EXECUTIVE SUMMARY

FOR

PROPOSED CEMENT MANUFACTURING PLANT
(STANDALONE GRINDING UNIT)

IN THE PROPOSED CEMENT MANUFACTURING PLANT

OF

M/S RICHIE AND BRANSON CEMENT PRIVATE LIMITED.

Khasra no. 206/2, Har Raipur, Khailiwala road,
Village-Har Raipur, Bathinda, Punjab.

Prepared by

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EXECUTIVE SUMMARY

1.0 Project Name and location

The Proposed Project namely M/s Richie and Branson Cement Private Limited a cement manufacturing plant. The plant is located at Har Raipur, Khailiwala road, village-Har Raipur, Bathinda, Punjab.

2.0 Products and capacities

The total capacity of the unit will be 3,00,000 TPA or 1,000 TPD for making of PPC Cement by addition of two nos of Ball Mills having capacity 2X500 TPD.

3.1 Land Area

The total area of the plot will be 4554.107 m^2 out of which greenbelt area is 2523.2466 sqm

3.2 Raw Materials

The raw materials required for the cement grinding unit will be clinker, gypsum and fly ash. The detail of the raw material is given in the following table.

Table: Raw Material Detail

Name of Raw Material	Quantity of Raw-Material to be used	Source of Raw material
	PROPOSED	
Clinker	700 TPD	Cement plants in Punjab & Rajasthan
Gypsum	20 TPD	Gypsum from Rajasthan
Fly Ash	280 TPD	Thermal Power Plant Punjab

3.3 Water Requirement

The total water consumption will be 4.0 KLD which will be met through an own tube well. Septic tank will be provided for treatment of domestic effluent. Treated effluent will be used on land for plantation in premises and Zero Liquid Discharge will be adhered. The detail of water requirement is the given table.

Table: Water requirement detail

DESCRIPTION	DOMESTIC	OTHER (COOLING)	TOTAL
Proposed	1.0 KLD	3.0 KLD	4.0 KLD

3.4 Power Requirement

The proposed power requirement of the unit will be 200 KW which will met from PSPCL.

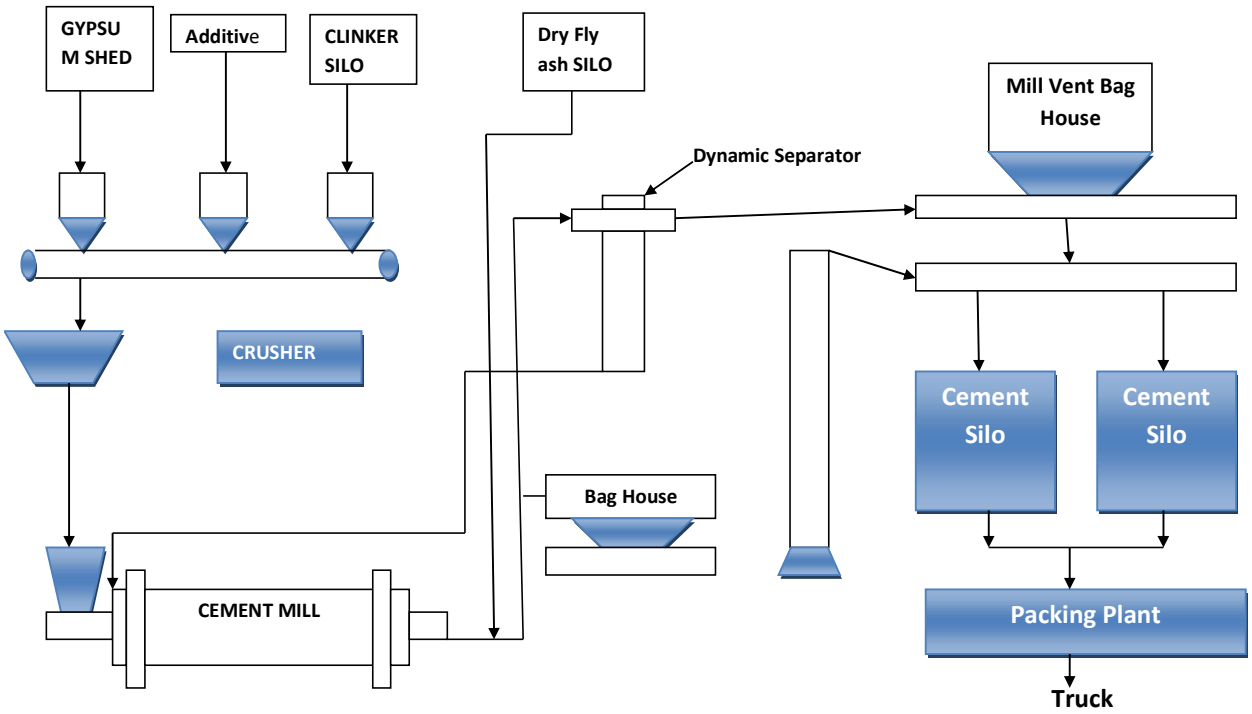
3.5 Manpower Requirement

Total number of manpower in the unit will be 18 persons.

4.0 Process Description

Rotatory electronic packing machines will be used for packing of cement. Flow chart of Cement production process is attached as below.

PROCESS FLOW DIAGRAM



MATERIAL BALANCE:

Name of material	Quantity in kg	Quantity in TPD
Clinker	**0.60**	600
Gypsum	**0.05**	50
Fly Ash	**0.35**	350
		1,000

5.0 Description of Mitigation Measures

Construction Phase

No major construction work will be carried out for the proposed activity; as the proposed unit will take place within the required land; hence, no major impact is envisaged during the construction phase on any of the environmental components due to the project.

Operation Phase

Activities	Environment Component	Probable impacts
Transportation of raw materials and finished goods	Air	Fugitive dust emissions due to traffic movement.
	Water	Spillage of raw materials, oil and flow into streams.
	Public utilities	Increased flow of traffic.
Unloading, crushing and storage of raw materials	Air	Fugitive dust emissions from raw material handling areas.
	Water	Run-off from raw material stock yard.
	Soil	Degradation of soil quality due to settling of air borne dust
Packing and transportation of cement	Air	Fugitive Emissions
Domestic use of water in plant	Water	Generation of sanitary effluents

Mitigation Measures for Ambient Air:

- Better maintenance and installation of pollution control equipment like Bag Filters.
- Covered storage facilities for raw material & product.
- Motorable roads in the plant area are paved to reduce dust emission.
- Water sprinkling to reduce the PM emission level.
- CPCB & CREP guidelines are being / will be followed

Mitigation Measures for Noise:

- Equipment has been designed to conform to occupational noise levels prescribed by regulatory agencies.
- Ear plugs is being / will be provided to persons working in high noise zone.
- Properly insulated enclosures have been / will be provided to equipment making excessive noise.
- Greenbelt development would further help in attenuating noise.

Mitigation Measures for Water:

- Domestic waste water generated is being / will be treated in Septic tank.

Mitigation Measures for Soil:

- Use of efficient pollution control systems.
- Maintained proper stack height.

6.0 Cost Details

Capital cost of the project is Rs 4.33 crores. The proposed project will be done within one year after granting of Environment Clearance.

7.0 Site Details

M/s Richie and Branson Cement Private Limited is a brand-new Cement Grinding project located at Khasra No. 206/2, Har Raipur-Khaili Wala Road, Village Har Raipur, Bathinda, Punjab is having its global coordinates as Latitude 30°20'22.21"N, 30°20'21.90"N, 30°20'19.49"N & 30°20'20.06"N and 74°58'12.33"E", 74°58'13.66"E, 74°58'14.00"E & 74°58'12.14"E. Nearest airport is Bathinda which is at 22 km towards SW side from project site. No National Parks/ Wildlife Sanctuaries/ Biosphere Reserves/ Reserved Forests exist within 5 km radius of 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 October to December 2022. All the physical parameters are found below prescribed limit. Eight monitoring location has been chosen for baseline study.

8.1 Ambient Air Quality

The $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO levels were monitored at eight locations in the study area for three months

(October to December 2022). The P98 levels of criteria pollutants are as follows: $PM_{2.5}$ is 47.9 µg/m^3, PM_{10} is 47.7 µg/m^3, SO_2 is 11.6 µg/m^3, NO_2 is 18.6 µg/m^3 and CO is 0.55mg/ 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, 80µg/m^3 and 4.0mg/m^3 for $PM_{2.5}$, PM_{10}, SO_2, NO_2 and CO respectively).** Due to better pollution abatement facilities, proposed expansion will have insignificant impact on existing air quality.

8.2 Water Quality

Eight groundwater samples and one surface water sample from Bathinda Branch of Sirhind Canal located at 8.7 km, SE from project site were collected from the study area for physical, chemical and bacteriological analysis. The groundwater qualities of the study area are satisfactory as no chemical or bacterial contamination was found in the water samples. But bacterial contamination was found in surface water. Since, no waste water will be discharged on land, water quality is not likely to be impacted.

8.3 Noise Environment

Ambient noise levels were monitored at 8 locations in the study area. Noise levels in the study vary from 52.4 dB (A) to 46.7 dB (A) in day time and 38.4 dB (A) to 36.6 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

Eight 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 due to proposed plant as no waste will be discharged on land.

8.5 Ecological Environment

Ecological data has been collected through secondary sources and by site visits. The tree species mainly dominated by are 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 the study area, no plant or animal species were found to be on the endangered list. No ecologically sensitive area like biosphere reserve, tiger reserve, and migratory corridors of wild animals & birds, wetland, national park and wildlife sanctuary are present in the study area. Agriculture and industrial workers dominate the occupational structure of the study area.

8.7 Socioeconomic Condition

This section discusses the extent of the potential socio-economic impacts expected from the various activities of the project. The impacts have been analyzed for the population in the nearby village and the transient labour working at site. A series of activities shall take place during construction and operation of the facility. The activities include site preparation and excavation before the construction stage. No rehabilitation or settlement is involved.

9.0 Possible Hazards & Risks from Cement grinding unit

Risk assessment is the determination of quantitative or qualitative value of risk related to a concrete situation and a recognized threat. Activities requiring assessment of risk due to occurrence of most probable instances of hazard and accident are both onsite and off-site.

9.1 Hazard Identification and Risk Assessment (HIRA)

The cement manufacturing industry is labor intensive and uses large scale and potentially hazardous manufacturing processes. The industry experiences accident rates that are high compared with some other manufacturing industries. Following hazards may occur in grinding unit of M/s Durga Cement Industries:

- Physical Hazards
- Loading/ Unloading /Packaging Operations
- Raw material/ Product storage area
- Cleaning Operations
- Electrocution/ Electrical Hazards

These mainly impact on those working within the industry, although health hazards can also impact on local communities.

Identification of sources of Fire

- Oil and Lubricant Room.

- Diesel Pump/storage area.
- Electrical faults.

10.0 Mitigation Measures

Following management measures are already implemented and will be continued to prevent the physical hazards in the plant:

- Work Permit system to ensure proper management control on the hazardous work activities like Maintenance Work required energy isolation, Work in Confined Space, Lifting & supporting loads, Work at Height and Earth Excavation.
- Any person working on equipment with moving parts is personally ensured that the equipment is de-energized, isolated and locked/tagged out.
- Any person working from a position with the potential risk for a fall from height has to use fall protection.
- Any person doing flame welding, cutting or brazing in the proximity of any flammable material has to use standard hot work equipments.
- Prescribed PPE are provided to all workers exposed to open processes or systems.
- In case of any accident, immediate & proper medical care is being provided at the plant site and nearby hospital and nursing home.
- To minimize traffic hazard, unidirectional vehicular movement will be implemented for the proposed project.

11.0 CER Plan

In lieu of Corporate Environmental Responsibility, the OM dated 30th Sept., 2020 issued by MOEF&CC superseding OM dated 1st May, 2018 shall be followed and commitments made by project proponent to address the concerns raised during public hearing will be part of EMP.

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 twice a year 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.

13.0 Environment Management Cell (EMC)

A duly constituted EMC comprises the following:

1. Project Promoter
2. Process Incharge
3. Environment Consultant.

14.0 EMP Budget:

Budgetary Provision for Environmental Protection Measures

S. No.	Environmental Protection Measures	Capital Cost Rs. In lakhs	Recurring Cost Rs. In lakhs/year
1.	Air Pollution Control Measures	50.0	0.50
2.	Water Pollution Control Measures	1.0	0.1
3.	Greenbelt Development	10.0	1.5
4.	Occupational Health & Safety	13.0	0.20
5.	Noise pollution	5.0	0.10
6.	Environmental monitoring	5.0	0.2
7.	Energy saving	2.0	0.5
8.	Issue raised during public hearing	4.0	0.1
Tot		83 lakh	3.2 lakh

SUMMARY: - Capital Cost of Expenditure of Project:

CAPITAL COST – Rs 90 Lakhs has been earmarked for EMP budget.

RECURRING COST – Rs 3.2 Lakhs has been earmarked for EMP budget