

EXECUTIVE SUMMARY

A. PROJECT FACT SHEET

Project Name	Cement Finish Mill Plant and Quarry Operations Project																																	
Project Location	<ul style="list-style-type: none"> Barangays Dunggoan, Cagat, Sandayong Norte, Binaliw, Malapoc and Quisol in Danao City, Cebu Barangays Triumfo, Hagnaya, Dawis Sur, Dawis Norte, Baring, Ipil and Corte in Carmen Municipality, Cebu 																																	
Project Type	Quarry and Cement Manufacturing Plant																																	
Project Area	<p>Existing Project covered by ECC No. 9906-014-105:</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Area (ha)</th> </tr> </thead> <tbody> <tr> <td>Cement Finish Mill and Packhouse/Storage</td> <td>10</td> </tr> <tr> <td>Quarry Area</td> <td>272</td> </tr> <tr> <td>Area 1: Binaliw in Danao</td> <td>121</td> </tr> <tr> <td>Area 2: Sandayong Norte in Danao</td> <td>30</td> </tr> <tr> <td>Area 3: Triumfo in Carmen</td> <td>81</td> </tr> <tr> <td>Area 4: Sandayong Norte in Danao</td> <td>30</td> </tr> <tr> <td>Power Plant</td> <td>1</td> </tr> <tr> <td>Total</td> <td>283</td> </tr> </tbody> </table> <p>Proposed Project:</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Area (ha)</th> </tr> </thead> <tbody> <tr> <td>Cement Finish Mill and Packhouse/Storage</td> <td>10</td> </tr> <tr> <td>Quarry Area</td> <td>1,355</td> </tr> <tr> <td>Area 1: Dunggoan in Danao and Dawis Sur in Carmen</td> <td>195</td> </tr> <tr> <td>Area 2: Sandayong Norte, Cagat, Cambanay, Binaliw in Danao</td> <td>710</td> </tr> <tr> <td>Area 3: Triumfo, Hagnaya in Carmen</td> <td>450</td> </tr> <tr> <td>Total</td> <td>1,365</td> </tr> </tbody> </table>		Description	Area (ha)	Cement Finish Mill and Packhouse/Storage	10	Quarry Area	272	Area 1: Binaliw in Danao	121	Area 2: Sandayong Norte in Danao	30	Area 3: Triumfo in Carmen	81	Area 4: Sandayong Norte in Danao	30	Power Plant	1	Total	283	Description	Area (ha)	Cement Finish Mill and Packhouse/Storage	10	Quarry Area	1,355	Area 1: Dunggoan in Danao and Dawis Sur in Carmen	195	Area 2: Sandayong Norte, Cagat, Cambanay, Binaliw in Danao	710	Area 3: Triumfo, Hagnaya in Carmen	450	Total	1,365
Description	Area (ha)																																	
Cement Finish Mill and Packhouse/Storage	10																																	
Quarry Area	272																																	
Area 1: Binaliw in Danao	121																																	
Area 2: Sandayong Norte in Danao	30																																	
Area 3: Triumfo in Carmen	81																																	
Area 4: Sandayong Norte in Danao	30																																	
Power Plant	1																																	
Total	283																																	
Description	Area (ha)																																	
Cement Finish Mill and Packhouse/Storage	10																																	
Quarry Area	1,355																																	
Area 1: Dunggoan in Danao and Dawis Sur in Carmen	195																																	
Area 2: Sandayong Norte, Cagat, Cambanay, Binaliw in Danao	710																																	
Area 3: Triumfo, Hagnaya in Carmen	450																																	
Total	1,365																																	
Project Capacity	Cement: 1,200,000 metric tons per year (MTPY) Quarry: <ul style="list-style-type: none"> 500,000 MTPY of limestone 150,000 MTPY of pozzolan/shale 																																	
Project Description	The proposed project will involve a Cement Finish Mill with a downgrade capacity from 2,500,000 MTPY (covered by ECC No. 9906-014-105) to 1,200,000 MTPY and Quarry Operations with a capacity of 500,000 MTPY for limestone and 150,000 MTPY for siliceous materials (pozzolan/shale).																																	
Project Components	The old project covered by the ECC Reference No. 9906-014-105 is a full cement manufacturing plant which starts from quarrying of raw materials, raw materials grinding, clinkering, finish milling, packing and powerplant. Whilst the proposed project involves quarrying of limestone and pozzolan/shale, finish milling and dispatch. The Kiln line was already demolished. The power plant facility is still existing, but the equipment is not operational anymore. RCBM has no plan to revive the power plant operation in this project. Moreover, the proposed project will not involve construction of new facilities. Only upgrade and improvement of the facilities will be undertaken. Provide below is the existing and proposed changes of the project in terms of components, rate and status.																																	
	<table border="1"> <thead> <tr> <th>Components</th> <th>Capacity/Rate</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td colspan="3">Quarrying</td> </tr> <tr> <td>• MPSA</td> <td>MPSA-132-99-VII Area 1: 121 ha</td> <td>Same MPSA-132-99-VII Area 1: 195 ha</td> </tr> </tbody> </table>		Components	Capacity/Rate	Status	Quarrying			• MPSA	MPSA-132-99-VII Area 1: 121 ha	Same MPSA-132-99-VII Area 1: 195 ha																							
Components	Capacity/Rate	Status																																
Quarrying																																		
• MPSA	MPSA-132-99-VII Area 1: 121 ha	Same MPSA-132-99-VII Area 1: 195 ha																																

Components	Capacity/Rate	Status
	Area 2: 30 ha Area 3: 81 ha Area 4: 30 ha	Area 2: 710 ha Area 3: 450 ha
Pyroline		
• Kiln and Cooler	2.5 MMTPY	No more pyroline operation (Already demolished)
Cement Raw Material Storage		
• Material Storage 1	73,000 T	Existing; no change
• Material Storage 2	39,000 T	Existing; no change
Cement Finish Mill Plant		
• Ball Mill	80-136 TPH	Existing; no change
• Mill Discharge Airslide	150 TPH	Existing; no change
• Mill Bucket Elevators 1 and 2	150 TPH	Existing; no change
• Fly Ash Silo	200 T	Existing; no change
• Air Separator	80-150 TPH	Existing; no change
• Product Airslide	150 TPH	Existing; no change
• Hot Gas Generator	200kg/h fuel consumption	Existing; no change
• Compressors:		
GA45	160 kW	Existing; no change
GA75	75 kW	Existing; no change
ZE160	45 kW	Existing; no change
ZE4	45 kW	Existing; no change
Packing, Bulk Loading, and Cement Silo (Dispatch)		
• Rotopacker	2,400 BPH (8 spouts)	Existing; no change
• Palletizing System	5 T	Existing; no change
• Bulk Loading Facility	80 TPH	Existing; no change
• Cement Silo	1,250 T	Existing; no change
Support Facilities		
• Power plant	70 MW	No more powerplant operation (Building is still existing but the equipment not anymore operational)
• Generator Set (Back-up)	800 kVA	Existing; no change
• Jetty (Wharf)	1.4MMT bulk cement / 0.7 MMT bag cement shipments	Existing; no change
• Fire Protection System	plantwide	Existing; no change
• Safety Devices	plantwide	Existing; no change
• Cement Warehouse 1	1,700 MT	Existing; no change
• Cement Warehouse 2	2,000 MT	Existing; no change
Existing ECC	ECC No. 931-07CE-051 issued on September 8, 1993 by DENR Region VII <ul style="list-style-type: none"> Proponent: Lloyd Richfield Industrial Corporation Project Name: Rehabilitation and Operation of its Cement Manufacturing Plant ECC No. 9906-014-105 issued on September 26, 2002 by DENR Central Office Proponent: Lloyds Richfield Industrial Corporation (LRIC)	

	Project Name: 2.5 MMPTY Cement Manufacturing Complex, Quarrying, Power Plant, Wharf and Other Facilities Changed the proponents name from LRIC to RCBM on 07 July 2017.
Project/Investment Cost	Four Hundred Fourteen Million and Three Hundred Thousand Pesos (PhP414.3 Million)
Profile of the Proponent	
Name of Proponent	Republic Cement and Building Materials, Inc. (RCBM)
Address	Brgy. Dunggoan, Danao City, Cebu
Authorized Signatory/ Representative	Mr. Fabian Baya Plant Manager
Contact Details	Telephone No.: (032) 238 6596 Email Address: fabian.baya@republiccement.com
Profile of the Preparer	
EIA Preparer	Mediatix Business Consultancy
Address	L29 Joy-Nostalg Center, 17 ADB Ave., Ortigas Center, Pasig City
Contact Person	Matilde R. Jimenez-Fernando General Manager
Contact Details	Telephone No.: (02) 689 7114 Mobile No.: +639175064499 Email Address: mrjfernando@mediatrixph.com; mediatrixbusinessconsultancy@gmail.com

B. EIA PROCESS DOCUMENTATION

EIA Team

The EIA Study was conducted by a multidisciplinary team of professional experts of Mediatix Business Consultancy (Mediatix), who have strong background in environmental assessments, in close coordination with the RCBM. The composition of the EIA Team is presented in **Table ES-1**. The sworn statements of accountability of RCBM and Mediatix are presented in **Annex ES-1**.

Table ES-1: EIA Team Composition

EIA Team	Areas of Expertise	EMB Registry No.
Matilde J. Fernando	Team Leader, Socio-Economics and Legal Framework	IPCO-035
Reynaldo S. Tejada	Water and Air Module	IPCO-036
Hernani Bayani	Geology and Geohazard	IPCO-058
Juvinal Esteban	Socio-economics	IPCO-091
Alexis M. Fernando	Research and sampling	IPCO-034
For. Benjamin Cuevas	Terrestrial Ecology	IPCO-072

EIA Schedule

Mediatix, together with the RCBM, proceeded on EIA planning, stakeholder profiling and conducted initial EIA processes. Public Scoping was held on January 23, 2014 at El Salvador Resort in Danao City, Cebu. The Technical Scoping was conducted on May 20, 2014 and based on the agreed scope of work, the collection of primary and secondary data was conducted. The EIA Scoping and Screening Form is attached in **Annex ES-2**.

Data collected were processed, analyzed and evaluated for impact assessment and formulation of Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP). The data and information were written into

an Environmental Performance Report and Management Plan (EPRMP) and the final version of the EPRMP will be submitted to the EMB-Central Office for the application of an amended ECC.

EIA Study Area

The EIA study area for the project covers the 10 has plant site and the 1,355 ha quarry area (Area 1: 195 ha; Area 2: 710 ha; and Area 3: 450 ha) at Barangays Dunggoan, Cagat, Sandayong Norte, Binaliw and Malapoc in Danao City and Barangays Triumfo, Hagnaya and Dawis Sur in Carmen Municipality in Cebu.

EIA Methodologies

The EIA for the proposed project conforms to the Revised Procedural Manual for DENR Administrative Order (DAO) 2003-30 and DAO 2017-15 in the conduct of the following activities, to wit: (i) Scoping, (ii) collection of primary and secondary data, (iii) identification/prediction/ assessment of environmental impacts, (iv) formulation of EMP, and (v) development of EMoP. **Table ES-2** presents the detailed EIA methodology per environment sector/component.

Table ES-2: EIA Methodology

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology
Land		
Geology/ Geomorphology, Pedology, Land Use & Classification	Reconnaissance, land use, land classification assessment, slope, soil types and classification, erosion	Secondary data, soil sampling and testing, review of geological reports and maps, soil site assessment
Terrestrial Biology – Wildlife and Vegetation	Plain description of the project site because of absence of flora and fauna environment	Plain description of the project site because of absence of flora and fauna environment
Water		
Hydrology/Hydrogeology	Regional hydrogeology, catchment and drainage system	Spring and well inventory, use of secondary data, water balance analysis, and groundwater recharge and production analysis, interviews
Water Quality	Physico-chemical and bacteriological characteristics of rivers	Water sampling and laboratory analysis; use of secondary data
Freshwater Ecology		
Air		
Air Quality	Ambient air quality and noise levels	Sampling and laboratory analysis
Meteorology/Climatology	Monthly average rainfall, climatological normal and extremes, wind rose diagrams, and frequency of tropical cyclones	Use and review of secondary data
Air Dispersion Modeling	Worst case scenario identification, use of meteorological data	Use of AUSPLUME Model
Climate Change		
Temperature change	Seasonal Temperature increase (in °C) in 2020 and 2050 under medium range emission scenario in Cebu Province Monthly Average Temperature without Climate Change Monthly Average Temperature with Climate Change (2006-2035)	Effects of Temperature Increase in the Project
Rainfall change	Seasonal rainfall change (in %) in 2020 and 2050 under medium range emission scenario in Cebu Province	Effects of change in rainfall pattern to the grinding plant project

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology
	Monthly Average Rainfall without Climate Change (1980-2010) Monthly Average Rainfall with Climate Change (2006-2035) Monthly Average Rainfall with Climate Change (2006-2065)	
Greenhouse Gas Assessment	CO ₂ , CH ₄ , and N ₂ O Emissions based on IPCC 2006 Guidelines and USEPA Procedure	CO ₂ emission released from the exhaust tailpipe of trucks, heavy equipment, and other vehicles during operation
People		
Public health and Demography	Morbidity and mortality trends, Demographic data of impact area: <ul style="list-style-type: none"> • Number of households and household size • Land area • Population • Population density /growth • gender and age profile • literacy rate • profile of educational attainment 	Interviews with key elected officials of the barangays (from barangay captains to councilors and the social welfare barangay officers/ barangay health workers); analysis of secondary health data; Use of secondary data from RHU and PSA; Interviews with the locals; household-level survey
Socio-economics	Socioeconomic data: Main sources of Income, Employment rate/ profile, sources of livelihood, Poverty incidence, commercial establishments and activities, banking and financial institutions	Perception surveys, Interviews with municipal and barangay officials; analysis of secondary data; analysis of survey results
Environmental Risk Assessment		
Risk Assessment	Safety risks and physical risks	Consequence and Frequency analyses to be undertaken using the methodology described in the Revised Procedural Manual for DAO 2003-30

Public Participation Activities

Pursuant to DAO 2003-30, MC 2010-14, and DAO 2017-15, RCBM has conducted a series of public participation activities through pre-scoping, Information, Education and Communication (IEC), public public scoping, and formal and informal discussions with the Barangay and Municipal Officials and residents of in Danao City and the municipality of Carmen from 2014 to present regarding the project.

Information, Education and Communication

The IEC activities presented in **Table ES-3** were conducted to provide updated information about the proposed project and encourage the concerned stakeholders to participate in the EIA process. IEC documents such as attendance, issues raised, and photos taken during the IEC are presented in **Annex ES-3**. **Table ES-4** presents the Summary of Issues and Concerns raised during the IECs Conducted.

The IEC Activities conducted were the following:

- Courtesy Calls and Consultations;
- Barangay Assembly
- Postings of Announcement in conspicuous areas

The content of the IEC Discussions and material were on the following:

- Company Introduction
- Project Concept



ENVIRONMENTAL PERFORMANCE REPORT AND MANAGEMENT PLAN (EPRMP)

Cement Finish Mill and Quarry

Republic Cement & Building Materials, Inc.

Brgys. Dunggoan, Cagat, Sandayong Norte, Binaliw and Malapoc in Danao City
Brgys. Triumfo, Hagnaya, Dawis Norte, Dawis Sur, Baring, Ipil and Corte in Carmen Municipality

Province of Cebu

- Health, Safety & Environment
- Benefits to Host Communities

Table ES-3: IEC Conducted for the Proposed Project

Date/Time	Venue
November 3, 2019, 10:00 AM	Barangay Hall of Barangay Cagat, Danao City
November 3, 2019, 10:00 AM	Barangay Hall of Barangay Cambanay, Danao City

Table ES-4: Summary of Issues and Concerns Raised during the IECs Conducted

Issue/Concern	Proponent's Response during the IEC
Kung ma-approve and proposed project sa planta ug mosugod na ang quarry sa among barangay kung mahimo ayohon una ang dalan kay ang dalan sa barangay dili intended para sa heavy equipment or vehicle.	
Pwede po ba mi makapangayo ug multicab o dump truck para sa among basura?	Sa akong gi-share kaninyo, ang pagprovide ug multicab apil sa social development and mgt program alang sa brgy nga aduna kami operation. Kung panangutan nga madayon atong project diri sa brgy, aduna kitay SDMP ug kamo ang mag-identify sa priority nga project nga maapil nini

Perception Survey

The perception survey was conducted in May 2014 and on February 5-12, 2020, as presented in **Table ES-5**. A total of 2,775 households were randomly interviewed and surveyed.

Table ES-5: Details of Sample Size

City/Municipality	Barangay	Sample size	Date of Survey
Danao	Sandayong Norte	306	February 5 to 12, 2020
	Cagat	295	
	Cambanay	344	
	Dunggoan	534	May 2014
	Binaliw	331	
	SUBTOTAL	1,810	
Carmen	Dawis Sur	323	February 5 to 12, 2020
	Triumfo	319	
	Hagnaya	323	
	SUBTOTAL	965	
OVERALL TOTAL		2,775	

Public Scoping

Two Public Scoping sessions were conducted. The first Public Scoping was conducted on January 23, 2014, 08:00AM in El Salvador Resort by Lafarge Republic, Inc. (former name of RCBM) and the second one was on November 15, 2019, 09:30AM in Carmen Activity Center, Nautical Highway, Carmen, Cebu. The first Public Scoping has a total of 28 attendees while 41 for the second Public Scoping. Provided in **Table ES-6** and **Table ES-7** are the summary of issues and concerns raised during the public scoping sessions. Details of Public Participation are presented in **Annex ES-3**.



ENVIRONMENTAL PERFORMANCE REPORT AND MANAGEMENT PLAN (EPRMP)

Cement Finish Mill and Quarry

Republic Cement & Building Materials, Inc.

Brgys. Dunggoan, Cagat, Sandayong Norte, Binaliw and Malapoc in Danao City
Brgys. Triumfo, Hagnaya, Dawis Norte, Dawis Sur, Baring, Ipil and Corte in Carmen Municipality

Province of Cebu

Table ES6: Summary of Issues and Concerns during Public Scoping Conducted by Lafarge Republic, Inc. on January 23, 2014

Issue/Concern	Proponent's Response during the Public Scoping
Dust during loading	LRI will conduct briefing with operators of payloaders; implementation of conveying system is also an option that LRI will implement
Clinker spillages during delivery from Wharf to plant	LRI will meet with hauler contractors; LRI will also look at possible assignment of street sweepers; water sprinkling during hauling will also be looked at as alternative option of dust/spillage mitigation
Efficiency of Dust Collection	Efficiency is built-in in the automated system; LRI invites the participants for a plant visit to see and understand the process
Copy of minutes and presentation to the LGU	To be provided next week
How fast can conveying system be implemented?	Schedule is still being finalized by LRI.
Feedback mechanism; provide hotline numbers of mobile numbers to report violations or alleged violations of contractors especially the haulers;	Suggestion noted and LRI to invite brgy officials during briefings with contractors in February to discuss concerns
Tree Planting in 44 hectares lacks protection of trees to grow and sustainable forest protection	LRI planted a total of 800 ha all over the Philippines; LRI has signed a MOA with DENR, Toledo, etc. on Tree growing; Annex B of the MOA was presented (attached in this ppt); meeting with parties involved to come up with plan on how to protect the forest after turn-over.
Illegal Tree Cutting	LRI will conduct information drive and Brgy. Dunggoan to pass a resolution regarding imposition of penalties to punish illegal tree cutting; cutting not allowed for regulated species (PENRO)
Livelihood and employment to avoid illegal tree cutting	LRI requested for the coordination of the Brgy.
Was MMT formed?	MMT was formed but did not officially convene. It is being revived.
Social Development for housewives	Programs to be proposed should be in coordination and aligned with Brgy. Dunggoan; accredit the NGO with the City and submit programs with the Barangay
Join the Brgy. Session schedule (every Thursday) to discuss the proposed SDP	LRI suggested for DACODEP to submit project feasibility and discuss with the barangay

Table ES7: Summary of Issues and Concerns during Public Scoping (25 November 2019)

Issue/Concern	Proponent's Response during the Public Scoping
Is road spraying not affecting or destroying the road	The Proponent responded that in order not to affect the quality of the road, water spraying should be done during cold time of the day like early morning or late afternoon.
How is Republic's pollution control system at the Plant	The Proponent responded that since dust is the main impact, Republic has installed 11 dust collectors. To date, test results based on quarterly monitoring is compliant with DENR Standards as per RA 8749.
Is there burning involved in processing Limestone?	The Proponent responded that limestone is used as an additive to reduce clinker requirement.
Program for Senior Citizens	The Proponent responded that medical missions are currently conducted annually and most of the beneficiaries are Senior Citizens. Republic also provides medicines for hypertension. RCBM may consider continuously providing other program in the future intended for the Senior Citizens.
What is the assurance that quarry operations will not cause landslides	The Proponent responded that this concern will be covered by the geology and geohazard identification that will be conducted by the EIA Group's Geology Team.

Issue/Concern	Proponent's Response during the Public Scoping
Do you conduct water spraying?	The Proponent responded that controlled water spraying is one of the control measures in mitigating the road dust during raw material hauling.
How much is the increase in production	The Proponent responded that the proposed project capacity for cement production is 1,200,000 metric tons per year and the extraction/quarry capacity is 500,000 metric tons per year of limestone and 150,000 tons of shale and other siliceous materials.
How often will medical mission be implemented? Is hiring will also be considered for Carmen?	The Proponent responded that annually Republic Cement conducted medical mission. Currently, 80% of the manpower employed in Republic Cement are from Danao City and Carmen. In every job opportunities, residents from Danao and Carmen are given utmost priority.
Membership to MMT; Inclusion of Dawis Sur to MMT	The Proponent responded that the exiting MMT Membership was previously assigned by EMB and MGB. Once the ECC amendment is issued, Dawis Sur will definitely be a member being a host community.
Provision of MRF / shredder	The Proponent noted this request.

Review of Secondary Data

Socio-demographic and economic data were procured from pertinent documents from respective government institutions such as Municipal, City and Provincial LGUs, as well as online sources for background information. All sources were exhausted in the study.

C. EIA SUMMARY

Summary of Alternatives

There were no alternative site and technology considered for the project because the Cement Finish Mill Plant and Quarry Operations Project of RCBM in Barangay Dunggoan, Danao City, Cebu is already operational. Also, no other technology option, project operation and resources were considered because the Plant will use the existing equipment available and already installed at the Plant.

With this, there will be no more comparison of environmental impacts for each alternative since alternative itself is nil.

No Project Option

If the proposed project will not materialize, employment opportunities and social development such as livelihood projects, skills training, scholarship programs and medical assistance for the residents will not be realized. Also, the prospective LGU increase in revenue, multiplier effect of the project such as business opportunities, support to basic services like infrastructure and medical assistance and other opportunities for the community and LGU will likely lose when the project is not pursued.

The possibility of expanding and upgrading LGU's basic infrastructure services and facilities and strengthening of LGU's capacity in local governance, investment planning, revenue generation and project development and implementation will not also be realized. This may also include possibility of enhancing their capabilities for local leadership because the project may provide technical support and assistance to local leaders to training, seminars and workshops. All of these may be provided by the project thru its tax payments, permits and clearances and social development programs.

Another opportunity that the local government and the community may miss if the project will not be realized is the possibility of constructing additional infrastructure projects like roads and bridges, increasing school classrooms and improving school facilities and medical assistance such as provision of medicines, medical supplies and medical missions.



ENVIRONMENTAL PERFORMANCE REPORT AND MANAGEMENT PLAN (EPRMP)

Cement Finish Mill and Quarry

Republic Cement & Building Materials, Inc.

Brgys. Dunggoan, Cagat, Sandayong Norte, Binaliw and Malapoc in Danao City
Brgys. Triumfo, Hagnaya, Dawis Norte, Dawis Sur, Baring, Ipil and Corte in Carmen Municipality

Province of Cebu

Summary of Existing Environmental Conditions Including Notifiable Changes vis-à-vis the Previous Baseline Conditions during the Previous EIA

In summary, the main impact for this project is the generation of dust by the cement plant and the generation of dust and noise by the quarry activities as well as movement of raw materials which can be mitigated as regularly practiced by RCBM. More importantly, among the main impacts of the project is the positive impact of community benefits under the SDMP, environmental protection under the EPEP and progressive rehabilitation under the FMRDP which are all religiously being implemented by RCBM.

Among the risks of the project is air emissions but this is continuously being mitigated using air pollution control devices such as bag filters as dust mitigation measure.

Table ES-8 presents the summary of key environmental impacts of the project and the corresponding management plan and mitigating measures.

Table ES-8: Summary of Environmental Management Plan

Activity	Impact	Mitigating Measure	Efficiency Of Measures
Site Preparation			
Vegetation clearing	Reduction of vegetation, fauna disturbance and/or displacement	<ul style="list-style-type: none"> Limit site preparation within an area required by MGB to be open at one given time and keep to a minimum vegetation removal ensuring that only necessary/planned clearings are undertaken 	100% replacement of removed vegetation with same species
		<ul style="list-style-type: none"> Replace with the same species of seedlings, tree and other plant species that are removed during site preparation and development 	
	Potential siltation of nearby bodies of water due to surface water run-off	<ul style="list-style-type: none"> Provision of temporary bunds around the stockpiles of overburden wastes and drainage systems to convey the storm run-off to siltation ponds. Zero discharge of silt ponds. 	100% conveyance of run-off water to siltation ponds
	Generation of dust from site/access road preparation	<ul style="list-style-type: none"> Sprinkling of water at least once a day along the access road and project area 	100% no generation of dust/compliance of TSP level
Quarry Operation			
Extraction and hauling of materials (Silica)	Siltation to streams due to erosion of exposed soil and Overburden materials	<ul style="list-style-type: none"> Progressive rehabilitation and revegetation of mined out quarries and planting barren lots, with at least 200 endemic trees per year to prevent soil erosion. 	100% No generation of silt
Crushing (sizing and sorting)		<ul style="list-style-type: none"> Utilize the recovered topsoil for re-soiling or as soil cover on waste dumps and other disturbed areas for rehabilitation and revegetation. All stockpiles shall be maintained and managed below the angle of repose of 45% 	No. sediments to streams and 100% compliance with RA9275
Materials (Silica) Transport		<ul style="list-style-type: none"> Continue to implement sediment and erosion control plan 	
	<ul style="list-style-type: none"> Proper drainage design at the bench toes and access roads, to control the 		

		<p>flow of run –off water, and divert it to series of 3 stage siltation ponds</p> <ul style="list-style-type: none"> • Rainwater and runoff collecting systems from crusher platform shall be provided with primary and secondary silt traps 	
	Generation domestic wastewater that may contaminate the soil and receiving body of water	<ul style="list-style-type: none"> • Provision of portalets (Note: at least one (1) portalet for 10 workers) with appropriate septic tanks for the workers. Wastes shall be collected by 3rd party hauler with valid permits/clearances 	100% collection of wastewater
	Generation of solid wastes	<ul style="list-style-type: none"> • Proper management of domestic solid i.e. provision of Material Recovery Facility for proper waste management (segregation, collection, minimization, reuse, recycle, treatment and disposal 	100% compliance to RA9003
	Generation of hazardous wastes from waste oil/grease and spills from the heavy equipment and vehicles	<ul style="list-style-type: none"> • Provision of 2,000 liter storage capacity provided with bund wall • Regular (2x a year) hauling of hazardous waste by DENR accredited transporter and treater 	100% no oil spills and compliance to RA6969
	Generation of fugitive dust during the quarrying activities	<ul style="list-style-type: none"> • Regular water spraying of exposed dusty areas during high winds, and dry months. • Establishment 20-meter wide buffer zone of different species combination of plants including shrubs, small and medium sized trees should be established around the quarry sites, to contain dust 	100% no dust be seen in the area
	Generation of noise from the quarrying activities	<ul style="list-style-type: none"> • Implement regular preventive maintenance to all vehicles/equipment and install mufflers 	100% compliance to noise standards
	Fugitive particulate pollution	<ul style="list-style-type: none"> • Water spraying of transportation of tires of trucks before leaving the site • Utilize at least 1 water truck in water spraying unpaved haul roads for the whole 8 hours operation per day depending on weather condition • Strictly implement 30 kilometers per hour vehicle speed limits • Trucks loaded with ores will be covered to prevent fugitive dust 	100% No dust be seen during transport of materials
Cement Mill operations	Contamination and improper management of hazardous waste materials, e.g. transformer oil spill	<ul style="list-style-type: none"> • Provision of Hazardous Waste area with proper labeling, segregation and storage of wastes • Management of transformer oil to prevent spills. Storage rooms should have concrete containment. The transformer room/ area should also be 	100% Compliance to disposal of toxic and hazardous waste

		<p>designed to prevent accidental spills to contaminate soil in the area. The storage room also for used transformer oils should have containment - this is our Hazmat Storage Facility.</p> <ul style="list-style-type: none"> • Transport, treatment and disposal of DENR accredited third party contractors • Provision of secondary containment for oil drums & diesel fuel tanks • Provision of oil skimmer for mechanical clean up in case of accidental spillage • Proper labelling of oil drums & diesel tanks 	
	Possible increase in ambient concentration of PM10, CO2, CO, Sox and NOx	<ul style="list-style-type: none"> • Regular maintenance of equipment • Use of enclosures for equipment • Quarterly monitoring of the ambient air to ensure the project's operation is compliant with the Clean Air Act 	100% Compliance to the standards of the Clean Air Act
	Degradation of air quality due to fugitive dusts from equipment and vehicles	<ul style="list-style-type: none"> • Strict implementation of speed limits in vehicles • Proper maintenance of equipment • Designation of no idling zone • Strict implementation of routine plant maintenance and good house keeping • Regular wet suppression or water spraying during dry weather condition of the access road • Regular maintenance of trucks to reduce or maintain tailpipe emissions 	100% Compliance to the standards of the Clean Air Act
	Indoor Dust Pollution	<ul style="list-style-type: none"> • Provision of Control Ducting Facility to minimize fugitive dusts outside the building of cement mill operation 	100% Compliance to the standards of the Clean Air Act
	Generation of Air Pollution from all sources	<ul style="list-style-type: none"> • Regular annual stack test monitoring 	100% Compliance to the standards of the Clean Air Act
	Noise from equipment and vehicles	<ul style="list-style-type: none"> • Maintain appropriate measures and buffer zones along the entire periphery of the industrial complex with appropriate species/dense vegetation cover to enhance the condition of the ecosystem and to serve as noise, vibration and dust buffers; • Enclosure of facility • Defective equipment/parts with abnormal noise and/or vibration will be either repaired replaced; • All employees working on site will be provided with proper PPE especially ear protectors 	100% Compliance to DENR Noise Standards

		<ul style="list-style-type: none"> The Contractor shall at all times comply with all current statutory environmental legislation especially on noise. 	
	Health and safety hazards	<ul style="list-style-type: none"> Strict implementation of Health and Safety Policies at the Plant Regular conduct of employee safety inspections and toolbox meetings Regular APE and strict implementation on the use of PPEs Regular conduct of First Aid Training Provision of Fire Fighting System 	100% Compliance to health and safety rules
	Traffic due to increase in number of trucks	<ul style="list-style-type: none"> Allocation of open yards and spaces for stationing of the trucks and provide ample parking spaces Adequate signages and proper scheduled hours for the truck and vehicles coming in and out Assign traffic personnel to manage the traffic 	100% Compliance to traffic rules and non-contribution to worst traffic situation

Status of EMF & EGF / CLRF implementation

For resource extractive projects where this project of RCBM falls, a financial mechanism called Contingent Liability and Rehabilitation Fund (CLRF) is established in lieu of the EMF and EGF. The CLRF is an environmental guarantee fund mechanism that ensures the just and timely compensation for damages and progressive and suitable rehabilitation for any adverse effect a mining operation or activity may cause. This fund is further broken down as follows:

- Environmental Trust Fund (ETF) which is divided into Rehabilitation Cash Fund (RCF) and Monitoring Trust Fund (MTF);
- Mine Rehabilitation Fund (MRF);
- Mine Waste Tailings Reserve Fund (MWTRF); and
- Final Mine Rehabilitation and Decommissioning Fund (FMRDF).

As per the Bank Account of RCBM as of 11/23/2020, follow are the funds' balance:

Run Date: 12-02-2020
Run Time: 11:47:28



TRUST SYSTEM
OUTSTANDING BALANCE OF INVESTMENT
As of November 30, 2020

CBN NUMBER 012546

T.O. In No.	Value Date	Cash Out	Gross Rate	Net of Tax	Coupon Rate	Full Term	Maturity Date	Sec Type	Face Value	Maturity Value	Maturity Value Net of Trust Fees
016-24 -012546 - RCBMI DANA0 (FMRDF)											
00144082	11/23/20	1,070,931.74	1.350000%	1.080000%	0.000000%	60	01/22/21	SSA	1,070,931.74	1,072,859.42	1,071,966.98
TOTAL		<u>1,070,931.74</u>							<u>1,070,931.74</u>	<u>1,072,859.42</u>	<u>1,071,966.98</u>