

EXECUTIVE SUMMARY

I. PROJECT FACT SHEET

Project Name	Proposed Scrap Recycling Steel Mill Project
Project Location	Sitio Kirahon, Barangay San Martin, Villanueva, Misamis Oriental
Project Area	248,035 m ²
Project Type	Steel Manufacturing
Project Capacity	500,000 MTPY Rebar 500,000 MTPY Scrap Recycling Plant
Project Description	The proposed project will be a scrap recycling steel mill for structural shapes and sections with a new generation scrap recycling facility.
Rationale	<p>The steel industry in the Philippines is one of the most significant growth industries. Steel constitutes a basic industry prerequisite in a country's pursuit of development and industrialization. The central role of the industry stems from its linkages with numerous sectors, where its products serve as an essential input to countless uses, such as building and construction, automotive, shipbuilding and repair, electronics, packaging, etc. and it is equally important contributions to employment generation, growth, and promotion of industrial activity, etc. Therefore, ensuring a strong domestic steel and steel-based industry is vital in developing the competitive edge of a country in meeting the challenges of globalization.</p> <p>The proposed project is also envisioned because of the following objectives:</p> <ul style="list-style-type: none"> • Job Creation: The project will create an estimated 700 jobs plant based and 3,500 outside of the plant. • Economic Value Preservation: Ensure that economic gains remain in the Philippines or the location of the mill. • Ensure Product Quality: Substitution of imported substandard steel with locally produced high quality products.
Project Components	<p>Major Component</p> <ol style="list-style-type: none"> 1. Rebar Rolling Mill <ul style="list-style-type: none"> • Reheating furnace • Rolling train • Block mill • Quenching • Cooling bed (For Rebar) • Bundling (For Rebar) • Laying Head (For Wire Rod) • Cooling Conveyor (For Wire Rod) • Roll Shop • QA laboratory 2. Melt Shop <ul style="list-style-type: none"> • Electric Arc Furnace • Ladle Furnace • Continuous Casting Machine • Circulating Water Treatment Plant • Make-up Water System • Soft Water Cooling System • Indirect Cooling Water System • Direct Cooling Water System • Sludge Treatment System <p>Support Facilities</p> <ol style="list-style-type: none"> 1. Electrical Substation 2. Generator Set/Emergency Power System

	<ol style="list-style-type: none"> 3. Water Catchment Pond 4. Drainage System 5. Compressed Air Station 6. Cranes 7. Firefighting System 8. Fuel Tank <p>Pollution Control Devices</p> <ol style="list-style-type: none"> 1. Sewerage Treatment Plant 2. Flue Stack 3. Dedusting System 4. Slag Treatment System 5. Material Recovery Facility
Manpower	During Construction: 1500 During Operation: <ul style="list-style-type: none"> • Within Plant: approximately 700 • Outside the Plant: Approximately 3,500
Duration of Project	The project is expected to operate for a period of at least 40 years.
Project Schedule	Project operation will commence 19 months after securing all necessary permits, licenses and approvals.
Project Cost	Approximately PhP 10 Billion
Proponent Profile	
Name of Proponent	SteelAsia Manufacturing Corporation
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
Consultant's Address	L29 Joy-Nostalg Center, 17 ADB Ave., Ortigas Center, Pasig City
Contact Person	Matilde R. Jimenez-Fernando Owner and General Manager
Contact Details	Telephone No.: (02) 689 7114 Mobile No.: +639175064499 Email Address: mrjfernando@mediatrixph.com

II. EIA PROCESS DOCUMENTATION

EIA Team

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

Table ES-1: EIA Team Composition

EIA Team	Areas of Expertise	EIA Registration No.
Matilde J. Fernando	Team Leader, Socio-Economics and Legal Framework	IPCO-035
Fritzie Jae Salido	Report Consolidator	IPCO-114
Reynaldo S. Tejada	Air Module	IPCO-036
Hernani Bayani	Geology Module	IPCO-058
Mark Angelo Bucay	Terrestrial Flora and Fauna / Wildlife	-
Benjamin Francisco	Freshwater Ecology	IPCO-038

EIA Team	Areas of Expertise	EIA Registration No.
Alexis Fernando	Research and Field Assignments	IPCO-034
Ria Caramoan	Water Module	IPCO-106
Juvinal Esteban	IEC and Community Relations	IPCO-091

EIA Schedule

Mediatrix, together with the SAMC, commenced the EIA Study by EIA planning, and project and stakeholder profiling for the preparation of Information, Education, and Communication (IEC) and Scoping activities. The IEC was conducted on March 13, 2018. Public Scoping was conducted on June 18, 2018, while the Technical Scoping was conducted on July 16, 2018. EIA baseline studies and impact assessment were conducted in July 2018 and the Environmental Impact Statement (EIS) Report was completed in December 2018. The major activities undertaken to complete the EIA were listed in **Table ES-2**.

Table ES-2: EIA Study Schedule

EIA Activity/Stage	Date
IEC	March 13, 2018
Initial Perception Survey	March 15 to 17, 2018
Public Scoping	June 18, 2018
Technical Scoping	July 16, 2018
Data Collection/Baseline Studies	July to December 2018
EIA Study, Impact Assessment and Mitigation Plan	
EIS Report Preparation	
Report Submission to EMB	
1 st Review	
2 nd Review	
Public Hearing	
Final Review	

EIA Study Area

The EIA Study area for the proposed project covers the 248,035 m² project site in Sitio Kirahon, Barangay San Martin and Municipality of Villanueva in Misamis Oriental.

EIA Methodology

Pursuant to Section 3 (page 3) and Table 2 (page 15) of MC 2014-005, the proposed project is classified under A-1: New Category of Environmentally Critical Projects (ECPs) which requires an EIS Report for an Environmental Compliance Certificate (ECC) application.

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) IEC and Scoping, (ii) collection of primary and secondary data, (iii) identification/ prediction/assessment of environmental impacts, (iv) formulation of EMP, and (v) development of EMoP. The baseline information are mainly primary and secondary data which were obtained from the Local Government Units (LGUs) and other government agencies. The data collected were based from the EIA Scoping and Screening Form presented in **Annex ES-2**, which was finalized during the Technical Scoping on July 16, 2018.

Table ES-3 presents the detailed EIA methodology per environment sector/component.

Table ES-3: EIA Methodology

EIA Study Module	Parameters/Scope	Methodology and Approach on Impact Assessment
Land		
Geology/Geomorphology, Pedology, Land Use and Classification	Reconnaissance, land use, land classification assessment, slope, soil types and classification, erosion	<ul style="list-style-type: none"> Assessment of the compatibility of the proposed project vis-à-vis approved land use plan and zoning classification. Review of available reports, geologic literature and information from Mines and Geosciences Bureau (MGB), Philippine Institute of Volcanology and Seismology (PHIVOLCS), Philippine Atmospheric, Geophysical and Astronomical Services (PAGASA), and National Mapping and Resource Information Authority (NAMRIA) Conduct of field surveys and collection of soil samples Assessment of construction and operation impacts based on the construction and operation activities of the proposed project, and the susceptibility of the project area to natural hazards.
Terrestrial Biology – Wildlife and Vegetation	Flora and fauna species inventory, species endemism and conservation status as per DAO 2017-11, species abundance, frequency and distribution	<ul style="list-style-type: none"> Conduct of field surveys Assessment of impacts based on the construction and operation activities of the proposed project to the existing ecosystem
Water		
Hydrology/ Hydrogeology	Regional hydrogeology, catchment and drainage system	<ul style="list-style-type: none"> Review of existing literatures and maps from DENR, MGB, and JICA. Assessment of impacts based on the construction and operation activities of the proposed project to the existing environment and the susceptibility of the project area to flooding.
Water Quality	Physico-chemical and bacteriological characteristics of groundwater and freshwater	<ul style="list-style-type: none"> Collection of groundwater and freshwater samples for analysis of physical, chemical, microbiological, micro-nutrient and heavy metal analyses.
Freshwater Ecology	Benthic habitats, species, composition, density, and diversity of sea grass resources and associated macro benthic algae in front of the project site, commercially-important macro invertebrates in the inter-tidal areas, plankton community	<ul style="list-style-type: none"> Use of primary and secondary data and interviews Assessment of impacts based on the construction and operation activities of the proposed project to the existing ecosystem.
Air		
Meteorology/Climatology	Monthly average rainfall, climatological normal and extremes, wind rose diagrams, and frequency of tropical cyclones	<ul style="list-style-type: none"> Assessment of impacts based on the construction and operation activities. Calculation of GHG emissions using emission factor-based estimation method prescribed in The Greenhouse Gas Protocol, A Corporate Accounting and Reporting Standard, Revised Edition, World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI), 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National GHG Inventories and 2014 IPCC Assessment Report. Projection of monthly average temperature and rainfall and frequency of extreme events under.
Air Quality and Noise Level	Ambient air quality and noise levels	<ul style="list-style-type: none"> Ambient air quality and noise sampling and laboratory analysis Conduct of ambient air quality monitoring at eight (8) established sampling stations to measure the

EIA Study Module	Parameters/Scope	Methodology and Approach on Impact Assessment
		Nitrogen Dioxide (NO ₂), Sulfur Dioxide (SO ₂), Total Suspended Particulates (TSP), and Particulate Matter of less than 10µm (PM ₁₀) concentration in the project area and its vicinity. <ul style="list-style-type: none"> • Assessment of operation impacts on air quality using the prediction model by AERMOD • Conduct of noise level measurement at five (5) established sampling stations
People		
Socio-economic and Public health	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 Socioeconomic data: Main sources of Income, Employment rate/ profile, sources of livelihood, Poverty incidence, commercial establishments and activities, banking and financial institutions	<ul style="list-style-type: none"> • Conduct of IEC, Public Scoping, and Perception Survey • Review of CLUP and other secondary data from LGU and PSA. • Assessment of impacts based on the results of IEC, Public Scoping, perception survey and construction and operation activities of the proposed project.
Environmental Risk Assessment		
Risk Assessment	Safety risks and physical risks	Conduct consequence and Frequency analyses using the methodology described in the Revised Procedural Manual (RPM) for DAO 2003-30

Public Participation Activities

Pursuant to DAO 2003-30, MC 2010-14, and DAO 2017-15, SAMC has conducted a series of public participation activities through, IEC, perception survey and public scoping in Barangay San Martin and Municipality of Villanueva.

Information, Education and Communication

The IEC was conducted on March 13, 2018 at Barangay Hall of San Martin to provide 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**.

Initial Perception Survey

The initial perception survey was conducted after the IEC to 1,165 households of the host Barangay San Martin. The survey covers the demographic characteristics, source of income, livelihood, health and sanitation, education, employment, their knowledge and attitude towards the proposed project. The results of the initial perception survey are presented in **Annex ES-4**.

Public Scoping

The Public Scoping was conducted on June 18, 2018 at Villanueva Multi-purpose Covered Court, Villanueva, Misamis Oriental to present the EIA Process and the proposed project to the public, as well as to collect site-specific concerns/inputs and suggestions to be incorporated in the EIA Study. The issues/concerns raised, copy of the received invitation letters, attendance sheets and photos taken during Public Scoping are presented in **Annex ES-5**.

III. EIA SUMMARY

Summary of Alternatives

Siting

The following site locations were considered for the proposed project:

- PHIVIDEC Villanueva near Macajalar Bay
- Barangay San Martin near the San Martin Steel, Inc.'s Plant
- Sitio Kirahon in Barangay San Martin, Villanueva, Misamis Oriental

However, based on the following criteria, the project site in Sitio Kirahon Barangay San Martin, Villanueva, Misamis Oriental was selected as the best option for the proposed project.

- **Logistics.** Steel manufacturing is essentially a transportation business as it requires a lot of moving and handling for its raw materials and finished goods. The plant shall be sited near the port, major highways and customers to optimize the logistics cost.
- **Land.** The land area must accommodate all the facilities needed in a contiguous manner. In addition, it should not require a long time for land conversion and expensive site development. It should have sufficient elevation for flooding.
- **Carbon Footprint.** SAMC's policy is to adopt practices to minimize fuel use. These include optimized trip planning/routing to increase fuel efficiency, reducing the number of kilometers each truck travels daily and minimizing travel time.
- **Social.** Social environment was also considered in the project alternatives. The project area was considered compatible with land use because the project site is an industrial area.
- **Environment.** The proposed location is considerably clear and flat area. Being in a topographically flat area, hazards associated with slope instability, erosion and mass wasting are expected to be nil. The proposed location of the project facilities was also evaluated in terms of geohazard susceptibility based on information from government agencies such as the Mines and Geosciences Bureau (MGB) and the Philippine Institute of Volcanology and Seismology (PHIVOLCS). Generally, the project area's susceptibility to earthquake-triggered slope failure, rainfall-triggered slope failure, and flooding are low as well as seismic vulnerability and liquefaction potential.
- **Technology and Design.** The Technology that will be used for the proposed project is from one of the top steel equipment companies, SMS Group of Germany, with a track record of 140 years, and Fives Stein of France with a track record of 205 years in equipment design and engineering and manufacturing. It will use the new generation scrap recycling mini-mill technology. The basis for technology selection is the efficiency of the technology to produce the target production rate at the equipment's rated capacity.
- **The use of an Electric Arc Furnace (EAF) for the melt shop is 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.
- **Environmental Impacts of Each Alternative.** The potential impacts in all locations are the same. However, other areas were not considered because of existing mangrove plantation, lack of sustainable water and power sources and the land classification is not yet industrial. The impacts are discussed and summarized in detail in the next two chapters.

Summary of Key Environmental Impacts and Management Plan

The major impact of the proposed project given in a worst case scenario of drought is water resource use competition. However, when that time comes, the project will be forced to stop its operation because it will not be feasible to operate in such worst case scenario. **Table ES-4** presents the summary of key environmental impacts of the proposed project and the corresponding management plan and mitigating measures.

Table ES-4: Summary of Key Environmental Impacts and Management Plan

Major Activities Description/ Key Environmental Aspects	Significant Issues/Impacts	Impact Mitigation, Built-In Management Measures and Facilities Planned	Rating/ Performance off Mitigating Measures
Construction Phase			
Site Clearing and Construction of Facilities	Generation of construction debris such as excess fill materials from grading and excavation activities, scrap wood and metals, and small concrete spills	<ul style="list-style-type: none"> • Temporary area within the site near the construction 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 and allocation of Hazardous Waste Facility Area 	100% removal of construction wastes and debris
	Soil erosion due to heavy rainfall	<ul style="list-style-type: none"> • Scheduling of construction works during dry months to avoid heavy rainfall periods • Contouring and minimizing length of steepness of slopes in case cut and fill will be implemented • Providing effective short-term measures for slope stabilization, sediment control, and subsidence control until long-term measures for the operational phase can be implemented 	100% slope stabilization and sediment control achieved
	Contribute to water pollution due to domestic wastewater discharges	<ul style="list-style-type: none"> • Provision of at least 3 units portable toilets at the construction site and will be added when necessary • Provision of septic tanks in all the permanent project facilities 	100% containment of domestic wastewater
	Dust generation due to transport of building materials	Water sprinkling during wet season will be 2x a day while four (4x) times a day during dry season.	100% reduction of fugitive dust from transport vehicles
	Noise and vibration due to operation of pile drivers, earth moving and excavation equipment, concrete mixers, cranes and transportation of equipment and materials	Consult with local communities on scheduling of activities with the greatest potential to generate noise during periods of the day that will result in least disturbance.	100% compliance to noise standards during construction

Major Activities Description/ Key Environmental Aspects	Significant Issues/Impacts	Impact Mitigation, Built-In Management Measures and Facilities Planned	Rating/ Performance off Mitigating Measures
	Safety and health 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 safety and health standards
	Traffic and road safety	<ul style="list-style-type: none"> • 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. • Coordination with the LGU 	100% compliance to traffic and road safety rules
	Generation of domestic wastewater discharges	<ul style="list-style-type: none"> • Runoffs will be channeled into the rainwater catchment which will be used as process water once the Plant is in operation. • Barracks is equipped with sanitary facilities such as three chamber septic tank 	100% containment of domestic wastewater
	Degradation of air quality due to SOx and NOx emissions from motor vehicles	<ul style="list-style-type: none"> • 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
Operations Phase			
Operation of Electric Arc Furnace for scrap recycling	Mixing of low and high quality scrap metals to be melted	<ul style="list-style-type: none"> • Sorting out low and high quality scrap metals and putting them on separate stockpiles • Metals from filter dust, slag, and waste metals to be collected and sold to sintering plants or selling it as a raw material to cement plants, use it for social development / livelihood programs or corporate social responsibility. 	100% elimination of low quality scraps to avoid production of dioxins and furans
	Generation of particulate matter during melting, oxygen injection and decarbonizing phases (primary off gas emissions), and harging/ tapping (secondary off-gas emissions)	Quick cooling of gas emissions from EAF, followed by bag filters	99-99.7% reduction efficiency

Major Activities Description/ Key Environmental Aspects	Significant Issues/Impacts	Impact Mitigation, Built-In Management Measures and Facilities Planned	Rating/ Performance off Mitigating Measures
	Generation of slag	<ul style="list-style-type: none"> • Proper stockpiling of slag in a landfill • Proper disposal thru DENR-accredited TSD 	100% containment of slags generated
	Generation of dioxins and furans	Ensure complete combustion by achieving temperature above 1200°C Use of oxygen injection and post combustion of the EAF off-gas to ensure complete combustion	100% reduction of dioxins and furans in the flue gas
Operation of the Rolling and Finishing Mills	Solid waste generation	<ul style="list-style-type: none"> • 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
	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
	Formation of sludge, containing heavy metals, and oil and grease, from wastewater	Desludging and collection of sludge from wastewater treatment facility for proper disposal at least once a year	100% elimination of sludge
	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
	Possible depletion of ground water source as used by the community	Provide rainwater water harvesting system	100% containment of hazardous wastes
	Domestic wastewater generation	Provision of septic tanks in all the permanent project facilities	100% containment of domestic wastewater
	Generation of hazardous wastes such as used oil, used batteries, contaminated rags, busted bulbs and lamps	<ul style="list-style-type: none"> • Provision of a Hazardous Waste Storage Area with proper labeling, segregation and storage of wastes • Implement RA 6969 through Proper segregation and storage of hazardous waste and allocation of Hazardous Waste Facility Area • Transport, treatment, and disposal by DENR accredited third-party contractors 	100% containment of hazardous wastes and proper disposal thru DENR accredited third-party contractors
	Water pollution from run-off and domestic wastes	Construction of rainwater cisterns and collection ponds	95% of overall water demand recycled
		Domestic wastewater management by connecting it to the water treatment facility for reuse as process cooling water	

Major Activities Description/ Key Environmental Aspects	Significant Issues/Impacts	Impact Mitigation, Built-In Management Measures and Facilities Planned	Rating/ Performance off Mitigating Measures
	Resource use competition for use of river water for make up water and process water	<ul style="list-style-type: none"> • Recycling of water from Rainwater Catchment Basin • Construction of cooling towers • Construction of wastewater treatment plant for removal of oil and sediments in the process water 	95% of overall water demand recycled
	Possible increase in ambient concentration of PM10, CO2, CO, SOx and NOx	<ul style="list-style-type: none"> • 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
	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 air quality standards and Clean Air Act
	Generation of Air Pollution from all sources (Point, Area, Volume, Line, generator set, reheating furnace, rolling mill)	Regular stack test monitoring	100% compliance to air quality standards under the Clean Air Act
	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 (scrap and product handling, waste or by-product gas fans, process cooling and draft fans, dedusting systems, furnace charging, EAF melting processes, fuel burners, cutting activities, wire rod pay-off units, and transport and ventilation system)	<ul style="list-style-type: none"> • Enclose the process buildings and/or insulate structures • Cover and enclose scrap and plate/slab storage and handling areas • Enclose cooling fans 	100% noise abatement

Major Activities Description/ Key Environmental Aspects	Significant Issues/Impacts	Impact Mitigation, Built-In Management Measures and Facilities Planned	Rating/ Performance off Mitigating Measures
		<ul style="list-style-type: none"> • Insulate ventilation pipes and use dampers • Limitation of scrap handling and transport during nighttime, where required • Establishment of buffer zones planted with trees 	
	Noise from vehicles	Contractor's compliance to noise standards.	100% noise abatement
	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 and proper observance of health and safety protocol • Provision of Fire Fighting System 	100% compliance to health and safety standards
Operation and maintenance of facilities	Solid wastes generation	<ul style="list-style-type: none"> • 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
	Domestic wastewater generation	Provision of septic tanks in all the project facilities	100% containment of domestic wastewater
	Generation of hazardous wastes such as used oil, used batteries, contaminated rags, busted bulbs and lamps	<ul style="list-style-type: none"> • 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
	Water pollution from run-off and domestic wastes	Construction of rainwater cisterns and collection ponds Domestic wastewater management by connecting it to the water treatment facility for reuse as process cooling water	95% of overall water demand recycled
	Resource use competition for use of river water for make up water and process water	<ul style="list-style-type: none"> • Recycling of water from Rainwater Catchment Basin 	50% of overall water demand recycled

Major Activities Description/ Key Environmental Aspects	Significant Issues/Impacts	Impact Mitigation, Built-In Management Measures and Facilities Planned	Rating/ Performance off Mitigating Measures
		<ul style="list-style-type: none"> • Construction of cooling towers • Construction of wastewater treatment plant for removal of oil and sediments in the process water 	
	Noise due to plant operations (scrap and product handling, waste or by-product gas fans, process cooling and draft fans, dedusting systems, furnace charging, EAF melting processes, fuel burners, cutting activities, wire rod pay-off units, and transport and ventilation system)	<ul style="list-style-type: none"> • Enclose the process buildings and/or insulate structures • Cover and enclose scrap ad plate/slab storage and handling areas • Enclose fans, insulate ventilation pipes, and use dampers • Limitation of scrap handling and transport during nighttime, where required • Establishment of buffer zones 	100% noise abatement

Based on the EIA conducted, there are insignificant risks and uncertainties for the Project because mitigation and management plans have been laid down and the SAMC's mother company, the SteelAsia Group of Companies has been in the business for more than 52 years now.