EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

M/s Bassi Alloys Pvt. Ltd. is an existing Steel Manufacturing Unit located at Village Ambey Majra, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab. Total area of the project after expansion will be 45,728.5 sq.m. (11.32 acres).

The project has obtained Environmental Clearance from SEIAA, Punjab vide EC Identification No. EC22B008PB189187 dated 24.02.2022 for increase in production capacity from 84 TPD (29,400 TPA) of Billets/ Ingots to 314 TPD (1,10,000 TPA) and 80 TPD (28,000 TPA) of Heavy Rounds/ Flats/ Structures to 200 TPD (70,000 TPA) with 2 Induction Furnaces of capacity 15 TPH each, 2 No. Rolling Mills and 1 No. Reheating Furnace of capacity 120 TPH for plot area of 4 acres.

Now, the industry wants to go for further expansion by increasing the plot area as well as production capacity. As there is planning to install 3rd Induction Furnace of capacity 15 TPH along with 1 Rolling Mill and also addition of adjoining land.

Thus, after expansion, the total production capacity of the unit with 3 Induction Furnaces of capacity 15 TPH each, Rolling Mills (3 No.) and Reheating Furnace of capacity 120 TPH will be 715 TPD of Ingots/ Billets or 1,000 TPD Rolled products i.e. Heavy Rounds/ Flats/ Structures (700 TPD through CCM and 300 TPD from Reheating Furnace).

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:

- **Production capacity:** After expansion, the production capacity of the unit will be 715 TPD of Ingots/ Billets or 1,000 TPD Rolled products i.e. Heavy Rounds/ Flats/ Structures (700 TPD through CCM and 300 TPD from Reheating Furnace) with 3 IFs × 15 TPH, Rolling Mill (3 No's.) and Reheating Furnace.
- **Total Area of the project:** 45,728.5 sq.m (11.32 acres)
- **Project cost:** EC accorded cost of the project is Rs. 22.14 Crores and for expansion, proposed cost will be Rs. 10.4 Crores. Therefore, overall cost of the project after expansion will be Rs. 32.54 Crores.
- **Interlinked projects:** None

2.0 LOCATION & CONNECTIVITY

Project is located at Village Ambey Majra, Mandi Gobindgarh, Distt. Fatehgarh Sahib, Punjab. The project is located at a distance of approx. 1 km from National Highway-1. The nearest railway station is Mandi Gobindgarh Railway Station at a distance of about 4 km in 'NW' direction. Project boundary coordinates of all corners are as follows:

CORNER	LATITUDE	LONGITUTE
A	30°38'4.73"N	76°19'1.53"E
B	30°38'4.73"N	76°19'6.11"E
C	30°38'8.82"N	76°19'6.20"E
D	30°38'8.81"N	76°19'9.22"E
E	30°38'13.32"N	76°19'9.31"E
F	30°38'13.29"N	76°19'0.65"E
G	30°38'10.72"N	76°19'0.62"E
H	30°38'10.72"N	76°19'1.59"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 operation of project

S. No.	Parameters	Description
1.	**Identification of the project**	Expansion of steel manufacturing unit namely "**Bassi Alloys Pvt. Ltd.**" falls under Schedule 3(a) as per EIA Notification dated 14th September, 2006 and its subsequent amendments.
2.	**Project Proponent**	**Mr. Gaurav Singla** (Director) M/s Bassi Alloys Pvt. Ltd. E-mail: bassialloys10@gmail.com

<table>
<tr><td>3.</td><td>Brief description of nature of the project</td><td>Project has obtained Environmental Clearance from SEIAA, Punjab vide EC Identification No. EC22B008PB189187 dated 24.02.2022 for increase in production capacity from 84 TPD (29,400 TPA) of Billets/ Ingots to 314 TPD (1,10,000 TPA) and 80 TPD (28,000 TPA) of Heavy Rounds/ Flats/ Structures to 200 TPD (70,000 TPA) with 2 Induction Furnaces of capacity 15 TPH each, 2 No. Rolling Mills and 1 No. Reheating Furnace of capacity 120 TPH for plot area of 4 acres. Now, the industry wants to go for further expansion by increasing the plot area as well as production capacity. As there is planning to install 3rd Induction Furnace of capacity 15 TPH along with 1 Rolling Mill and also addition of adjoining land.
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<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, the total production capacity of the unit will be 715 TPD of Ingots/ Billets or 1,000 TPD Rolled products i.e. Heavy Rounds/ Flats/ Structures (700 TPD through CCM and 300 TPD from Reheating Furnace).</td></tr>
<tr><td>4.2</td><td>Area Details</td><td>Total area after expansion will be 45,728.5 sq.m (11.32 acres).</td></tr>
<tr><td>4.3</td><td>Location</td><td>Project boundary coordinates of all corners are as follows:
<table>
<tr><th>CORNER</th><th>LATITUDE</th><th>LONGITUTE</th></tr>
<tr><td>A</td><td>30°38'4.73"N</td><td>76°19'1.53"E</td></tr>
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<tr><td></td><td></td><td>
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<tr><td>H</td><td>30°38'10.72"N</td><td>76°19'1.59"E</td></tr>
</table>
Project location and its study area falls in the Survey of India, Toposheet No. H43K2 & H43K6. Google Earth Image showing project location & its surroundings within 500 m are attached with report.
</td></tr>
<tr><td>4.4</td><td>Water requirement</td><td>
Source: Ground water
The total water requirement of the project will be 133 KLD. However, fresh water req. is estimated to be 123 KLD.
The break-up of the water requirement is given below:
<table>
<tr><th>Purpose</th><th>Existing water demand (KLD)</th><th>Total water demand after expansion (KLD)</th></tr>
<tr><td>Make-up water demand for cooling purpose</td><td>32</td><td>60</td></tr>
<tr><td>Domestic water demand</td><td>4.5</td><td>13</td></tr>
<tr><td>Green area demand
• Summer
• Winter
• Monsoon</td><td>
12.5
4
1</td><td>
60
20
5.5</td></tr>
</table>
Permission has been obtained from PWRDA for existing quantity and for additional quantity permission will be obtained.
</td></tr>
<tr><td>4.5</td><td>Wastewater</td><td>After expansion, approx. 10.5 KLD of domestic wastewater will be generated which will be treated in proposed STP of capacity 15 KLD. No industrial effluent will be generated.</td></tr>
<tr><td>4.6</td><td>Man Power</td><td>Total manpower will become 250 persons (both technical & non-technical); Out of this 20 workers will be residing within project premises.</td></tr>
<tr><td>4.7</td><td>Power requirement</td><td>For proposed expansion, total power requirement will be 22,200 KVA.
Source: Punjab State Power Corporation Limited (PSPCL).</td></tr>
</table>

4.8	**Alternative site**	No alternative site is being considered as the unit is already existing and expansion is proposed by addition of adjoining land.
4.9	**Land form, Land use and Land ownership**	Land document (registry) has been submitted with report.

4.0 METEOROLOGY

4.0 METEOROLOGY

Meteorological data was obtained for a yearlong data from January to December, 2021 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.

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 monitoring is considered for six monthly compliances of period ending 31.03.2023 & 30.09.2023 at project location. $PM_{2.5}$, 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 observed in the study area ranges between 81 $\mu g/m^3$ to 152 $\mu g/m^3$. Average value at project location is found to be 112 $\mu g/m^3$. Whereas, $PM_{2.5}$ concentration ranges between 37 $\mu g/m^3$ to 81 $\mu g/m^3$ in the study area and average value found to be 63.5 $\mu g/m^3$ 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 PM_{10} 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 (SO_2, NO_2, CO, Ozone & NH_3) 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 project location for six monthly compliances of period ending 31.03.2023 & 30.09.2023. Noise levels varied from 68.6 dB(A) to 69.1 dB(A) during the day 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 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 Compartmentalized 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 69.1 dB(A) during day 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

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

After expansion, the quantity of slag is estimated to be 18 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.

10.4.3 HAZARDOUS WASTE

Hazardous waste generated from the existing industrial unit is 0.8 TPD of exhaust air or gas cleaning residue (APCD dust) under Category 35.1 and 0.4 KLA of used oil under Category 5.1 of Schedule I. Authorization of hazardous waste has been obtained from PPCB.

After expansion, hazardous waste produced from the industrial unit is estimated to be 0.8 KL/annum of Spent oil under Category 5.1 and 1.8 TPD of APCD dust under Category 35.1 of Schedule I, which will be given to authorized vendor.

11.0 GREENERY DEVELOPMENT

10,966.54 sq.m of green area has been proposed within the existing unit which comes out to be 23.98%. In addition to this, land area outside the project premises will be acquired to meet the criteria of 33% of green area. 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. Gaurav Singla (Director) will be responsible for implementation of the Additional Environmental Activities. For expansion, proposed cost will be Rs. 10.4 Crores. Thus, Rs. 10.5 lakhs (@ 1% of the proposed cost i.e. Rs. 10.4 Crores) will be spent on additional environmental activity 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. 124 lakhs and recurring cost per year will be Rs. 22.5 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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