EXECUTIVE SUMMARY

For

Existing Steel manufacturing unit "SG Multimetals"

Located at

Village Bhadla, Tehsil Khanna, Distt. Ludhiana, Punjab

By

"M/s SG Multimetals"

Project schedule 3(a): Metallurgical Industries (ferrous & nonferrous)

Category: B1

Existing production capacity: Ingots/Concast Billets or Rolled products (Round, Square, Girder, Channel, Flats) @ 84 TPD

After expansion production capacity: Ingots/Concast Billets or Rolled products (Round, Square, Girder, Channel, Flats) or Pipe, Section @ 2,00,000 TPA

(TOR Letter No. – SEIAA/MS/2022/5050 dated 9th Feb, 2022)
(Baseline Monitoring Period: 1st Oct to 31st Dec, 2021 & 15th Jan to 15th Feb, 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/2023/RA 0211** dated **10.09.2021**)
(In-house Lab., NABL Accreditation No. – **TC-7477** dated **28.04.2022)**

November, 2022

EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

M/s S G Multimetals is an existing Steel Manufacturing Unit located at Village Bhadla, Tehsil Khanna, Distt. Ludhiana, Punjab. The total area of the industrial unit is 16,310.40 sq.m (4.0625 acres).

The existing industrial unit deals with the manufacturing of Ingots/Concast Billets or Rolled products (Round, Square, Girder, Channel, Flats) @ 84 TPD with one Induction Furnace of capacity 7 TPH and rolling mill.

Now, the industry wants to increase their production capacity by replacing the existing Induction Furnace of 7 TPH with new Induction Furnace of 25 TPH capacity along with addition of one more Induction Furnace of 25 TPH, Reheating Furnace and Pipe Plant. However, existing rolling mill will remain same.

Thus, after expansion, the production capacity of the industrial unit will become 2,00,000 TPA of Ingots/ Concast Billets or Rolled products (Round, Square, Girder, Channel, Flats) or Pipe, Section with 2 Induction Furnaces of capacity 25 TPH each, rolling mill, pipe plant and Reheating furnace.

As per EIA Notification, 2006 and its amendments, it is a Secondary Metallurgical processing industry falling under Schedule 3(a); Category B1 project which requires Environmental Clearance.

The salient features of the project are as under:

- **Existing production capacity:** Ingots/Concast Billets or Rolled products (Round, Square, Girder, Channel, Flats) @ 84 TPD with 1 IF of capacity 7 TPH and Rolling Mill.
- **After expansion production capacity:** 2,00,000 TPA of Ingots/ Concast Billets or Rolled products (Round, Square, Girder, Channel, Flats) or Pipe, Section with 2 Induction Furnaces of capacity 25 TPH each, Rolling Mill, Pipe Plant and Reheating furnace.
- **Total Area:** 16,310.40 sq.m. (4.0625 acres)
- **Overall Project cost:** Existing cost of the project is Rs. 11.6755 Crores and after expansion, the total cost of the project will become approx. Rs. 26.0755 Crores.
- **Interlinked projects:** None.
- **Envisaged changes due to expansion:** Addition of two new IFs of capacity 25 TPH each along with Pipe plant and Reheating Furnace.

2.0 LOCATION & CONNECTIVITY

The project is located at Village Bhadla, Tehsil Khanna, Distt. Ludhiana, Punjab. The existing industrial unit lies on Khanna-Ratanhari-Bhadla Road which in-turn connected to Bhadla-Kheri-Nud Single Road which in turn connected to National Highway (NH-1). Khanna Railway Station is located at a distance of 5 km in 'NW' direction. Ludhiana Airport, Sahnewal is located at a distance of 36 km in 'NW' direction and International Airport, Mohali is located at a distance of 49 km in 'E' direction.

Project and its study area falls in the Survey of India, Toposheet No. **H43K1, H43K2, H43K5 & H43K6.**

3.0 BRIEF FEATURES OF PROJECT

Table 1: Size/ magnitude of the project

S. No.	Parameters	Description
1.	**Identification of the project**	Expansion of Steel manufacturing unit for increasing the production capacity to 2,00,000 TPA for the project namely **"**S G Multimetals**"** falls under Schedule 3(a) as per EIA Notification dated 14th September, 2006 and its subsequent amendments.
2.	**Project Proponent**	**Mr. Dinesh Singla** (Partner) **S G Multimetals** E-mail: sgmultimetals@gmail.com
3.	**Brief description of nature of the project**	M/s S G Multimetals is an existing industrial unit deals with the manufacturing of Ingots/Concast Billets or Rolled products (Round, Square, Girder, Channel, Flats) @ 84 TPD with one Induction Furnace of capacity 7 TPH and rolling mill. After expansion, the production capacity of the industrial unit will become 2,00,000 TPA of Ingots/ Concast Billets or Rolled products (Round, Square, Girder, Channel, Flats) or Pipe, Section with 2 Induction Furnaces of capacity 25 TPH each, rolling mill, pipe plant and Reheating furnace.

<table>
<tr><td>4.</td><td colspan="2">Salient Features of the Project After expansion</td></tr>
<tr><td>4.1</td><td>Overall plant capacity</td><td>After expansion, the production capacity of the industrial unit will be 2,00,000 TPA.</td></tr>
<tr><td>4.2</td><td>Area Details</td><td>After expansion, the overall area of the project becomes 4.065 acres (16,310.40 sq.m).</td></tr>
<tr><td>4.3</td><td>Location</td><td>Project boundary coordinates of all corners are as follow:
A: 30°41'27.84"N & 76°16'30.40"E
B: 30°41'27.92"N & 76°16'27.02"E
C: 30°41'31.85"N & 76°16'27.10"E
D: 30°41'31.85"N & 76°16'27.02"E
E: 30°41'33.78"N & 76°16'27.01"E
F: 30°41'33.75"N & 76°16'30.45"E</td></tr>
<tr><td>4.4</td><td>Water requirement</td><td>Existing water requirement of the project is 27 KLD. After expansion, water requirement will be 71 KLD. The breakup of the water demand is given below:
<table>
<tr><th>Purpose</th><th>Existing water demand (KLD)</th><th>Proposed water demand (KLD)</th><th>Total water demand after expansion (KLD)</th></tr>
<tr><td>Make-up water demand for cooling purpose</td><td>19</td><td>8</td><td>27</td></tr>
<tr><td>Domestic water demand</td><td>6</td><td>8</td><td>14</td></tr>
<tr><td>Green area demand
• Summer
• Winter
• Monsoon</td><td>
2
0.5
0.1</td><td>
28
9.5
2.9</td><td>
30
10
3</td></tr>
<tr><td>Total</td><td>27</td><td>44</td><td>71</td></tr>
</table>
Source: Borewells (Nos. 3).</td></tr>
</table>

		Application will be filed to Punjab Water Regulation & Development Authority (PWRDA) for seeking permission regarding abstraction of ground water.
4.5	**Wastewater**	5 KLD of domestic wastewater is being generated from the existing unit which is being treated in the septic tank. After expansion, total wastewater generated from the unit will be 11 KLD; which will be treated in proposed STP of capacity 15 KLD to be installed within project premises and treated water will be reused for cooling 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**	Existing industrial unit having 90 workers; out of which, 20 workers are residing within project premises. For proposed expansion, additional 160 workers will be hired. Thus, after expansion, the total manpower become 250 persons; out of which 30 workers will be residing within project premises.
4.7	**Power requirement**	Existing power load: 4,000 KW. Proposed power load: 16,000 KW After expansion, total power requirement will be 20,000 KW **Source:** Punjab State Power Corporation Limited (PSPCL). For power backup 1 DG of capacity 250 KVA has already been installed. For proposed expansion, 1 additional DG of capacity 500 KVA will be installed. Thus, after expansion 2 DG sets of capacity 500 KVA & 250 KVA will be used as a source of power backup.
4.8	**Alternative site**	No alternative site is considered, as the expansion is proposed within the existing ongoing industrial unit.
4.9	**Land form, Land use and Land ownership**	The project falls within Industrial Zone as per Master Plan of Khanna. Change in landuse has been obtained.

4.0 METEOROLOGY

Meteorological data was obtained for a yearlong data January to December 2021 to cover the seasonality (seasonal pattern) and its impact on environment. The predominant winds are mainly flowing from West North West.

5.0 AIR QUALITY

The baseline air quality was established by monitoring of major air pollutants like Suspended Particulate Matter (≤ PM_{10} µm), Fine Particulate Matter (≤ $PM_{2.5}$ µm), Sulphur dioxide, Nitrogen dioxide and Carbon monoxide at various locations in the study area. Respirable dust samplers and fine particulate matter samplers were used for ambient air sampling. Samples were collected continuously from all the stations for 24 hours. Samples thus collected were analyzed for various pollutants. Baseline data for ambient air quality were collected within the study area of nearby project i.e. M/s Devbhoomi Casting Pvt. Ltd. during October to December, 2021 and at project location from 15th January to 15th February, 2022.

PM_{10} concentration observed in the study area during October to December, 2021 ranges between 72 µg/m^3 to 152 µg/m^3. This indicates air quality in study area against 24 hours average is greater than the permissible limits of 100 µg/m^3 due to presence of industries in Mandi Gobindgarh and Khanna and other agro and biomass burning activities as predominant in the region. However, the value ranges between 86 to 108 µg/m^3 in January to February, 2022 at project location with average value found to be 93 µg/m^3. Thus, at project location the 24 hours' average of ambient air quality is within the permissible limits of 100 µg/m^3.

$PM_{2.5}$ concentration observed in the study area during October to December, 2021, ranges between 37 µg/m^3 to 81 µg/m^3. This indicates air quality in study area against 24 hours average is more than the permissible limits of 60 µg/m^3 due to presence of industries in Khanna and other agro and biomass burning activities as predominant in the region. However, the average value monitored at project location in January, 2022 to February, 2022 is found to be 52.875 µg/m^3 which is within the permissible limits of 60 µg/m^3.

Mass levels of particulate dust (PM_{10} & $PM_{2.5}$), 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

The baseline noise quality data were collected by establishing monitoring network at various locations in the project area. A total of 5 locations; 4 at corner and one at center points of SG Multimetals were selected for measurement of ambient noise levels.

The obtained noise levels at project location of SG Multimetals are varying from 54.8 dB(A) to 69.7 dB(A) during the day time and 42.6 dB(A) to 57.1 dB(A) during night time within the prescribed limits for industrial area as 75 dB(A) in day time and 70 dB(A) in night time respectively. The noise levels within prescribed limits indicate that the noise quality in the study area is safe and comfortable to human health and environment.

7.0 WATER QUALITY

The ground water 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.

Analysis results of ground water reveal the following:

- pH varies from 7.2 -7.39 in the study area which is the acceptable limits for potable water and at project location it is found to be 7.26. Thus, the ground water is fit for drinking and cooling purpose.
- Calcium varies from 60 to 74 mg/l in the study area and at project location it is found to be 76 mg/l which is within the permissible limit as per IS 10500.
- Magnesium varies from 13 to 18 mg/l in the study area and at project location found to be 13 mg/l which is within the permissible limit as per IS 10500.
- Chloride concentration which is also one of the important parameters varies from 34 to 65 mg/l in the study area and at project location found to be 92 mg/lt. Thus, the value of chloride is within the permissible limit as per IS 10500 and water is fit for drinking and cooling purpose.
- Rest of other chemical parameters tested are well within prescribed limit of BIS.

All the above parameters at the various locations in the study area are within permissible and tolerable limits. In the study area, since the 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. The ground water test results indicate that water is good in quality and safe for drinking purpose after suitable treatment of hardness and

alkalinity and fit for cooling water requirement.

As no effluent will be generated from the industry after the commissioning of the industry. Hence, surface water quality will not be affected due to the industry.

8.0 SOIL QUALITY

The baseline monitoring of soil quality was done by establishing monitoring network at various locations in the study area of M/s Devbhoomi Casting Pvt. Ltd. during October to December 2021 and at project location in 15th January,2022 to 15th February, 2022. For studying the soil profile of the region, soil samples were collected from 8 locations in the study area of our nearby project M/s Devbhoomi Casting Pvt. Ltd. as well as from project location of S G Multimetals to assess the existing soil conditions within the study area representing various land uses. The observations show that in the study area soil are generally alkaline in nature and Sandy loam texture with medium class of fertility.

9.0 ECOLOGY

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 controlled using Side suction hood will be provided 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 noise levels near the sources such as raw material handling yard, Induction Furnace etc. will be higher during the operation phase. The noise levels at source like Induction Furnace are anticipated to go upto 85 dB(A). However, the noise levels will attenuate to the background values beyond the plant boundary and the levels are not expected to rise beyond 55 dB(A) in the study area. The damage risk criteria as enforced by OSHA and CPCB to reduce hearing loss, stipulates the noise levels up to 85 dB(A) as acceptable limits for 8 hour working shift per day. In case of the operation of heavy machinery/ cranes for scrap handling and storage, noise levels may exceed the prescribed limits in certain work places like scrap yard, material

loading/unloading and feeding to furnace.

10.3 WATER QUALITY

Domestic wastewater will be treated in the proposed STP of 15 KLD capacity to be installed within the project premises. No wastewater will be discharged outside the plant premises (under normal operating conditions). The storm water drain will be kept separate from wastewater drains. As no Industrial effluent is generated from the project hence the quality of the surface water will not be affected.

10.4 SOLID WASTE

10.4.1 DOMESTIC WASTE

Approximately, 22 kg/day of domestic solid waste is being generated from the existing project & after expansion approx. 56 kg/day of domestic waste will be generated, which will be properly collected and segregated into biodegradable and non-biodegradable waste. Solid waste will be disposed off as per Solid Waste Management Rules, 2016.

10.4.2 INDUSTRIAL WASTE

3 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 18 TPD. Out of this, 20% will be used for metal recovery and remaining 80% will be sold to tiles/block manufacturing unit for co-processing.

10.4.3 HAZARDOUS WASTE

Hazardous waste produced from the existing industrial unit is 0.020 KL/annum of Spent oil under Category 5.1 and 0.3 TPD of Exhaust air or Gas cleaning residue (APCD dust) under Category 35.1 of Schedule I is being generated. 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. After expansion, hazardous waste produced from the industrial unit is estimated to be 0.6 KL/annum of Spent oil under Category 5.1 and 1.5 TPD of Exhaust air or Gas cleaning residue (APCD dust) under Category 35.1 of Schedule I will be generated.

11.0 GREENERY DEVELOPMENT

Adequate green area of 33% has been proposed inside the plant premises. 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 PUBLIC CONSULATION

Public hearing for Establishment of the unit will be conducted by Punjab Pollution Control Board (PPCB). The proceedings of the same will be incorporated in the final EIA report.

15.0 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 will create additional direct/indirect employment for people. Local people will be preferred for employment.

16.0 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. Dinesh Singla (Partner) will be responsible for implementation of the CER activities. The total cost of the project after expansion is estimated to be Rs. 26.07 Crores. Therefore, 1% of the total cost will be spent on CER activities which comes out to be Rs. 26 lakhs. Thus, Rs. 25 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	Total Expenditure (in lakhs)
Rejuvenation of pond Adoption of Bhadla 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. 25 lakhs

17.0 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. 243 lakhs and recurring cost per year will be Rs. 28 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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