

ENVIRONMENTAL IMPACT ASSESSMENT SUMMARY FOR THE PUBLIC (ENGLISH)

Proposed Santa Cruz Cement Grinding Facility

Barangay Darong, Santa Cruz, Davao del Sur

Submitted by:

Oro Cemento Industries Corporation

Submitted to:

Environmental Management Bureau – Central Office

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EXECUTIVE SUMMARY

1.0 Project Description

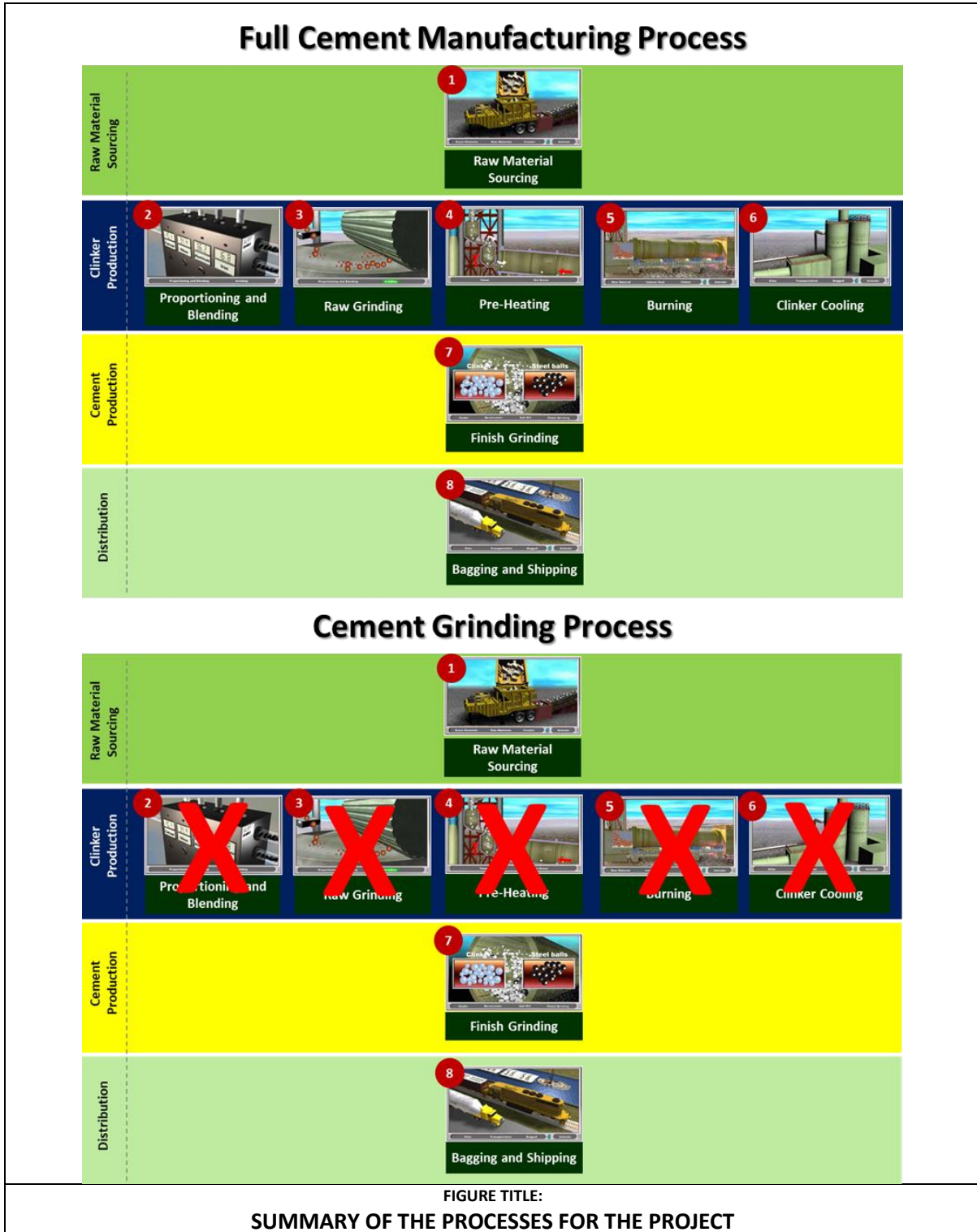
Name of Project	Santa Cruz Cement Grinding Facility	
Project Location	Province of Davao del Sur, Municipality of Sta. Cruz, Barangay Darong	
Nature of Project	<ul style="list-style-type: none"> ▪ Cement (Clinker) Grinding Process 	
Project Size	2.0 Million Metric Tons per Year (MMTPY) of Cement/40,000,000 Cement Bags	
Summary of Major Project Components	PROJECT COMPONENT	DESCRIPTION/SPECIFICATIONS
	Raw Materials Storage	Longitudinal storage with 50,000 MT capacity and with mechanical reclaimers
	Clinker Storage	6 x 10,000 tons capacity
	Dosing Silos	6 x silos with various sizes, with weigh feeders
	Cement Mill	1 x 250 TPH Vertical Roller Mill
	Cement Storage	4 x 10,000 tons capacity
	Cement Packing and Dispatch	3 x 90 TPH Rotary Packing machine
	Water Source	2 Deepwell Pumps (capacity: 110 cu.m./day)
	Air Pollution Control	Bag Filters
	Wastewater Pollution Control	Septic Tanks Sewage Treatment Plant
	Pier Facility	Raw Material/Clinker Unloading & Conveyor
Resource Utilization	Water	<p>Water will be sourced from 2 deep wells to be installed within the project area. A water reservoir (elevated tank) will be constructed for water storage with a capacity of 150 cu. m. Everyday, 110 cu. m. will be consumed by the project based on the following uses: (a) 30 cu. m./day for industrial use, (b) 50 cu. m./day for gardening of green area, and (c) 30 cu. m./day for domestic use.</p> <p>There will be a separate storage tank for fire protection.</p> <p>For industrial use, the cement mill cooling system will use 8 cu. m./day and will be stored in a siltation pond for re-use. Evaporation rate is estimated at 2 cu. m./day. Dust suppression (including road watering) will utilize 20 cu. m./day.</p> <p>For domestic use, approx. 30 cu. m./day of water will be utilized. 5 cu. m./day will be consumed, while 25 cu. m./day will be domestic waste water. The waste water will be treated in the sewage treatment plant and will eventually be discharged in the storm drainage (25 cu. m./day).</p>
	Power	During operation, the facility is expected to consume about 12 Megawatt (MW) of electricity to be supplied by the National Grid Corporation of the Philippines (NGCP) and/or Davao del Sur Electric Cooperative, Inc. (DASURECO).
Project Alternative	ALTERNATIVES	ANTICIPATED ENVIRONMENTAL IMPACTS
	Full Cement Plant	<ul style="list-style-type: none"> • Land: Site preparation and earthworks for a wider tract of land may entail considerable changes in the surface landform/terrain/slope and threat to terrestrial ecology due to vegetation removal and loss of habitat. Solid waste generation may be higher due to use of more resources and employment of more personnel. • Water: Construction and operation of larger facilities may have higher water supply requirement that may, in turn, result to competition in water use and higher wastewater generation.

		<ul style="list-style-type: none"> • Air: Dust emissions from the cement processing may also adversely affect ambient air quality in the project area if not properly mitigated. • People: Local benefits from the large-scale project (i.e., increased employment, social and economic activities, tax revenues, and basic social services) may be greater. However, dust generated from the cement plant may cause adverse health effects to the community and workers if not properly mitigated.
	Cement Grinding Facility	<ul style="list-style-type: none"> • Land: Minimal site preparation and earthworks may cause minor changes in the surface landform/terrain/slope and threat to terrestrial ecology. Solid waste generation may be low due to lower resource use and manpower requirement. • Water: Water supply requirement is limited and may pose little competition in water use. Wastewater generation is expected to be low. • Air: Dust emissions may also adversely affect ambient air quality in the project area if not properly mitigated. • People: Local benefits from the project include increased employment, social and economic activities, tax revenues, and basic social services. However, dust generated from the grinding plant may also cause adverse health effects to the community and workers if not properly mitigated.
	No-Project Scenario	<ul style="list-style-type: none"> • Land: The land use in the area will still be allotted for industrial use, according to the present Comprehensive Land Use Plan of Sta. Cruz. • Air: Current ambient condition will remain to be affected by the soon-to-be operated feed mill facility. Low levels of air pollutants such as SO₂, NO_x, CO, and TSP will still be experienced; changes in the micro-climate will be minimal in the absence of the proposed project. • Water: High levels of fecal coliform will still be observed in Davao Gulf, while elevated levels of fecal coliform will remain in the groundwater. • People: The no-project scenario entails loss of local employment and service opportunities. If the project is not pursued, the supply of cement will be affected, especially with the Duterte Administration's push for infrastructure development under the "Build, Build, Build" program.
Project Cost	Php 2,000,000,000.00 (2 Billion Pesos)	
Construction Period	2019	
Commercial Operation Date	2020	

2.0 Major Components of the Project

PROJECT COMPONENT	DESCRIPTION/SPECIFICATIONS
Raw Materials Storage	Longitudinal storage with 50,000 MT capacity and with mechanical reclaimer
Clinker Storage	6 x 10,000 tons capacity
Dosing Silos	6 x silos with various sizes, with weigh feeders
Cement Mill	1 x 250 TPH Vertical Roller Mill
Cement Storage	4 x 10,000 tons capacity
Cement Packing and Dispatch	3 x 90 TPH Rotary Packing machine
Water Source	2 Deepwell Pumps (capacity: 110 cu.m./day)
Air Pollution Control	Bag Filters
Wastewater Pollution Control	Septic Tanks Sewage Treatment Plant
Pier Facility	Raw Material/Clinker Unloading & Conveyor
Support Facilities	<ul style="list-style-type: none"> • Warehouses • Administration Building and Staff House • Parking and Truck Marshalling Area • Water and Wastewater Treatment Facilities • Clinic • Power Substation

3.0 Process/Technology



4.0 Summary of Major Impacts and Residual Effects After Mitigation

POTENTIAL IMPACTS	PROJECT PHASES	MITIGATING MEASURES	RESIDUAL IMPACTS
LAND			
Solid waste is expected to be produced	Construction, Operation, Abandonment	Implementation of a solid waste management plan	Residual waste will be hauled off by accredited off-takers. Wastes will not be stocked in the area.
There may be some soil erosion due to the earth movement during the site development	Construction	Limitation of earth movement to areas where site development is necessary	There will be no soil movement outside the plant site to be developed
There is a risk of soil contamination due to the maintenance of heavy equipment	Construction, Operation, Abandonment	Use sawdust, rice hulls, or coir dusts to absorb the oil spills	Contamination of land due to oil spills will be minimized with the use of absorptive materials
WATER			
Pier construction may affect water circulation in the coastal area	Construction/ Operation	Construction of pier on piles/pillars to allow unobstructed flow of currents	There will be minimal obstruction of currents due to pillars
Accidental oil spills from heavy equipment and delivery trucks	Construction/ Operation	Use sawdust, rice hulls, or coir dusts to absorb the oil spills Maintain canal in the maintenance and repair area of vehicles and equipment	Concentration of oil & grease in the receiving body of water should comply with appropriate standards
Ground and coastal water contamination from improper disposal of wastes, percolated wastewater, sludge and fecal matter	Construction/ Operation	Provision of sanitation facilities for workers (e.g. toilets, showers, etc.)	Concentration of fecal coliform in the receiving body of water should comply with appropriate standards
Possible siltation and surface runoff Increase in turbidity of coastal water due to spillage of building materials for pier facility and debris	Construction	Establishment of sediment traps and erosion barriers Regular removal of silt and sediments.	While siltation may still be present, this impact is expected to be minimized by erosion barriers and sediment traps.
Runoff from plant and pier operations Possible spillage of raw materials from pier	Operation	Installation and maintenance of drainage system within the plant and the pier Coastal water monitoring Oil spill contingency plan	Some runoff can still be expected, but will be greatly minimized

POTENTIAL IMPACTS	PROJECT PHASES	MITIGATING MEASURES	RESIDUAL IMPACTS
Accidental oil spill from ship			
Possible siltation that may disturb nearby reefs	Construction	Installation of silt curtain.	Disturbance of the reef shall be minimized
AIR			
AMBIENT AIR QUALITY AND NOISE			
NO _x , SO ₂ , and CO emissions from heavy equipment that will be used during construction	Construction	Proper maintenance on heavy equipment	Gaseous emissions in the area should be compliant with appropriate standards
TSP and PM ₁₀ emissions from the cement grinding facility is of primary concern.	Operation	Installation of bag filters that will control at least 90% of the emissions from the cement grinding facility Road watering within the plant site to control dust	Fugitive dust, while still prevalent, will significantly be less.
Noise will be generated by heavy equipment during construction The cement grinding facility will generate some noise	Construction/ Operation	Maintenance of engines and other mechanical parts of the equipment Installation of exhaust mufflers Constructing enclosures surrounding the project site Maintenance of vegetation surrounding the area to serve as natural noise barriers.	Noise from the facility will still be emitted.
PEOPLE			
Dust may cause negative health effects (i.e., respiratory) to the community and workers if not properly mitigated Crime incidence may also increase in the local community	Construction Operation	Conduct of medical missions and regular check-ups to workers and host barangay Coordination with Municipal Health Officer (MHO) and barangay health units to address health-related needs of the community Coordination with barangay officials to ensure peace and order among workers and community members	Health effects of the proposed project can be monitored. Health of the community can improve because of the medical missions and regular check-ups.
Generation of additional source of income and livelihood	Operation	Implementation of social development programs	The community will reap the benefits of the project through social development

POTENTIAL IMPACTS	PROJECT PHASES	MITIGATING MEASURES	RESIDUAL IMPACTS
Additional revenue for the local government Increased basic social services Addition and improvement of local residential dwelling		that are responsive to local needs in the impact area	programs and corporate social responsibility projects.
Increase in traffic generation in the area due to delivery trucks coming in and out of the Plant	Construction Operation	Coordination with LGU on scheduling and handling the flow of traffic near the project area Provision of private road with interface to the National Road	The project may still generate traffic on the National Road only.

5.0 Identified Stakeholders

Stakeholders	Name
Local Government Unit	Municipality of Sta. Cruz ▪ Municipal Planning and Development Office ▪ Municipal Engineer's Office (MEO) ▪ Municipal Environment and Natural Resources Office (MENRO) ▪ Municipal Health Office (MHO)/Rural Health Unit (RHU) Barangay Darong (Direct Impact Area)
Sector Representatives within Barangay Darong	BREAD-MPC KABABAIHAN BFARC Darong Senior Citizen Association Darong Elementary School

6.0 Statement of Commitment and Capability to Implement Necessary Measures to Prevent Negative Impacts

The institutional organization of **Oro Cemento Industries Corporation** for the proposed Cement Grinding Facility Project is shown in the figure below. The organization is formed to achieve the following:

- Economical and safety operations and maintenance of the proposed cement grinding facility components;
- Implementation of the company policies;
- Environmental compliance and sustainability; and
- Promotion and enhancement of the social acceptability of the proposed project.

The institutional organization will involve **Oro Cemento Industries Corporation's** top-level management, who is responsible for providing the corporate direction and policies of the company. The policies shall then be disseminated to the cement grinding department heads and managers for

implementation of the company personnel, including those who will be working on the operations of the proposed project.

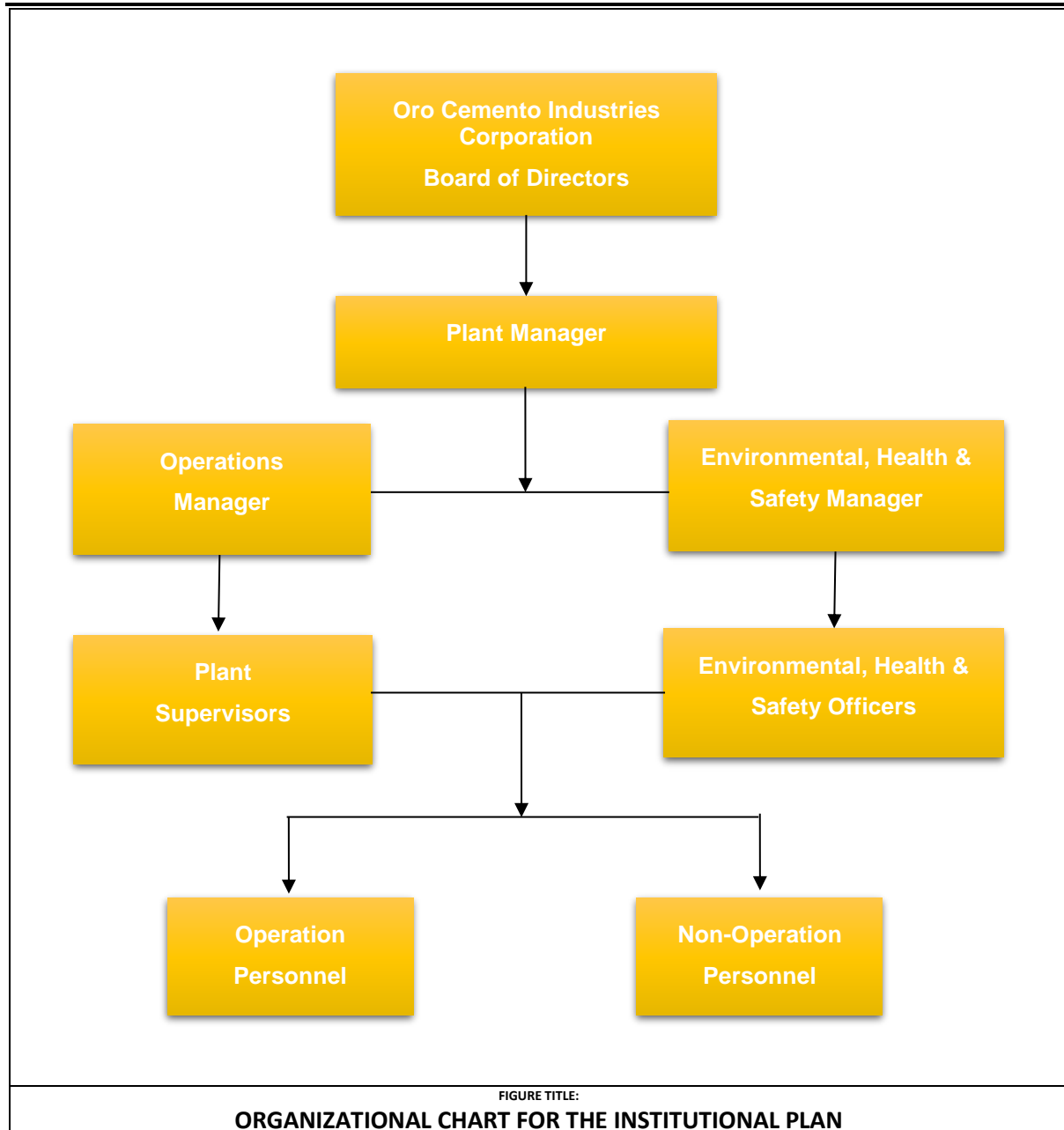
Oro Cemento Industries Corporation will also establish a partnership with relevant government agencies, various stakeholders, and local host communities in relation to the project. This partnership is necessary to maintain a transparent and positive relationship for the proposed project and its stakeholders, as well as to ensure that the environmental protection and enhancement measures are complied with.

The key stakeholders of the proposed project will be identified as the following:

- Municipality of Sta. Cruz, Davao del Sur;
- Brgy. Darong;
- Residents and community organizations that will be affected by the proposed project;
- Various industry organizations;
- Local peace-and-order councils (i.e., PNP, Barangay Police); and
- Other concerned non-government organizations.

Oro Cemento Industries Corporation commits to:

- Comply with the conditions that will be stipulated in the ECC and other related environmental laws;
- Foster mutually beneficial partnership and cooperation with the host community;
- Promote sustainable use and responsible development of resources by adopting appropriate technologies;
- Develop livelihood programs and upgrade skills of host community to contribute and enhance the quality of life; and
- Develop training programs for its employees to ensure that they will be continually prepared for the tasks assigned to them.



7.0 Proponent and Preparer Details

Proponent Name	Oro Cemento Industries Corporation
Proponent Authorized Representative	Mr. Ferdinand K. Constantino President/Director
Proponent Address and Contact Details	Oro Cemento Industries Corporation SMC Head Office Complex San Miguel Avenue, Mandaluyong City 1603 Metro Manila, Philippines
EIS Preparer (Consultant)	LCI Envi Corporation
Preparer Contact Person	Engr. Jose Marie U. Lim, MSc. Managing Director
Preparer Address and Contact Details	LCI Envi Corporation Unit 8LM Future Point Plaza 3 111 Panay Avenue, South Triangle Quezon City, NCR, The Philippines, 1103 Telephone no.: (+632) 442-2830 Fax No.: (+632) 961-9226