Executive Summary

For

Existing Steel Manufacturing Unit

Located at

G.T. Road, Doraha, Tehsil Payal, District Ludhiana, Punjab

by

"M/s Kalsi Alloys"

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

Category: B1

Production Capacity

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

After Expansion: @ 180 TPD (63,000 TPA) of Billets/Ingots or Rolled Products (Wire rods, Flats, TMT Bars etc.)

(TOR Letter No. – SEIAA/MS/2023/33 dated 9th January, 2023)

(Baseline Monitoring Period – March to May, 2021)

(Addition One Month Monitoring at Project Location – 15th October to 15th November, 2022)

Submitted by

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

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(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/2022/07/05/D/Rev. 01 **April, 2023**

EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

M/s Kalsi Alloys is an existing steel Manufacturing Unit located at G.T. Road, Doraha, Tehsil Payal, District Ludhiana, Punjab. The total area of the project is 7,334.86 sq.m (1.8125 acres).

Currently, the existing industrial unit deals with the manufacturing of Ingots @ 84 TPD (29,400 TPA) with one Induction Furnace of capacity 7 TPH.

Now, the industrial unit wants to increase their production capacity by replacing the existing Induction Furnace of capacity 7 TPH with new Induction Furnace of capacity 12 TPH along with installation of Rolling Mill.

Thus, after expansion, the total production capacity of the unit will be 180 TPD (63,000 TPA) of Billets/Ingots or Rolled Products (Wire rods, Flats, TMT Bars etc.) with Induction Furnace of capacity 12 TPH and Rolling Mill.

The industrial unit is located in the Industrial Zone as per the Master Plan of Ludhiana. 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 by Induction Furnace of capacity 7 TPH.
- **Total production capacity after expansion**: @ 180 TPD (63,000 TPA) of Billets/Ingots or Rolled Products (Wire rods, Flats, TMT Bars etc.) by Induction Furnace of 12 TPH & Rolling Mill.
- **Total Area after expansion:** 7,334.86 sq.m (1.8125 acres)
- **Project cost after expansion:** Existing cost of project is Rs. 4.36 Crores and proposed cost of expansion is estimated to be Rs. 6.80 Crores. Thus, total cost of the project after expansion becomes Rs. 11.16 Crores.
- **Interlinked projects:** None
- **Envisaged Changes:** By replacing the existing Induction Furnace from 7 TPH to 12 TPH and installing Rolling Mill.

2.0 LOCATION & CONNECTIVITY

Project is located at G.T Road, Doraha, Tehsil Payal, District Ludhiana, Punjab. The industrial unit lies on internal road which in turn connected to NH-44 (G.T. road), at a

distance of 350 m in 'SW' direction. The nearest Railway station is Doraha Railway Station, located at a distance of approx. 3 km in 'E' direction. Ludhiana Airport, Sahnewal is located at a distance of approx. 6 km in 'NW' direction. Project boundary coordinates of all corners are as follows:

CORNER	LATITUDE	LONGITUTE
A	30°48'53.38"N	76° 0'42.56"E
B	30°48'55.30"N	76° 0'44.15"E
C	30°48'57.22"N	76° 0'41.14"E
D	30°48'56.93"N	76° 0'40.87"E
E	30°48'56.87"N	76° 0'40.96"E
F	30°48'55.34"N	76° 0'39.55"E

The project location and its study area of 10 km falls in the Survey of India, Toposheet No. **H43K1, H43K2, H43J13 & H43J14.**

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 Kalsi Alloys**" for increasing production capacity from 84 TPD (29,400 TPA) to 180 TPD (63,000 TPA) which falls under Schedule 3(a) as per EIA Notification dated 14th September, 2006 and its subsequent amendments.
2.	**Project Proponent**	**Mr. Gurmukh Singh** (Partner) M/s Kalsi Alloys E-mail: kalsialloys@yahoo.com
3.	**Brief description of nature of the project**	Currently, existing industrial unit deals with the manufacturing of Ingots @ 84 TPD (29,400 TPA) with one Induction Furnace of capacity 7 TPH. Expansion of the existing steel manufacturing unit will be done replacing the existing Induction Furnace of capacity 7 TPH with new Induction Furnace of capacity 12 TPH along with installation of Rolling Mill.

<table>
<tr><td></td><td></td><td>Thus, after expansion, the total production capacity of the unit will be 180 TPD (63,000 TPA) of Billets/Ingots or Rolled Products (Wire rods, Flats, TMT Bars etc.) with Induction Furnace of capacity 12 TPH 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 180 TPD (63,000 TPA).</td></tr>
<tr><td>4.2</td><td>Area Details</td><td>The total area of the project is 7,334.86 sq.m (1.8125 acres).</td></tr>
<tr><td>4.3</td><td>Location</td><td>Project boundary coordinates of all corners are as follows:
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<tr><td>4.4</td><td>Water requirement</td><td>Source: Ground water
Total consumption of water after expansion will be 34 KLD. Out of which, fresh water demand will be 31 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>15</td><td>9</td><td>24</td></tr>
<tr><td>Domestic water demand</td><td>5#</td><td>(-) 1</td><td>4</td></tr>
<tr><td>Green area water demand
• Summer</td><td>-</td><td>• 6</td><td>• 6</td></tr>
</table></td></tr>
</table>

		<table><tr><td>• Winter • Monsoon</td><td></td><td>• 2 • 0.5</td><td>• 2 • 0.5</td></tr><tr><td colspan="2">Total</td><td>14</td><td>34</td></tr></table> #*Existing water demand mentioned in Consent to Operate is taken on higher end.* Permission will be obtained from PWRDA regarding abstraction of ground water.
4.5	**Wastewater**	Approx. 4 KLD of domestic wastewater is being generated from the existing unit which is being treated in septic tank provided within project premises. After expansion, 3.2 KLD of domestic wastewater will be generated which will be treated in proposed STP of capacity 5 KLD provided within project premises. Also, no industrial effluent is being generated and even after expansion, none will be generated. **Existing domestic effluent was taken on higher end.*
4.6	**Man Power**	Existing manpower: 30 workers (including both technical & non-technical). Out of this, 10 workers are residing within the project premises. Proposed manpower: 30 additional workers will be hired; out of which 5 workers will be residing within project premises. After expansion manpower: 60 workers (including both technical & non-technical). Out of which, 15 workers will be residing within project premises.
4.7	**Power requirement**	Power load of the existing unit is 2,500 KW, which is being supplied by PSPCL. 1 DG set of capacity 125 KVA has been provided for power backup. After expansion, total power load requirement for the proposed unit will be 4,000 KW which will be supplied by Punjab State Power Corporation Limited (PSPCL). One additional DG set of capacity 125 KVA has been proposed for power backup along with existing DG set.
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**	Total land area of the unit is 7,334.86 sq.m (1.8125 acres). Land documents (registry) and change of landuse has been submitted with report.

	ownership	

4.0 METEOROLOGY

Meteorological data was obtained for a yearlong data from January to December, 2022 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 March to May, 2021 of M/s Allied Recycling Ltd. (Unit II) and additional one-month study conducted at project location from 15th October to 15th November,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 observed in the study area ranges between 63 $\mu g/m^3$ to 127 $\mu g/m^3$. Average value at project location is found to be 155.5 $\mu g/m^3$. Whereas, $PM_{2.5}$ concentration ranges between 32 $\mu g/m^3$ to 72 $\mu g/m^3$ in the study area and average value found to be 94.13 $\mu g/m^3$ 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 Ludhiana, Mandi Gobindgarh 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 5 locations within the project premises (M/s Kalsi Alloys). Noise levels varied from 66.5 dB(A) to 71.3 dB(A) during the day time and were 53.5 dB(A) and 60.5 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 Ludhiana, 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 neutral in nature and sandy clay 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, Compartmentalized Pulse Jet Bag Filter will be restricted. The efficient Air Pollution Control Device will enhance environment cleanness. Therefore, impact on the surrounding environment will be minimal.

10.2 NOISE QUALITY

The raw material handling yard, Induction Furnace, DG Sets 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 75 dB(A) during day time and 70 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 5 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, 8 kg/day of domestic solid waste is being generated from the existing project & after expansion, approx. 15 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

2.8 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 5.8 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 unit is 0.05 TPD of exhaust air or gas cleaning residue (APCD dust) under category 35.1 and 0.05 KLA of used oil under Category 5.1 of Schedule I. After expansion, hazardous waste produced from the industrial unit is estimated to be 0.2 KL/annum of Spent oil under Category 5.1 and 0.5 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 Nimbua Greenfield (Punjab) Ltd. for disposal of APCD dust and used oil will be given to authorized vendor.

11.0 GREENERY DEVELOPMENT

Since, the project is an existing industrial unit. 1,100.24 sq.m of green area has been proposed within the existing unit which comes out to be 15% of the plot area. In order to meet 33% green area requirement, additional land has been purchased located at a distance of 820m from project location in 'N' direction. Green area provided on additional land will be 1,618.72 sq.m. Thus, total green area will be 2,718.96 sq.m. which comes out to be 37.06%. 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. Gurmukh Singh (Partner) will be responsible for implementation of the CER activities. Thus, under CER, rejuvenation of pond or development of Nanak Bagichi in nearby village will be done. Further, issues raised during public hearing will be taken up as CER.

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. 81 lakhs and recurring cost per year will be Rs. 15 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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