and dumps

There are no stockpiles of dumps involved in the project that may cause siltation or pollute the creek and rivers except the slime that shall be removed from the settling pond.

2.7.1.4 Plant, including derelict equipment

The project involves only crushing and uses a few heavy equipment. Junk equipment may in some way also cause negligible pollution and contamination of the water and environment if not properly mitigated.

2.7.1.5 Water supply and storages, including settling and treatment ponds

Only siltation sump and/or silt traps along the plant drainage and the settling pond shall be constructed that has minimal impact on the environment.

2.7.1.6 Watercourse crossings and diversions

No water diversions or crossings shall be undertaken.

2.7.1.7 Hard stands and parking areas

Hard stands and parking areas shall be located inside the plant site itself that may not pose any significant environmental effects.

2.7.1.8 Contaminated land

There will be no contaminated land in the vicinity. The process plant does not use any chemical of any kind.

2.7.1.9 Removal of plant and animal communities

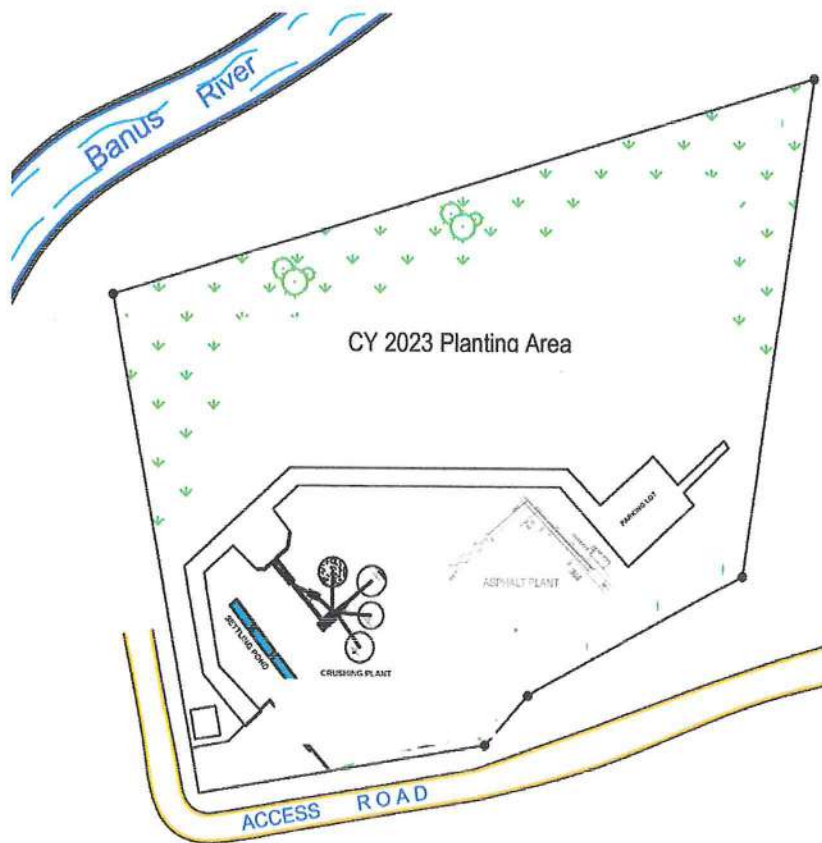
Removal of plants and animal communities is negligible since the affected area cover only less than two hectares. The area as mentioned is devoid of forest cover and hence there are no significant existing animal communities that may be affected.

2.7.2 Control strategies

2.7.2.1 Progressive rehabilitation

Progressive rehabilitation shall be implemented in the affected areas. Disturbed areas which shall not be utilized for the rest of the life of the project shall be rehabilitated by planting trees, stabilization of slopes and landscaping. While the project is in operation, progressive rehabilitation is focused on planting of trees along the perimeter of the Plant site. Other rehabilitation activities include but not limited to the following:

- Continuous levelling/filling of potholes along the access roads and haul roads;
- Maintenance of roadside drainage canals to divert surface water runoff to silt collector sumps;
- Stabilization and maintenance of rip-rap materials align slide prone areas;
- Maintenance of planted trees and grasses; and
- Regular water spraying of haul roads to minimize dust generation.



Location of Progressive Rehabilitation for CY 2024

2.7.2.2 Rehabilitation standard

Rehabilitation standard shall be based on the requirements of the DENR to ensure compliance with the regulations and the condition sand commitments set forth in the Environmental Compliance Certificate (ECC) and this AEPEP, respectively.

2.7.2.3 Rehabilitation methods

2.7.2.3.1 Pre-development preparation

Existing condition of the project area prior to the commencement of clearing and crushing plant development was documented for future reference.

2.7.2.3.2 Final landform design

The final landform design is a residential lot area. After clearing the area of structures, the area shall be landscaped and levelled or stabilized.

2.7.2.3.3 Surface preparation

Little surface preparation is needed in the rehabilitation of the area. It may involve the clearing and demolition of concrete structures that are not needed and removal of non-biodegradable materials that are detrimental to plant growth and other debris and backfilling silt ponds, etc...

2.7.2.3.4 Revegetation method

Topsoil conservation is one of the primary concerns as this will determine the survival and growth rate of a planted trees. In this connection, areas to be planted are identified and planting spacing designed is decided at a 3 x 3 meters. Afterwards, staking of the planting holes are dug with 80 cm. diameter hole of 0.5-meter depth. Holes will be filled with ameliorated soil consisting of mixtures of organic fertilizer (chicken dung) and topsoil.

Planting shall be done only during the rainy season to ensure a high rate of survival. Regular maintenance such as removal of grasses or weeds around the growing plant and application of fertilizers and watering shall be instituted when necessary. Tree species to be planted are Bamboo, Acacia, Indian tree, Gemelina, Jackfruit, Mango or other species endemic in the area.

2.7.2.3.5 Maintenance

To ensure a high rate of survival of planted trees monthly monitoring and maintenance shall be undertaken to include slope stability and growth rate of the trees. Fencing may be needed to protect the trees from stray animals that may destroy the developing vegetation- insecticide spraying may be done in case insect infestation occur and cultivation, watering or fertilizer application may be resorted to if the need for it arises.

2.8 Water resources

2.8.1 Acceptable impacts associated with potential source(s) of water contamination:

2.8.1.1 Stockpiles drainage including sedimentation (waste dumps/spoils and ore)

The waste dump stockpiles may pose minimal siltation of the creek if not properly mitigated due to surface water runoff during heavy rains.

2.8.1.2 Plant site drainage

Similarly, water that may accumulate in the plant site may contribute to the creek if allowed to flow freely without any intervention measures. Excessive water spraying of roads may also contribute to the siltation of the waterways.

2.8.1.3 Process water

Process water or effluents from the crushing plant go directly to the setting pond where it is decanted of slimes/tailings before it is pumped back to the plant for recycling/reuse.

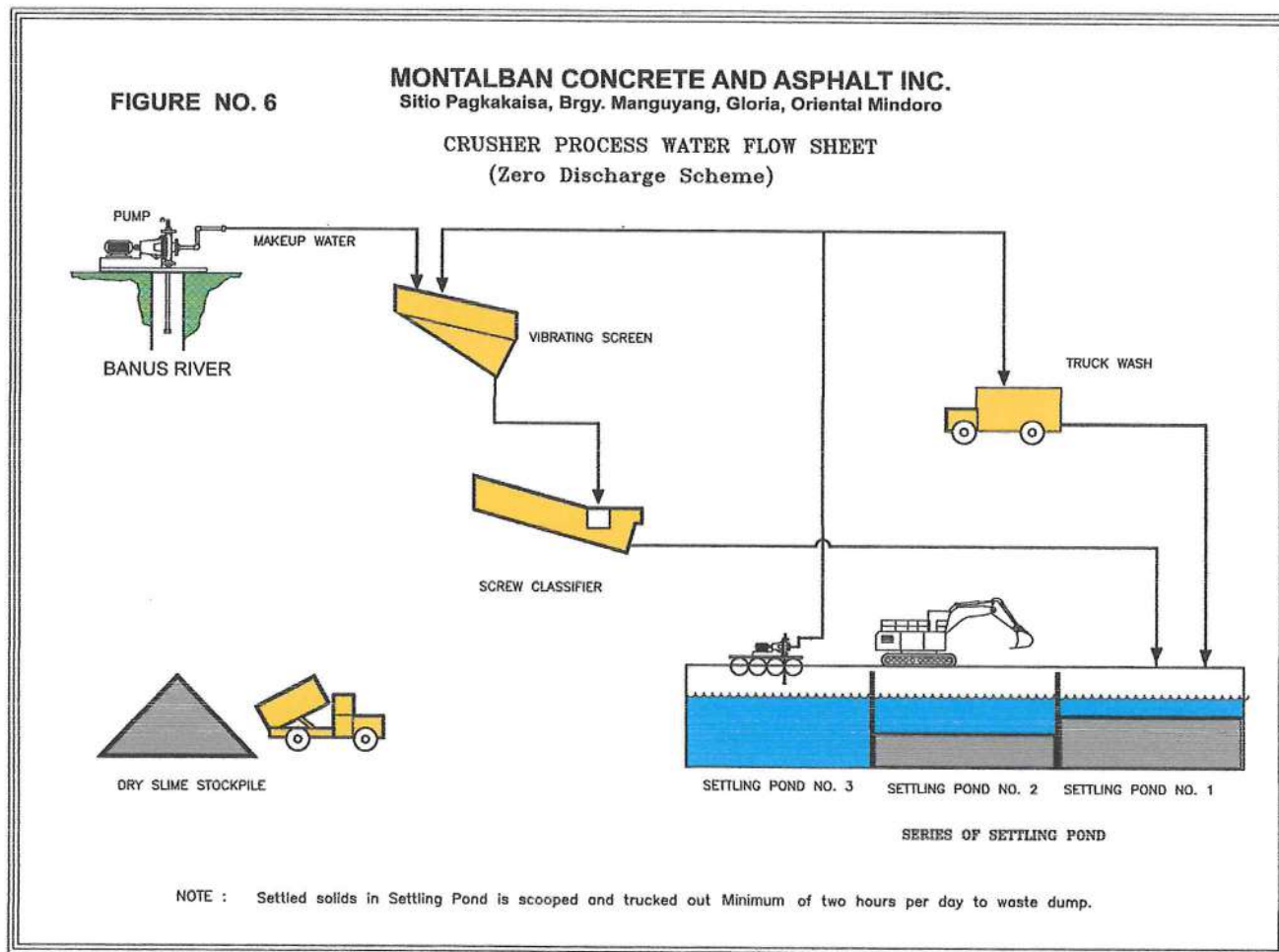


Figure 6: Crusher Processed Water Flow

The water is decanted and the clear water is recycled as process water. The settled slime/tailings are removed/scooped daily from the ponds by way of backhoe. Make up water in case of losses due to evaporation is pumped from Banus river.

2.8.1.4 Settling pond

The setting ponds are designed to accommodate the expected slimes/tailings and effluents from the crushing plant. Hence, contamination of the waterways by the slimes/tailings from the pond is very remote. The ponds are designed such that no water discharge from it is allowed. The settling pond has a storage impounding capacity of 900 cubic meters measuring 30 meters x 10 meters x 3 meters.

2.8.1.5 Infrastructure

Infrastructures at the project are located within the periphery of the plant site. These may cause little environmental degradation and damage if not properly maintained and left to rot after their useful life.

2.8.1.6 Sewerage

Concrete septic tanks are constructed to contain domestic wastes that will be generated at the project site. Hence, contamination of waterways is very unlikely. Disposal of domestic waste will be thru a third-party transporter and treater.

2.8.1.7 Solid Waste and Hazardous Waste Generation

The company generates solid waste and hazardous wastes as follows:

Major domestic waste:

- a. Plastic containers
- b. Metal scraps
- c. Papers
- d. Food Leftovers

Major Hazardous Waste Components

- a. Used oil
- b. Busted fluorescent bulbs
- c. Busted Batteries

2.8.2 Control strategies

2.8.2.1 Slimes/Tailings impoundment

Crushing plant slimes/tailings pond was constructed in accordance with safe engineering design to prevent failure of its containment structures. It has three compartment, zero discharge or close circuit as shown in Figure 7. Effluents from the crushers are combined in the first compartment of the slimes/tailings

pond where it is decanted. Then the water flows to the second compartment where it is further decanted and the clear water flows to the third compartment and the treated water is pumped back for reuse in the crushing plants washing operation.

The decanted/settled slimes/tailings is scooped out daily by a backhoe. Excavated materials shall be temporarily stocked at an area beside the pond where it is dried. The dried slime/tailings is mixed with base coarse materials to act as a binder for road ballasting purposes, or sold to road contractors. The crushing plant generate slimes at an average of 50 cubic meters per day. Utilization range from 40 to 80% of the generated 'banlik'. Un-utilized banlik is used as backfill materials given free to the host Barangay.

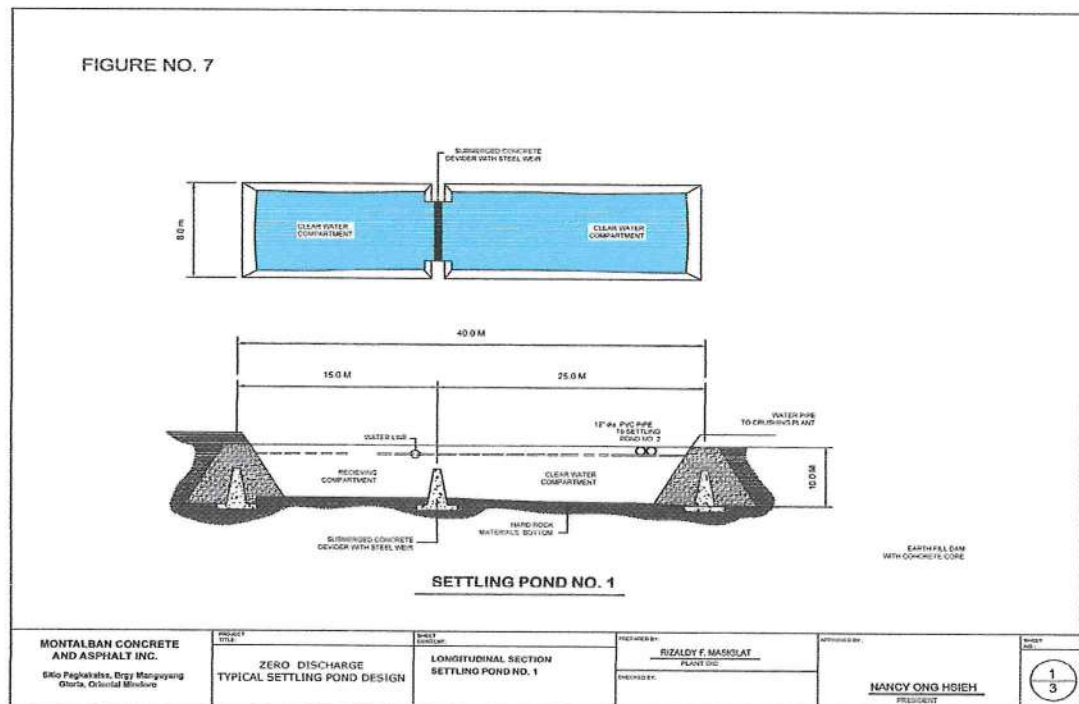


FIGURE NO. 7

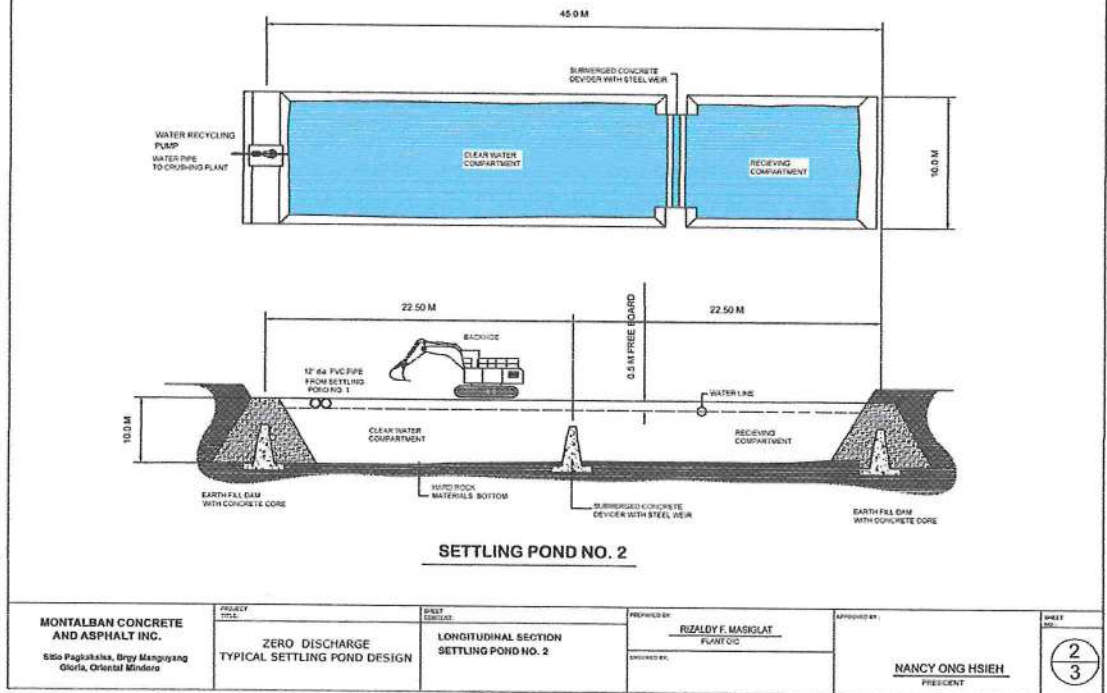


FIGURE NO. 7

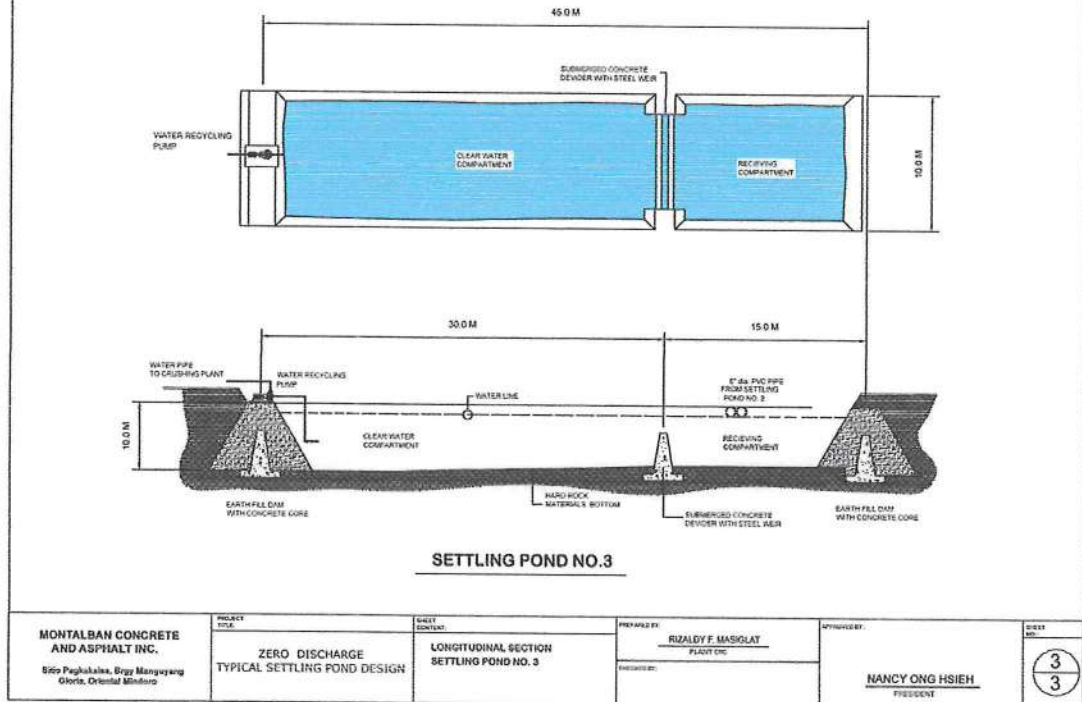


Figure 7: Settling Ponds 1 to 3

2.8.2.2 Waste Management

The company implements proper wastes management of domestic and hazardous wastes in accordance to RA. 9003 and RA. 6969, respectively.

Solid Wastes Management Strategy:

- a. IEC for workers on disposal, collection and storage
- b. Implement wastes segregation, recycling and re-use
- c. Proper disposal schemes of different types of wastes
- d. Maintenance of Material Recovery Facility

Hazardous Wastes Management Strategy:

- a. IEC for workers on types of wastes produced and its handling and storage
- b. Proper collection and storage in Hazardous waste storage area
- c. Recording of wastes streams (e.g. volume, nature and condition of wastes, labelling etc.)
- d. Training of selected employees as member of the Oil Spill Emergency Response Team under the supervision of company's PCO.
- e. Disposal of wastes only to the DENR Accredited Transporter/Treater.

The company generates domestic and hazardous wastes. The wastes streams and volumes are as follows:

Major domestic waste streams

- a. Plastic containers
- b. Metal scraps
- c. Papers
- d. Food Leftovers
- e. Broken Glass
- f. Used woods (crates)

Monthly volume of the above wastes is approximately 1 ton.

Major Hazardous Waste Components

- a. Used oil
- b. Busted fluorescent bulbs
- c. Busted Batteries

The approximate monthly volume generated of the above hazardous wastes is 100 kilograms (0.1Ton).

2.9 Noise

2.9.1 Acceptable levels emanating from potential source(s) of noise:

2.9.1.1 Road vehicles, including off-highway trucks;

Mufflers of company vehicles and haulers of aggregate products are always kept in good operating conditions to minimize noise. Regular check-up of the mufflers is conducted and the haulers are advised to repair/maintain their mufflers regularly. Drivers are also advised to drive slow especially during night time when traversing residential areas. The speed limit of 15KPH shall be observed.

2.9.1.2 Crusher

The crushing plant is located in an area far from the residential areas. Notwithstanding trees shall be planted along the road side facing to act as sound barrier and minimize dust emanation. Likewise, earplugs shall be provided to workers in case excessive noise is detected during monitoring.

2.9.1.3 Earthmoving equipment

There are few earthmoving equipment involved such that its usage will not substantially cause exceedance of noise within 50 meters from the working area. The noise emanating from the backhoe is within the range of 75 to 90 dB at a distance of less than 50 meters from the working area.

2.9.1.4 Powerhouse

The power generating unit shall be utilized only during ORMECO outages. The electric generating set has a noise emanating from 90 to 100 for less than 50-

meter distance from the generator set. The noise on this type of source exceeds the allowable limit for 8-hour exposure as per regulation of the Department of Labor and Employment (DOLE). Exposure for 8-hours if the noise has 90 decibel (dB) reading and beyond shall not be allowed.

2.9.2 Control strategies

2.9.2.1 Restriction of hours of activity

The restrictions of hours of operation as stipulated in the ECC shall be respected and strictly followed. Operating hours will not go beyond 8:00 o'clock in the evening.

2.9.2.2 Permanent or temporary relocation of residences affected

There are very few squatter residences in the vicinity that are located 100 hundred meters from the project. However, they are not directly affected by the project operation since reading from noise meter in the said area is below 65 dB, thus no management intervention is needed.

2.9.2.3 Changing methods or equipment used

There is no need to change equipment currently being used in the operation.

2.9.2.4 Construction of sound barriers, e.g., spoil embankments

There is no plan to construct sound barriers since there are no residences within 100 meters that will be affected by the operation. However, high wall fences are installed at the perimeter to retard noise emanating from the crushing plant. Likewise, the trees planted around the perimeter of the plant premises will act as sound barrier to dissipate noise.

2.10 Air Quality

2.10.1 Acceptable levels of air quality

2.10.1.1 Dust from plant processing area

The dust generated from the crushing plant is very minimal since it is a wet process where wash water is introduced to remove the fine materials and expected to minimize dusts generation. The 200 gallons per minute water supply for the plant is enough for use in the water spraying in all stages of the process.

However, dust emanation from passing of dump trucks and service vehicles along the road inside the plant will cause dust to be airborne if no mitigation is implemented.

2.10.1.2 Dust from crushing activities

Generation of dusts from crushing and sizing operations during dry months is expected particularly if the ambient temperature ranges from 32 to 38 degree centigrade where materials being feed to the plant is expected to contain fines particles of soil and rocks.

2.10.1.3 Dust from vehicle movement

Another source of dust generation is the haul/access roads during summer months. Dusts may emanate from haul trucks during hauling of raw materials and products.

2.10.2 Control strategies

2.10.2.1 Dust suppression

Dust generation will be minimized by water sprinkling of haul road. Trees planted at the perimeter will eventually reduce wind velocity and minimize dust migration. Other steps will be implemented such as setting speed limit inside the Permit area, and conduct air quality monitoring.

Table 4: DENR National Ambient Air Quality Guideline for Criteria Pollutants

POLLUTANT	SHORT TERM (a)			LONG TERM (b)		
	mg/Ncm	Ppm	Ave. time	mg/Ncm	Ppm	Ave. time
Suspended Particulate Matter (e) - TSP PM-10	230 (f) 150 (g)		24 hours 24 hours	90 60		1 year (c) 1 year (c)
Sulfur Dioxide (e)	180	0.07	24 hours	80	0.03	1 year (c)
Nitrogen Dioxide	150	0.08	24 hours			
Photochemical Oxidans as Ozone	140 60	0.07 0.03	1 hour 8 hours			
Carbon Monoxide	35 10	30 9	1 hour 8 hours			
Lead (d)	1.5		3 mos (d)	1		1 year

Notes:

- a. Maximum limits represented by (98%) values motto be exceeded more than once a year
- b. Arithmetic mean.
- c. Annual Geometric Mean.
- d. Evaluation of this guideline is carried out for 24-hour averaging time three moving calendar months.
- e. SO₂ and Suspended Particulates are sampled once every 6days when methods.
- f. With mass median diameter less than 25-50 pm.
- g. With mass median less than 10 Pm.

2.11 Conservation values

2.11.1 Nature issues

2.11.1.1 Acceptable levels of impact

The area affected by the crushing operations is less than two hectares of barren land that is devoid of any forest cover. This would cause little effect on the environment and natural environment may even be enhanced when the affected area have been fully rehabilitated and planted with trees.

2.11.1.2 Control strategies

The perimeter of the plant site is planted with trees and enrichment planting is implemented to ensure that mortalities are immediately replaced. The reforestation activity is aimed to at least camouflage the crushing operations and enhance the visual aesthetics of the area from a barren, unproductive land to a green buffer/landscape. Nonetheless, MOCAI will participate in the tree planting activity organized by the LGU.

2.11.2 Visual aesthetics

2.11.2.1 Acceptable levels of impact

Aesthetically, the project has little impact on aesthetic value of the area since it involves only less than two hectares of affected land aside from being located in an area where urban expansion is in the near future. Besides, the ill effects of the operation are only temporary since after the life of the project it will be rehabilitated and converted into a residential area.

2.11.2.2 Control strategies

While in operation, the visual aesthetic value of the area shall gradually be enhanced by the tree plantation along the perimeter at the same time. it will act as a curtain to camouflage the operation and reflect a green environment. Continuously implement the enrichment planting and maintenance of the existing trees to ensure high growth and survival.

2.11.3 Recreation and education

2.11.3.1 Acceptable levels of impact

The project area is outside of any recreational and educational reservations; hence no direct impact is expected. On the contrary, in the indirect aspect, the project will create other positive impacts including the employment of the residents and the attendant business opportunities generated. This further leads to the increase in family income that will allow workers to send their children to school. Further, MOCAI shall endeavour to sponsor sports festivals and other recreational events in the host through the implementation of Social Development and Management program.

2.11.3.2 Control strategies

It is the commitment of the company to support Sitio Pagkakaisa Barangay Manguyang, and Municipality of Gloria not just in education and recreation but also in all aspects of community development. The company shall sponsor sports contingent, festivals and educational fieldwork for students and tourists alike. It hopes to become/serve as model for other crushing operations to follow not just in terms of environmental concern, maximize utilization of non-renewable natural resources, and effective crushing plant operations.

2.12 Heritage and cultural values

2.12.1.1 Acceptable levels of impact

There are no historical sites, traditions or practices, customs, beliefs that are directly affected by the crushing activities. Residents are migrant people from all corners of the country and hence their cultural values are diverse. Nevertheless, it was observed that local Filipino traditions are conducted such as the celebrations of Christmas, All Saints/Souls Day, fiestas, birthdays, holy week, etc.

2.12.1.2 Control strategies

No indigenous people are present in the area and hence, no cultural values or heritage unique to the area is affected. In contrast, more people are expected to migrate to the crushing plant site that may eventually assimilate with the earlier migrants. Hence, it may alter gradually the cultural traits of the

residents as a whole. But the change is expected to be on the positive side since the area in general will be uplifted economically and rapid modernization will follow. MOCAI shall support the Filipino traditions and will actively participate in the celebration of the same.

2.13 Social issues

2.13.1.1 Acceptable levels of impact

The positive side dominates the impact of the crushing operations on the socio-economic environment although there are occasional negative impacts that accompany industrialization and urbanization. Increase vices such as alcoholism and gambling may occur due to increase in income. But the advantages and benefit derived from the project by the community far outweigh the negative impacts.

Likewise, issues such as siltation, noise and dust emanation are expected in an area of mining/processing sites due to advocacies injected by anti-mining NGO's giving wrong information to in the community.

2.13.1.2 Control strategies

To mitigate adverse actions of the community towards the operation of project, the company shall continue in its endeavour to inform the community of the programs of the company towards the improvement of the affected community in terms of the Social Development and Management Program activities in partnership with Barangay Manguyang.

Several IEC and community development programs are to be continuously implemented by the company.

3.0 APPROACH AND SCOPE OF ENVIRONMENTAL MONITORING PROGRAM

3.1 Monitoring

3.1.1 Significant impacts to be monitored

Significant impacts to be monitored include water quality, siltation control, noise level air quality and social issues.

3.1.2 Sources of impact

3.1.2.1 Mining activities/infrastructure

3.1.2.1.1 Parameters to be monitored

Parameters to be monitored include water quality (total suspended solids pH, color, etc.) siltation, air quality and noise level drainage/sump, etc. or as required by the Mines and Geosciences Bureau and Environmental Management Bureau.

3.1.2.1.2 Purposes of monitoring

The above shall be monitored to determine if it is within the acceptable limits set by the DENR or it is within tolerable limits of the original water quality before the onsite of operation.

3.1.2.1.3 Monitoring methods

Quarterly monitoring by the Multipartite Monitoring Team (MMT) shall be undertaken in compliance with pertinent provisions of the Mining Act and other regulations. Visual inspections shall be done by the MMT on the crushing activities of the company insofar as safety and other aspects of crushing operation is concerned.

Quarterly air quality and noise level shall be done to determine if they are within the tolerable limits.

3.1.2.1.4 Monitoring locations

The monitoring locations are indicated in the attached Figures.

MONTALBAN CONCRETE AND ASPHALT INC.
 BRGY. MANGUYANG , GLORIA, ORIENTAL MINDORO

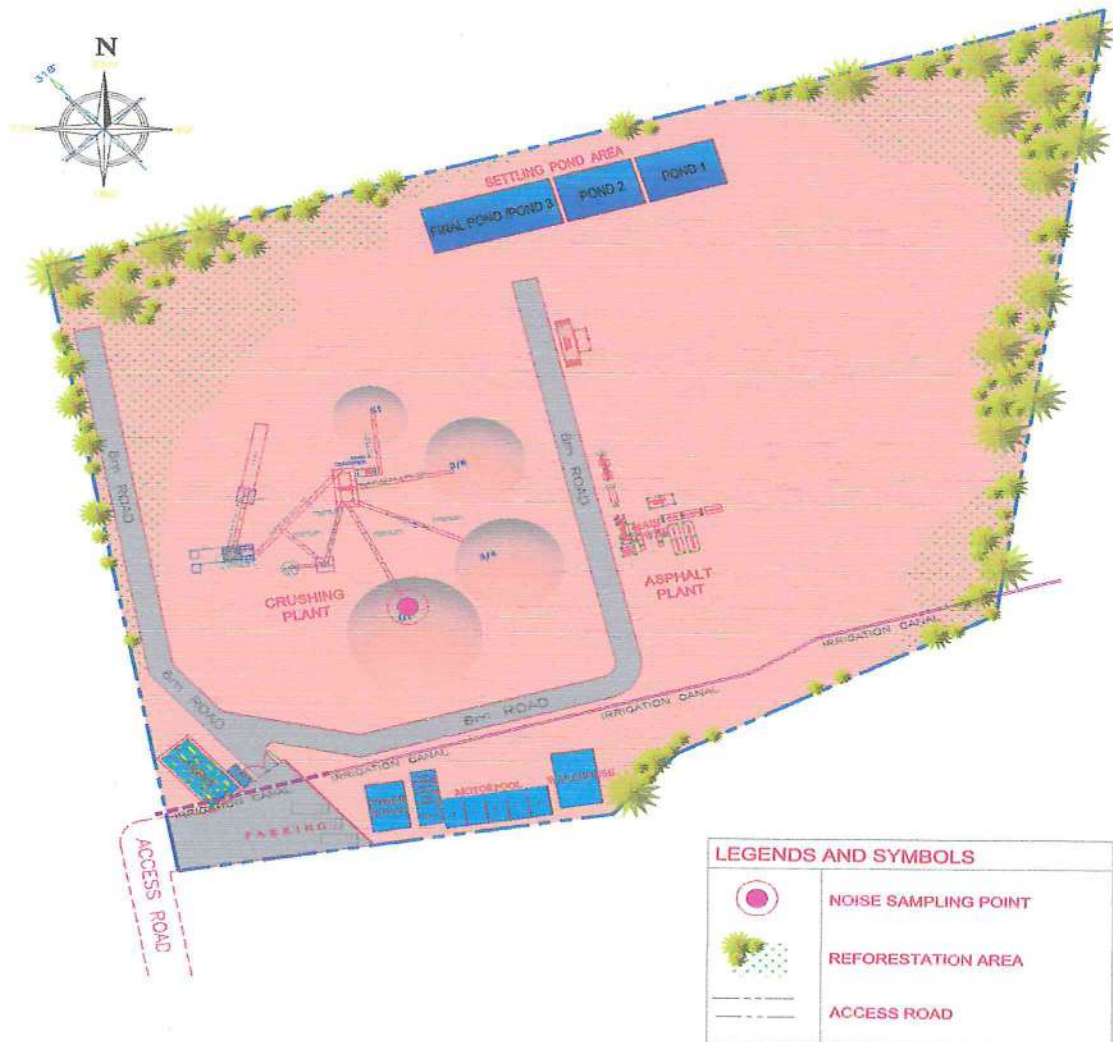



FIGURE A.2
NOISE SAMPLING POINT
 SCALE : NTS

Figure 8: Noise Sampling Stations

MONTALBAN CONCRETE AND ASPHALT INC.
BRGY. MANGUYANG, GLORIA, ORIENTAL MINDORO

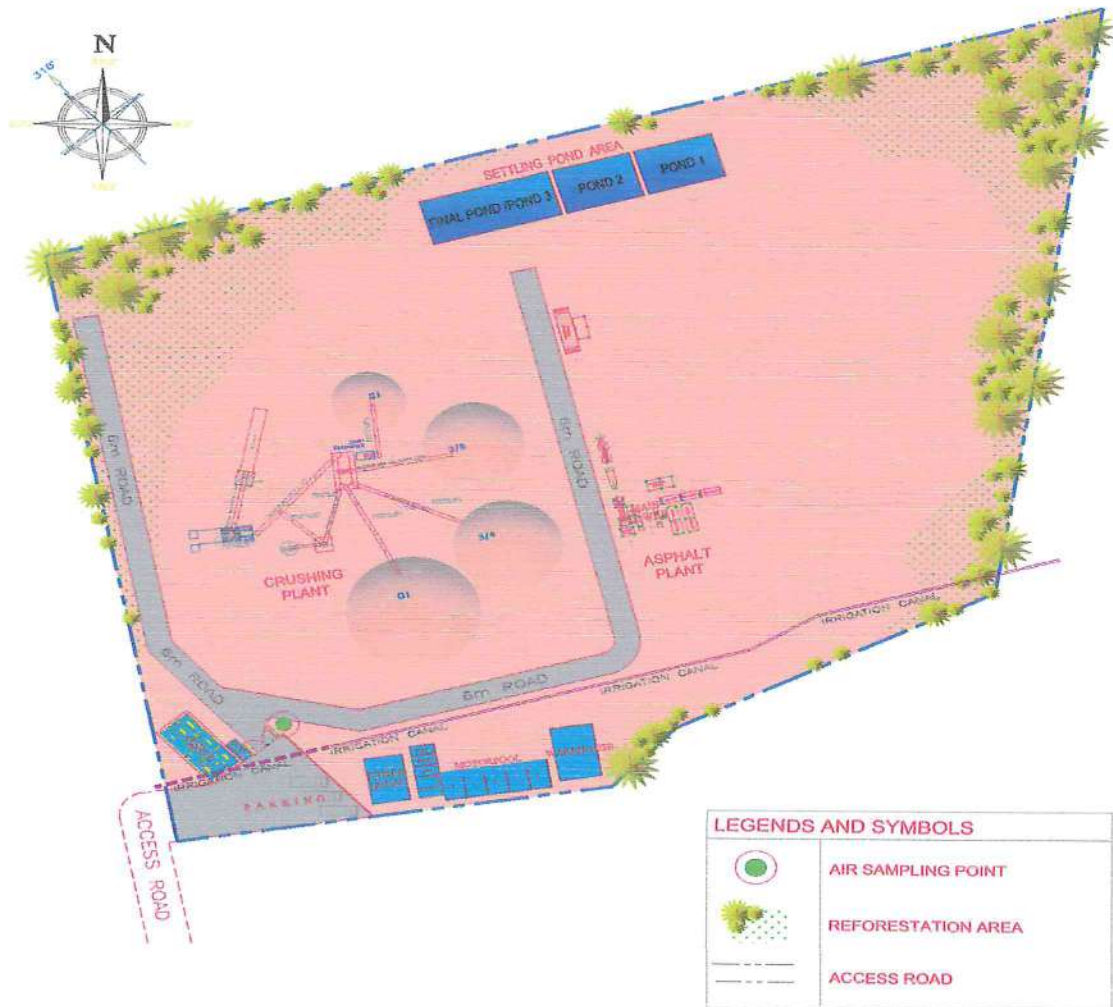


FIGURE A.1
AIR SAMPLING POINT
SCALE : NTS

Figure 9: Ambient Air Sampling Stations

MONTALBAN CONCRETE AND ASPHALT INC.
BRGY. MANGUYANG , GLORIA, ORIENTAL MINDORO

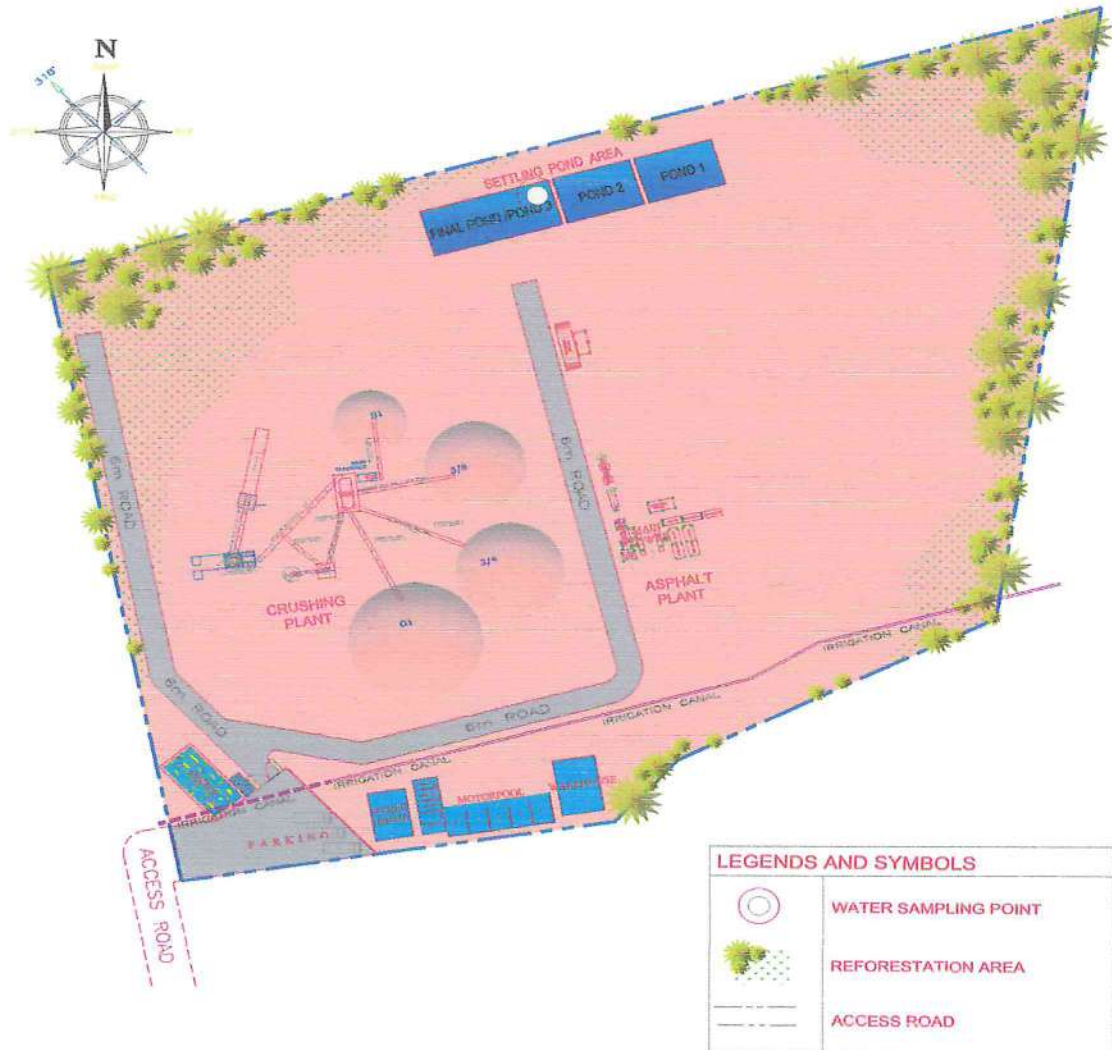


FIGURE A.3
WATER SAMPLING POINT
SCALE : NTS

Figure 10: Water Sampling Stations

3.1.2.1.5 Monitoring frequency

All monitoring activities shall be done quarterly by the MMT or as frequent as required by the regulatory authorities.

3.1.2.2 Noise

3.1.2.2.1 Parameters to be monitored

Parameters to be monitored is the level of noise in decibels caused by the crushing operations and equipment/vehicle operation.

3.1.2.2.2 Purposes of monitoring

To determine noise level of crushing plant operation if it exceeds the allowable noise level that affects the neighboring community and the workers. Also to see whether the equipment operators are absorbing safe noise level according to the standards set by the Department of Labor and Employment and is the noise level generated is within Environmental Quality Standards for Noise in General Areas as shown by the following Tables:

Table 5: DOLE Occupational Safety and Health Standard for Noise Level

NOISE LEVEL	EXPOSURE TIME, HOUR
below 90 db	unlimited
90	8
91-91	6
93-95	4
96-97	3
98-100	2
101-102	1.5
103-105	1
106-110	0.5
111-115	0.25

Table 6: Typical Noise Emission of Construction Equipment

EQUIPMENT	TYPICAL SOUND PRESSURE LEVEL AT 15-METER FROM THE SOURCE
Air Compressor	75-78
Backhoe	71-92
Compactor	72
Concrete Mixer	75-88
Concrete Pump	82
Crane	76-88
Front Loader	72-81
Generator	72-82
Grader	80-93
Jackhammer	81-97
Paver	87-88
Pile Driver	95-105
Pump	70-90
Tractor	78-95
Bulldozer	78-95
Truck	83-93
Vibrators	68-81

Table 7: Environmental Quality Standards For Noise In General Areas

CATEGORY OF AREA	DAYTIME (dBA)	MORNING AND EVENING (dBA)	NIGHTTIME (dBA)
AA	50	45	40
A	55	50	45
B	65	60	55
C	70	65	60
D	75	70	65

Note:

Category of the Area:

Class AA - A section or contiguous area which require quietness such as area within 100-meters from school sites, nursery schools, hospital and special home for the aged.

Class A- A section or contiguous area which is primarily used for residential purposes.

Class B- A section or contiguous area which is primarily a commercial area.

Class C - A section or contiguous area primarily reserved as light industrial area.

Class D - A section or contiguous area primarily reserved as a heavy industrial area.

Division of 24-hour Period

Morning - 5:00 a.m. to 9:00 a.m.

Daytime - 9:00 a.m. to 6:00 p.m.

Evening - 6:00 p.m. to 10:00 p.m.

Night time - 10:00 p.m. to 5:00 a.m.

3.1.2.2.3 Monitoring methods

Noise meter instrument shall be used. Third (3rd) party environmental service provider will be commissioned by the company to conduct noise sampling and analysis.

3.1.2.2.4 Monitoring locations

Please see Figure 8 for monitoring sites. Other monitoring sites may be added depending on the recommendation of the MMT.

3.1.2.2.5 Monitoring frequency

Quarterly monitoring schedule shall be done during the Multipartite Monitoring Team monitoring of the crushing operations.

3.1.2.3 Air quality

3.1.2.3.1 Parameters to be monitored

The amount of particulate matter or dust in the air shall be monitored. Third (3rd) party environmental service provider will be commissioned by the company to conduct air sampling and analysis.

3.1.2.3.2 Purposes of monitoring

To determine if the air quality in the area of the operation is within the ambient air quality standard set by the DENR as shown in Table 8 as follows:

Table 8: DENR National Ambient Air Quality Guideline for Criteria Pollutants

POLLUTANT	SHORT TERM (a)			LONG TERM (B)		
	Mg/Nc m	Ppm	Ave. time	mg/N cm	Ppm	Ave. time
Suspended Particulate Matter €-TSP PM-10	230 (f)		24 hours	90	-	1 year (c)
	150 (g)		24 hours	60	-	1 year (c)
Sulfur Dioxide (e)	180	0.07	24 hours	80	0.03	1 year (c)
Nitrogen Dioxide	150	0.08	24 hours	-	-	-
Photochemical Oxidants as Ozone	140	0.07	1 hour	-	-	-
	60	0.03	8 hours	-	-	-
Carbon Dioxide	35	30	1 hour	-	-	-
	10	9	8 hours	-	-	-
Lead (d)	1.5	-	3 mos (d)	1.0	-	1 year

Notes:

- Maximum limits represented by (98%) values not to be exceeded more than once a year-
- Arithmetic mean.
- Annual Geometric Mean
- Evaluation of this guideline is carried out for 24-hour averaging time and average over three moving calendar months.
- So2 and suspended Particulates are sampled once every 6-days when using the manual methods.
- With mass median diameter less than 25-50 pm.
- With mass median diameter less than 10 pm.

3.1.2.3.3 Monitoring methods

MMT shall provide sampling locations for the 3rd party environmental service provider.

3.1.2.3.4 Monitoring locations

Air quality monitoring sites are indicated in Figure 9. Other monitoring sites may be added depending on the recommendation of the MMT.

3.1.2.3.5 Monitoring frequency

Quarterly monitoring shall be done.

3.1.2.4 Social issues

3.1.2.4.1 Parameters to be monitored

Parameters to be monitored include the perception of the residents of the immediate and neighboring communities about the project.

3.1.2.4.2 Purposes of monitoring

To get feedback on the public perception and acceptability of the project to the affected people and establish social acceptability of the project, the purpose is to inform and educate them on the benefits to be derived from the project for the community and the economy in general and to address corrective measures to all grievances if any.

3.1.2.4.3 Monitoring methods

MOCAI shall constantly be in contact with and shall establish close rapport with the local Barangay and Municipal officials. Continuous and regular consultation and consultation with them shall be undertaken.

3.1.2.4.4 Monitoring locations

As mentioned above, consultations with the Barangay and Municipal officials and residents shall continuously be implemented.

3.1.2.4.5 Monitoring frequency

Frequency of consultations with the local government officials and residents shall be done quarterly or as often as necessary.

Table 9: Environmental Impacts Monitoring

SOURCES OF IMPACTS	PARAMETERS CONSIDERED	PURPOSE OF MONITORING	MONITORING METHODS	MONITORING LOCATION	MONITORING FREQUENCY
CRUSHING ACTIVITIES /INFRASTRUCTURE	Water Quality: Color, TSS, pH, Siltation, etc.	To monitor and mitigate significant impacts	Sampling of water discharge/ effluent, Ocular inspection	Settling pond / Final pond and Deep well	Quarterly / Semi - Annual
	Noise Level	To monitor and mitigate significant impacts	Noise Measuring Device	Crushing plant side Access roads Haulage roads	Quarterly / Semi - Annual
	Air Quality: PM ₁₀ /Dust	To monitor and mitigate impacts if found to be in excess of tolerable limit	Sampling device Visual Inspection	Crushing plant site Access roads Haulage Roads	Quarterly / Semi - Annual
SOCIAL ISSUES	Public Perception Peace and Order	To monitor and mitigate significant impacts; to inform community of company plans and how to assist them.	Coordination with LGUs	Concerned Local Government Units, Residents	Quarterly or as often as necessary

Table 10: Environmental Impacts And Mitigating Measures

Activity	Affected Resources/Areas	Foreseen Impacts	Mitigating Measures	Estimated Budget (per year)
Crushing Operations	Plant Discharge drainage canals, settling pond, slopes/embankments, silt traps, etc.	Degradation of nearby water bodies	Maintenance/desilting of settling pond/sump, water quality monitoring, stabilization of slopes, etc.	90,000 20,000 35,000
	Plant site Area, Reforestation area	Loss of Vegetation	Planting of suitable tress, maintenance, monitoring	6,000
	Plant site Area	Solid Waste Generation	Construction and Maintenance of MRF, provision of waste bins	3,000
	Plant site Area	Hazardous Waste Generation	Construction and Maintenance of Haz waste Storage Area, Disposal of haz waste	3,000
	Plant site area, access road	Dust generation	Air quality monitoring, water spraying of roads, roads maintenance	20,000 25,000
	Plants site area, access road	Increase in noise level	Noise level monitoring, proper maintenance of trucks and vehicles	3,000 part of operating cost

4.0 RESEARCH PROPOSAL

For 2024, MOCAI will extent research on the beneficial use of mill tailings or locally known as banlik. Being a by-product of the crushing process, banlik offers no financial value.

In this study titled: "Banlik as possible complement of cement in concreting process," it aims to compare the relative hardness of concrete that was mixed with banlik over the traditional mixture of sand, gravel and cement in order to determine whether the mixture can be used on low impact construction. In this study, the researcher will have a constant variable (traditional mixture of cement) and dependent variables (cement mixed with banlik at varying amount). If the result is encouraging, it will lessen dependence on cement.

5.0 REPORTING

Quarterly, semestral and annual accomplishment reports on various environmental management strategies implemented will be submitted to MGB MIMAROPA following the hereunder schedule:

Reports	Submission
1. Compliance Monitoring Report (CMR)	Within 15 days after the end of every quarter
2. Quarterly Report on National Greening Program Accomplishment	Within 15 days after the end of every quarter.
3. Notarized semestral report on Mill Tailings generated, contained and or utilized.	Within 45 days after the end of every semester.
4. Semestral report on Mining Forest Program Accomplishment.	Within 15 days after the end of every semester.
5. Annual Report of AEPEP Accomplishment.	Within 30 days after the end of the calendar year.

6.0 TOTAL COST OF AEPEP 2024 (see Annex O: AEPEP Matrix Presentation)

The total cost of this Annual Environmental Protection and Enhancement Program for CY 2024 is **THREE HUNDRED SEVENTY NINE THOUSAND PESOS (PHP 379,000.00)**.


The minimum three to five percent (3-5%) Projected Direct Milling Cost of Php 3,520,252.49 is Php 105,607.57 to Php 176,012.62 is within allocated cost of our Annual EPEP budget cost of **Php 379,000.00**. This projected direct milling cost used is CY 2023 and will be revised as soon as the 2023 Direct Milling Cost is finalized and submitted. (see **Annex N: Statement of Projected Annual Direct Milling Cost CY 2023**).

7.0 NAME AND SIGNATURE OF APPLICANT OR PERSON PREPARING THE AEPEP

Prepared by:

MERDIA JAMAE A. MAYORES
PCO/ Asst. MEPEO

Checked by:


RIZALDY F. MASIGLAT
Plant Manager/ MEPEO

Noted by:

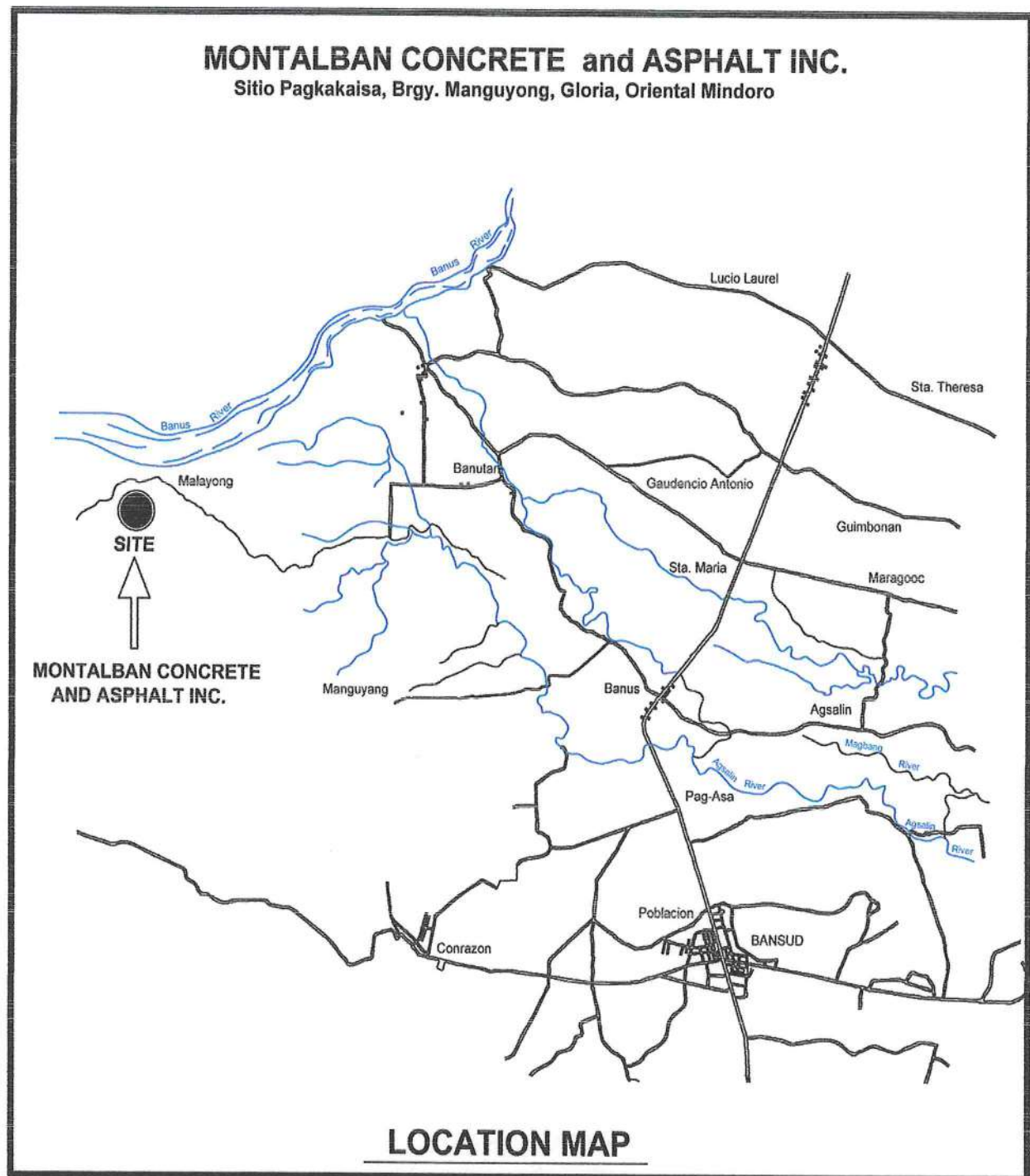
NANCY ONG HSIEH
President

ANNEXES

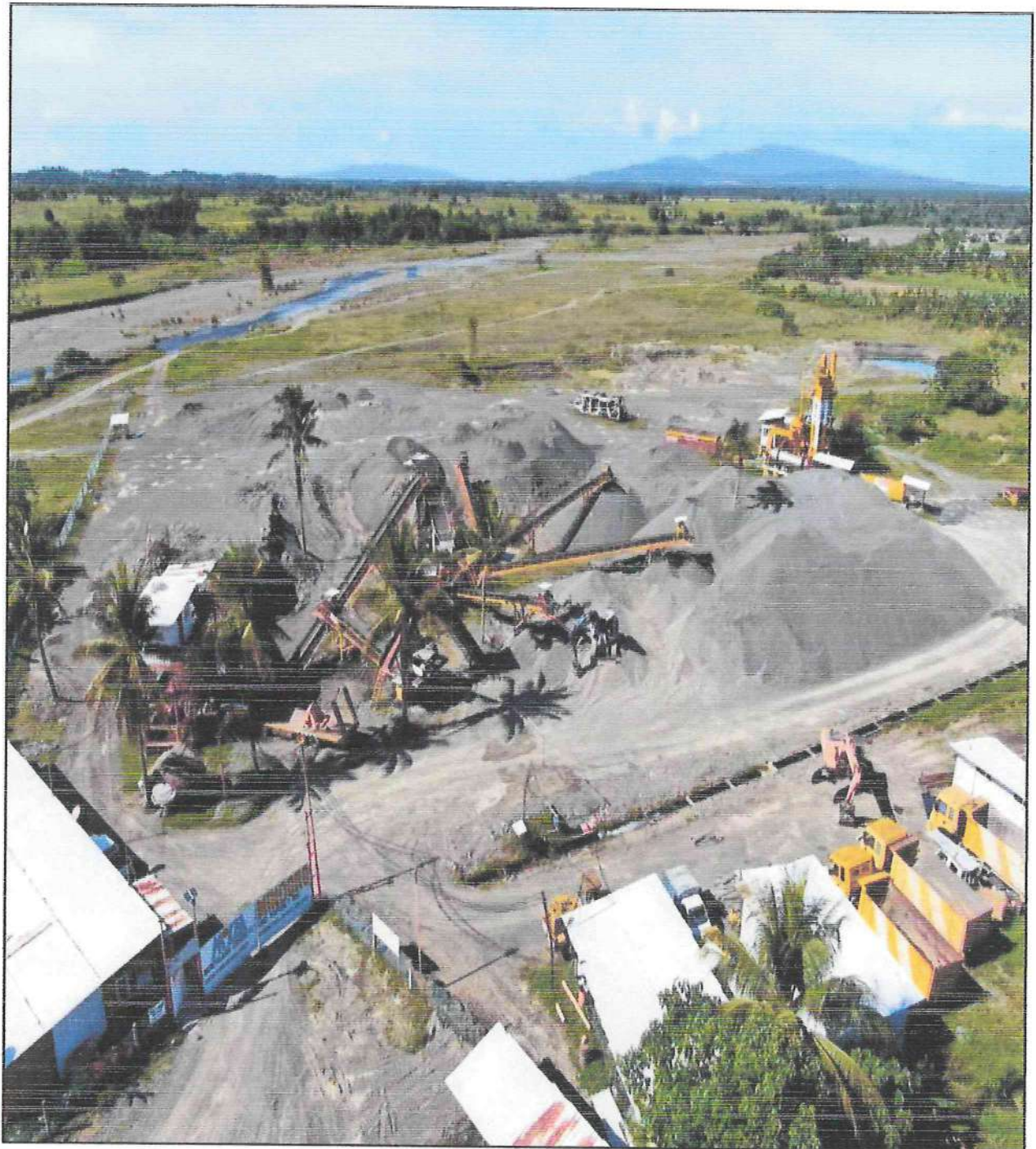
Annex A – Vicinity Map



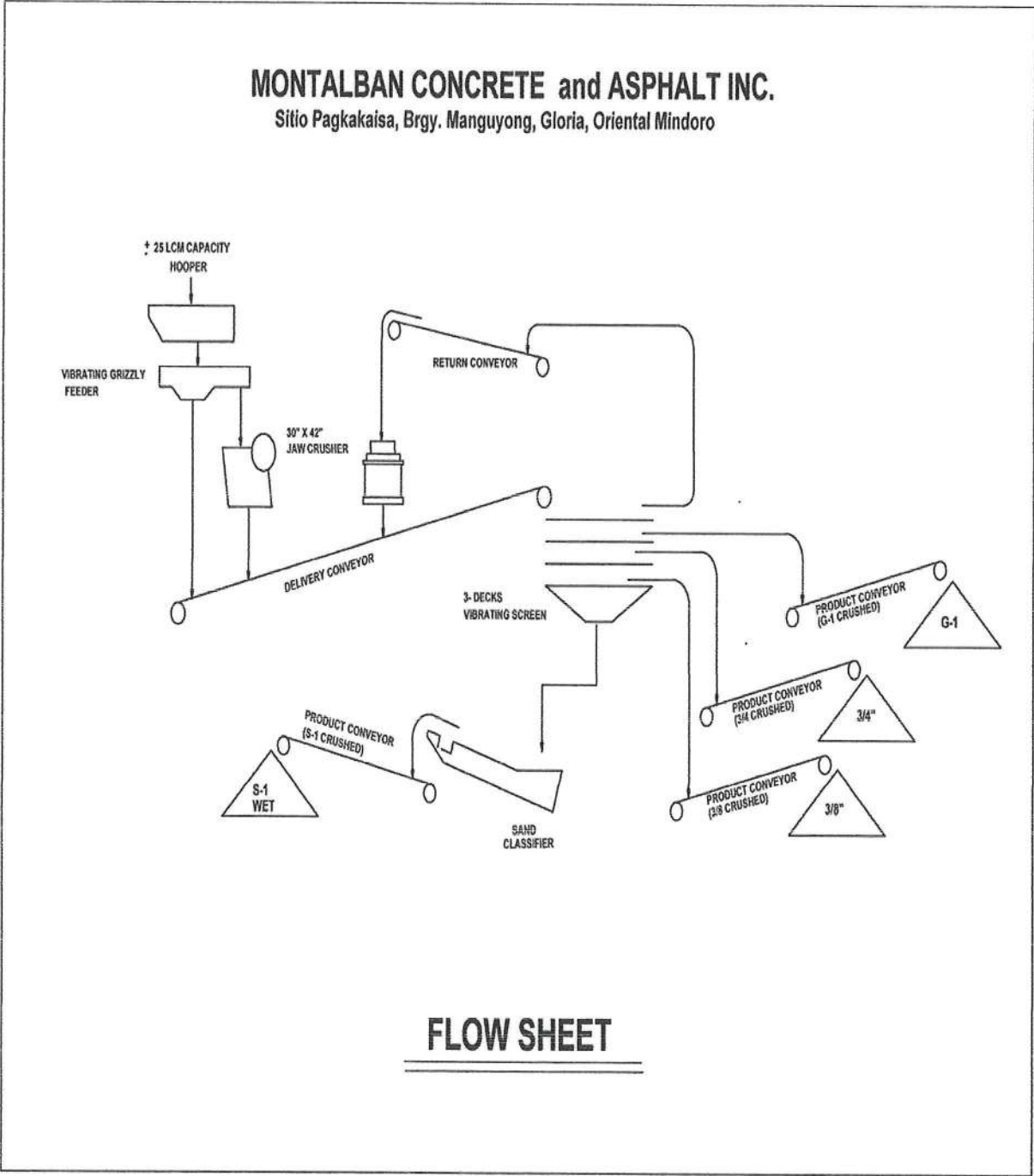
Annex B – Location Map



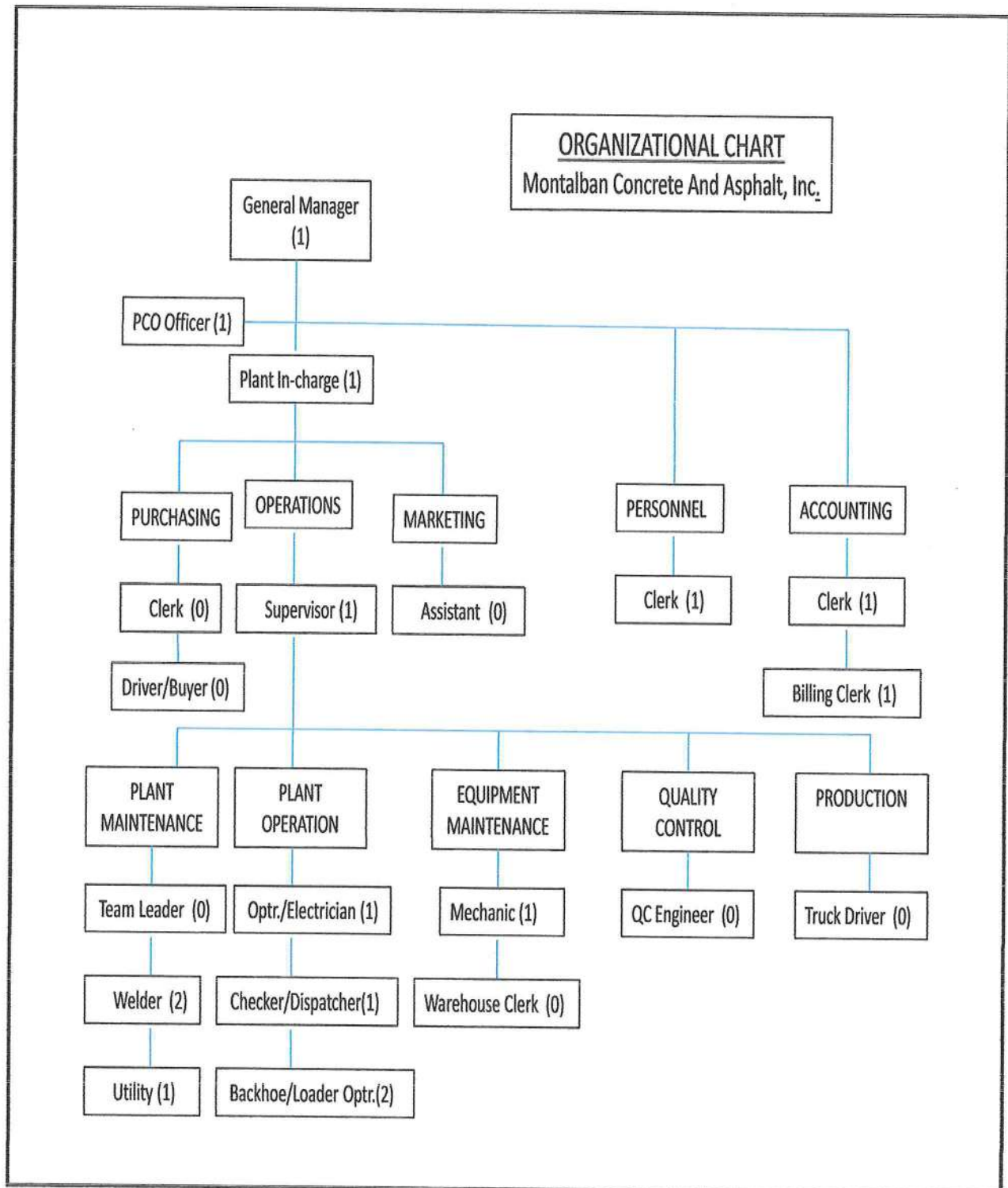
Annex C – Actual Photograph of the Area



Annex D – Process Flow



Annex E – Organizational Chart



Annex F – Crusher Processed Water Flow

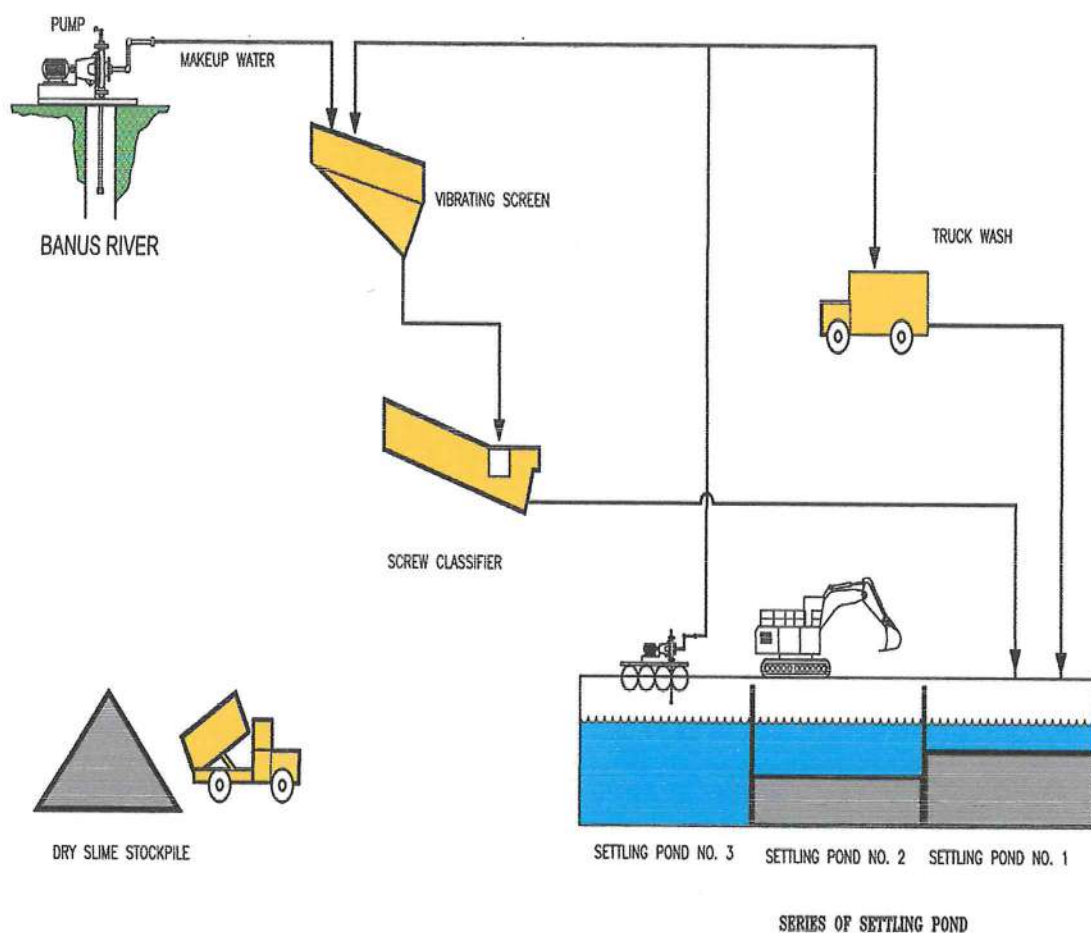
FIGURE NO. 6

MONTALBAN CONCRETE AND ASPHALT INC.

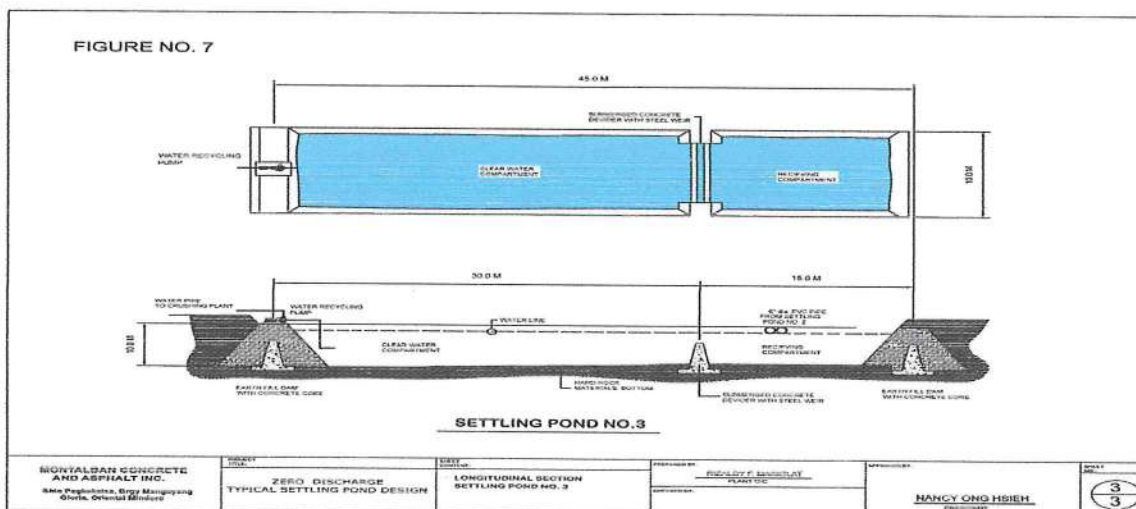
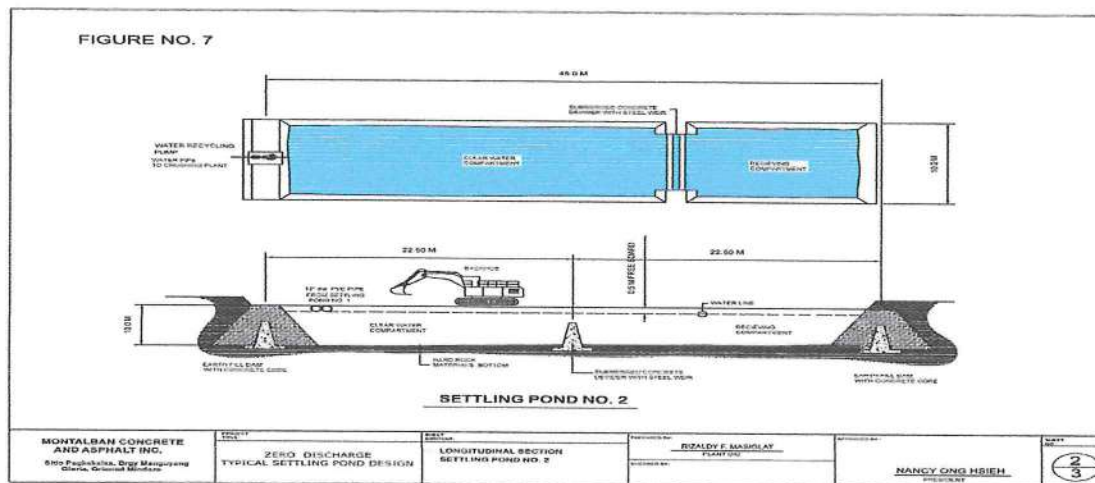
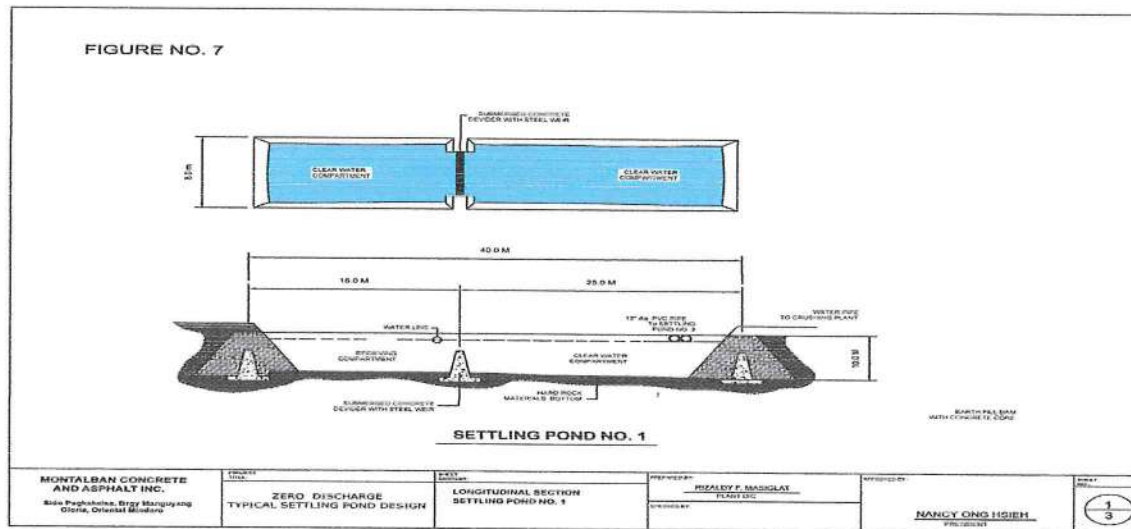
Sitio Pagkakaisa, Brgy. Manguyang, Gloria, Oriental Mindoro

CRUSHER PROCESS WATER FLOW SHEET

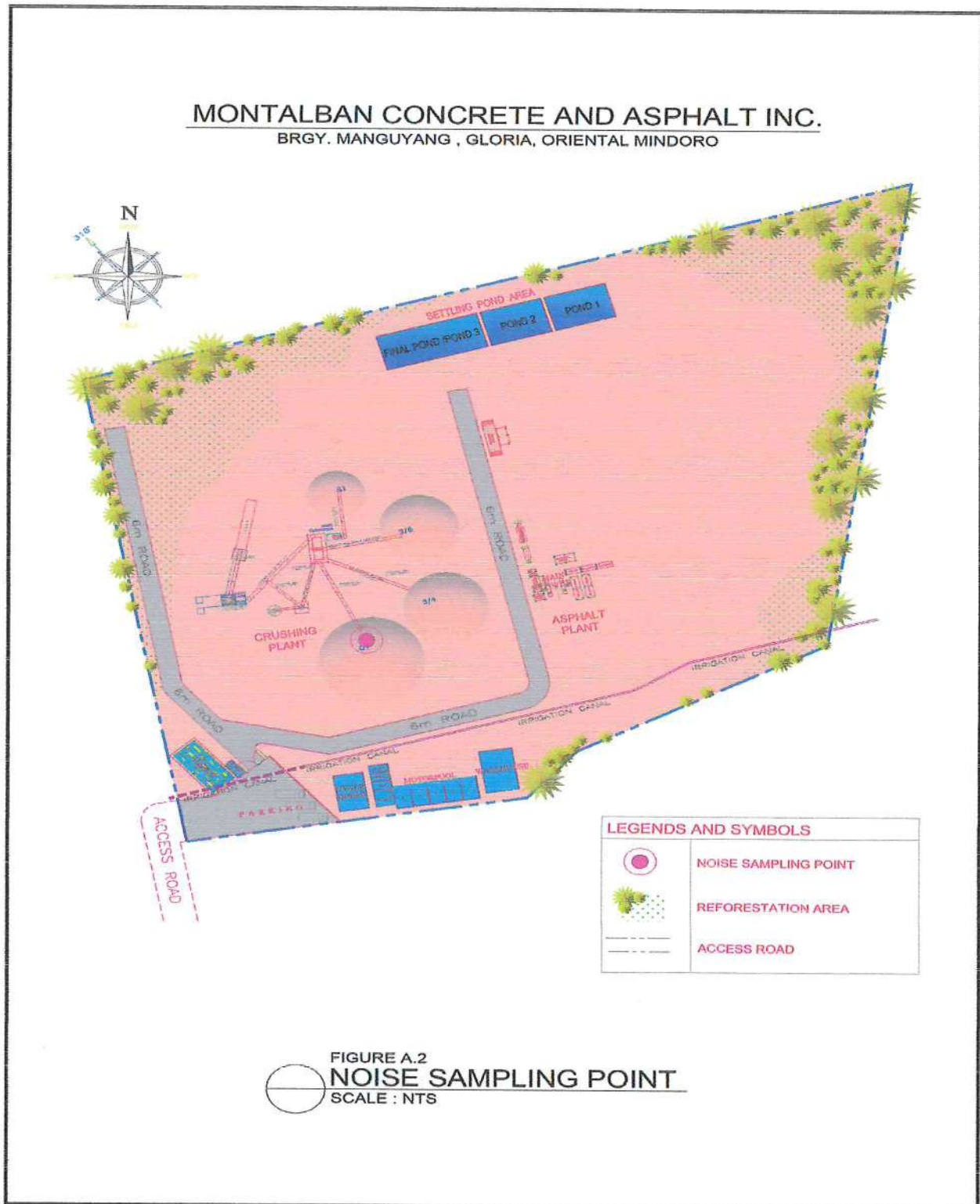
(Zero Discharge Scheme)



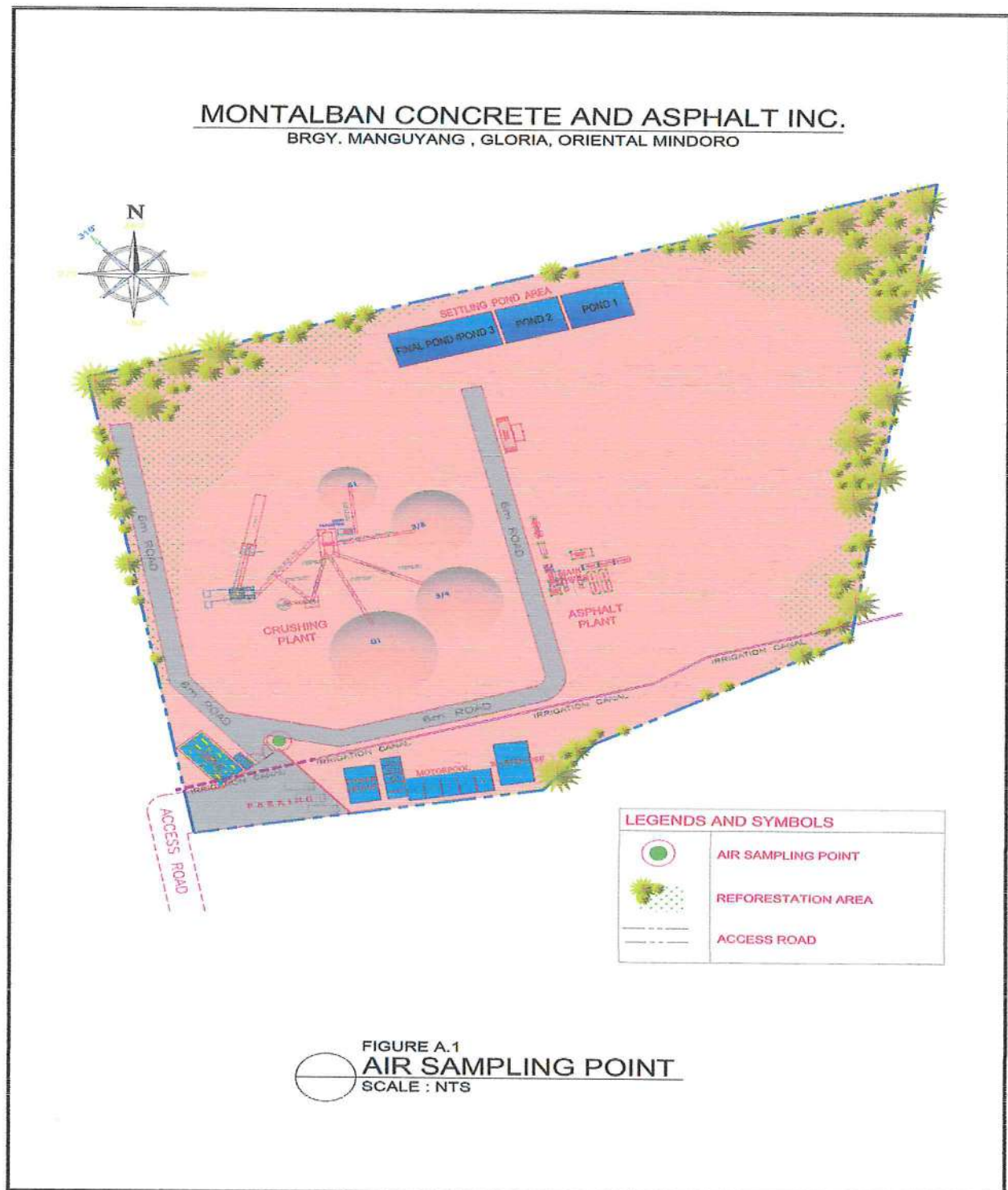
Annex G – Settling Pond No.1 to 3



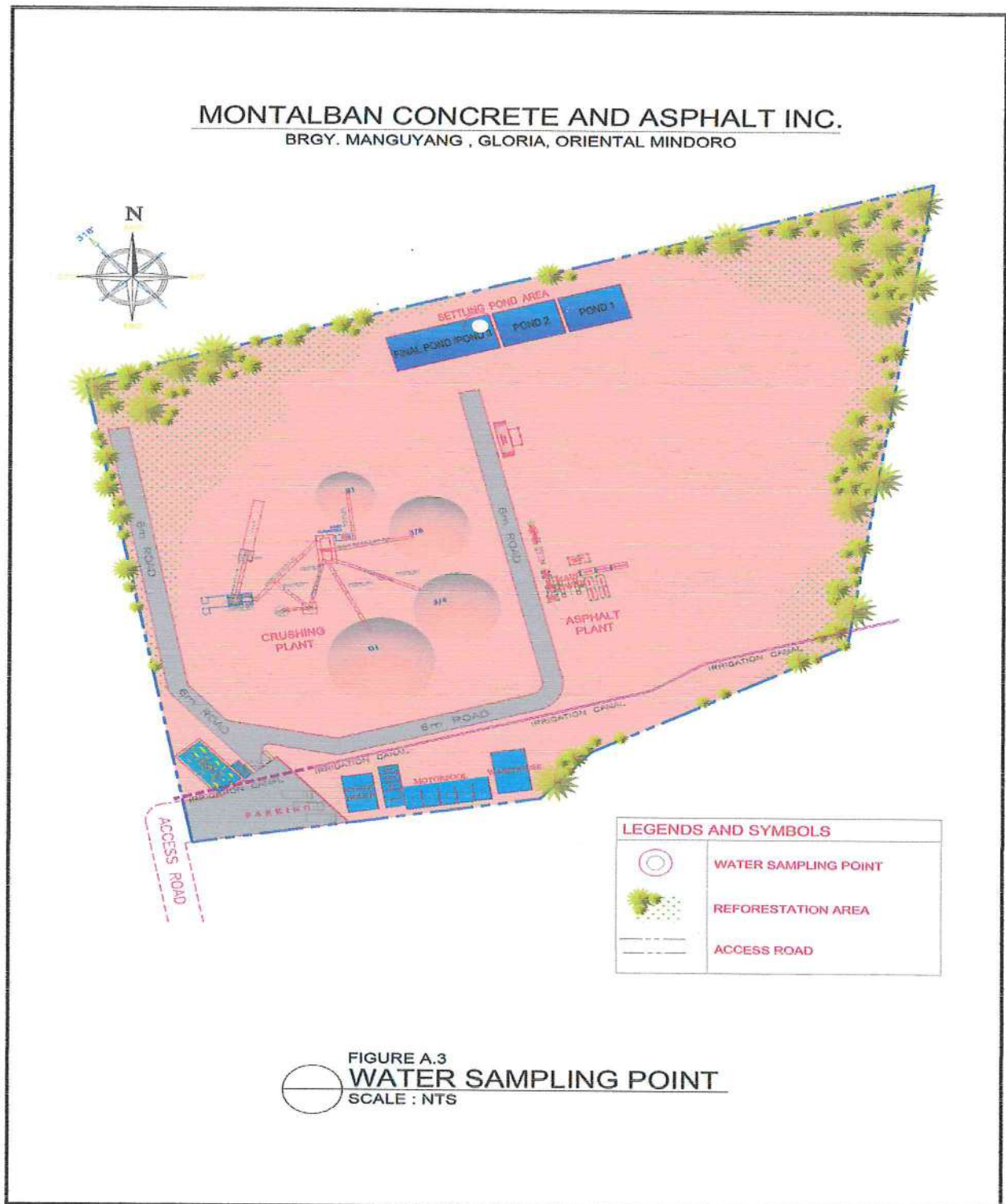
Annex H – Noise Sampling Station



Annex I – Ambient Air Sampling Station



Annex J – Water Sampling Stations



Annex K – Copy of Environmental Compliance Certificate



Department of Environment and Natural Resources
Environmental Management Bureau
Regional Office No. IV – B MIMAROPA

NOV 12 2015

ECC Reference Code: ECC-R4B-1510-0093

Ms. Nancy Ong Hsieh
President
MONTALBAN CONCRETE AND ASPHALT INC.
First Solid Compound, Paliparan 1,
Dasmariñas City
Cavite

SUBJECT: ENVIRONMENTAL COMPLIANCE CERTIFICATE

Dear Ms. Hsieh,

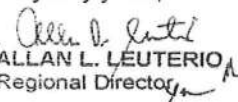
This has reference to your Environmental Compliance Certificate (ECC) application for your **PROPOSED CRUSHING PLANT AND ASPHALT BATCHING PLANT PROJECT** located at Brgy. Manguyang, Gloria, Oriental Mindoro. Please be informed that after evaluation of the documents submitted on the aforesaid project, this Office has decided to grant your application for ECC which is hereto attached.

In issuing this **CERTIFICATE**, it should be understood that the same is a **PLANNING TOOL** and **NOT A PERMIT**. It is expected that you will diligently secure pertinent **PERMITS/CLEARANCES** from all concerned government agencies pertaining to the implementation of your project. With the issuance of this ECC, you are expected to strictly implement the measures presented in the Initial Environmental Examination (IEE) Checklist Report intended to protect and mitigate the project's adverse impacts on community health, welfare and the environment. Environmental considerations should be incorporated in all phases and aspects of your project. The issuance of this ECC shall not construe as a certification of ownership over parcel of land subject of the ECC and any misinterpretation, false statement or allegation material to the issuance of this ECC shall be sufficient reason for its suspension, revocation or cancellation.

The DENR/EMB will be monitoring the project periodically to ensure your compliance with stipulations cited in the attached ECC. Finally, any expansion or modification of currently approved plans will be subjected to new Environmental Impact Assessment (EIA) requirements.

For your information and guidance.

Very truly yours,

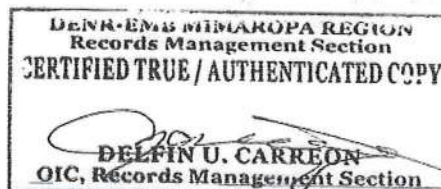

ALLAN L. LEUTERIO
Regional Director



Department of Environment and Natural Resources
Environmental Management Bureau
Regional Office No. IV – B MIMAROPA



RDALLAN0004834



6th Floor DENR by the Bay Bldg., 1515 Roxas Blvd., Ermita Manila
Regional Director's Office 536-9786; Administrative and Finance Division Telefax No. 400-5960
Environmental Monitoring and Enforcement Division 521-8904, Clearance and Permitting Division Telefax No. 400-5960
E-mail Address: regional@denr.gov.ph



Department of Environment and Natural Resources
Environmental Management Bureau
Regional Office No. IV – B MIMAROPA

ENVIRONMENTAL COMPLIANCE CERTIFICATE

(Issued under Presidential Decree No. 1586)

ECC-R4B-1510-0093

THIS IS TO CERTIFY THAT THE PROPONENT, **Montalban Concrete and Asphalt, Inc.**, represented by Ms. Nancy O. Hsieh, is granted this Environmental Compliance Certificate (ECC) for the **PROPOSED CRUSHING AND ASPHALT BATCHING PLANT PROJECT** located at Brgy. Manguyang, Gloria, Oriental Mindoro by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB), MIMAROPA Region.

This Certification is being issued for the project with the following details:

PROJECT DESCRIPTION

This ECC covers the **Crushing and Asphalt Batching Plant Project** having a production capacity of Two Hundred Fifty (250) tons per hour and asphalt output capacity of sixty (60) metric tons per hour within an area of 3.8129 hectares, under Tax Declaration No. 2012-060020-222005-01, located at Barangay Manguyang, Gloria, Oriental Mindoro.

The project shall operate and maintain its facilities and amenities as contained in the submitted **Initial Environmental Examination Checklist (IEEC) Report and Environmental Management Plan (EMP)**.

This certification is issued in compliance to the requirements of Presidential Decree No. 1586, in accordance to Department Administrative Order No. 2003-30. The Bureau, however, is not precluded from reevaluating, adding, removing, and correcting any deficiencies or errors that may be found after issuance of this Certificate.

This is to certify, further, that in issuing this **CERTIFICATE**, it should be understood that the same is a **PLANNING TOOL** and **NOT A PERMIT**. It is expected that the proponent will diligently secure pertinent **PERMITS/CLEARANCES** from all concerned government agencies prior to the start/implementation of the project. Furthermore, the DENR/EMB will be monitoring the project periodically to ensure compliance with the stipulations cited in the attached conditions and restrictions which are made as integral part of this ECC.

NOV 12 2015

Issued at EMB MIMAROPA Region this

Recommending Approval:

BUENA FE A. RIOFLORIDO
Chief, Clearance and Permitting
Division and OIC, EIA Section
(in Concurrent Capacity)

Approved by:

ALLAN L. LEUTERIO
Regional Director



Department of Environment and Natural Resources
Environmental Management Bureau
Regional Office No. IV – B MIMAROPA

DENR-EMB MIMAROPA REGION
Records Management Section

CERTIFIED TRUE / AUTHENTICATED COPY



RDALLAN0004835

DELFIN U. CARREON
Regional Director

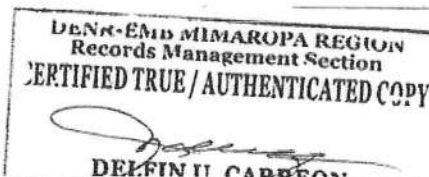
Regional Office 536-9786; Administrative and Finance Division Telefax No. 400-5960
Environmental Monitoring and Enforcement Division 521-8904; Clearance and Permitting Division Telefax No. 400-5960

I. CONDITIONS

ENVIRONMENTAL MANAGEMENT

The proponent shall strictly implement the following mitigating, enhancement, and rehabilitating measures:

1. That the proponent shall ensure that the project implementation shall **NOT START** unless all required/clearances from the concerned government agencies are secured. EMB shall be advised when all the permits/clearances are secured and when will be the actual date of project implementation;
2. That the proponent shall establish a reforestation and carbon sink program using endemic/indigenous species to mitigate greenhouse gas (GHG) emissions of the project in line with the DENR's thrust for GHG emissions reduction programs and National Greening Program. The program shall be submitted to EMB-4B (MIMAROPA Region) six (6) months prior to the project implementation;
3. That the proponent shall conduct an effective Information, Education and Communication (IEC) Program to inform and educate all stakeholders, especially its contractors, workers, and local residents about the mitigating measures embodied in its IEEC, the conditions stipulated in this Certificate and the environmental and human safety features of the project for greater awareness, understanding and sustained acceptance of the project. The program shall be submitted to EMB-4B (MIMAROPA Region) on an annual basis;
4. That the proponent shall implement a Comprehensive Social Development Program (SDP) and submit a separate report together with the Compliance Monitoring Report (CMR) to the EMB-4B (MIMAROPA Region) on a semi-annual basis;
5. That the proponent shall strictly manage all external, traffic problems, excessive surface runoff, dust, soil erosion, accidental spillage and health hazards identified in the Initial Environmental Examination (IEE) Checklist Report and, in case of emergency episodes, appropriate response activities shall be immediately undertaken for the protection of the workers/ personnel, host and nearby communities and the receiving environment;
6. That preservation and easement retention of natural drainage/waterways shall be undertaken and should conform with the provisions of the DENR Administrative Order No. 97-05 (Procedures in the Retention of Areas within certain distances along the Banks of Rivers, Streams, and Shores of Seas, Lakes and Oceans for Environmental Protection). If disturbed, a replacement drainage system shall be constructed within two (2) months from the disturbance;
7. That the solid waste management scheme as provided in the Environmental Management Plan (EMP) shall be continuously implemented from the start of the project operation.
8. The proponent shall install adequate and properly maintain effective **Water Pollution Control Facility (Settling Ponds)**, to ensure maximum efficiency, at all times in order to conform to the prescribe DENR standards.



9. That proper **Air Pollution Source and Control Installations (APSCI)** shall be provided by the proponent to avert pollutant emissions.

10. The proponent shall set up the following:

10.1 A **Memorandum of Agreement (MOA)** shall be entered into by the proponent with the **ECC Holders Association** to become part of their MMT and in setting up the corresponding **Environmental Monitoring Fund (EMF)** prior to project implementation;

10.2 A replenishable Environmental Monitoring Fund (EMF) to cover all costs attendant to the operation of the MMT such as conduct meetings, training, sampling and analysis, hiring of technical experts, meals, accommodations, supplies and materials, communication, and transportation;

10.3 The amount and mechanics of the EMF and the establishment of the MMT shall be determined by the EMB-MIMAROPA Region and the proponent in consultation with stakeholder-communities and other concerned agencies. This MOA shall be submitted to EMB-MIMAROPA within sixty (60) days upon receipt of this Certificate.

GENERAL CONDITIONS

Further administrative conditions for the grant of this Certificate shall be strictly complied:

11. The project operations shall conform to the provisions of RA 6969 (Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990), RA 8749 (Philippine Clean Air Act of 1999), RA 9003 (Ecological Solid Waste Management Act of 2000), and RA 9275 (Philippine Clean Water Act of 2004) and other relevant policies, rules and regulations;

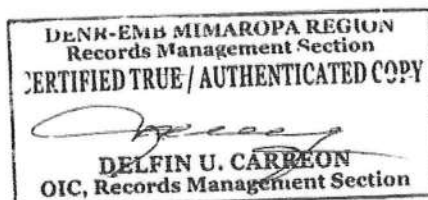
12. Creation of an Environmental Unit (EU) within sixty (60) days from issuance of this Certificate that shall competently handle the environment-related aspects of the project. In addition to the monitoring requirements as specified in the Environmental Management Plan/ Environmental Monitoring Plan, the EU shall have the following responsibilities:

12.1. Monitor actual project impacts vis-à-vis the predicted impacts and management measures in the Generic IEE Checklist Report;

12.2. Recommend revisions to the EMP/EMoP, whenever necessary subject to the approval of EMB-4B (MIMAROPA Region);

12.3. Ensure that data gathered during monitoring activities are properly documented, assessed, evaluated and reported to EMB-4B (MIMAROPA Region) in accordance with the standard formats;

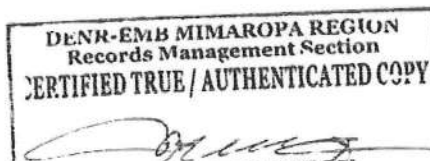
12.4. Ensure that monitoring and submissions of reports to EMB-4B (MIMAROPA Region) are carried out as required;



- 12.5. Regular submission of a semi-annual ECC Compliance Monitoring Report (on or before January 15 and July 15 of each year the project is operational) provided with supporting documents and in accordance with the prescribed format stipulated in the Implementing Rules and Regulations of P.D. 1586;
- 12.6. Submit a quarterly monitoring report using the prescribed format of the Self-Monitoring Report (SMR) pursuant to DAO 2003-27;
- 12.7. Submit an Abandonment Plan two (2) months prior to the abandonment activities. It shall include rehabilitation measures/clean-up, costs, remediation of areas possibly contaminated with toxic/hazardous substances and presentation of options on proposed alternative projects in the area.;
13. That the proponent shall allocate ample budget for the implementation of the proposed mitigating/enhancement measures during the operation and abandonment phases of the project;
14. That health and sanitation practices shall be observed in all phases of the project and safety & personal protection equipment/devices shall always be provided to all employees/workers within the premises of the project site to prevent health and occupational hazards;
15. That a billboard containing this message: **"Notice to the Public, CRUSHING AND ASPHALT BATCHING PLANT PROJECT of Montalban Concrete and Asphalt, Inc., has been issued an Environmental Compliance Certificate (ECC #48-915-1283) by the Department of Environment and Natural Resources – Environmental Management Bureau MIMAROPA Region on NOV 12 2015."** shall be installed at all entry and exit points and in the perimeter of the project site facing the road to inform the general public within thirty (30) days from receipt of the ECC;
16. That a copy of the ECC shall be posted in a conspicuous location at the field office of the project site clearly visible to the public and shall be adequately framed or otherwise protected against damage and at the barangay bulletin board of the host barangay(s) within thirty (30) days from receipt of the ECC;
17. That any authorized DENR-EMB personnel, with proper identification card and travel/mission order, shall be allowed unconditional access to conduct an on-the-spot inspection and monitoring to the project without the need for prior notice to the proponent to oversee compliance to the ECC.

II. RESTRICTIONS

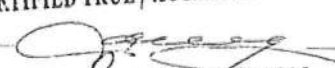
1. That no other activities should be undertaken other than what was stipulated in the Generic IEE Checklist Report. Should there be an expansion of the project beyond the project description, construction of other structures beyond those stated in the Generic IEE Checklist Report; or any change in the activity or location, shall be made subject to a new Environmental Impact Assessment (EIA) requirements.



2. That all appropriate construction, operational and resource-use permits/clearances from other national and local government agencies concerned (i.e. PMRB, PNP, LGUs, DPWH, DOH, NWRB, HLURB, MGB, DA, DAR, DOLE, DTI, etc.) shall be secured pertaining to the implementation of the project. Likewise, the proponent shall notify this Office of the reckoning date of project operation.
3. That the proponent shall plant an equivalent area of the project with appropriate tree species and shall coordinate with PENRO/CENRO concerned for area identification within **thirty (30) days** prior to project implementation. And status of compliance shall be included in the semi-annual submission of CMR.
4. That an adequate waste water treatment facility shall be constructed in order to meet the effluent standards of DENR.
5. That spoil shall be stockpiled away from drainage route.
6. That hauling trucks should be covered with canvass and removal of soil/mud from tires of trucks and equipment before leaving the project area shall be made regularly.
7. That in case of transfer of ownership/management of this project, these same conditions and restrictions shall apply and the transferee shall be required to notify this Office concerned within fifteen (15) days as regards to the transfer of ownership/management.
8. That the proponent (**NANCY ONG HSIEH**) shall be accountable for any misrepresentation and failure to state material information in the submitted documents.

The conditions stipulated in this Certificate shall be deemed final within fifteen (15) days from receipt hereof and all conditions and restrictions set forth above shall be complied with by the herein grantee. This ECC is deemed expired if not implemented within five (5) years from the date of issuance and the proponent shall have to apply for a new ECC if it intends to pursue the project.

Non-compliance with any of the provisions of this certificate shall be a sufficient cause for the cancellation or suspension of this certificate and/or imposition of a fine in an amount not to exceed Fifty Thousand Pesos (Php50,000.00) for every violation thereof.

DENR-EMB MIMAROPA REGION
Records Management Section
CERTIFIED TRUE / AUTHENTICATED COPY

DELFIN U. CARREON
OIC, Records Management Section

PROJECT ASSESSMENT PLANNING TOOL

For the assistance of the Proponent, LGUs and other concerned government agencies (GAs) in the management of the project and for better coordination in mitigation on the impacts of the project on its surrounding areas and to the environment.


By way of recommendation, the following have been taken notice of by this Office and are providing these recommendations to the parties and authorities concerned for proper action and integration into their decision making-process.

Regulatory Conditions 1. The proponent shall comply with, but not limited to the following: 1.1 P.D. 856 or the Sanitation Code of the Philippines; 1.2 P.D. 442 or the Labor Code of the Philippines including occupational health and safety; 1.3 R.A. 6541 or the National Building Code of the Philippines including adequate storm drainage system and other flood control measures and compliance to the Fire Safety and Emergency Preparedness; 1.4 P.D. 705 & DAO 97-05;	DOH DOLE-Bureau of Working Condition Municipal Planning & Dev't. Office/Building Official/BFP/ LGU Concerned DENR Sector concerned
Environmental Planning Recommendations for the Proponent 2. Close monitoring of the project should be undertaken by the proponent to maintain a high level of safety and efficiency at all phases of the project and to immediately address any environmental hazard that may take place.	Proponent

For dissemination and proper action of the parties concerned.

[Signature]
BUENA FE A. RIOFLORIDO
Chief, Clearance and Permitting
Division and OIC, EIA Section
in Concurrent Capacity

[Signature]
ALLAN L. LEUTERIO
Regional Director

 Department of Environment and Natural Resources
Environmental Management Bureau
Regional Office No. IV - MIMAROPA



RDALLAN0004836

DENR-EMB MIMAROPA REGION
Records Management Section
CERTIFIED TRUE / AUTHENTICATED COPY
[Signature]
DELEEN U. CARREON
OIC, Records Management Section

SWORN STATEMENT OF OWNER/PROPONENT

Under the provisions of Presidential Decree 1586, I, **NANCY O. HSIEH**, representative of Montalban Concrete and Asphalt Inc., do hereby certify that the information provided to the Department of Environment and Natural Resources (DENR) – Environmental Management Bureau (EMB), MIMAROPA Region pertaining to the **Crushing and Asphalt Batching Plant Project** located at **Brgy. Manguyang, Gloria, Oriental Mindoro**, are true and correct to the best of my personal knowledge and based on the records in my possession and I shall take full responsibility in complying with all conditions and restrictions contained in this Environmental Compliance Certificate (ECC).

NANCY O. HSIEH

Signature

TIN No. _____

Subscribed and sworn before me this NOV 24 2015, the above-named affiant taking oath presenting _____, issued on _____ at _____

Notary Public

Doc. No. 291
Page No. 46
Book No. VXXVII
Series of 2015

ATTY. RAMIL JOSELITO B. TAMAYO
NOTARY PUBLIC TIN NO. 231430784200 ROLL NO. 49667
PTR No. 2837981 Date 1-4-16 / ICLE No. 74-0027244 issued July 12, 2013
RPS LPE No. 942235, Commission No. 2014-019 Under 12-31-15 BAR/LA
Office Address: Rancolar Press Club Bldg., Baguio Drive, Marikina, Manila

DENR-EMB MIMAROPA REGION
Records Management Section
CERTIFIED TRUE / AUTHENTICATED COPY

DELFIN U. CARREON

Annex L – Copy of Transfer Certificate of Title (TCT)

LAND REGISTRATION AUTHORITY CCV FORM	
UNOFFICIAL COPY IF NOT IN BLUE COLOR	
Judicial Form No. 140	
REPUBLIC OF THE PHILIPPINES DEPARTMENT OF JUSTICE Land Registration Authority QUEZON CITY	
Registry of Deeds for Calapan, Mindoro Oriental	
Transfer Certificate of Title	
No. 064-2016002836	
IT IS HEREBY CERTIFIED that certain land situated in MANGUYANG, GLORIA, ORIENTAL MINDORO, more particularly bounded and described as follows: BEGINNING AT A POINT MARKED "1" OF LOT NO. 1408, CAD. 691-D, BEING S. 50-60 W., 8,982.15 M. FROM BBM # 1, CAD. 691-D, GLORIA CADASTRE, THENCE: S. 34-49 N., 168.23 M. TO POINT 2; S. 62-21 W., 83.63 M. TO POINT 3; S. 40-56 W., 22.20 M. TO POINT 4; (Continued on next page) is registered in accordance with the provision of Section 103 of the Property Registration Decree in the name of Owner: MONTALBAN CONCRETE AND ASPHALT INC. Address: FIRST SOLID COMPOUND PALIPARAN I, DASMARIÑAS, CAVITE CALABARZON subject to the provisions of the said Property Registration Decree and the Public Land Act, as well as to those of the Mining Laws, if the land is mineral, and subject, further, to such conditions contained in the original title as may be subsisting. IT IS FURTHER CERTIFIED that said land was originally registered as follows: Patent Type: Free Patent Original RD: CALAPAN, MINDORO ORIENTAL Patent Date: 08/07/1998 OCT Date: 02-05-1999 Under Act No.: 141, AS AMENDED OCT No.: OCT-P-8282 Volume No.: P-47 Page No.: 82 Original Owner: BEATRIZ LANETE This certificate is a transfer from ORIGINAL CERTIFICATE OF TITLE P-8282 (TOTALLY CANCELLED) by virtue hereof in so far as the above-described land is concerned. Entered at Calapan, Mindoro Oriental, Philippines on the 13th day of JULY 2016 at 12:31pm. ATTY. GHELYNNE AVRIL D. DEL ROSARIO Acting Deputy Register of Deeds It is hereby certified that this is a true electronic copy of TCT 2016002836 on file in Registry of Deeds of Calapan, Mindoro Oriental, which consists of 2 page(s). This is a system-generated Certified True Copy and does not require a manually-affixed signature.	

LAND REGISTRATION AUTHORITY CCV FORM

UNOFFICIAL COPY IF DERIVED FROM COLOR

Judicial Form No. 140

TCT No.: 064-2016002836

Page No.: 2

TECHNICAL DESCRIPTION (Continued from page 1)

S. 80-44 W., 102.15 M. TO POINT 5;
N. 10-40 W., 169.17 M. TO POINT 6;
N. 73-35 E., 255.52 M. TO POINT 1;
POINT OF BEGINNING.
CONTAINING AN AREA OF THIRTY EIGHT THOUSAND ONE HUNDRED TWENTY NINE (38,129) SQUARE METERS. ALL POINTS REFERRED TO ARE INDICATED ON THE PLAN AND ARE MARKED ON THE GROUND BY P. S. CYL. CONC. MONS. BOUNDED ON THE SE., ALONG LINE 1-2 BY LOT NO. 1410, CAD. 691-D, ALONG LINES 2-3-4 BY LOT NO. 1405, CAD. 691-D; ON THE S., ALONG LINE 4-5 BY LOT NO. 1406, CAD-691-D; ON THE W., ALONG LINE 5-6 BY LOT NO. 1407, CAD. 691-D; AND ON THE N., ALONG LINE 6-1 BY LOT NO. 1409, CAD. 691-D, GLORIA CADASTRE. BEARINGS TRUE. THIS LOT WAS SURVEYED IN ACCORDANCE WITH LAW AND EXISTING REGULATIONS PROMULGATED THEREUNDER BY N. F. FABON AND WAS DULY APPROVED ON JUNE 27, 1985.
NOTE: THIS LOT IS COVERED BY FPA-045206-53.

Page

591-0

It is hereby certified that this is a true electronic copy of TCT 2016002836 on file in Registry of Deeds of Calapan, Mindoro Oriental, which consists of 2 page(s). This is a system-generated Certified True Copy and does not require a signature.

Annex M – Copy of Mineral Processing Permit (MPP)

MPP Form No. 11-1

CERTIFIED TRUE COPY

Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Mines and Geosciences Bureau
MIMAROPA Region
7/F DENR Bldg., 1515 Roxas Blvd., Ermita, Manila

MINERAL PROCESSING PERMIT

SEP 09 2019
Date

Mineral Processing Permit No. MPP-004-2019-MGBMIMAROPA

MONTALBAN CONCRETE AND ASPHALT, INC.
(Processor)

First Solid Comp. Paliparan I, Dasmariñas City, Cavite
(Business Address)

The Department of Environment and Natural Resources through the Mines and Geosciences Bureau (MGB) – MIMAROPA Region hereby grants to **MONTALBAN CONCRETE AND ASPHALT, INC.**, a corporation duly organized and existing under the laws of the Republic of the Philippines, this Mineral Processing Permit to process **River Aggregates** at the latter's plant site located in **Sitio Pagkakaisa, Barangay Manguyang, Gloria, Oriental Mindoro, Philippines**.

This Mineral Processing Permit having been filed with Mineral Processing Permit Application No. AMPP-08-2019-MGBMIMAROPA with the MGB – MIMAROPA Region on **11 July 2019** is granted in accordance with Republic Act (RA) No. 7942, otherwise known as "The Philippine Mining Act of 1995" and Chapter XI of the Revised Implementing Rules and Regulations promulgated thereunder, subject to the following terms and conditions:

TERMS AND CONDITIONS

1. That this Mineral Processing Permit shall apply to person(s)/corporation(s) engaged in processing of minerals except for Contractors and Permit Holders;
2. That this Mineral Processing Permit shall be for a period of five (5) years renewable for like periods but not to exceed a total term of twenty-five (25) years. *Provided*, That no renewal of Permit shall be allowed unless the Permit Holder has complied with all the terms and conditions of the Permit and has not been found guilty of violation of any provision of the Act and Revised Implementing Rules and Regulations. The effectivity of this Permit reckoned from the date of issuance shall be from September 9, 2019 to September 8, 2024.
3. That this Mineral Processing Permit shall be for the exclusive use and benefit of the Permit Holder or his/her duly authorized representative/s and shall not under any circumstances be used for purposes other than mineral processing of the aforesaid mineral(s).
4. That the Permit Holder shall assume full responsibility and be liable for damages to and/or public property/ies that may be occasioned by its operation under the

5. That the Permit Holder shall ensure that its source of materials has a valid extraction permit;
6. That the Permit Holder shall secure an Ore Transport Permit from the MGB MIMAROPA Region prior to the transport of materials from its plant site;
7. That the Permit Holder shall submit the following reports to the Regional Director concerned, copy furnished the Director:
 - 7.1 Monthly Report on Production, Sales and Inventory of Metallic/Non-metallic Minerals and Employment as prescribed in MGB Form No. 31-10 within fifteen (15) days after the end of each calendar month;
 - 7.2 Quarterly Energy Consumption Report as prescribed in MGB Form No. 31-18 within fifteen (15) days after the end of each calendar quarter;
 - 7.3 Integrated Annual Report as prescribed in MGB Form No. 31-16 within two (2) months after the end of each calendar year;
 - 7.4. Annual Land Use Report showing its stockpile, silt pond, environmental programs, among others, pursuant to DENR Administrative Order No. 2010-21 and the MGB Regional Memorandum Order (RMO) No. 2019-02; and
 - 7.5. Annual Status Report based on the Feasibility Study/Approved Work Program pursuant to MGB RMO No. 2019-02.
8. That the Permit Holder shall strictly follow the Feasibility Study/Approved Work Program and shall undertake the operations within the scheduled plan;
9. That the Permit Holder shall effectively use the best available appropriate anti-pollution technology and facilities to protect the environment in compliance with the requirements of the Environmental Compliance Certificate (ECC) and P.D. No. 984. This should be undertaken in coordination with the Environmental Management Bureau/Department Regional Office;
10. That the Permit Holder shall not discriminate on the basis of gender and that the Permit Holder shall respect the right of women workers to participate in policy and decision-making processes affecting their rights and benefits;
11. That the Permit Holder shall pay fees, taxes and other obligations in accordance with existing laws, rules and regulations.
12. The Permit Holder shall conform to laws, rules and regulations regarding, among others, labor, safety and health standards;
13. The Permit Holder shall comply with its obligations under its ECC;
14. That the Permit Holder shall give preference to goods and services produced and offered in the Philippines of comparative quality and in particular, shall give preference to Filipino construction enterprises, shall erect buildings which can be constructed using materials and skills available in the Philippines, shall employ Filipino subcontractors for road construction and transportation and shall purchase Philippine household equipment, furniture and food;
15. That the Permit Holder shall give preference to Filipinos in all types of employment for which they are qualified and that technology shall be transferred to the same through trainings, symposia, seminars and workshops;

CERTIFIED TRUE COPY

16. That alien employment shall be limited to technologies requiring highly specialized training and experience subject to the required approval under existing laws, rules regulations.
17. In cases where foreign technologies are utilized and where alien executives are employed, an effective program of training understudies shall be undertaken;
18. That the Permit Holder shall utilize the best available appropriate and efficient processing technology;
19. That the Secretary may at any time suspend or revoke this Permit when in his/her opinion, public interest so requires or upon failure of the Permit Holder to comply with any of the terms and conditions hereof or of relevant mining laws, rules and regulations without any responsibility on the part of the Government as to the expenditures that might have been incurred or as to other damages that might have been suffered by the Permit Holder;
20. Withdrawal by the Permit Holder from the Permit shall not release it from any and all financial, environmental, legal and/or fiscal obligations;
21. That the Permit Holder shall abide by provisions of the ECC or statements made later in support thereof which shall then be considered as integral part of this Permit, R. A. No. 7942 and its Revised Implementing Rules and Regulations and other applicable laws, rules and regulations governing health, safety, sanitation, pollution control, zoning, labor and those pertaining to environment protection, enhancement and rehabilitation. Violation of any of these applicable laws and rules and regulations shall constitute grounds for cancellation/revocation of this Mineral Processing Permit;
22. That the Permit Holder shall allow at any reasonable time, the Secretary or his/her duly authorized representative/s to conduct on-site validation of submitted reports and to review his/her performance;
23. That the Permit Holder shall file and keep books of accounts, reports and correspondences which shall be opened at all times for verification by the Secretary/Director or his/her duly authorized representative/s.
24. That the Permit Holder shall abide to any additional terms and conditions which the Department/Bureau may prescribe, and
25. That the Permit Holder shall comply with other terms and conditions not inconsistent with the Constitution, the Act and the Revised Implementing Rules and Regulations, as well as those which the Secretary may deem to be for the national interest and public welfare.

City of Manila, Philippines.

SEP 09 2019

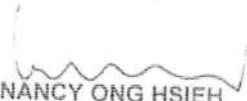
ROLAND A. DE JESUS, CESO V
Regional Director

Recommended by:



ELLENGRACE R. GALISTE

CERTIFIED TRUE COPY

in my capacity as President of Montalban Concrete and Asphalt, Inc. I hereby accept the terms and conditions of this Mineral Processing Permit as above stated.


NANCY ONG HSIEH

Signed in the presence of:

 
(Signature over Printed Name) (Signature over Printed Name)

ACKNOWLEDGEMENT

Republic of the Philippines)
Province of _____) s.s.
City/Municipality of MANILA)

BEFORE ME, personally appeared:

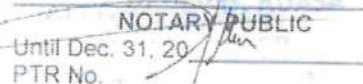
Name	ID Number	Date/Place Issued
ROLAND A. DE JESUS	PRC ID No. 0001452	16 May 2017 / Manila
NANCY ONG HSIEH		

Known to me and to me known to be the same persons who executed the foregoing instrument and acknowledged to me that the same are their free act and voluntary deed.

This instrument, consisting of four (4) pages, including the page on which this acknowledgment is written, has been signed on the left margin of each and every page thereof by the concerned parties and their witnesses, and sealed with my notarial seal.

IN WITNESS WHEREOF, I have hereunto set my hand and affix my notarial seal, this _____ day of _____

NOV 13 2019


NOTARY PUBLIC
Until Dec. 31, 20____
PTR No. _____

Doc. No. 367
Page No. 75
Book No. XLVIII
Series of 2019

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Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
MIMAROPA REGION
7/F DENR Bldg., 1515 Roxas Blvd., Ermita, Manila

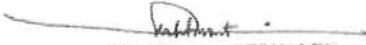
CERTIFICATE OF REGISTRATION

The filing fee thereto having been paid the foregoing instrument was registered in this Office at 03:00pm on November 13, 2019 has been recorded on Book 1 of this Region on page 78 as Document No. 10 of Miscellaneous Documents.

Registration Fee paid under Official Receipt No. 6704278 dated Nov. 13, 2019 in the amount of P 5,000.00.


ROLAND A. DE JESUS, CESO V
Regional Director

a true and correct copy of the Mineral Processing Permit (MCCAI) of Mentalban Concrete in the Mining District of Mines in the Province of This on the 24th day of November, 2019 in the amount of P 150.00 paid by Official Receipt No. 6704279 on Nov. 13, 2019.


KEITH A. BELMONTE
Mining Claims Examiner III

Annex N – STATEMENT OF ANNUAL DIRECT MILLING COST



MONTALBAN CONCRETE AND ASPHALT, INC.
Sitio Pagkakaisa Brgy. Manguyang, Gloria, Oriental Mindoro

STATEMENT OF PROJECTED ANNUAL DIRECT MILLING COST For the period Ending September 2023

Crushing Plant:	
Direct labor	1,107,000.50
Materials and Supplies	987,075.00
Fuel and Lubricants	327,411.50
Repairs and Maintenance	64,704.22
Light and Water	29,021.19
Depreciation-Plant and Equipment (under repairs & maintenance)	1,005,040.08
Total Milling Cost	<u>Php 3,520,252.49</u>

Subscribed and sworn to before me a Notary Public on _____ this _____ day of
_____ 2023, affiant exhibited to me his/her _____

WITNESS MY HAND AND SEAL on the date and place written above.

Doc. No. _____
Page No. _____
Book No. _____
Series of 2023 _____

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Annex O: Annual EPEP Matrix for the year 2024

Annual Environmental Protection and Enhancement Program C.Y. 2024							
Name of Contractor/Permittee: Montalban Concrete and Asphalt, Inc.							
Tenement No. MPP No. 004-2019-MGBMIMAROPA							
Location: Sitio Pagkakaisha Barangay Manguyang, Gloria, Oriental Mindoro							
Activities	Unit of Work Measure	Annual Physical and Financial Target	Physical Target				Remarks
			Q1	Q2	Q3	Q4	
1. Land Resource							
1.1 Reforestation/Tree Planting							
1.1a Nursery Operation							
i. Procurement of seedlings	No. of seedlings procured	200	50	50	50	50	Indian tree, bamboo and or other tree species.
	50.00	10,000.00	2,500.00	2,500.00	2,500.00	2,500.00	
1.1b. Plantation Establishment							
i. Planting of trees	Area in square meters	400	100	100	100	100	Planting location: Along company perimeter fence.
	No. of trees	200	50	50	50	50	
	20.00	4,000.00	1,000.00	1,000.00	1,000.00	1,000.00	
1.1c Maintenance of Existing Plantation							
i. Brushing and / or grass cutting	Area in square meters	40	10	10	10	10	
	150.00	6,000.00	1,500.00	1,500.00	1,500.00	1,500.00	Along company perimeter fence.
ii. Watering	Area in square meters	40	10	10	10	10	
	150.00	6,000.00	1,500.00	1,500.00	1,500.00	1,500.00	

1.1d Other activities under land resource							
i. Inventory of planted trees	No. of inventory report	1					1
	2,000.00	2,000.00					2,000.00
1.2 Dumpsite and Stockpile Management							
1.2a Maintenance of dumpsite area	Area in square meters	2000	500	500	500	500	Location: Outside company premises near gabion area.
	10.00	20,000.00	5,000.00	5,000.00	5,000.00	5,000.00	500
1.2b Maintenance of stockpile area (finished products)	No. of stockpile areas	1	1	1	1	1	Location: Inside company premises near Crusher plant area.
	5,000.00	20,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
2. Water Resource and Quality							
2.1 Siltation Control Measure							
2.1a Desilting and maintenance of settling ponds	No. of settling ponds maintained	12	3	3	3	3	Settling pond #1, #2, and #3
	Volume in cubic meters	800	200	200	200	200	200
	30.00	24,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00
2.1b Maintenance of drainage canal	Length, in meters	40	10	10	10	10	From Sand classifier to Settling Pond
	Volume in cubic meters	4	1	1	1	1	1
	1,000.00	4,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
2.1c Hauling/Transferring of waste materials to dumpsite area	Volume in cubic meters	800	200	200	200	200	From Settling pond area to approved waste dumpsite area near gabion.
	50.00	40,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00

2.2 Water Quality

2.2a Water sampling activity	No. of sampling activity	4	2	2	Sampling point: Final pond/settling pond area and Deep well
	500.00	2,000.00	1,000.00	1,000.00	
2.2b Laboratory analysis of water sample from Final pond and Raw Water	No. of samples collected	16	16	16	Third Party: AERONICS INC. and Parameter to be tested: Total Suspended Solids and PSIC Code 239.
	750.00	24,000.00	12,000.00	12,000.00	

2.3 Solid Waste Management

2.3a Operationalization and maintenance of MRF	No. of MRF	1	1	1	1	1	1	Company MRF
	2,500.00	10,000.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	
2.3b Maintenance of waste bins	No. of waste bins	16	4	4	4	4	4	Location: Infront of Plant office
	125.00	2,000.00	500.00	500.00	500.00	500.00	500.00	
2.3c Volume of recyclable materials	Kilograms	16	4	4	4	4	4	Turn-over to Brgy. MRF Facility.
	250.00	4,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	
2.3d Volume of residual wastes	Kilograms	40	10	10	10	10	10	To be collected by Brgy. Manguyang Solid waste truck.
	300.00	12,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	

2.4 Hazardous Waste Management

2.4a Operationalization and maintenance of hazardous waste storage facility/area	No. of facility/area	1	1	1	1	1
	1,500.00	6,000.00	1,500.00	1,500.00	1,500.00	1,500.00
Haz-waste Area: 10 sq.m.						

2.4b Transport/treatment of hazardous waste									
i. Used oil	Liters		800	200	200	200	200	200	
	7.50		6,000.00	1,500.00	1,500.00	1,500.00	1,500.00	1,500.00	
ii. Busted bulbs	No. of bulbs		4					4	
	250.00		1,000.00					1,000.00	
iii. Contaminated materials/rugs	Kilograms		8	2	2	2	2	2	
	250.00		2,000.00	500.00	500.00	500.00	500.00	500.00	
iv. Used batteries	No. of battery		8	2	2	2	2	2	
	250.00		2,000.00	500.00	500.00	500.00	500.00	500.00	
3. Air Quality									
3.1 Ambient air quality monitoring									
3.1a Air sampling activity	Frequency of sampling		2		1			1	Air sampling located inside the Plant Site.
	2,500.00		5,000.00		2,500.00			2,500.00	
3.1b Laboratory analysis of air sample	No. of samples collected		2		1			1	Third Party: To be tested by AERONICS INC.:Total Suspended Particulate (TSP).
	10,000.00		20,000.00		10,000.00			10,000.00	
3.2 Dust suppression	Cu.m of water utilized		300	100	100			50	Using company owned trucks.
	Kilometers maintained		3	3	3			3	From Plant access road to Brgy. Manguyang Road.
	200.00		60,000.00	20,000.00	20,000.00			10,000.00	
3.3 Road maintenance	Kilometer		1	1	1			1	Brgy. Road of Sitio Acacia, Sitio Kawayan and Sitio Pagkakaia of Brgy. Manguyang
	5,000.00		20,000.00	5,000.00	5,000.00			5,000.00	

4. Noise							
4.1 Noise level measurement	No. of station	8		2		2	Noise sampling location: Sampling Station No. 1 @ Crusher Plant Area and Station No. 2 @ Powerhouse/Generator Room.
	No. of noise level measurement	140		70		70	
	7.14	1,000.00		500.00		500.00	
5. Biodiversity Conservation/Consideration							
5.1 Participation to Tree planting activity	No. of activity	2		1		1	Provincial/Municipal- LGU Tree planting Program.
	5,000.00	10,000.00		5,000.00		5,000.00	
5.2 Participation to River Clean-up	No. of activity	2		1		1	Municipal/BARANGAY - LGU River Clean-up Program.
	2,500.00	5,000.00		2,500.00		2,500.00	
6. Environmental Research							
6.1 Research on the beneficial use of banlik or the mill tailings from the crushing plant	No. of progress report submitted	1				1	
	20,000.00	20,000.00				20,000.00	
7. Information, Education, Communication (IEC) Campaign							
7.1 Meeting/discussion with LGU	No. of meetings	2		1		1	Municipal / Barangay - LGU.
	1,500.00	3,000.00		1,500.00		1,500.00	
7.2 Installation of Environmental billboard/posters	No. of billboard / posters	4	1	1	1	1	Barangay Hall / Barangay Covered Court.
	2,000.00	8,000.00	2,000.00	2,000.00	2,000.00	2,000.00	

7.3 Attendance to PCO training and workshop / Other Environmental Forum	No. of attendees	1			1				EMB-R4B PCO Training/Environmental Summit scheduled by MGB-R4 MIMAROPA.
	20,000.00	20,000.00			20,000.00				
TOTAL ANNUAL EPEP COST FOR THE YEAR 2024		379,000.00							
8. Monitoring Activity									
8.1 MMT monitoring	No. of monitoring	2			1				Charge to MTF Account
	30,000.00	60,000.00			30,000.00				30,000.00
8.2 MRFC meeting	No. of meetings	2			1				1
	30,000.00	60,000.00			30,000.00				30,000.00

Prepared by:

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PCO/ Asst. MEPEO

Checked by:


RIZALDY F. MASIGLAT
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Noted by:

NANCY ONG HSIEH
President