Executive Summary

For

Existing Steel Manufacturing Unit

Located at

GT Road (Sirhind Side), Near Gian TMT Mills, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab

by

"M/s Lord Mahaveer Industries Pvt. Ltd."

Project schedule 3(a): Metallurgical Industries (ferrous & non-ferrous)

Category: B1

Production Capacity

Existing: @ 84 TPD (29,400 TPA) of Steel Ingots/Billets/MS Flats/Bars

After Expansion: @ 300 TPD (1,05,000 TPA) of Steel Ingots/Billets/MS Flats/Bars

(TOR Letter No. – SEIAA/MS/2022/5132 dated 2nd March, 2022)

(Baseline Monitoring Period – October to December, 2021)

(Addition One Month Monitoring at Project Location – February, 2022)

Submitted by

M/s. Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

Eco Bhawan, E-207, 204 & 205, Industrial Area, Phase VIII-B (Sector-74)
Mohali (Punjab) - 160071.
www.ecoparyavaran.org

(QCI NABET Accreditation No. - **NABET/EIA/2223/SA 0183** dated **09.01.2023**)

(In-house Lab, NABL Accreditation No. – **TC-7477** dated **28.04.2022**

UID No. EL/2021/07/03/D/Rev. 01

October, 2023

EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

M/s Lord Mahaveer Industries Pvt. Ltd. is an existing Steel Manufacturing Unit located at GT Road (Sirhind Side), Near Gian TMT Mills, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab.

Currently, the existing industrial unit is dealing with the manufacturing of Steel Ingots/Billets/MS Flats/Bars @ 84 TPD (29,400 TPA) with one Induction Furnace of capacity 7 TPH & Rolling Mill.

Now, the industry wants to increase their production capacity by replacing existing Induction Furnace of capacity 7 TPH, with new Induction Furnace of capacity 20 TPH. However, existing Rolling Mill will remain same.

Thus, after expansion, total production capacity of the unit will be 300 TPD (1,05,000 TPA) of Steel Ingots/Billets/MS Flats/Bars with one Induction Furnace of capacity 20 TPH & existing Rolling Mill.

The industrial unit is located in the Industrial Zone as per the Master Plan of Mandi Gobindgarh 2010-2031. As per EIA Notification, it is a Secondary Metallurgical processing industry under Schedule 3(a); Category B project which requires Environmental Clearance.

The salient features of the project are as under:

- **Existing production capacity:** Steel Ingots/Billets/MS Flats/Bars @ 84 TPD (29,400 TPA) with one Induction Furnace of capacity 7 TPH & Rolling Mill
- **After expansion production capacity:** @ 300 TPD (1,05,000 TPA) of Steel Ingots/Billets/MS Flats/Bars with one Induction Furnace of capacity 20 TPH & existing Rolling Mill.
- **Total Area after expansion:** 17,038.3 sq.m (4.21 acres).
- **Overall Project cost:** Rs. 19.37 Crores (Existing project cost is Rs. 5.41 Crores and cost for proposed expansion is Rs. 13.96 Crores).
- **Interlinked projects:** None.
- **Envisaged changes due to expansion:** Replacement of existing Furnace with new Induction Furnace of capacity 20 TPH.

2.0 LOCATION & CONNECTIVITY

Project is located at GT Road (Sirhind Side), Near Gian TMT Mills, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab. The project is located at internal road; which in-turn connected to

NH-44 at a distance of approx. 0.8 km in 'SW' direction. The nearest Railway station is Mandi Gobindgarh Railway Station, located at a distance of approx. 2.4 km in 'NW' direction. Sahnewal Ludhiana Airport is located at a distance of approx. 41 km in 'NW' direction. Project boundary coordinates of all corners are as follows:

Corners	Latitude	Longitude
A	30°39'27.87"N	76°19'7.65"E
B	30°39'24.02"N	76°19'15.00"E
C	30°39'21.47"N	76°19'11.53"E
D	30°39'25.19"N	76°19'7.32"E
E	30°39'26.80"N	76°19'7.59"E

The project location and its study area of 10 km falls in the Survey of India, Toposheet No. **H43K6 & H43K2.**

3.0 BRIEF FEATURES OF PROJECT

Table 1: Size/magnitude of project

S. No.	Parameters	Description
1.	**Identification of the project**	Expansion of existing steel manufacturing unit namely **"M/s Lord Mahaveer Industries Pvt. Ltd"** for increasing production capacity from 84 TPD (29,400 TPA) to 300 TPD (1,05,000 TPA) which falls under Schedule 3(a) as per EIA Notification dated 14th September, 2006 and its subsequent amendments.
2.	**Project Proponent**	**Mr. Balram Gupta** (Director) M/s Lord Mahaveer Industries Pvt. Ltd
3.	**Brief description of nature of the project**	The existing industrial unit deals with the manufacturing of Steel Ingots/Billets/MS Flats/Bars @ 84 TPD (29,400 TPA) with one Induction Furnace of capacity 7 TPH & Rolling Mill. Expansion of the existing steel manufacturing unit will be done by replacing existing Induction Furnace of capacity 7 TPH, with new

<table>
<tr><td></td><td></td><td>Induction Furnace of capacity 20 TPH. However, existing Rolling Mill will remain same.
Thus, after expansion, total production capacity of the unit will be 300 TPD (1,05,000 TPA) of Steel Ingots/Billets/MS Flats/Bars with one Induction Furnace of capacity 20 TPH & existing Rolling Mill.</td></tr>
<tr><td>4.</td><td colspan="2">Salient Features of the Project Proposed</td></tr>
<tr><td>4.1</td><td>Overall plant capacity</td><td>After expansion, overall production capacity of the plant will become 300 TPD (1,05,000 TPA).</td></tr>
<tr><td>4.2</td><td>Area Details</td><td>The total area of the project is 17,038.3 sq.m. (4.21 acres) which consist of sheds for machinery, storage of raw materials & final goods, green area and parking area etc.</td></tr>
<tr><td>4.3</td><td>Location</td><td>Project boundary coordinates of all corners are as follow:
<table>
<tr><th>Corner</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>30°39'27.87"N</td><td>76°19'7.65"E</td></tr>
<tr><td>B</td><td>30°39'24.02"N</td><td>76°19'15.00"E</td></tr>
<tr><td>C</td><td>30°39'21.47"N</td><td>76°19'11.53"E</td></tr>
<tr><td>D</td><td>30°39'25.19"N</td><td>76°19'7.32"E</td></tr>
<tr><td>E</td><td>30°39'26.80"N</td><td>76°19'7.59"E</td></tr>
</table>
Google Earth Image showing project location & its surroundings within 500 m is attached with the report. Project and its study area falls in the Survey of India, Toposheet No. H43K2 & H43K6. Toposheet showing project location is attached with the report.</td></tr>
<tr><td>4.4</td><td>Water requirement</td><td>Source: Ground water.
Total water requirement of the unit will be 59 KLD. Break-up of the same is given below:
<table>
<tr><th>Details</th><th>Existing</th><th>Proposed</th><th>Total after expansion</th></tr>
<tr><td>Makeup water demand for cooling purpose</td><td>14.5</td><td>9.5</td><td>24</td></tr>
<tr><td>Domestic water demand</td><td>1.5</td><td>2.5</td><td>4</td></tr>
<tr><td>Green area water Demand
• Summer</td><td>-</td><td>• 31</td><td>• 31</td></tr>
</table></td></tr>
</table>

		<table><tr><td>• Winter • Monsoon</td><td></td><td>• 10 • 3</td><td>• 10 • 3</td></tr><tr><td colspan="2">Total</td><td>16</td><td>43</td><td>59</td></tr></table> Permission will be obtained from Punjab Water Regulation & Development Authority (PWRDA) regarding abstraction of Ground water.
4.5	**Wastewater**	Approx. 1 KLD of domestic effluent is being generated from the existing unit which is being disposed in septic tank provided within project premises. After expansion, approx. 3.2 KLD of domestic wastewater will be generated which will be treated in proposed STP of capacity 5 KLD and it will be reused for horticulture purpose. No industrial effluent is being generated from the existing unit and even after expansion, no industrial effluent will be generated.
4.6	**Man Power**	In the existing unit, 35 workers including both technical & non-technical are working. No residing facility has been provided within project premises. For proposed expansion, additional 55 workers will be required. Thus, after expansion, total 90 workers will be working. Further, no residing facility will be provided even after expansion.
4.7	**Power requirement**	The power load of existing unit is 2,200 KW which is being supplied by PSPCL. 1 DG set of 60 KVA capacity is installed in existing unit for power backup. After expansion, power load requirement for the unit will be 10,000 KVA which will be supplied by Punjab State Power Corporation Limited (PSPCL). 1 additional DG set of 320 KVA capacity has been proposed as power backup along with existing DG set.
4.8	**Alternative site**	No alternative site is considered, as it is expansion of the existing industrial unit.
4.9	**Land form, Land use and Land ownership**	The project falls within Industrial Zone as per Master Plan of Mandi Gobindgarh, 2010-2031. Land documents (Registry & Jamabandi) and Change of landuse has been submitted with Draft EIA report.

4.0 METEOROLOGY

Baseline monitoring of project M/s Devbhoomi Casting Pvt. Ltd. for the period of Oct. - Dec. 2021 has been considered for M/s Lord Mahaveer Industries Pvt. Ltd. Further, additional one-month monitoring has been conducted at project location in the period of February, 2022. Meteorological data was obtained for the monitoring period. The predominant winds are mainly flowing from the North-West.

5.0 AIR QUALITY

The baseline data of ambient air quality monitoring considered for October to December, 2021 of M/s Devbhoomi Castings Pvt. Ltd. and additional one-month study conducted at project location in February, 2022. $PM_{2.5}$, PM_{10}, SO_2 and NO_2 levels (Criteria Pollutants) as well as NH_3 and O_3 were monitored at 9 locations including project and its 10 km study area. Monitoring stations were keeping in view of the dominant wind direction.

PM_{10} concentration ranges between 72 $\mu g/m^3$ to 152 $\mu g/m^3$ in study area with 98 percentile value monitored at project location is found to be 106.32 $\mu g/m^3$. $PM_{2.5}$ concentration ranges between 37 $\mu g/m^3$ to 81 $\mu g/m^3$ in study area with 98 percentile value monitored at project location is found to be 64.46 $\mu g/m^3$. Both are more than the NAAQ standards 100 $\mu g/m^3$ and 60 $\mu g/m^3$ for PM_{10} and $PM_{2.5}$ respectively.

However, SO_2 levels at various monitoring stations ranged from 10 to 18 $\mu g/m^3$ in the study area and the 98 percentile value at project location found to be 16.86 $\mu g/m^3$. Further, NO_2 concentration in the study area varied from 20 to 34 $\mu g/m^3$ and the 98 percentile value of NO_2 at project location found to be 34.72 $\mu g/m^3$. It would be seen that concentrations of SO_2 and NO_2 are quite low in the study area in respect to 24 hours average permissible limits of 80 $\mu g/m^3$each. This indicates air quality deterioration in study area due to presence of industries in areas of Mandi Gobindgarh and Khanna and other agro and biomass burning activities as predominant in the region.

Mass levels of Gaseous pollutants (SO_2, NO_2, CO, Ozone & NH_3) were within the prescribed limits of CPCB (24 hours' average NAAQ standards). This indicates air quality in the study area is good, safe and comfortable to human health and environment.

Mass levels of particulate elements as Lead (Pb), Arsenic (As) and Nickel (Ni) and hydrocarbons as Benzene, Benzo(a)pyrene (BaP) were also reported as below detection levels which indicates safe environment with no health hazards.

6.0 NOISE QUALITY

Ambient noise levels were measured at 5 locations within M/s Lord Mahaveer Industries Pvt. Ltd. Noise levels varied from 62.4 dB(A) to 73.3 dB(A) during the day time and 51.8 dB(A) to 61.4 dB(A) during night time. The obtained noise level is well within prescribed limits for industrial area whereas marginally higher to prescribed limits for residential areas indicating annoying environment for population and sensitive receptors. Noisy environmental conditions are mainly associated to industrial activities in Khanna and Mandi Gobindgarh industrial hubs, heavy traffic movement on road network and other agro and domestic activities in the region.

7.0 WATER QUALITY

The ground water test results indicate that water is good in quality and safe for drinking purpose and fit for cooling water requirement. In the study area, samples have been collected from different locations at isolated places, the level of concentration and different elements vary quite considerably which may be due to small aquifers. However, the levels of the various components are within acceptable/ permissible norms for drinking water.

As no effluent is being generated from the industry and even after expansion, no industrial effluent will be generated from the unit. Hence, surface water quality will not be affected due to the proposed expansion of the industry.

8.0 SOIL QUALITY

The observations show that in the study area soil are generally basic to alkaline in nature and sandy loam texture at the project site whereas sandy loam texture with medium class of fertility.

9.0 ECOLOGY

No plant or animal species were found as per the endangered list within 10 km radius of the project location. No ecologically sensitive area like biosphere reserve, tiger reserve, elephant reserve, migratory corridors of wild elephant, wetland, national park and wildlife sanctuary are present within 10 km study area.

10.0 ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

10.1 AIR QUALITY

The major pollutants from the project will be particulate matter (PM) emissions and will be controlled using Side Suction Hood, Compartmentalized Pulse Jet Bag Filter will be restricted within 150 mg/Nm^3. The efficient Air Pollution Control Devices will enhance environment

cleanness. Therefore, impact on the surrounding environment will be minimal.

10.2 NOISE QUALITY

The raw material handling yard, Induction Furnaces, etc. are the major sources of noise during operation phase of the project. All the workers engaged at and around high noise generating sources are being provided with ear protection devices like ear mufflers/ plugs. They will be regularly subjected to medical check-up for detecting any adverse impact on the ears. The green belt will also help to prevent noise generated within the plant from spreading beyond the plant boundary. Workplace ambient level is not expected to be beyond 73.3 dB(A) during day time and 61.4 dB(A) during night time which is much below the limit specified for 8 hours of exposure.

10.3 WATER QUALITY

Approx. 1 KLD of domestic effluent is being generated from the existing unit which is being disposed in septic tank provided within project premises. After expansion, approx. 3.2 KLD of domestic wastewater will be generated which will be treated in proposed STP of capacity 5 KLD and it will be reused for horticulture purpose.

No industrial effluent is being generated from the existing unit and even after expansion, no industrial effluent will be generated. Hence, surface water quality will not be affected due to proposed expansion.

10.4 SOLID WASTE

10.4.1 DOMESTIC WASTE

Approximately, 7 kg/day of domestic solid waste is being generated from the existing unit. After expansion, approx. 18 kg/day of domestic solid waste will be generated, which will be properly collected and segregated into biodegradable and non-biodegradable waste. The solid waste will be disposed off as per Solid Waste Management Rules, 2016.

10.4.2 INDUSTRIAL WASTE

Approx. 2 TPD of slag is being generated from the existing unit. After expansion, approx. 9.5 TPD of slag will be generated which will be given to Tile/Block manufacturing units for co-processing after metal recovery.

10.4.3 HAZARDOUS WASTE

Hazardous waste generated from the existing unit is 0.2 TPD of APCD dust under Category 35.1 and 0.04 KLA of used oil under Category 5.1 of Schedule I. After expansion, generation

of Hazardous waste is estimated to be 0.8 TPD of APCD and 0.3 KLA of used oil. APCD dust will be given to M/s Jogindra Castings Pvt. Ltd. and used oil will be given to authorized vendor.

11.0 GREENERY DEVELOPMENT

Since, the project is an existing industrial unit. 5,631.97 sq.m. of green area has been proposed within the existing unit which comes out to be 33.05%. Locally available types of trees which are resistant to pollutants will be planted. Tree plantation around the plant helps to arrest the effects of particulate matter and gaseous pollutants in the area besides playing a major role in environmental conservation efforts. The green belt would;

- Mitigate gaseous emissions;
- Have sufficient capability to arrest accidental release;
- Effective in wastewater reuse;
- Maintain the ecological balance;
- Control noise pollution to a considerable extent;
- Prevent soil erosion;
- Improve the Aesthetics;

All the species suggested are pollution tolerant, besides having an aesthetic appeal.

12.0 ENVIRONMENTAL MONITORING PLAN

The environment 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 points will be decided considering the environmental impacts likely to occur due to expansion of project as the main scope of monitoring program is to track, timely and regularly, the change in environmental conditions and to take timely action for protection of environment Monitoring of environmental samples will be done as per the guidelines provided by MoEF&CC/CPCB. Separate records for water, wastewater, solid wastes, air emission, soil and manure/ compost will be prepared and preserved regularly. Along with other budgets, Budget for environmental monitoring will be prepared and revised regularly as per requirement. The estimated yearly budget for Environmental Monitoring has been kept as Rs. 5 lakhs which include monitoring of efficiency of pollution control equipment.

13.0 RISK MITIGATION MEASURES

Even with all precautions, disasters may take place. As such, an Emergency Plan will be

formulated to take care of any disaster in the plant and surrounding areas. In order to prevent occurrence of any disaster, the plant will be provided with various safety and disaster control facilities. In addition to these, numerous material handling systems, heavy road transport, high-tension electric lines, overhead cranes and various other handling and transport systems always have chances of accidents.

14.0 PROJECT BENEFITS

The project will overcome the demand and supply gap of steel product in the country. The expansion of the project will also generate revenue for the State Government. The steel availability will boost the infrastructure sector and overall economic scenario of the country. The project will create direct/indirect employment for people. Local people will be preferred for employment.

15.0 CORPORATE ENVIRONMENT RESPONSIBILITY (CER)

Mr. Balram Gupta (Director) will be responsible for implementation of the CER activities. Thus, under CER rejuvenation of pond will be done. Further, issues raised during public hearing will be taken up as CER. Following activity has been proposed under CER:

Table 2: CER activity

S. No.	Activity
1.	**Rain Water Harvesting** Adoption of pond located at Village Kotla Dadheri Having area of 1 acre for rainwater harvesting and maintenance of pond as per measures given below: i. Nano-Bubble technology to treat wastewater discharge into the pond ii. Tree plantation of 6 ft. size around the pond iii. Removal of solid waste, sludge, silt from the pond iv. Landscaping around the pond

16.0 ENVIRONMENTAL MANAGEMENT PLAN

Environment Management Cell will be constituted and will implement the EMP of the project. All recommendations given in the EIA report including that of occupational health, risk mitigation and safety will be complied. Capital cost for the pollution control equipment for project is estimated to be Rs. 90.5 lakhs and recurring cost per year will be Rs. 18 lakhs. EMC will ensure that all air pollution control devices and water re-circulating systems function effectively. Schemes for resource conservation (raw materials, water etc.) and rainwater

harvesting will be taken up by EMC. Greenbelt and greenery development inside and outside the plant premises will be intensified by the EMC. Guidelines issued by the Central Pollution Control Board (CPCB) on greenbelt development will be followed. Environmental awareness programs for the employees will be conducted. EMC will also ensure cleanliness inside the plant.

****