1.0 EXECUTIVE SUMMARY

1.1 Type of Project

Bharat Aluminium Company Limited (BALCO) proposes to conduct coal mining over in an area of 316.826 ha with production capacity of 1.0 MTPA at Salaigot Village, Tehsil Podiuprodha, Korba District, Chhattisgarh.

The proposed coal mine project is a mechanized opencast cum underground mining project. Conventional mining system with shovel dumper combination of opencast mining technology and underground mine is being done by adopting bord and pillar method of working with mechanized loading using SDL/LHD will be adopted.

1.2 Identification of Project & Project Proponent

Preamble

Chotia coal mine located in Hasdeo Arand coal field in the state of Chhattisgarh was originally allocated to M/s Prakash Industries Limited (PIL) in the year 2003. The first Mining Plan prepared by PIL was approved by MoC in 2004 vide no. 13016/22/2003-CA dated 04.08.2004.

PIL conducted further exploration in two phases and based on the outcome, the geological reserves was revised and accordingly Mining Plan was revised two times and approved by Ministry of Coal vide reference nos. 13016/22/2003-CA-1 dated 20.08.2007 and 13016/22/2003-CA-1(Vol-III) dated 02.02.2010.

The Supreme Court of India through its judgement dated August 25th, 2014 read with its order dated September 24th, 2014 had cancelled allotment of 204 coal blocks including Chotia Coal Block which was previously owned by M/s Prakash Industries Limited. Subsequent to the Supreme Court Judgement, the Coal Mines (Special Provisions) Ordinance, 2014 read with Coal Mines (Special Provision) Second Ordinance, 2014 were promulgated and the Coal Mines (Special Provisions) Rules, 2014 were framed for auction and allotment of all coal blocks which were subject to cancellation.

BALCO has participated in the e-auction conducted by the Nominated Authority, Ministry of Coal and on winning the bid, Chotia Coal mine has been vested with BALCO vide vesting order no. 104/11/2015/NA dated 23rd March 2015.

Project Proponent

Bharat Aluminium Company Limited (BALCO) has an integrated aluminium plant at Korba district of Chhattisgarh. BALCO was established on 27th November 1965 and its production started from 1973. Initial capacity of BALCO was 1.0 Lakh Tonnes of Aluminium per annum. Over the years, to meet the domestic requirement of aluminium, Balco has been gradually ramping up its production capacity and currently it stands at 5.70 lakh tons per annum and Captive Power Plant capacity of 1410 MW.BALCO was the first major Public Sector Organization which went through the economic reforms and disinvested 51% stake to Sterlite Group in 2001 remaining 49% stake is held by Government of India.

Need of the Project

Bharat Aluminium Company Limited has set up a 600 MW captive Power Plant at Korba District to meet its power requirement for manufacturing of Aluminium products. As manufacturing of Aluminium products is power guzzling process therefore Coal from Chotia II Coal Mine is essential to start up the 600 MW Captive Power Plant and sustain the Aluminium production.

Bharat Aluminium Company Limited supplies Aluminium products to defence; railway and power sector hence contributes directly to country's growth and prosperity.

1.3 Salient Features

Mine development and extraction of coal at the desired capacity will commence after getting Environmental Clearance (EC) from MoEF&CC, New Delhi and Consent to Establish and Consent to Operate from Chhattisgarh Environment Conservation Board (CECB). The salient features of the mine lease area are presented in **Table-1.1**.

TABLE-1.1
SALIENT FEATURES OF COAL MINE

Sr. No	Description	Details
1	Name of the mine lease	Chotia-II coal mine
2	Extent of mine lease (ML) area	316.826 ha
3	Location & co-ordinates	Salaigot Village, Tehsil Podiuprodha, District Korba, State Chhattisgarh.

Sr. No	Name	Northing	Easting
1	BP-1	22° 50' 32.2" N	82° 32' 51.6" E
2	BP-2	22° 50' 40.6" N	82° 33' 01.2" E
3	BP-2A	22° 51' 02.5" N	82° 32' 41.6" E
4	BP-2B	22° 51' 06.2" N	82° 32' 45.1" E
5	BP-2L	22° 51' 37.0" N	82° 32' 17.4" E
6	BP-18	22° 51' 33.7" N	82° 32' 06.1" E
7	BP-19	22° 51' 42.4" N	82° 32' 00.7" E
8	BP-20	22° 51' 53.2" N	82° 32' 02.8" E
9	BP-3	22° 51' 58.6" N	82° 31' 57.9" E
10	BP-4	22° 51' 57.2" N	82° 31' 41.2" E
11	BP-4D	22° 51' 36.8" N	82° 31' 24.7" E
12	BP-5	22° 51' 33.4" N	82° 31' 26.9" E
13	BP-6	22° 51' 01.3" N	82° 31' 47.7" E
14	BP-7	22° 51' 07.1" N	82° 31' 53.7" E
15	BP-8	22° 50' 59.1" N	82° 32' 05.7" E
16	BP-9	22° 50' 41.7" N	82° 32' 16.5" E

4	Elevation MSL	380 m - 438 m
5	Type of ML area	Forest land
6	Capacity of mine	1 MTPA
7	Expected life of mine	20 years
8	Method of mining	Opencast mechanized mining by shovel dumper combination and underground by bord and Pillar method
9	Geological reserves	Open cast (5.424 MT) and underground (5.408 MT) Total: 10.832 MT
10	Extractable reserves	Open cast (4.98 MT) and underground (2.70 MT) Total: 7.68 MT
11	Over burden thickness	8 to 12 m
12	Average stripping ratio	4.82 cum/t

Sr. No	Description	Details
13	Working hours	3 shifts per day of 8 hrs in 330 days of operation in a year
14	Maximum bench height	6 m
15	Bench Width	20 m
16	Bench slope	70°
17	Ultimate pit slope	45°
18	Power requirement	2250 KVA (mainly for UG operation)
19	Source of power	CSEB
20	Manpower requirement	Direct employment already generated - 200 Nos (includes 120 local villagers) Direct employment to be generated - 605 Nos

Source: Mine Plan

1.4 Environmental Setting

The study area covers 10 km radius around the proposed expansion mine lease area. The environmental setting of the proposed expansion site is as follows:

- The proposed expansion ML area is at a distance of 1.0 km from Hasdeo River. Site elevation is about 380 m to 438 m above MSL;
- Present land use is industrial use (Mining);
- There are no ecological sensitive locations, archaeological monuments, places of tourist interests and defence installations within 15 km radius;
- There are 4 protected forests and 2 reserve forest block within 10 km radius.

1.4 Baseline Environmental Status

The baseline data monitoring studies have been carried out for three months (1st October 2015 to 31st December 2015) and one month additional monitoring during 16th May 2016 to 15th June 2016 as suggested by EAC, MoEF&CC.

1.4.1 Soil Quality

Eight soil samples were collected and analyzed in and around the mine lease area to assess the present soil quality of the region. The pH of the soil indicates that the soil is Very strongly acidic to slightly acidic in nature. The nitrogen concentration was observed to be in the range of very less to good category. Phosphorous concentration was observed to be in the range of very less to less quantities. Potassium concentration was observed to be in the range of very less to better category. Based on the results, it is evident that the soils are not contaminated by any pollution sources.

1.4.2 Meteorology

Meteorological data at the site was monitored during 1st October 2015 to 31st December 2015 and additional one month monitoring during 16th May 2016 to 15th June 2016. It was observed that the during study period, temperature ranged from 10.2^{0}C to 32.9^{0}C (1st October 2015 to 31st December 2015) and 19.3^{0}C to 38.2^{0}C (16th May 2016 to 15th June 2016). The relative humidity

recorded in the range of 45% to 73% (1st October 2015 to 31st December 2015) and 22% to 62% (16th May 2016 to 15th June 2016).

1.4.3 Ambient Air Quality

Ambient Air Quality Monitoring (AAQM) was carried out at 8 locations with a frequency of two days per week for three months during 1st October 2015 to 31st December 2015 and additional one month monitoring during 16th May 2016 to 15th June 2016. The minimum and maximum values of PM_{10} were observed in the range of 31.6-53.4 $\mu g/m^3$ and 34.6 to 56.2. The results thus obtained indicate that the concentrations of PM_{10}, $PM_{2.5}$, SO_2, NOx and CO in the ambient air are well within the National Ambient Air Quality (NAAQ) standards.

1.4.4 Water Quality

To assess the physical and chemical properties of water in the region, five ground water and three surface water locations during 1st October 2015 to 31st December 2015 and additional three surface and two ground water during 16th May 2016 to 15th June 2016 were collected and analyzed from various water sources around the project site.

- ***Ground Water***

Observations made on the analytical results pertaining to all the locations reveal that pH values ranged from 5.7 to 7.9 during study period and 5.9 to 7.4 during additional one month. The values for EC were observed to be between 48.4-503.0 µS/cm during study period and 121-753 during additional one month. Total hardness was observed to be 15-230 mg/l during study period and 25- 230 mg/l additional one month.

- ***Surface Water***

Observations made on the analytical results pertaining to all the locations reveal that pH values ranged between 6.8-7.4 during study period and 7.1-8.2 additional one month. The values for EC were observed to be between 125.7-205.0 µS/cm during study period and 120.6 - 242.3 µS/cm additional one month. DO values were observed to be varying from 5.6-5.9 during study period and 5.6-6.1 mg/l additional one month. Total hardness values at the water quality monitoring locations were observed to be 50.0-90.0 mg/l during study period and 40-80 mg/l additional one month.

1.4.5 Noise Levels

Ambient noise levels were measured at ten locations around the project site. The daytime and night time noise levels in all the residential locations were observed to be within the permissible limits.

1.4.6 Ecological Environment

The whole study area is screened through the parameters for ecological sensitivity. "Ecologically particularly sensitive areas" fulfill specific criteria. The technical and political discussion around the concept "ecologically particularly

sensitive areas" can be reduced to three criteria (EPSA criteria): Value, Fragility and Potential. The Value criterion serves, for example, to describe virgin areas, rare landscapes and habitats or ancient rural landscapes. The assessment includes both ecological and cultural values. The Fragility criterion identifies the sensitive (unstable) state and, thus, the special fragility of a habitat. Fragile are, for example, areas with little buffer capacity, areas with critically impacted assets to be protected or areas with conditions that intensify the effect of stress on them. The Potential criterion is used for areas with scope for sustainable development, for example areas that show no dominant or irreversible utilization, areas with planning "culture (tradition/structure)" or areas with reserves.

The presently investigated Chotia-II Coal Mine does not fall under any of the above mentioned criteria; hence the Coal Mine does not fall under any sensitive area.

1.4.7 Social Environment

The study area (10 km radius) area has a total population of 28316 according to 2011 census. Total male population is about 50.27% and total female population is around 49.73%.

1.5 Anticipated Environmental Impacts and Mitigation Measures

The environmental impacts due to the proposed mining project, associated activities like drilling, blasting, overburden handling, coal loading, coal transportation both in opencast as well as underground mining are given below-

1.5.1 Air Quality

The proposed mining activities are likely to contribute additional particulate matter (PM), dust from area sources and Nitrogen dioxide (NO_2) and hydrocarbons from automobile exhausts. The existing baseline concentrations of pollutants are within the limits prescribed by CPCB.

Air pollution sources at the mining site can be classified into three categories, viz., area sources, line sources and instantaneous point sources. Extraction of coal by various activities in mining area is considered as an area source. Transportation of coal from mining area to the storage area is considered as line source. Drilling is considered as point source.
PM and NO_2 emissions are envisaged during blasting and transportation operations. But these will be kept under control by monitoring regularly, the emissions from exhaust and by sprinkling of water on haul roads etc. The results indicate that the maximum incremental dust concentrations will be about 62.4 $\mu g/m^3$ at a distance of 0.1 km.
The Underground mining operations are not exposed to the outside environment; there will not be any adverse impacts on the surface air quality. In addition to this, all underground mining equipment will be electrically operated hence no generation of fumes/gases anticipated.

Mitigation Measures:

Mitigative measures suggested for air pollution controls are based on the baseline ambient air quality of the area. From the point of view of maintenance of an acceptable ambient air quality in the region, it is desirable that air quality is monitored on a regular basis to check compliance of standards as prescribed by regulatory authorities. Fugitive dust will be generated in open cast mine due to drilling, blasting, handling of overburden and coal. To control dust from various operations following measures will be restored.

a. The production of blast fumes containing noxious gases should be reduced by the following methods:

- Use of adequate booster/primer; and
- Proper stemming of the blast hole.

b. Dust due to drilling will be minimized by using wet drilling methods:

- If dry drilling is used, dust arrestor should be provided; and
- Dust produced during deep large blast hole drilling will be controlled by maintaining the drilling speed as recommended by the manufacturer.

c. Regular maintenance of vehicles and machinery will be carried in order to control emission;

d. Cabins for shovel and dumper and dust respirators to workmen should be provided:

e. Dust suppression will be done on exposed area using water trucks and sprinkler;

f. Dust generated due to traffic on haul roads will be reduced by water spraying at regular interval;

g. Greenbelt development will be taken up all along the haul roads and overburden dumps;

h. A good housekeeping and proper maintenance will be practiced which will be help in controlling pollution.

- ***Controlling CO Levels***

The concentration of CO in the ambient air is found to be below permissible levels at all the air quality monitoring locations. Expected increase in the CO concentration is very low as CO emissions from mining operations are less as compared to other pollutants. Heavy and light vehicles are the major sources of CO in the mine. All vehicles and their exhausts will be well maintained and regularly tested for pollutants concentration.

All underground mining equipment will be electrically operated hence no generation of CO from equipment is anticipated. The Mine falls under degree-1

gassiness category, so the generation of CO is minimum which can be controlled by proper ventilation arrangements.

- ***Controlling NO_2 Levels***

NO_2 emissions in the mine mainly occur during blasting operations. The main reasons for NO_2 emissions are:

- Poor quality of explosives having large oxygen imbalance;
- Manufacturing defect;
- Use of expired explosives in which ingredients have disintegrated; and
- Incomplete detonation, which may be due to low Primer to Column ratio.

To ensure low NO_2 levels following control measures will be adopted:

- Use of good quality explosives having proper oxygen balance with regular monitoring;
- Regular updating of the date of manufacture/expiry to avoid confusions. A normal procedure should be formulated to check/visually inspect all explosives, and if disintegrated ingredients are spotted, the explosives won't be used, even if the date has not expired; and
- The primer to column ratio would be rationalized so as to produce minimum NO_2.

1.5.2 Noise Levels and Ground Vibrations

With the proposed mining operations, deployment of machinery, drilling, blasting, excavation and transportation of coal, it is imperative that noise levels are generated. The mine lease area, OB dumps and other areas have been provided with thick green belt, which help in attenuating the community noise levels.

The main source of noise at the mine is likely to be due to HEMM, loading equipment, mine blasting, mine fan etc. Underground blasting noise is only momentary and the impact of ground vibrations, due to blasting by delay detonators would be negligible to cause any physical damage. The noise generated by equipment can be reduced by proper maintenance. Also low-noise level generation design will be stipulated, as a necessary specification while purchasing equipment.

The proposed green belt is planned around the mining area, and avenue plantation along haul roads, will considerably help in reducing noise propagation. Operators of high noise generating equipment like dozer etc. would be provided with ear-muffs. There will be no effect of noise in core and buffer zone area, as the activities will be concentrated in work site zone only. Fully equipped environment monitoring unit will be set up by BALCO for the required monitoring activity.

Noise generated from blasting is neither continuous nor for a shorter duration but instantaneous. It takes less than 5 seconds to occur. Noise of blast is site specific and depends on type, quantity of explosives, dimensions of drill holes, degree of compaction of explosive in the hole and type of rock. It is envisaged that the noise impact is marginal as the blasting is performed during daytime only.

Controlled blasting techniques like presplit blasting, use of NONEL and use of SME (Site Mixed Emulsion) is in practice which shall minimize the generation of noise and vibrations due to blasting. In underground mine, permitted explosives will be used

Ground vibration, fly rock, air blast, dust and fumes are the deleterious effects of blasting on environment. The explosive energy sets up a seismic wave in the ground, which can cause significant damage to structures and disturbance to human occupants. It causes major damages to the pit configuration too. When an explosive charge is fired in a hole, stress waves propagate radially in all directions and cause the rock particles to oscillate. This oscillation is felt as ground vibration. The proposed mining operations using deep hole drilling and blasting using delay detonators are bound to produce ground vibrations. The ground vibration are measured as the peak particle Velocity (PPV), which are compared vis-à-vis the circular no.7, issued by Director General of Mines Safety for safe level criteria.

Mitigation Measure:

The following control measures will be adopted to keep the ambient noise levels well below the limits:

- Secondary blasting will be totally avoided;
- Controlled blasting with proper spacing, burden and stemming will be maintained;
- Minimum quantity of detonating fuse will be consumed by using alternatively excel non-electrical initiation system;
- The blasting will be carried out during favorable atmospheric condition and less human activity timings;
- The prime movers/diesel engines will be of proper designed and will be properly maintained;
- The operators chamber will be safe guarded with proper enclosures to reduce the noise levels;
- A thick green belt will be provided in phased manner around the periphery of the mine to attenuate noise;

The ground vibrations are controlled by below mentioned:

- Blasting shall be performed strictly as per the guidelines specified under CMR, 1957;
- Overcharging shall be avoided;
- Proper charge per delay will be used;
- Blasting operations shall be carried out only during day time as per mine safety guidelines;
- Adequate safe distance from blasting area shall be maintained;
- During blasting, other activities in the immediate vicinity shall be temporarily stopped;
- Drilling parameters like over burden, depth, diameter and spacing shall be properly designed to give proper blast;
- Effective stemming of the explosives shall be done in the drill holes;
- Electric detonators shall be used wherever possible;
- The explosives shall have:

- ⇒ A high velocity of detonation;
- ⇒ A density suited to its particular application;
- ⇒ Good fume characteristics;
- ⇒ Good water resistance; and
- ⇒ Good storage qualities and resistance to atmospheric parameters.

1.5.3 Water Resources

The proposed mining requires supply of water for various purposes during mining, such as green belt, dust suppression, plantation etc. apart from drinking water supply. The total water requirement of the mine will be 600 KLD. Out of this, 250 KLD of mine seepage water will be utilized to meet the industrial water demand such as green belt, dust suppression and plantation. The balance 350 KLD will be met from one tube well proposed within the project area for drinking and domestic purpose.

Surface Water

The mining activity proposed to be carried out throughout the life of mine will not directly interfere anywhere with the surface water sources of perennial nature as the mining activities will continue down to 60 m below ground level. However, to prevent the entry of surface run-off in the active mining pit, it is proposed to make garland drain around the pit before monsoon season so that rainwater will be channelized towards temporary unused pit/sump. As no stored water is released directly to streams, there is no possibility of any siltation in natural streams and reduction of vertical percolation.

Generally, it is observed that in open cast mining activity due to blasting and digging operations as well as land leveling and slope maintenance the overall infiltration / percolation capacity of soils changes significantly and at times it results in to enhanced natural recharge to ground water and reduction in surface runoff. This may impact the stream flow during the rainy season; however, on contrary the enhanced ground water recharge results in increase in the base flow to smaller order streams of the area. As such, there is no apparent / significant change or impact of mining on the surface water regime of the area. Other sources of pollution are by oil spillage at pit head and at the facilities viz. workshop, resulting in oil and grease Contamination of surface water if appropriate control measures are not adopted.

There will be no impact on the surface water due to the proposed underground mining operations as it will not disturb the surface topography.

Ground Water

The mine area is occupied by sandstones, shale underlain predominantly by coal. Based on the behaviour of the water level in the Pre monsoon and Post monsoon in the core zone the mine seepage has been estimated wherever the depth of excavation goes beyond the water level leading to active ground water seepage to the mine pit. The seepage in the pit eventually requires pumping of the seepage water to allow mining activity. This assessment assumes that sump pumps will be employed at the base of pits/underground workings to remove the

seepage water, which will be used for other purposes (i.e. dust suppression and water supply) at the mine sites.

Considering the underground mining operations in future, appropriate water evacuation and de-silting of the same will minimize the contamination of water bodies. Due to dewatering of the underground mine, there would be impact on water table of the area.

Mitigation Measures:

Surface Water

The probable cause of surface water pollution in the proposed mining area will be soil erosion and wash off from the waste dumps and coal stock yards in monsoon season. The run-off water during monsoon season flows through natural water courses in to streams. The surface water entering in to the mine during rainy season will be diverted through suitable drain to reduce the wash off of soil. The general drainage direction in the working area will be towards the mine sump, which is proposed to be used for collection of water. The water will be utilized for greenbelt development, dust suppression, plantation etc.

Adequate measures to protect the mine working from surface water flow during the rains will be taken by way of providing garland drains around the mine excavation and also providing suitable drainage gradient for mine benches. Sumps of adequate capacity will be provided on the quarry floor.

Ground Water

The ground water quality in the mine area is not likely to be effected, as no toxic chemicals are present in the reject stacked. The storm water during monsoon season will be directed to water sump through proper drainage system.

The effluents generated from the work shop will be treated in ETP and domestic sewage from the colony area will be treated in septic tanks, soak pits and STP. Adequate maintenance of the tanks and STP will be undertaken to avoid chocking with sludge.

The qualitative and quantitative monitoring will be done once in every season. Besides one/two piezometer will also be installed in and around the core zone in which fortnightly/monthly water level observation will be carried out. Based on the monitoring result if it is found that the water table is lowering down in the neighboring villages then adequate artificial recharge measures in form of check dams, recharge ponds and roof top rainwater harvesting systems will be implemented in consultation with CGWA.

1.5.4 Soil Environment

The environmental impacts of the mining activities on topsoil are based on the quantity of removal of topsoil and its dumping. In the present project, as it is proposed to temporarily store the topsoil and use it for plantation schemes, no impact of dozing of topsoil is envisaged.

1.5.5 Solid Waste

The solid waste in form of over burden generated will be used for internal dumping, reclamation and construction of haulage roads.

1.5.6 Flora and Fauna

The impact on terrestrial ecology would be due to emission of gaseous pollutant like NO_2. The pollutant at a very low dose act as an atmospheric fertilizer for the vegetation. However, at higher doses, they are injurious to both vegetation as well as animals.

In the proposed mining operations, NO_2 emissions are mainly due to burning of diesel in mining vehicles. As described in Chapter-3 on air quality, the low concentrations of NO_2 due to operation of the proposed mining operations will have insignificant impact on ambient air quality and NO_2 concentration will remain within the AAQ standards. Therefore, the impact of these emissions on the surrounding agro-ecosystem will be insignificant.

The Underground Mining operations are not going to have any impact on the flora and fauna in the region

Aquatic Ecology

Aquatic ecological studies were conducted in and around the mining area to assess the current biological resources in the study area.

There is no major water body in proposed mine area. Check dams, garland drains, retaining walls all around the waste dumps have been provided to arrest the suspended solids generated due to soil erosion and from waste dumps. Further due to the plantation proposed on the overburdens, there will be reduction in soil erosion. Hence, no impact is envisaged from the proposed mining operations on aquatic bodies around the proposed mine area.

The Underground Mining operations are not going to have any impact on the aquatic ecology in the region

The Wildlife conservation plan to counter the adverse impacts of project on flora and fauna of the region has been prepared and the required fund for implementation of the same has been deposited in state CAMPA account.

1.5.7 Socio-Economic Aspects

The development activities needs to be taken up, based on the requirement of the people in the area. The basic requirement of the community needs to be strengthened by extending health care, educational facilities developed in the township to the community, providing drinking water to the villages affected, building/strengthening of existing roads in the area.

The preference will be given to the local population for direct and in-direct employment. The proposed project may create opportunities for indirect employment in the field of vehicle hiring, labours, trading of construction

material, carpenters etc. This will help in improving the socio economic status of the region. Till date all together 120 local villagers has been given direct employment as per qualification, experience and need of the project.

The company will participate in social development activities in all the villages surrounding the proposed mine area. Social welfare activities will be taken up on a large scale. These activities will have the following focus areas:

- Health Care;
- Social well-being;
- Education;
- Sustainable Livelihood;
- Infrastructure Building
- Afforestation;
- Rural water supply; and

1.6 Budgetary Allocation for Environmental Protection

BALCO is proposed to spend total of Rs 7.68 Crores (i.e. Rs. 10/tonne of total extractable reserves of 7.68 MT) towards environmental protection measures during the life of the mine. The total recurring cost of EMP will be Rs.10/tonne of coal production as per approved mine plan.

1.7 Conclusion

The proposed opencast and underground coal mine will have impacts on the local environment however with proper mitigation measures and with the effective implementation of the environment management measures as suggested in the EIA/EMP report and as recommended by MoEF&CC, CPCB and State Pollution Control Board, the impacts will be minimized to a great extent. However, development of this project has beneficial impact/effects in terms growth in regional economy, social upliftment of local people, increase in Government earnings, revenues and accelerate the pace of industrial development in the region.

The proposed project will provide direct employment to a large number of personnel. This project will also generate indirect employment to a considerable number of families, who will render their services for the employees of the project.

The project will also encourage ancillary industries in the region, which will not only increase the employment potential but also the economic base of the region will be further strengthened.

Thus, in view of considerable benefits from the project, the proposed project is most advantageous to the region as well as to the nation.