Executive Summary

for

Expansion of Steel Manufacturing Unit

Located at

Transport Nagar, Village Kumbra, Mandi Gobindgarh, District Fatehgarh Sahib, Punjab

by

"M/s Devbhoomi Casting Pvt. Ltd."

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

Category: B1

Production Capacity

Existing: @ 84 TPD (29,400 TPA) of Ingots/Billets

After Expansion: @ 288 TPD (1,00,800 TPA) of Billets/Ingots or Flats/Bars/Rounds

(TOR Letter No. – SEIAA/MS/2021/4781 dated 01.12.2021)

(Monitoring Period: October - December, 2021)

Submitted by

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

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Mohali (Punjab) - 160071.
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(QCI NABET Accreditation No. - **NABET/EIA/2023/RA 0211** dated **10.09.2021**)

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

July,2022

ਕਾਰਜਕਾਰੀ ਸੰਖੇਪ

ਵਿਚ

ਸਟੀਲ ਨਿਰਮਾਣ ਯੂਨਿਟ ਦਾ ਵਿਸਤਾਰ

ਵਿਖੇ ਸਥਿਤ ਹੈ

ਟਰਾਂਸਪੋਰਟ ਨਗਰ, ਪਿੰਡ ਕੁੰਬੜਾ, ਮੰਡੀ ਗੋਬਿੰਦਗੜ੍ਹ, ਜ਼ਿਲ੍ਹਾ ਫਤਿਹਗੜ੍ਹ ਸਾਹਿਬ, ਪੰਜਾਬ

ਦੁਆਰਾ

"ਮੈਸਰਜ਼ ਦੇਵਭੂਮੀ ਕਾਸਟਿੰਗ ਪ੍ਰਾਈਵੇਟ ਲਿਮਟਿਡ"

ਪ੍ਰੋਜੈਕਟ ਕਾਰਜਕ੍ਰਮ 3(a): ਧਾਤੂ ਉਦਯੋਗ (ਫੈਰਸ ਅਤੇ ਗੈਰ-ਫੈਰਸ)

ਸ਼੍ਰੇਣੀ: B1

ਮੌਜੂਦਾ ਉਦਯੋਗਿਕ ਇਕਾਈ ਦੀ ਉਤਪਾਦਨ ਸਮਰੱਥਾ: @ 84 TPD (29,400 TPA) ਇੰਗਟਸ/ਬਿਲਟਸ

ਵਿਸਤਾਰ ਤੋਂ ਬਾਅਦ ਕੁੱਲ ਉਤਪਾਦਨ ਸਮਰੱਥਾ: @ 288 TPD (1,00,800 TPA) ਇੰਗਟਸ/

ਬਿਲਟਸ ਜਾਂ ਫਲੈਟ/ਬਾਰ/ਰਾਉਂਡ

(TOR ਪੱਤਰ ਨੰ. – SEIAA/MS/2021/4781 ਮਿਤੀ 01.12.2021

(ਨਿਗਰਾਨੀ ਅੰਤਰਾਲ – ਅਕਤੂਬਰ, 2021 - ਦਸੰਬਰ, 2021)

ਦੁਆਰਾ ਜਮ੍ਹਾ ਕੀਤਾ ਗਿਆ

ਮੈਸਰਜ਼ ਈਕੋ ਲੈਬਾਰਟਰੀਜ਼ ਐਂਡ ਕੰਸਲਟੈਂਟਸ ਪ੍ਰਾਈਵੇਟ ਲਿਮਟਿਡ

ਈਕੋ ਭਵਨ, **ਈ** -207, 204 **ਅਤੇ** 205, **ਉਦਯੋਗਿਕ ਖੇਤਰ**, **ਫੇਜ** - VIII-B (**ਸੈਕਟਰ** -74)

ਮੁਹਾਲੀ (ਪੰਜਾਬ) - 160071.

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EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

M/s Devbhoomi Casting Pvt. Ltd. is an existing Steel Manufacturing Unit located at Transport Nagar, Village Kumbra, Mandi Gobindgarh, District Fatehgarh Sahib, Punjab. The existing industrial unit deals with the manufacturing of Ingots or Billets @ 84 TPD (29,400 TPA) with one Induction Furnace of capacity 7 TPH. Now, the industry wants to increase their production capacity by upgradation of existing Induction Furnace from capacity 7 TPH to 12 TPH along with addition of one new Induction Furnace of capacity 12 TPH and Rolling Mill.

Thus after expansion, the total production capacity of the industrial unit will be @ 288 TPD (1,00,800 TPA) of Billets/Ingots or Flats/Bars/Rounds with 2 Induction Furnaces of capacity 12 TPH each and 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 will be as under:

- **Existing production capacity:** @ 84 TPD (29,400 TPA) of Ingots/Billets by Induction Furnace of capacity 7 TPH.
- **Total after expansion production capacity**: @ 288 TPD (1,00,800 TPA) of Billets/Ingots or Flats/Bars/Rounds with 2 Induction Furnaces of capacity 12 TPH each and Rolling Mill.
- **Total Area after expansion:** 21,085 sq. m (5.20 acres).
- **Project cost after expansion:** Existing cost of project is Rs. 12.77 Crores and proposed cost of expansion is estimated to be Rs. 12.20 Crores. Thus, total cost of the project after expansion becomes 24.97 Crores
- **Interlinked projects:** None

2.0 LOCATION & CONNECTIVITY

Project is located at Transport Nagar, Village Kumbra, Mandi Gobindgarh, District Fatehgarh Sahib, Punjab. The project is located at a distance of approx. 2 km from National Highway-1. The nearest Railway station is Mandi Gobindgarh Railway Station, located at a distance of approx. 4 km in 'NW' direction. Ludhiana Airport, Sahnewal is located at a distance of approx. 41.5 km in 'NW' direction. The nearest bus stand is Mandi gobindgarh Bus Stand at

a distance of about 4.2 km in 'NW' direction. Project boundary coordinates of all corners are as follows:

Corners	Latitude	Longitude
A	30°37'50.32"N	76°18'21.71"E
B	30°37'53.16"N	76°18'17.26"E
C	30°37'56.57"N	76°18'22.34"E
D	30°37'54.83"N	76°18'23.99"E
E	30°37'54.71"N	76°18'23.79"E
F	30°37'52.90"N	76°18'25.52"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 the existing steel manufacturing unit namely "**M/s Devbhoomi Casting Pvt. Ltd.**" for increasing production capacity from 84 TPD (29,400 TPA) to 288 TPD (1,00,800 TPA) which falls under Schedule 3(a) as per EIA Notification dated 14th September, 2006 and its subsequent amendments.
2.	**Project Proponent**	**Mr. Deepak Goyal** (Director) M/s Devbhoomi Casting Pvt. Ltd. E-mail: dbcpl2017@gmail.com
3.	**Brief description of nature of the project**	Existing capacity of steel manufacturing unit is Ingots/Billets @ 84 TPD (29,400 TPA) with one Induction Furnace of capacity 7 TPH. Expansion of the existing steel manufacturing unit will be done by upgradation of existing Induction Furnace from capacity 7 TPH to 12 TPH along with additional of one new Induction Furnace of capacity 12 TPH and Rolling Mill.

<table>
<tr><td></td><td></td><td>Thus, after expansion, the production capacity of the industrial unit will become 288 TPD (1,00,800 TPA) of Billets/Ingots or Flats/Bars/Rounds with 2 Induction Furnaces of capacity 12 TPH each and 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 288 TPD (1,00,800 TPA).</td></tr>
<tr><td>4.2</td><td>Area Details</td><td>The total area of the project is 21,085 sq. m (5.20 acres).</td></tr>
<tr><td>4.3</td><td>Location</td><td>Project boundary coordinates of all corners are as follows:
A: 30°37'50.32"N & 76°18'21.71"E
B: 30°37'53.16"N & 76°18'17.26"E
C: 30°37'56.57"N & 76°18'22.34"E
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F: 30°37'52.90"N & 76°18'25.52"E
Project location and its study area falls in the Survey of India, Toposheet No. H43K2 and H43K6.</td></tr>
<tr><td>4.4</td><td>Water requirement</td><td>Source: Ground water
Total consumption of water after expansion will be 79 KLD.
The break-up of the same is given below:
<table>
<tr><th>Details</th><th>Existing Water Demand (KLD)</th><th>Proposed Water Demand (KLD)</th><th>Total Water Demand After Expansion (KLD)</th></tr>
<tr><td>Makeup water demand for cooling purpose</td><td>13.5</td><td>13.5</td><td>27</td></tr>
<tr><td>Domestic Water Demand</td><td>5.5</td><td>8</td><td>13.5</td></tr>
<tr><td>Green Area Water Demand
• Summer
• Winter
• Monsoon</td><td>-</td><td>• 38.5
• 12.5
• 3.5</td><td>• 38.5
• 12.5
• 3.5</td></tr>
<tr><td>Total</td><td>19</td><td>60</td><td>79</td></tr>
</table></td></tr>
<tr><td>4.5</td><td>Wastewater</td><td>Approx. 4 KLD of domestic wastewater is being generated from the existing</td></tr>
</table>

		unit which is being treated in septic tank provided within project premises. After expansion, 10.8 KLD of domestic wastewater will be generated which will be treated in proposed STP of capacity 15 KLD provided within project premises. Also, no industrial effluent is being generated from existing industrial unit and even after expansion.
4.6	**Man Power**	Existing manpower: 90 workers (including both technical & non-technical). Out of this, 15 workers are residing within the project premises. Proposed manpower: 150 additional workers will be hired. After expansion manpower: 240 workers (including both technical & non-technical). Out of which, 30 workers will be residing within project premises.
4.7	**Power requirement**	Power load of the existing unit is 4,000 KVA, which is being supplied by PSPCL. 1 DG set of capacity 125 KVA has been provided for power backup. For proposed expansion, additional power load of 12,000 KVA will be required. Thus, after expansion, total power load requirement will be 16,000 KVA. For 1 power backup, 1 additional DG set of capacity 750 KVA has been proposed along with existing DG set. **Source:** Punjab State Power Corporation Limited (PSPCL).
4.8	**Alternative site**	No alternative site is being considered as the expansion is proposed within the existing land only.
4.9	**Land form, Land use and Land ownership**	Land documents i.e registry and change of landuse has been submitted with report.

4.0 METEOROLOGY

The monitoring of environmental parameters has been conducted at project location and its 10 km study area for the period of October to December, 2021 from NABL and MoEF&CC approved laboratory. The predominant winds are mainly flowing towards North-West direction, with the secondary wind direction being from the South-East.

5.0 AIR QUALITY

$PM_{2.5}$, PM_{10}, SO_2 and NO_2 levels (Criteria Pollutants) as well as NH_3 and O_3 were monitored at eight locations in the 10 km study area. Monitoring stations were keeping in view of the dominant wind direction. PM_{10} concentration observed in the study area during October to December, 2021, ranges between 72 µg/m^3 to 152 µg/m^3 with average value at project location is found to be 111.12 µg/m^3.

Whereas, $PM_{2.5}$ concentration ranges between 37 µg/m^3 to 81 µg/m^3 with average value at project location is found to be 64.5 µg/m^3. Both are more than the NAAQ standards 100 µg/m^3 and 60 µg/m^3 for PM_{10} and $PM_{2.5}$ respectively. However, average concentrations of SO_2 and NO_2 found to be 14.8 µg/m^3 and 30.7 µg/m^3 which are much below the desired limits of 80 µg/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.

6.0 NOISE QUALITY

Ambient noise levels were measured at 5 locations within the project location and 3 locations outside the project location within the 500 m radius of the project location. Noise levels varied from 52.1 dB(A) and 69.3 dB(A) during the day time and were 41.5 dB(A) and 58.5 dB(A) during night time in the study area. 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 sites 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 distance of the project location. There is only one protected Forest i.e. Bir Amloh Protected Forest located at a distance of 7.5 km from project location.

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 69.3 dB(A) during day time and 58.5 dB(A) during night time which is much below the limit specified for 8 hours of exposure.

10.3 WATER QUALITY

Domestic wastewater will be treated in the proposed STP of capacity 15 KLD to be installed within project premises. No wastewater will be discharged outside the plant premises (under normal operating conditions).

Storm water drains are kept separate from wastewater drains. No Industrial effluent is being

generated from the industrial unit. Similarly, 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, 21 kg/day of domestic solid waste is being generated from the existing project & after expansion, approx. 54 kg/day of domestic waste will be generated, which will be properly collected and segregated into biodegradable and non-biodegradable waste. Solid waste is being disposed off as per Solid Waste Management Rules, 2016.

10.4.2 INDUSTRIAL WASTE

2.5 TPD of slag is being generated from existing industrial unit which is disposed of in low lying area. After expansion, the quantity of slag is estimated to be 9 TPD, out of which 20% will be reused for metal recovery within the project premises & remaining 80% will be sold to M/s Deep Enterprises for co-processing.

10.4.3 HAZARDOUS WASTE

Hazardous waste generated from the existing industrial unit is 0.02 KL/annum under Category 5.1 and 0.2 TPD under Category 35.1 of Schedule I. After expansion, hazardous waste produced from the industrial unit is estimated to be 0.7 KL/annum of Spent oil under Category 5.1 and 0.75 TPD of APCD dust under Category 35.1 of Schedule I. Authorization of hazardous waste has been obtained from PPCB. Agreement has been done with M/s Madhav KRG Ltd. (formerly known as M/s Madhav Alloys Pvt. Ltd.) for disposal of APCD dust. Agreement has been done with M/s BRS Lubricants for used oil.

11.0 GREENERY DEVELOPMENT

Since, the project is an existing industrial unit. 7,026 sq.m of green area has been proposed within the existing unit which comes out to be 33.3%. 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 the operation of proposed expansion 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, once in four months.

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 additional revenue for the State Government. The steel availability will boost the infrastructure sector and overall economic scenario of the country. The project expansion will create additional direct/indirect employment for people. Local people will be preferred for employment during operation stage, after expansion.

15.0 CORPORATE ENVIRONMENT RESPONSIBILITY (CER)

Apart from the various environmental protection measures, the project proponent is conscious of its social responsibility and as any good corporate citizen, it is to undertake the various activities. Mr. Deepak Goyal (Director) will be responsible for implementation of the CER activities. The total cost of the project after expansion is estimated to be Rs. 24.97 Crores. Therefore, 0.6% of the total cost will be spent on CER activities which comes out to be Rs. 15 lakhs. Thus, Rs. 15 lakhs will be spent on CER activities as per the details given below. Further, issues raised during public hearing will be taken up as CER.

Table 2: CER activities

Activities	Annual Expenditure (in lakhs)	Timeline (from the date of EC granted)	Total Expenditure (in lakhs)
Rejuvenation of pond Adoption of Kumbra village pond 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	Rs. 15 lakhs	1 year	Rs. 15 lakhs

16.0 ENVIRONMENTAL MANAGEMENT PLAN

Environment Management Department 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. 142.5 lakhs and recurring cost per year will be Rs. 24 lakhs. EMD 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 EMD. Greenbelt and greenery development inside and outside the plant premises will be intensified by the EMD. Guidelines issued by the Central Pollution Control Board (CPCB) on greenbelt development will be followed.

Environmental awareness programs for the employees will be conducted. EMD will also ensure cleanliness inside the plant.

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