PANGKALAHATANG BUOD

A. IMPORMASYON TUNGKOL SA PANUKALANG PROYEKTO

<table>
<tr><td>Pangalan ng Proyekto</td><td>Davao Mill Expansion with Scrap Recycling Project</td></tr>
<tr><td>Lugar kung nasaan ang Proyekto</td><td>Barangay Mahayag, Bunawan District, Davao City</td></tr>
<tr><td>Uri ng Proyekto</td><td>Iron and Steel Manufacturing</td></tr>
<tr><td>Sukat ng Proyekto</td><td>Ang Proyekto ay nasa loob ng 13.3575 ektaryang Planta ng rolling mill at dagdag na lugar na may sukat na 15.3808 ektarya para sa scrap recycling facility. Lahat ng mga lugar na ito ay nasa Brgy. Mahayag, Bunawan District, Davao City.</td></tr>
<tr><td>Kapasidad</td><td>
<table>
<tr><th rowspan="2">Pasilidad</th><th colspan="3">Kapasidad (metriko tonelada kada taon)</th></tr>
<tr><th>Existing</th><th>Proposed Expansion</th><th>Total</th></tr>
<tr><td>Rebar Rolling Mill</td><td>400,000</td><td>200,000</td><td>600,000</td></tr>
<tr><td>Scrap Recycling/Melt Shop</td><td>-</td><td>500,000</td><td>500,000</td></tr>
</table>
</td></tr>
<tr><td>Project Description</td><td>Ang Proyektong ito ay ekspansyon ng kasalukuyang rolling steel mill ng NCMI upang maglagay ng makabagong scrap recycling facility na gagawang mga billets na magiging materyales naman ng kasuluyang rolling mill plant.

Ang Planta ng rolling mill ay mayroon ng ECC number CO-1111-0019 na iginawad noong November 28, 2011. Ito ang aamiyendahan upang isama ang mga sumusunod na components:
Dagdagan ang kapasidad ng rolling mill mula 400,000 MTPY to 600,000 MTPY
Maglagay ng scrap recycling facility na may kapasidad na 500,000 MTPY
Isama/iconsolidate sa main ECC ang kasalukuyang fabrication operations na pinayagan na ng EMB</td></tr>
<tr><td>Rationale</td><td>Ang industriya ng bakal sa Pilipinas ay isa sa pinaka-importanteng growth industries. Ito ay isang importanteng sangkap ng pagnanais ng ating bansa na maabot ang development at industrialization. Kaakibat nito ang paglikha ng mga industriyang nakadugtong dito gaya ng building and construction, automotive, shipbuilding and repair, electronics, packaging, etc. at ito ay may kahalintulad na kontribusyon sa employment generation, growth, at promotion ng industrial activity. Dahil dito, ang paninigurado ng isang matibay na domestic steel and steel- based industry ay mahalaga sa pad-develop ng competitive edge ng ating bansa upang makamit ang challenges ng globalization. Dahil sa pag unlad ng infrastructure industry sa ating bansa kasabay ng mga pagawaing kaakibat ng rehabilitation sa iba't-ibang parte ng bansa, mas lalaki ang pangangailangan sa produktong kabilya o reinforcing steel bars.

Dagdag pa dito, ang proyekto ay itatayo dahil sa mga sumusunod na dahilan:
Karagdagang trabaho
Pangangalaga ng paglago ng local na ekonomiya
Paninigurado ng kalidad ng produkto</td></tr>
<tr><td>Project Components</td><td>
<table>
<tr><th>Component</th><th>Existing (covered by ECC CO-1111-0019)</th><th>Additional/ Expansion</th></tr>
<tr><td>Rolling Mill</td><td></td><td></td></tr>
<tr><td>Re-heating Furnace</td><td>70MT/hr</td><td>-</td></tr>
<tr><td>Twin Finishing Blocks</td><td>70MT/hr</td><td>-</td></tr>
<tr><td>Rolling Mill Stands</td><td>70MT/hr</td><td>-</td></tr>
<tr><td>QTB Water Quenching Line</td><td>450 m³/hr</td><td>-</td></tr>
<tr><td>Heavy Duty Stationary Shear</td><td>500 tons Cold Shear only</td><td>-</td></tr>
</table>
</td></tr>
</table>

Hydraulic Bundling Machines	70MT/hr	-
Cooling Bed	1 unit	-
Scrap Yard	-	20,000 m^2
Electric Arc Furnace	-	80 MT
Ladle Furnace	-	80 MT
Continuous Casting Machine	-	96 MT/hr
Overhead Cranes	-	150 tons / unit
	20 tons	-
	7.5 tons	-
Component	**Existing (covered by ECC CO-1111-0019)**	**Additional/ Expansion**
Overhead Cranes	10 tons	-
	15 tons	-
	40 tons	-
	50/15 tons	-
	50/20 tons	-
	30/10 tons	-
	5 tons	-
Auxiliary Facilities		
Truck Marshalling Area	2256 m^2	-
Mill Scale Storage Area	5000 MT	-
Electrical Power Substation	20 MVA Transformer 69kV/20 kV	To be change to 20 MVA 34.5 kV/20 kV
	-	80 MVA Transformer 138kV/34.5 kV For EAF & LF power supply
	-	40MVA Transformer, 138KV/34.5KV Common supply for EAF Auxiliaries and Rolling Mill
	-	50 MVA Transformer, 34.5KV/520V For EAF
		20 MVA Transformer 34.5 kV/291V for LF
Diesel Engine Generator Set	350kVA / 280KW	-
Raw Material Storage Facility	6,000 MT	-
Finished Product Storage Facility	52,500 MT	-
Materials Warehouse	762 m^2	Additional 3,000 m^2
Motor pool	-	1000 m^2
Water Refilling Station	-	3,000 gal/day
Truck Scale	80 MT	Add 2 truck scale
Administration Building (offices, conference room, QA Lab & storage rooms)	609 m^2.	-
Training Center	19.33 m^2	-

	Logistics Office	39.06 m^2	-
	Hazardous Waste Storage Facility	205 m^2	Additional 6,000 m^2
	Materials Recovery Facility	205 m^2	-
	Rainwater collection reservoir	5,000 m^3	-
	Generator Set/Emergency Power System	1MVA/800kW	Additional 1MVA/800kW for melt shop
	Compressed Air Station	-	5,000 m^3/h at 8 Bars
	Overhead Cranes	-	30 Tons (maximum)
	Semi- Gantry Cranes	-	20 tons under magnet
	Firefighting System		
	Fuel Storage		
	Pollution Control Devices		
	Meltshop Dedusting System	-	1,273,395 Nm^3/hr @ $\leq$ 10 mg/Nm^3 dust content at the Fume stack.
	Canopy Hood	930,000 Nm^3/hr	-
	Circulating Water Treatment Plant	7606.89 m^3	-
	Make-up Water System	7606.89 m^3	-
	Soft Water Cooling System	-	480 m^3/h
	Indirect Cooling Water System	260.55 m^3	-
	Direct Cooling Water System	1036.88 m^3	-
	Component	**Existing (covered by ECC CO-1111-0019)**	**Additional/ Expansion**
	Stack	70 m	-
	Septic Tank (admin building)	9.2 m^3	-
	Septic Tank (motor pool)	7.73 m^3	-
	Septic Tank (operations office & locker room)	34.18 m^3	-
	Septic Tank (PSA CR)	-	8.95 m^3
	Septic Tank (canteen)	9 m^3	-
	Water Supply (deep well 1)	beside clinic, 22.57 m^3	-
	Water Supply (deep well 2)	beside warehouse, 50.93 m^3/ tank	-
	Water Supply (deep well 3)	beside scale pit, 22.57 m^3	-
	Sludge Treatment System		
	Slag Treatment System		
Manpower	Tinatayang 300empleyado ang kakailanganin sa loob ng planta.		
Project Schedule	Kapaga nakuha na ang ECC, sisimulan na ang konstruksyon ng proyekto.		
Project/Investment Cost	PhP 4.32 billion		
Profile of the Proponent			
Name of Proponent	**New Carcar Manufacturing Inc.**		
Address	25th Floor Ore Central Building, 31st Street corner 9th Avenue Bonifacio Global City, Taguig City, Philippines 1634		
Authorized Signatory/ Representative	**Romeo R. Soliven** Vice President - Rolling Mill Operations		
Contact Details	Telephone No.: +63 2 858 0500 Mobile No.: 09175873348 Email address: rrsoliven@steelasia.com		
Profile of the Preparer			

EIA Preparer	**Mediatrix 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: mediatrixbusinessconsultancy@gmail.com

B. EIA PROCESS DOCUMENTATION

EIA Team

Ang EIA Study ay isinagawa ng multidisciplinary team ng mga professional experts ng Mediatrix Business Consultancy (Mediatrix), na may matatag na background sa larangan ng environmental assessments, kasama ang New Carcar Manufacturing Inc. (NCMI). Ang komposisyon ng EIA Team ay ipinakita sa **Table ES-1**. Ang sworn statements ng accountability ng NCMI at Mediatrix ay nasa **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	Air Module	IPCO-036
Hernani Bayani	Geology Module	IPCO-058
Benjamin Francisco	Freshwater Ecology	IPCO-038
Alexis Fernando	Research and Field Assignments	IPCO-034
Ria Caramoan	Water Module	IPCO-106
Juvinal Esteban	IEC and Community Relations	IPCO-091

EIA Schedule

Ang EIA Study ay sinimulan sa pamamagitan ng Information, Education at Communication (IEC) at Public Scoping. Ang Technical Scoping naman ay isinagawa noong April 12, 2019 kasama ang EMB at EIA Review Committee (EIARC) members at nagkaroon ng kasunduang listahan ng mga kailangang isama sa EIA. Dahil dito, nagkaroon ng collection ng primary at secondary data na pinroseso, inalisa, at na-evaluate para sa impact assessment at paggawa ng Environmental Management Plan (EMP) at Environmental Monitoring Plan (EMoP). Ang mga datos na ito ay isinulat sa EIA document na tinatawag na Environmental Performance Report and Management Plan (EPRMP) at ang final version nito ay isusumite sa EMB-Central Office for ECC application. Ang mga pangunahing activities na mga nagawa na upang makumpleto ang EIA ay nakalista sa Table ES-2.

Table ES-2: EIA Study Schedule

Activity	Date
IEC Activities	January 22, 2019
Public Scoping	September 14, 2017; March 12, 2019
Technical Scoping	April 12, 2019
Primary and Secondary Data Gathering	
Geology and Geological Hazards	June 25, 2019
Hydrology/Hydrogeology	
Pedology	December 2018

Activity	Date
Terrestrial Ecology	March 29 to April 01, 2019
Groundwater and Freshwater Quality	
Air Quality and Noise	October 2017 and January to March 2020
Perception Survey	February to July 2017
Preparation of EISR	January 2019 to March 2020
Submission of EISR to EMB	
First EIARC Meeting	
Public Hearing	

EIA Study Area

Ang sakop ng pag-aaral ng EIA ay ang 28.7383 has project site in Barangay Mahayag, Bunawan District in Davao City.

EIA Methodology

Alinsunod sa Department Administrative Order (DAO) No. 30 Series of 2003 ng Revised Procedural Manual of the Philippine EIS System (PEISS) at EMB Memorandum Circular 005 na may petsang Hulyo 7, 2014, ang proyekto ay nauri bilang Category A - Environmentally Critical Projects (ECPs) na nangangailangan ng EIA Report para sa aplikasyon ng Environmental Compliance Certificate (ECC).

Ang EIA ay alinsunod sa Revised Procedural Manual para sa DENR Administrative Order (DAO) 2003-30 at DAO 2017-15 sa pagsasagawa ng mga sumusunod na aktibidad, na: (i) IEC at Scoping, (ii) koleksyon ng pauna at pangalawang data, (iii) identification/prediction/assessment ng mga epekto sa kapaligiran, (iv) pagbabalangkas ng EMP, at (v) pagbuo ng EMoP. Ang pangunahin at pangalawang impormasyon ay nakuha mula sa Local Government Units (LGUs) at iba pang mga ahensya ng gobyerno. Ang nakolektang mga datos ay batay sa EIA Scoping at Screening Form na ipinakita sa **Annex ES-2**, na napagkasunduan noong Technical Scoping. Ipinapakita sa **Table ES-3** ang detalyadong EIA methodology kada sector ng kapaligiran at tinatalakay kung ano ang kasalukuyang estado nito na wala pa ang Proyekto.

Table ES-3: The EIA Methodology

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology
Land		
Geology/Geomorphology, Pedology, Land Use and Classification	Reconnaissance, land use, land classification assessment, slope, soil types and classification, erosion	Review of secondary data, soil sampling and testing, review of geological reports and maps, soil site assessment
Terrestrial Biology – Wildlife and Vegetation	Flora and fauna species inventory, species endemicity and conservation status, species abundance, frequency and distribution	Use of secondary data and inventory
Water		
Hydrology/Hydrogeology	Regional hydrogeology, catchment and drainage system	Review of secondary data
Water Quality	Physico-chemical and bacteriological characteristics of rivers, wells, springs, and coastal water	Review of water quality monitoring reports of NCMI
Air		
Meteorology/Climatology	Monthly average rainfall, climatological normal and extremes, wind rose diagrams, and frequency of tropical cyclones	Use and review of secondary data

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology
Air Quality and Noise Level	Ambient air quality and noise levels	Review of ambient air quality monitoring reports of NCMI
Air Dispersion Modeling	Worst case scenario identification, use of meteorological data	Use of AERMOD Model
Temperature and Rainfall Change	Seasonal Temperature (in °C) and Rainfall (in %) Change in 2020 and 2050 under medium range emission scenario in Davao Monthly Average Temperature and Rainfall without Climate Change Monthly Average Temperature and Rainfall with Climate Change (2006-2035) Monthly Average Temperature and Rainfall with Climate Change (2006-2065)	Assessment of effects of Temperature and Rainfall Change
Greenhouse Gas Assessment	GHG Emissions based on IPCC 2006 Guidelines and USEPA Procedure	Assessment of Bunker oil consumption vs GHG emissions
People		
Public health and Demography	Morbidity and mortality trends, Demographic data of impact area: • 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 captain 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 city and barangay officials; analysis of secondary data; analysis of survey results, Traffic assessment
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 (RPM) for DAO 2003-30

Public Participation Activities

Alinsunod sa DAO 2003-30, MC 2010-14, at DAO 2017-15, nagsagawa ang SAMC ng aktibidad sa publiko sa pamamagitan ng pre-scoping Information, Education and Communication (IEC), perception survey at public scoping kasama ang mga Opisyal ng City at Barangay ng Mahayag at Davao City upang makuha ang kanilang aktibong partisipasyon ayon sa Section 12.1 ng DAO 2017-15. Sila ay kinabibilangan ng mga apektadong residente ng barangay at host community, local na pamahalaan, mga ahensya ng gobyernong related sa proyekto, EMB Regional Office No. 11 at ang DENR Region 11.

IEC and Initial Perception Survey

Isinagawa ang IEC noong January 22, 2019 upang magbigay ng updated na impormasyon tungkol sa panukalang optimisasyon at para hikayatin ang mga concerned stakeholders na makiisa sa EIA Study. Ang ginawang IEC ay isinagawa sa pamamagitan ng pakikipagpulong sa mga barangay officials at residente ng Barangay Perrelos. May mga dokumento din ng IEC na ginamit gaya ng attendance, issues raised, at mga photos habang isinasagawa ang IEC at ito ay nasa **Annex ES-3**.

Ang perception survey questionnaire ay ipinamigay at pinasagutan sa mga participants pagkatapos ng IEC. Kasama dito ang mgha impormasyon na dapat ibigay ukol sa demographic characteristics, source of income, livelihood, health and sanitation, education, employment, their knowledge and attitude sa panukalang ekspansyon.

Public Scoping

Ang Public Scoping ay isinagawa noong September 14, 2017 para sa rolling mill expansion lang at noong March 12, 2019 para s akabuuan ng rolling mill expansion with melt shop na poinangasiwaan ng mga kinatawan ng EIA Division ng EMB-Central Office upang magbigay ng impormasyon ukol sa poryekyo at tipunin ang mnga site-specific issues, concerns at inputs sa EIA Study. Ito ay inatendan ng mga barangay officials and residents and LGU Officials. Ang mga issues/concerns, kopya ng mga nireceived na invitation letters, attendance sheets at photos taken noong Public Scoping ay nasa **Annex ES-4**. Nakalahad sa ibaba ang summary ng mga issues raised.

Table ES-4: Issues/Concerns Raised during Public Scoping

Aspect	Issue/concern	Provided by	NCMI's Response
People	Health, Safety and Security	Kagawad Calvin Brgy. Mahayag	NCMI responded that M5 is currently one of the member-officer of the JPSCC (Joint Peace Security Coordinating Council) composed of the AFP, LGU, and several industries whose objective is to maintain peace and order in the community.
	Parking when melt shop operates because now for the rolling mill, all trucks are inside the plant. Traffic Management Plan for scrap, raw materials and finish products; harmonize with City's Traffic Policy and truck ban	Kagawad Jerry Rebusa	NCMI responded that parking space will be provided in the melt shop area especially for scrap materials. Truck marshalling will also be provided.
	Livelihood programs for Senior Citizens	Maria , President of Senior Citizens Association	NCMI responded that course the livelihood programs for Senior Citizens thru the Barangay Council; initial project is production of gloves or rags which can be used by the Plant. EMB Central Office representative suggested for NCMI to initiate the identification of SDP for senior citizens.
	Employment for senior citizens as long as fit to work and pass the qualifications; employment in general, skilled workers	Kagawad Jerry Rebusa	As long as the Senior Citizens are fit to work and qualified for the job, they may be employed. This is also extended to their relatives such as children/grandchildren who may be qualified to the job requirements.
	Health, Safety and Security	Kagawad Calvin Brgy. Mahayag	NCMI responded that M5 is currently one of the member-officer of the JPSCC (Joint Peace Security

Aspect	Issue/concern	Provided by	NCMI's Response
			Coordinating Council) composed of the AFP, LGU, and several industries whose objective is to maintain peace and order in the community.

The Public Scoping Report including the copy of the received invitation letters, attendance sheets and photos taken during the Public Scoping is presented in **Annex ES-4**.

Perception Survey

The perception survey was conducted to the host barangay of the project in February to July 2017. The respondents of the survey were represented the barangay council, multi-sectoral representatives (women representatives, men group representative, senior citizen, church group representative) and other authority figures of the community. The sample of the perception survey questionnaire is presented in **Annex ES-5**.

C. EIA SUMMARY

Summary of Alternatives

Ipinapakita ang buod ng criteria used for the alternatives considered in terms of siting, technology selection/operation processes and design

Siting

Dahil sa kasalukuyang pwesto ng plants ng NCMI sa Barangay Mahayag, Bunawan District, Davao City, wala ng iba pang suitable na lugar na tamang-tama sa ekspansyon at paglalagyan ng bagong scrap recycling facility dahil sa bakanteng lugar sa tabi ng NCMI Plant na 15.3808 ektarya. Ang kabuuang lugar na 28.7383 ektarya ay pribadong pag aari ng NCMI at nasa loob ng Heavy Industrial Zone (I-3) na klasipikasyon ayon sa City Planning and Development Office (CPDO) ng Davao City.

Technology and Design

Wala na ding ibang alternative technologies na ikinonsidera dahil ang Rolling Mill Project of NCMI ay operational na. Wala ng dagdag na equipment na ilalagay sa Rolling Mill Plant maliban sap ag optimize ng kapasidad nito sa pamamagitan ng improvement ng utilization at mill speed na built-in na sa equipment. Ang reheating furnace capacity will increase by means of oxygen enrichment, a green solution that requires only blending of Oxygen in combustion.

Ang Project ay gagamit at magrerecycle ng steel scrap as its input. Steel scrap will be melted, refined, and cast to the final specification of the billet. The billet will then be used as input of an existing rebar rolling mill, which will be integrated with the proposed Project. The proposed Project shall be designed to incorporate the most modern steelmaking technology, which includes a Scrap Preheating System. Scrap preheating uses offgas to heat the scrap in a holding area/bucket prior to charging in the Electric Arc Furnace (EAF). The source of the hot gas can be either from offgases from the EAF (i.e. recycled heat) or gases from a burner. The goal is to heat the scrap prior to charging in the furnace in order to reduce energy cost and to eliminate the possibilities of charging wet scrap, which may cause furnace explosion.

Gagamit din ng EAF para sa melt shop, ang the most appropriate steelmaking route to produce quality steel. It capitalizes on the abundance of steel scraps in the country, of which substantial quantity is exported. Moreover, there are various technologies available for the EAF to capture waste heat generated during the melting process. A waste heat recovery system makes use of the waste heat to preheat the in-feeding scrap so that it attains around 500 to 600◦C before being charged into the furnace. The feeding system is specially constructed to divert the hot waste gases from the EAF to heat the scrap before being ducted to

the fume treatment plant (FES). Benefiting from the scrap preheating system, electrical energy consumption can be reduced to 350kW-hours per tonne of liquid steel; as compared to 550kW-hours per tonne for most of the conventional EAF's in the ASEAN region.

Nakalista sa ibaba ang mga advantages ng EAF:

- Savings SA electrical energy through efficient scrap preheating;
- Higher productivity at yield with shorter cycle time with pre-heated scrap;
- Contribute reduction in consumable cost through shorter cycle time;
- Flexibility in scrap usage, enhancing operational sustainability; and
- Reduced emissions, whereby offgas is used for preheating.

Summary of Key Environmental Impacts and Management Plans

Ipinapakita sa **Table ES-5** ang buod ng key environmental impacts ng panukalang proyekto at ang karampatang management plan at mitigating measures nito.

Table ES-5: Summary of Key Environmental Impacts and Management Plan

Activity	Impact	Mitigating Measures	Rating / Efficiency of Measures	Status of implementation of the Mitigating Measures and Efficiency
CONSTRUCTION PHASE				
Construction of Scrap Recycling Facilities, e.g. melt shop	Generation of debris such as scrap wood and metals and small concrete spills	• Temporary area within the site will be designated for storage and segregation • Implement RA 9003 thru provision for Material Recovery Facility (MRF) and practice good housekeeping through segregation of wastes • Implement RA 6969 through Proper segregation and storage of hazardous waste	100% removal of debris	Currently being implemented at the Plant
	Devaluation of land value as a result of improper solid waste management			
	Vegetation removal and loss of habitat	• Conduct inventory of the affected trees. • Conduct tree planting activities to compensate site clearing activities.	100% compliance	
Transport of supplies and materials to be used for upgrading of equipment utilization of the rolling mill and construction materials for the melt shop	Safety and health hazards	• 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 safety and health standards	Currently being implemented at the Plant
	Traffic and road safety	• Implement traffic management through proper scheduling of delivery. • Installation of adequate signages approaching National Highway • Provide personnel to manage or direct the vehicle going in and out of the premises.	100% compliance to traffic and road safety rules	Currently being implemented at the Plant as part of Security guard's duty

Activity	Impact	Mitigating Measures	Rating / Efficiency of Measures	Status of implementation of the Mitigating Measures and Efficiency
	Generation of domestic wastewater discharges	• Runoffs will be channeled into a temporary drainage system. • Barracks is equipped with sanitary facilities such as three chamber septic tank	100% containment of domestic wastewater	Currently being implemented at the Plant
	Generation of dust due to transport of supplies and materials to be used for upgrading	• Continuous sprinkling or water in open areas at least once times a day, especially during dry season. • Delivery trucks shall be covered with canvass materials	100% reduction of fugitive dust from transport vehicles	Currently being implemented at the Plant thru watering of grounds during summer and hot season
	Degradation of air quality due to SOx and NOx emissions from motor vehicles	Regular maintenance of heavy equipment at least once a year and motor vehicles at least twice a year	100% compliance to air quality standards and Clean Air Act	Currently being implemented at the Plant c/o Plant Mechanic for Heavy Equipment; and third party maintenance for other motor vehicles
OPERATION PHASE				
Operation of the rolling mill facility on its optimized production capacity	Solid waste generation	• Operation and maintenance of Material Recovery Facility (MRF) • Segregation or establishment segregation within the area is strictly enforced. • Coordination with the local government units for schedule of collection.	100% reduction of solid wastes in the facilities	Currently being implemented at the Plant
	Generation of hazardous wastes such as used oil, used batteries, contaminated rags, busted bulbs and lamps	• Provision of a Hazardous Waste Storage Area with proper labeling, segregation and storage of wastes • Transport, treatment, and disposal by DENR accredited third-party contractors	100% containment of hazardous wastes	
	Generation of domestic wastewater and sludge from septage	Septic tank management by desludging at least once a year	100% containment of domestic wastewater and 100% elimination of sludge	Currently being implemented at the Plant on a quarterly basis
	Effluent generation from cooling and quenching, containing scales and emulsified oil	Construction of wastewater treatment plant for removal of oil and sediments in the process water	95% of overall water demand recycled	
	Possible depletion of ground water source as used by the community	Provide rainwater water harvesting system	100% harvesting of water	This measure will still be established, the Rainwater harvesting, piping and storage to a Water Collection Tanks

Activity	Impact	Mitigating Measures	Rating / Efficiency of Measures	Status of implementation of the Mitigating Measures and Efficiency
	Water pollution from run-off and domestic wastes	Continuous implementation of Zero Discharge thru recycling of water and water recirculation	95% of overall water demand recycled	Currently being implemented at the Plant
	Contamination and improper management of hazardous waste materials, e.g. transformer oil spill	• 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 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. • 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	100% compliance to RA 6969 provisions	Currently being implemented at the Plant
	Possible increase in ambient concentration of PM_{10}, CO_2, CO, SO_x and NO_x	• Regular maintenance of equipment and making sure the recuperator system is always working • Use of low sulfur fuel (LSFO or mixing with Diesel at 60/40 proportion/ratio) • Use of enclosures for equipment and insulation for structures • Quarterly monitoring of the ambient air to ensure the project's operation is compliant with the clean air act	100% compliance to air quality standards and Clean Air Act	Currently being implemented at the Plant
	Degradation of air quality due to fugitive dusts from equipment and vehicles	• 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 air quality standards and Clean Air Act	Currently being implemented at the Plant
	Generation of Air Pollution from all sources (Point, Area, Volume, Line, generator	Regular stack test monitoring	100% compliance to air quality standards and Clean Air Act	Currently being implemented at the Plant on an annual basis

Activity	Impact	Mitigating Measures	Rating / Efficiency of Measures	Status of implementation of the Mitigating Measures and Efficiency
	set, reheating furnace, rolling mill)			
	Emissions containing SO_2 and NO_2	Use of Low Sulfur Fuel Oil (LSFO), or a mix of LSFO and Diesel as fuel for the reheating furnace	>90% reduction of SO_2 and NO_2 emissions	
	Noise due to plant operations (product handling, waste or by-product gas fans, process cooling and draft fans, dedusting systems, cutting activities, wire rod pay-off units, and transport and ventilation system)	• Enclose the process buildings and/or insulate structures • 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; • Provision of AC motors • 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% noise abatement	Currently being implemented thru tree planting within the Plant premises Implemented – defective equipment already replaced Implemented
	Noise from vehicles	The Contractor shall at all times comply with all current statutory environmental legislation especially on noise.	100% noise abatement	Currently being implemented
	Health and safety hazards	• 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 standards	Implemented
	Traffic due to increase in number of trucks	Allocation of open yards and spaces for stationing of the trucks and provide ample parking spaces	100% allocation of staging area	Currently being implemented at the Plant
		• 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	Currently being implemented at the Plant thru assignment of a Traffic personnel who is also among one of the security guards on duty

Risks and Uncertainties in Decision Making

Batay sa isinagawang EIA, wala masyadong risk and uncertainties sa Proyekto sapagkat mitigation at management plans ay inilatag Proponent's mother company, ang SteelAsia Group of Company ay nasa negosyo nang higit sa 54 taon.