EXECUTIVE SUMMARY

1.0 Project Name and location

The Proposed Project i.e. M/s Chopra Alloys is a Secondary Metallurgical Process based industry. The plant is located at Village- Alour, Bhadla Road, Khanna, Ludhiana, Punjab.

2.0 Products and capacities

The project proponent proposed to enhance the capacity of product by replacing existing induction furnace of capacity 7TPH with two number induction furnaces having capacity 20TPH each and one induction furnace of 10TPH capacity and adding one number Rolling Mill. The capacity of the Steel Ingots/Billets unit after expansion will be 2, 52, 000 TPA and 1, 80, 000 TPA Rounds, Square, TMT/MS Bars, Angles, Channel, Flats etc.

After expansion the production details will be as under:

PRODUCTS			
Capacity	**Existing**	**Additional**	**Total**
Steel Ingots/ Billets (TPA)	(-) 29,520	(+) 2, 52, 000	2, 52, 000
Round, Square, TMT/MS bars, Angle, Channel, Flats etc (TPA)	Nil	1, 80, 000	1, 80, 000

3.1 Land Area

The industry is having 3 acres of land. No additional land will be required for expansion.

3.2 Raw Material Requirement

RAW MATERIAL			
Capacity	**Existing**	**Additional**	**Total**
MS Scrap (TPA)	(-) 31,492	(+) 2,82,350	2,82,350
Ferro Alloys (TPA)	(-) 188	(+) 1150	1150
Source & Transportation	Local & international markets and transport through covered trucks		

3.3 Water Requirement

Water consumption in the unit shall be for twin purpose namely domestic and make up water for cooling tower (CT). Water requirement will be met through existing tube well. The detail of water requirement and water balance is given below:-

Water Supply Source	**Existing Tube well**		
Quantity of Water Required	Domestic	Cooling	Total
Existing (KLD)	2.5	7.5	10.0
Proposed (KLD)	2.0	68.0	70.0
Total (KLD)	4.5	75.5	80.0

Power Requirement

The Power Requirement will be met by sourcing the power from Punjab State Power Corporation limited from nearby Sub-station. The detail of power requirement existing & after expansion is given below:-

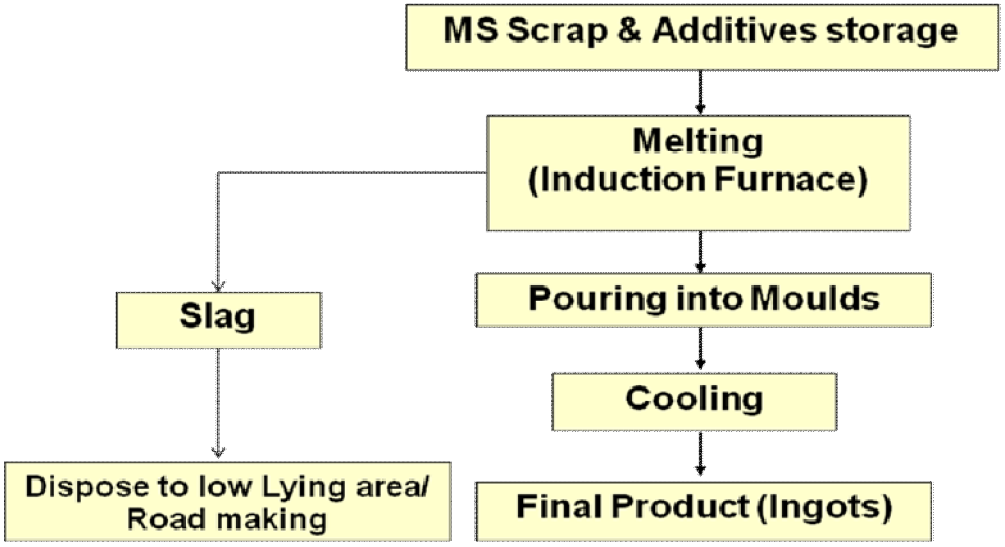
Source of Electricity	**Punjab State Power Corporation Limited (P.S.P.C.L.)**		
Total Load (KWA)	Existing	Additional	Total
	4000	18000	22000

3.5 Manpower Requirement

For expansion, additional 15 persons will be required. Total manpower after expansion will be 55.

4.0 Process Description

PROCESS FLOW CHART



5.0 Description of Mitigation Measures

The purpose of mitigation measures is to avoid, reduce or minimize unwanted impacts on the environment. To minimize & control the Flue Gas emission from the stack attached to furnace & DG Set, M/s Chopra Alloys has already installed separate water scrubber with I.F & canopy with DG set. The quantity of slag after expansion will be 48.91TPD which will be used to fill low lying area. Solids from APCD are disposed off at designated TSDF site. Used Oil from DG set is being sold to the authorized Recyclers. STP is provided for treatment of domestic effluent. Treated effluent is used for plantation in the premises. The industry is regularly operating and maintaining its APCD and ensuring that the emissions are adequately collected and concentration of air pollutants in its emissions conforms to the emission standards laid down by the board.

6.0 Cost Details

Existing cost of the project is Rs. 4.53 Cr and total cost for the expansion has been estimated Rs. 26.00 Cr. The total cost of the project has been estimated as Rs. 30.53 Cr. The proposed expansion will be done within one year after granting of Environment Clearance.

7.0 Site Details

M/s Chopra Alloys is situated Village Alour, Bhadla Road, Khanna, Ludhiana, Punjab having its global coordinates as Latitude 30°40'53.34"N & Longitude 76°16'15.96"E. Ludhiana is the nearest city and Mandigobindgarh is the nearest railway station. Nearest airport is Ludhiana which is at 48 km from site. No National Parks/ Wildlife Sanctuaries/ Biosphere Reserves/ Reserved Forests exist within 5 km radius of project site. There are no water bodies near project site.

8.0 Baseline Environmental Data and their impacts

Various Environmental factors as existing in the study area which are liable to be affected by the activities have been assessed both quantitatively and qualitatively. Baseline environmental data generation of study area was carried out during the period February, March & April 2018.

8.1 Ambient Air Quality

The $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO, O_3, Pb, NH_3, C_6H_6, BaP, As and Ni levels were monitored at eight locations in the study area for three months (Feb-April, 2018). The P98 levels of criteria pollutants are as follows: $PM_{2.5}$ is 54.5μg/m^3, PM_{10} is 96.8 μg/m^3, SO_2 is 17.7 μg/m^3, NO_2 is 48.4 μg/m^3 and CO is 0.62 mg/ m^3. The baseline air quality level is within the National Ambient Air Quality Standards prescribed for industrial, residential, rural & other area and also satisfies the air quality

index (AQI) w.r.t. health bracket for all the monitoring. **(Standards are 60, 100, 80 and 80µg/m^3 for $PM_{2.5}$, PM_{10}, SO_2 and NO_2 respectively).** Proposed expansion will have less impact than existing one.

8.2 Water Quality:

Eight groundwater samples and one surface water sample were collected from the study area for chemical and biological analysis. The groundwater quality of the study is satisfactory. No metallic or bacterial contamination was found in the water quality. But bacterial contamination is found in surface water.

8.3 Noise Environment

Ambient noise levels were monitored at 8 locations in the study area. Noise levels in the study vary from 47.4 dB (A) to 71.4 dB (A) in day time and 35.2 dB (A) to 62.5 dB (A) at night. The highest levels were observed at Project Site. The baseline noise levels are well within the National Standards. Proposed expansion will have less impact than existing one due to better pollution control facility.

8.4 Soil Quality

Two soil samples were collected from the study area and analyzed. The texture of soil is sandy loam. The organic matter, nitrogen, potassium and phosphorus content of the soil are moderate. The pH of all the soil samples is within the acceptable range. No impact on soil will be there for proposed plant.

8.5 Ecological environment

Ecological data has been collected through secondary sources and by site visits. The tree species kikar, Jamun, Peepal and Mango etc are the dominant plant species of the study area. Mongoose, porcupine, jungle cat, cobra, krait, snakes, hare, pigeon and variety of birds are the common animals of the study area. No endangered species of plants and animals are found in the study area, so no impact on ecological environment.

8.6 Sensitive Ecosystem:

Within 10 km distance of the project site, no plant or animal species were found to be on the endangered list. No ecologically sensitive area like biosphere reserve, tiger reserve, and elephant reserve, migratory corridors of wild elephant, wetland, national park and wildlife sanctuary are present within 10 km distance of the project site. There is no Reserve and Protected Forests present around the project site of 10 km. Agriculture and industrial workers dominate the occupation

structure of the study area. Several induction furnaces, rolling mills, ferroalloy plants, brick kilns, and other small units are present in the study area.

8.7 Socioeconomic Condition:

Socioeconomic status has been studied through secondary sources and by site visits. The social requirements identified such as Drinking water requirement, Promotion of Educational institutions and Medical facilities to the villagers (especially Senior Citizens and infants or pregnant ladies). Community centers, recreation facilities etc will also be developed as part of social responsibility.

9.0 Possible Hazards & Risks from Secondary Metallurgical Industries

The various process operations, which are having potentially high risk to human exposure and which have high levels of attention area identified in **Table.**

Table: Possible Risk

S.No.	Plant Area	Possible Deviation from normal operation	Likely Causes	Consequences
1	Furnace	Re-circulating and cooling water coming in contact with the molten iron or slag.	Leakage of water from the walls Spurting of metal/	Explosion under extreme cases.
		Presence of Oil & Grease and other Impurities in raw	Fire	Sudden catches fire & flames
2	High Power Transformer	Oil temperature being very high.	Varying room Temperatur	Sudden flashing of fire or
3	High Tension Electrical	Heavy sparking at the pot heads and the joints.	Loose joints, cable cut, burning of fuses, short circuits	Sparks in the beginning, devastating fire if

10.0 Emergency Plan

Emergency planning is primary for the protection of plant personnel and people in nearby areas and the environment that could be affected by unplanned hazardous events. Furnaces are associated with fire and electrical hazard due to sudden generation of pressure or temperature

that leads to damage, injury and death. Temperature and pressure are closely related, and when flammable or combustible mixture is present in process equipment that leads to worst consequences. Thus, an engineering evaluation will be done for worst-case scenario.

11.0 CER Activities (Corporate Environmental Responsibility)

Being a socially responsible corporate and as follow up of latest CER guidelines by MoEF&CC, The company has provided a corpus of rupees 26 lacs are undertaking the following activities in the surrounding activities.

12.0 Environment Monitoring Plan

Regular monitoring of all significant environmental parameters is essential to check the compliance status vis-à-vis the environmental laws and regulation. The frequency of the monitoring will be as follows:

- The ambient Air quality shall be monitored at project site and two upward and downstream locations once every quarter for $PM_{2.5}$, PM_{10}, NO_x & SO_2, and CO levels during the Construction Phase and Operational Phase.

- The Ambient Noise Levels, Water Quality, Effluent etc. shall also be monitored once every six months or as per EC conditions.