Executive Summary

of

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

For

Proposed Expansion of Steel Melting Plant and Rolling Mill from 23720 TPA to 2,00,000 TPA of MS Billets and 61,200 TPA to 2,00,000 TPA of Re-rolling Steel Angle & Flat Bars Channels, Patras & Hollow Sections."

By

Chennai United Metal Industries Pvt Ltd

Chennai United Metal Industries Private Limited (CUMI)

At

Sy. Nos: 997/1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B, 3C, 998/1A1, 1B, 2A, 2B, 2C, 2D, 3, 5A, 5B, 6, 7A, 7B, 8A, 8B, 9, 10, 11, 12A, 12B, 12C, 12D, 12E, 12F, 13A, 13B, 14, 15A, 15B, 16, 17, 1002/1, 2A, 2B, 2C, 2D, 2E, 3A, 3B, 3C, 4A, 4B, 5A, 5B, 5C, 5D, 5E, 6A, 6B, 7A, 7B, 8B, 9, 10A, 10B, 11, 12, 13, 15, 15A, 15B, 16, 17A, 17B, 18A, 18B, 18C, 18D, 19A, 19B, 19C, 19D, 19E, 19F, 19G, 19H, 20, 21, 22, 23, 1019/1, 2A, 2B, 3A, 3B, 13A1, 13A2, 14A, 22A, 22B, 22C, 23, 24, 25 of Sirupuzhalpettai and 501/1, 2, 3A, 3B, 3C, 502/1A, 2A, 2B, 2C, 2D, 2E of Getnamalee Village

Village : Sirupuzhalpettai & Getnamalee

Taluk : Gummidipoondi

District: Tiruvallur

State: Tamil Nadu

[Terms of Reference : SEAC-TN/F.No.9877/SEAC/3(a)/ToR-1450/2023; 09.05.2023]

[Baseline Period : March 2024 – May 2024

[Purpose of the report: Submission for Public Consultation]

Consultant

EHS 360 LABS PRIVATE LIMITED

ASHOK NAGAR, CHENNAI-68

(NABET/EIA/22-25/IA 0098_Rev 01| Validity up to 24.06.2025)

1 Introduction

M/s. Chennai United Metal Industries Private Limited is one of the leaders in steel manufacturing in South India. The company was incorporated on 27th June 2012 with Registrar of companies, Chennai, Tamil Nadu as a backward integration and set up an Induction furnace unit for manufacturing of Billets with installed capacity of 23,760 Tons/Annum and Rerolled Steel Angle & Flat Bars & Channels with capacity of 61,200 Tons/Annum. Project proponent has Initially the proponent operating Re-Rolling Mill plant with valid conset orders intime renewals and planned Billets manufacturing(23,760 Ton/Annum) and applied for CTE on 1st June 2022 and obtained CTE for Billet plant on 18th June 2022, constructed shed for Billat plant vide No. 2201145553551 dated on 18/06/2022 and along with Manufacture of Rerolled Steel Angle & Flat Bars & Channels (61,200 Tons/Annum) facility and obtained Renewal CTO for the same, vide No. 2108239615131 dated on 10/08/2021 which the project does not attract Environmental Clearance. The Consent orders for Re-rolling plant & Billet plant are enclosed as Annexure-7 &8 respectively.

M/s. Chennai United Metal Private Limited (herein after referred to as CUMI) has planned to expand the production capacity of their Billets plant from 23,760 Tons/Annum to 2,00,000 Tons/Annum and Re-Rolled Steel Angle & Flat Bars & Channels plant from 61,200 Tons/Annum to 2,00,000 Tons/Annum within the existing facility located at Sirupuzhalpettai and Getnamalee Village, Gummidipoondi Taluk, Tiruvallur District, Tamil Nadu. The total estimated cost for the proposed expansion project is Rs. 36.25 crores.

The demand for the billets for steel rolling mills is increasing day-by-day due to various development works proposed by the Government as well as the Private sectors resulting in vast construction activities in different fields such as building, village development programs, housing and irrigation, concrete roads, etc., So, the project proponent proposed expansion in production capacity within the existing premises.

As per MoEF&CC Notification S.O 3250(E), dated: 20th July 2022 and the existing & proposed plant required Environmental Clearance and the proposed project comes under Schedule 3(a) “Metallurgical Industries” under Category ‘B’ as per the EIA Notification 2006 & its further amendments.

In line with EIA notification dated 14.09.2006, The Environmental Clearance application was applied vide 06.03.2023 as an Integrated plant and TOR meeting was held for determining the Terms of Reference (TOR) on 19th Aprill 2023 and obtained Terms of Reference vide SEAC letter no. TN/F.No.9877/SEAC/3(a)/ToR-1450/2023 dated 09.05.2023 for the carried-out Baseline studies and preparation of EIA report for the proposed expansion project.

The Draft EIA report has been prepared according to obtained ToR and as per generic structure described in EIA Notification 2006 for Public Consultation. The project will be appraised by the TNSEIAA after a Public Hearing.

The Final Environmental Impact Assessment study report after Public Hearing, has been prepared for obtaining Environmental Clearance (EC) from SEIAA of Tamil Nadu and to get further consents from the Tamil Nadu Pollution Control Board (TNPCB) for the proposed expansion project.

2 Project Description

The proposed plant is located at varies survey numbers in Sirupuzhalpettai and Getnamalee Village, Gummidipoondi Taluk, Tiruvallur District, TamilNadu. The total site area is 16.86 Acres (68212.31 Sq. m). Site Centre Co-ordinates of the project site latitude 13°22'52.67"N & Longitude: 80° 3'56.83"E. The elevation of the project area is 23-25m AMSL. State Highway 52: Satyavedu to Kavaraipettai is located adjacent (N), & NH-5: Chennai to Jharpokharia ~ 6.18km (ENE). Chennai International Airport is located at ~ 42.34km (SSE). Pulicat Birds Sanctuary is located at ~12.7km (NNE). Manali RF is located at ~0.99km towards the SSW direction. The total estimated cost for the proposed expansion project is Rs. 36.25 crores.

2.1.1 List of Proposed Products:

S. No	Name of the product	Existing TPA	Proposed TPA	After Expansion TPA
1	Billets	23,760	2,00,000	2,00,000
2	Re-Rolled Steel Angle & Flat Bars, Patras, Channels & Hollow section	60,000	2,00,000	2,00,000

2.1.2 MS Billets Material Balance for proposed expansion:

S. No	Input	Tonnes (TPA)	Output	Tonnes (TPA)
1	Sponge Iron	40879	MS Billets (90%)	2,00,000
2	Silico Manganese	2313	Slag (8%)	17,924
3	Ferro Silicon	302	Burning Loss (2%)	4,481
4	Ms Scrap (Local Market + from slag and scale)	178911		
	Total	**2,22,405**	**Total**	**2,22,405**

2.1.3 Material Balance for Re-Rolled Steel Angle & Flat Bars, Patras, Channels & Hollow sections. (Proposed):

S. No	Input	Tonnes (TPA)	Output	Tonnes (TPA)
1	MS Billets (Inhouse)	**2,22,405**	Re-Rolled Steel Angle & Flat Bars, Patras, Channels & Hollow sections (97.5%)	2,00,000
			Mill Scale (8%)	17,792
			Burning Loss (2%)	4,613
	Total	**2,22,405**	**Total**	**2,22,405**

2.1.4 Project Summary:

S. No	Particulars	Proposed details
1.	Category of products	Manufacturing of Steel Billets & Re-rolling Steel Angle, Flat Bars Channels, Patra & Hollow Sections
2.	Product & Capacity	1. Steel Billets - from 23760 TPA to 2,00,000 TPA 2. Re-rolling Steel Angle, Flat Bars Channels, Patra & Hollow Sections – 61,200 TPA to 2,00,000 TPA **Total Production: 4,00,000 TPA**
3.	Total Land area (Ha)	6.85 (68212.03 Sq. m)
4.	Total Built up area (sq .m)	Existing: 11,153.73 Proposed: Nill **After expansion: 11,153.73**
5.	Total Water Requirement (KLD)	Existing: 87 Proposed: 95 **After expansion: 95**
6.	Fresh water Requirement (KLD)	Existing: 84 Proposed: 86 **After expansion: 86**
7.	Effluent Generation	Existing: 6.50 Proposed: 12.5 **After expansion: 12.5**
8.	Recycled Water (KLD)	Existing: 3 Proposed: 9 **After expansion: 9**
9.	Source of Water	Local Panchayat
10.	Sewage Generation (KLD)	Existing and Proposed 2.0
11.	Wastewater Treatment System & capacity	2 KLD of Solar Evaporation Pond for Existing and after expansion
12.	Domestic Wastewater treatment system	Septic Tank followed by soak pit
13.	Power (kVA)	Existing: 5000 Proposed: 19000 After expansion: 24000
14.	Source of Power	TANGEDCO
15.	Power Backup-DGs (kVA)	Existing: 1 x 500 Proposed: Nil After Expansion 1 x 500
16.	Air Compressor (HP)	Existing and proposed: 30HP.
17.	Diesel for DG Sets (Liters/Month) During power failure only	Existing: 250 Proposed: 50 After Expansion: 300
18.	Coal (Tonne/Month)	Existing: 150

		Proposed: Nill (Reduced to 75) due to DHR method. After Expansion: 75
19.	Grease (Kg/Year) as a lubricant	Existing: 25 Proposed: 15 After Expansion: 40
20.	Permanent Manpower (Nos)	Existing: 30 Proposed 20 After expansion: 50
21.	Municipal Solid Waste (kg/day)-Operation phase	Existing: 13.5 Proposed: 9.0 After Expansion: 22.5
22.	Project Cost in crores (INR)	36.25
23.	Environmental Management Plan (EMP) Cost (Crores)	1.40
24.	CER cost (Lakhs)	36.25

3 Description of the Environment

Meteorological Data for the Study Period (March 2024 – May 2024):

S. No	Parameter	Observation
1.	Temperature	Max Temperature: 38 ^{0}C Min Temperature: 21 ^{0}C Avg Temperature :28.05 ^{0}C
2.	Average Relative Humidity	74.5 %
3.	Average Wind Speed	2.99 m/s
4.	Predominant Wind Direction during study period	East

Summary of Description:

Ambient Air Quality Monitoring						
S. No	**Criteria Pollutants**	**Unit**	**Maximum value**	**Minimum Value**	**98th Percentile Value**	**Prescribed Standard**
1	PM_{10}	$\mu g/m^3$	85.6	44.9	85.1	100
2	$PM_{2.5}$	$\mu g/m^3$	48.6	24.5	48.3	60
3	SO_2	$\mu g/m^3$	18.7	8.9	18.6	80
4	NO_x	$\mu g/m^3$	38.6	20.3	38.3	80
All the results of ambient air quality parameters have been found within the limit as per NAAQS. Based on comparison study of results for tested parameters with NAAQS, it is interpreted that ambient air quality of studied locations is good. This interpretation relates to the results found for corresponding locations and study period.						
Noise Monitoring						
S. No	**Parameters**	**Unit**	**Maximum Value**	**Minimum value**	**Prescribed standard (residential areas)**	
1	Leq (day)-residential areas)	dB(A)	52.6	50.1	55	
2	Leq(Night) residential areas)	dB(A)	42.7	40.3	45	
In Industrial area daytime noise levels was about 45.2 dB(A) and 44.2 dB(A) during nighttime, which is within prescribed limit by CPCB (75 dB(A) Day time & 70 dB(A) Nighttime). The field observations during the study period indicate that the ambient noise levels are well within the prescribed limit by CPCB (55 dB(A) Day time & 45 dB(A) Nighttime).						
Surface Water						
S. No	**Parameters**	**Unit**	**Maximum Value**	**Minimum Value**	**IS 2296 Class A**	
1	pH	-	7.75	6.94	6.5-8.5	
2	TDS	mg/l	587	402	500	
3	DO	mg/l	5.8	4.4	6	
4	COD	mg/l	39.2	19.7	-	
5	BOD	mg/l	18.7	6.9	2	
The surface water results were compared with IS 2296:1192 standard and in respect of CPCB water Quality Criteria for designated best use. Based on comparison study of test results with Surface water Quantity Standards (Is 2296 Class A), it is interpreted that water qualities of studied locations are classified under Class E, which can be used for irrigation industrial cooling, and controlled waste disposal						
Ground Water						
S. No	**Parameters**	**Unit**	**Maximum Value**	**Minimum Value**	**Acceptable Limit**	**Permissible Limit**
1	pH	-	7.94	6.83	6.5-8.5	-
2	Total Hardness	mg/l	546.4	296.8	200	600
3	Chloride	mg/l	306.4	156.4	250	1000
4	Fluoride	mg/l	0.52	0.24	1.0	1.5

5	Sulphate	mg/l	154.2	70.3	400	200

Based on comparison study of test results with drinking water standard, it is interpreted that water qualities of studied locations meet with the drinking water standards as per IS 10500: 2012. These interpretations relate to the sample tested for location only. To prevent ground water contamination and improving the quality and Quantity, rainwater harvesting, and groundwater recharging may be helpful.

Soil Quality

S. No	Parameters	Unit	Maximum Value	Minimum Value
1	pH	-	8.1	7.06
2	EC	mmhos/cm	186	129
3	Nitrogen	kg/ha	319	217
4	Phosphorus	kg/ha	94	45
5	Potassium	kg/ha	104	75

As per the Indian Council of Agricultural research characterization all locations soils are having PH, Neutral to Slight Alkaline range, Electrical conductivity is Sensitive to salts, potassium as very less, Nitrogen as N is better range and Phosphorus range from medium to More than Sufficient range.

Ecology and Biodiversity

This area hosts common animals. Indian Dogs, Jungle and Domestic cat, Rhesus macaque, Domestic Cows, Buffaloes, Bullocks, and Goat etc. are found amongst mammals. There are no rare and endangered species, and a Near Threatened bird species (*Psittacula eupatria) is* identified in the study area.

Socio-Economic

The literacy rate of the study region is 65.02%. The study area has more than 50% non-workers. There is a need to establish more industries so that the maximum number of employments can be generated.

4 Anticipated Environmental Impacts and Mitigation Measures

The proposed project has no major adverse impact on the surrounding environment since the proposed expansion will be implemented in the existing facility.

The proposed project has no major adverse impact on the surrounding environment. During the movement of trucks, fugitive emissions will be minimized by water sprinkling on roads and regular vehicular maintenance. Trucks used for transportation shall be covered with tarpaulin sheet to avoid dust dispersion at site. Only PUC vehicles will be used for transportation. An air pollution control device will be installed to mitigate the impact of air pollution. The electricity is being supplied by TANGEDCO and hence D.G.set will be used only in case of power failure. Water shall be sourced from private suppliers; hence no major impact will be envisaged on surface or ground water resources. A small quantity of Effluent (Scrubber bleed off) is being disposed through Solar Evaporation. Sewage generated disposed through septic tank followed by soak pit. There is no liquid discharge from the proposed project in any means. Proper sanitation facilities shall be provided within the premises to prevent contamination of water due to runoff. Solid/hazardous waste generated from the process and solar evaporation pond is being properly handled with

adequate solid/hazardous waste management facilities. All the solid/hazardous waste generated shall be packed in HDPE bags and stored in Hazardous Waste Storage Facility. The evaporation pond sludge will be sent to TSDF. Used oil will be collected and disposed of properly by selling it to registered refiners. Discarded containers will be sold to approved recyclers and recyclable scrap will be collected, stored in scrap yard, and reused. The collection, storage and disposal of solid/hazardous waste shall be carried out as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. The adequate greenbelt developed in and around the plant shall greatly serve as an efficient barrier for prevention of air outside the plant premises.

5 Analysis of Alternatives (Technology and Site)

No Alternative Site was considered for the proposed project since the existing premises. CUMI' is being adopted **Direct Hot Rolling** (DHR) method as the best option, the same will be followed for the proposed expansion project. Apart from this, not Ecologically Sensitive, no National Park, no Wildlife Sanctuary, no Biosphere Reserve, and no Protected Forests are attracted to the project site. Also, some alternatives for technology were considered for the proposed project is being adopted tested technology. A partial building area will be designed to establish the solar panel and the project proponent explores the phase wise installation of solar panel to meet the lighting power required energy from renewal energy source.

6 Environmental Monitoring Program

The environmental monitoring plan enables environmental management system with early sign of need for additional action and modification of ongoing actions for environment management, improvement, and conservation. The environmental monitoring locations will be decided considering the environmental impacts likely to occur due to the operation of proposed project as the main aim of the monitoring program is to track, timely and regularly, the change in environmental conditions and to take timely action for protection of surrounding environment. Environmental sampling and monitoring will be done as per the guidelines provided by MoEF&CC & CPCB. Budget for environmental management will be prepared and revised regularly as per requirement. Budgetary Provision for ***Environment Monitoring Programme is allocated 15,75,000 out of total project cost is Rs. 36.25 crores.***

7 Additional Studies

CUMI handles Diesel and small quantity of lubricants, about their storage, quantity to be stored, possible hazards and control measures are given in detail. Hazard Identification and Qualitative Risk Assessment have been developed to improve upon the integrity, reliability, and safety of industrial plants, the same has been discussed. Further CUMI has prepared the Disaster Management Plan (onsite emergency plan) to effectively utilize all the resources at its disposal for the protection of life, environment, and property.

8 Project Benefits

The proposed project will give major Financial and social & Environmental benefits due to development of infrastructure, Manufacturing of MS Billets, and Re rolling products as well as generation of employment. project would help in increasing revenue to the nation and the living standard of the near populations/ habitants through CER and CSR program as follows:

- Revenue to Government
- Total project cost Rs. 36.25 crores.
- Expected Annual Turnover: Rs.700 Crores.
- Projected Annual Profit: INRRs. 10 Crores.
- There is no displacement of habitation since expansion in production capacity in existing facility only and the existing project site is located away from the habitation area.
- The total manpower will be 50 no during operation phase. 50 nos during construction phase as direct employment. Indirect employment generation (100 Nos) for local people, transporters, carpenters, labourers and other businesses and ancillary industry in that area.
- 1.0% of project cost (Rs 36.25 Lakhs) is allocated under CER to nearby villages/neighbourhoods & 2.5 % of Annual profit will be provided for CSR & Development of surrounding region & Income generation of the large community of farmers. The amount of 36.25 Lakhs will be allocated to the requirement of villages and issues/opinions araised during Public Hearing.

9 Environmental Cost Benefit analysis

Not recommended during scoping stage

10 Environmental Management Plan (EMP)

The main purpose of EMP is to minimize the identified potential environmental impacts to be generated from the proposed project and to mitigate the consequences. During construction phase materials will be transported through covered trucks. Greenbelt has been developed and will be maintained to reduce noise impacts. Regular water sprinkling will be done to reduce PM concentration in the atmosphere. PPEs will be provided to workers and first aid facilities will be kept at designated locations. During operation phase the industry will maintain Environment Management Plan in place for the proposed unit which will cover all the environment protection measures to mitigate environmental impact. Solid/Hazardous waste management will be done as per HW (Management, Handling and Trans boundary Movement) – 2016. Noise level within the plant premises will be measured regularly and will try to maintain range within permissible limit. Cost Estimate for Environmental Management Plan is estimated under ***capital cost INR Rs. 140,50,000/-& under Recurring cost 13,20,000/-*** is allocated.

11 Conclusion

The proposed project is in a non-Notified industrial area, the proposed expansion will be implemented in existing facility with additional equipments and would not have any considerable impact on the environment with efficient mitigation measures implemented. The waste generation in form of gas (flue and process), effluent and solid waste may have impacts on environmental parameters, but the proponent has planned & installed most efficient technologies for prevention of emission & treatment of effluent. Further, the solid/hazardous waste will be disposed of through TSDF site.

There is no liquid discharge from project in any means into the inland surfaces or water bodies. The proposed project activities will have a positive beneficial effect on the local population, economic output, and other related facilities viz. employment, development of business, transportation etc. Risk assessment including emergency response plan & DMP has been prepared to handle any sort of emergencies. The industry will be proposed 33 % green belt area. 1.0% of project cost (Rs 36.25 Lakhs) is allocated under CER to nearby villages/neighborhoods & 2.5 % of Annual profit will be provided for CSR & Development of surrounding region & Income generation of the large community of farmers. The amount of 36.25 Lakhs will be allocated to the requirement of villages and issues/opinions raised during Public Hearing.

Hence looking to the overall project justification, process, pollution potential and pollution prevention measures, technological adoption and Environmental Management activities of the proponent has been concluded that, the proposed project would not have any significant impacts on environment as well as socio-economic and ecological conditions of the project area. Hence proposed project may be recommended, considering Environmentally safe.

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