

Executive Summary

For

Existing Steel Manufacturing Unit

Located at

Village Harbanspura, RIMT College Road, Sirhind Side, Mandi Gobindgarh, District
Fatehgarh Sahib, Punjab

by

“M/s Rudra Inn Pvt. Ltd”

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

Category: B1

Production Capacity

Existing: @ 84 TPD of MS Billets and Castings

After Expansion: @ 432 TPD (1,51,200 TPA) of Steel Ingots/ Billets/ Rolled products
(TMT Bars/Flats/Patra/Angles/Structure/Channels etc)

(ToR Identification No – TO24B1009PB5792192N dated 01st August, 2024.)

(Baseline Monitoring Period – October to December, 2021)

(Addition One Month Monitoring at Project Location – 15th May to 15th June, 2024)

Submitted by



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(QCI NABET Accreditation No. - NABET/EIA/23-26/RA 0324 dated 17.04.2024)

(In-house Lab., NABL Accreditation No. – TC-11818 dated 26.06.2023)

UID No. EL/2024/06/06/D/Rev. 01

September, 2024

EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

M/s Rudra Inn Pvt. Ltd (Formerly known as DS Metals) is an existing Steel Manufacturing Unit located at Village Harbanspura, RIMT College Road, Sirhind Side, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab. The total area of the project is 31,296.38 sq.m (7.733 acres).

Currently, the existing industrial unit is involved in the manufacturing of MS Billets and Castings @ 84 TPD with one Induction Furnace of capacity 7 TPH.

Now, the project proponent wants to increase their production capacity by replacing existing Induction Furnace of capacity 7 TPH to 12 TPH along with installation of one new Induction Furnace of capacity 15 TPH (both based on electricity as a fuel) along with the addition of one Rolling Mill.

Thus, after expansion, total production capacity of the unit will be 432 TPD (1,51,200 TPA) of Steel Ingots /Billets/ Rolled products (TMT Bars/Flats/Patra/Angles/Structure/Channels etc.) with two Induction Furnaces (1 × 12 TPH & 1 × 15 TPH) based on electricity as a fuel along with 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 of MS Billets and Castings with one Induction Furnace of capacity 7 TPH.
- **Total production capacity after expansion:** 432 TPD (1,51,200 TPA) of Steel Ingots/ Billets/ Rolled products (TMT Bars/Flats/Patra/Angles/Structure/Channels etc) with two Induction Furnaces (1 × 12 TPH & 1 × 15 TPH) along with Rolling Mill.
- **Total Area after expansion:** 31,296.38 sq.m (7.733 acres).
- **Project cost after expansion:** Existing cost of project is Rs. 7.4099 Crores and proposed cost of expansion is estimated to be Rs. 16.6374 Crores. Thus, total cost of the project after expansion becomes Rs. 24.0473 Crores.
- **Interlinked projects:** None



- **Envisaged Changes:** By replacing the existing Induction Furnace from 7 TPH to 12 TPH along with addition of one new Induction Furnace of capacity 15 TPH and Rolling Mill.

2.0 LOCATION & CONNECTIVITY

Project is located at Village Harbanspura, RIMT College Road, Sirhind Side, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab. Project lies on RIMT university road which in turn is connected to G.T Road (NH-44) at a distance of approx. 0.2 km in 'SE' direction. The nearest Railway station is Govindgarh Railway Station: Approx. 3.74 km; NW. Patiala Airport is located at a distance of approx. 36 km in 'SE' direction. Project boundary coordinates of all corners are as follows:

Corner	Latitude	Longitude
A	30°38'43.01"N	76°19'46.67"E
B	30°38'40.16"N	76°19'44.01"E
C	30°38'40.57"N	76°19'43.53"E
D	30°38'41.14"N	76°19'44.02"E
E	30°38'42.87"N	30°38'42.87"N
F	30°38'42.68"N	76°19'41.35"E
G	30°38'43.70"N	76°19'39.78"E
H	30°38'43.88"N	76°19'39.93"E
I	30°38'47.12"N	76°19'34.83"E
J	30°38'49.51"N	76°19'37.17"E
K	30°38'46.99"N	76°19'41.49"E
L	30°38'46.68"N	76°19'41.24"E

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

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 Rudra Inn Pvt” for increasing production capacity from 84 TPD to 432 TPD (1,51,200 TPA) which falls under Schedule 3(a) as per EIA Notification dated 14 th September, 2006 and its subsequent amendments.
2.	Project Proponent	Mr. Hitesh Tangri (Director) E-mail: damni.rudra@gmail.com
3.	Brief description of nature of the project	The existing industrial unit deals with the manufacturing of MS Billets and Castings @ 84 TPD with one Induction Furnace of capacity 7 TPH. After expansion, the production capacity of the industrial unit will become 432 TPD (1,51,200 TPA) of Steel Ingots/ Billets/ Rolled products (TMT Bars/Flats/Patra/Angles/Structure/Channels etc.) with two Induction Furnaces (1 × 12 TPH & 1 × 15 TPH) along with Rolling Mill.
4.	Salient Features of the Project Proposed	
4.1	Overall plant capacity	432 TPD (1,51,200 TPA).
4.2	Area Details	31,296.38 sq.m (7.733 acres)
4.3	Location	Village Harbanspura, RIMT College Road, Sirhind Side, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab.
4.4	Water requirement	Total water requirement for the project on full production capacity is estimated to be 101 KLD. Out of which, fresh water demand will be 95.5 KLD which will be met from ground water.
4.5	Wastewater	Approx. 2.4 KLD of domestic effluent is being generated from the existing project which is being treated in septic tank provided within the project premises. After expansion, the quantity of domestic effluent is estimated to be 5.6 KLD which will be treated in proposed STP of capacity 10 KLD

		and it will be reused for cooling purpose. No industrial effluent is being generated from the unit.
4.6	Man Power	Existing: 55 workers (including both technical & non-technical). 5 workers residing within the project premises. After expansion: 65 additional workers will be hired. After expansion: 120 workers (including both technical & non-technical). 15 workers will reside within the project premises.
4.7	Power requirement	Existing: 4,100 KVA Proposed: 7,100 KVA Total after expansion: 11,200 KVA. DG set of capacity 1 x 180 KVA & 1 x 200 KVA has been provided. Additionally, 1 x 250 KVA DG set will be provided for power backup. 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	Total land area of the unit is 31,296.38 sq.m (7.733 acres) Land documents and landuse classification submitted with the report.

4.0 METEOROLOGY

Meteorological data was obtained for a yearlong data from January to December, 2023 to cover the seasonality (seasonal pattern) and its impact on environment. The wind rose diagram shows the predominant winds are mainly flowing from North West. Calm conditions are observed for 2.3 % of the total time.

5.0 AIR QUALITY

The baseline data of ambient air quality monitoring considered for October to December, 2021 of M/s Devbhoomi Casting Pvt. Ltd. and additional one-month study conducted at project location from 15th May to 15th June, 2024. PM_{2.5}, PM₁₀, SO₂ and NO₂ levels (Criteria Pollutants) as well as NH₃ and O₃ were monitored at 9 locations including project and its 10 km study area. Monitoring stations were keeping in view of the dominant wind direction.

PM₁₀ concentration observed in the study area ranges between 72 µg/m³ to 152 µg/m³. Average value at project location is found to be 140 µg/m³. Whereas, PM_{2.5} concentration ranges between 37 µg/m³ to 81 µg/m³ in the study area and average value found to be 80 µg/m³ in project area. This indicates air quality levels in study area as well as project location against 24 hours' average is more than the permissible limits of PM₁₀ and PM_{2.5} which is due to presence of industries in Mandi Gobindgarh and Khanna and other agro and biomass burning activities as predominant in the region.

However, mass levels of Gaseous pollutants (SO₂, NO₂, CO, Ozone & NH₃) were found to be much below the prescribed limits of CPCB (24 hours' average NAAQ standards) at study area as well as project location. 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 the project premises (M/s Rudra Inn Pvt. Ltd). Noise levels varied from 62.3 dB(A) and 71.2 dB(A) during the day time and were 50.8 dB (A) and 58.6 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 whereas at the project location 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.

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 followed by Pulse Jet Bag Filter. 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 72.8 dB(A) during day time and 60.5 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 10 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, 12 kg/day of domestic solid waste is being generated from the existing project & after expansion, approx. 27 kg/day of domestic waste will be generated, which will be properly collected and segregated into biodegradable and non-biodegradable waste. The solid waste is being disposed off as per Solid Waste Management Rules, 2016.

10.4.2 INDUSTRIAL WASTE

Approx. 2.8 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 14 TPD, out of which 20% will be reused for metal recovery within the project premises & remaining 80% will be given to Concrete Blocks/ RCC tiles etc. manufacturing units for co-processing for co processing.

10.4.3 HAZARDOUS WASTE

After expansion, hazardous waste produced from the industrial unit is estimated to be 0.5 KL/annum of Spent oil under Category 5.1 and 1.1 TPD of APCD dust under Category 35.1 of Schedule I. Authorization of hazardous waste obtained from PPCB. Agreement has been done with M/s R.P Multimetals Pvt. Ltd. (Unit-II) for disposal of APCD dust. Used oil will be given to authorized vendor.

11.0 GREENERY DEVELOPMENT

Since, the project is an existing industrial unit. 10,509.09 sq.m of green area has been proposed within the existing unit which comes out to be 33.57%. 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.

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)

Mr. Hitesh Tangri (Director) will be responsible for implementation of the Corporate

Environmental Responsibility (CER). CER activities will be finalized as per the issue raised during public hearing.

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. 157 lakhs and recurring cost per year will be Rs. 18 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.
