

JEPPIAAR POWER CORPORATION PRIVATE LIMITED

EXECUTIVE SUMMARY

1.0 INTRODUCTION

M/s. Jeppiaar Power Corporation Pvt. Ltd. owned by Dr. Jeppiaar a multifaceted entrepreneur, philanthropist, educationist of Tamilnadu, proposes to establish the production capacity 30 MW of Captive power plant.

India is endowed with a wealth of rich natural resources and sources of energy. Resources for power generation are unevenly dispersed across the country. This can be appropriately and optimally utilized to make available reliable supply of electricity to each and every household. Electricity is considered key driver for targeted 8 to 10% economic growth of India. Electricity supply at globally competitive rates would also make economic activity in the country competitive in the globalized environment.

1.1 Production Capacity

M/s. Jeppiaar Power Corporation Pvt. Ltd. is proposes to establish a coal based power plant. The power generation process involves combustion of coal to generate steam which shall be sent to turbine to obtain power. The power generated (30 MW) shall be partially used for captive consumption and the balance shall be utilised for Jeppiaar Group of Companies.

Location of the Project

M/s. Jeppiaar Power Corporation Pvt. Ltd. is proposes to establish 30 MW Coal based Power Plant at Sy. No 129, 130, 131, 132 & 133, Thiruvanganai Village, Kancheepuram District, Tamil nadu spread over an area of 40.34 acres. The site is surrounded by open lands in all directions. There is no National Parks / sanctuaries with in the 10 km radius of the study area.

Process Description

M/s. Jeppiaar Power Corporation Pvt. Ltd. proposes to establish a coal based power plant. The power generation process involves combustion of coal to generate steam which shall be sent to turbine to obtain power. The power generated (30 MW) shall be partially used for captive consumption and the balance shall be utilised for Jeppiaar Group of Companies.

Water Requirement

The total water consumption of the project is 340 KLD. Which can be met from the Groundwater, Water is required for equipment cooling, drinking, sanitation, horticulture, etc. For plant equipment, water will be recycled after cooling to avoid any wastage and only losses will be made up from fresh water. The water balance is presented in the following **Table E.1**;

Table E.1 Water Balance

Input	KLD	Out Put	KLD
Cooling Tower and Boiler	300	Blow down	15
		Loss	285
DM Plant	18	DM Effluent	18
Services and washing	15	Washing Effluent	15
Domestic	7	Domestic Effluent	6
		Loss	1
Total	340	Total	340

Baseline Environmental Data

The baseline data for ambient air quality, surface and ground water quality, noise, and soil quality was collected and analyzed for various parameters. The analysis results show that the values are within the prescribed limits for air quality. The water quality of the area is found to be within the limits. The noise levels are found to be within limits.

Identification and Quantification of Impacts:

The major contributions of pollution in the proposed plant are emissions from the kilns, apart from utilities and solid wastes from process. The impact assessment report identified various sources of pollution and quantified the pollution loads and has identified the technologies to be adopted for the mitigation and control of the same.

The impacts on air quality due to the project are from the boiler from fugitive emissions during transfer of raw materials and solid wastes. The impacts are quantified using ISC-AERMOD based on ISCST3 algorithms of USEPA. The results indicate marginal increase in the ambient air quality parameters and the cumulative concentrations of predicted values and baseline data are within the prescribed limits of CPCB. The required water shall be drawn from ground water sources. The noise levels may increase due to the motors, DG set and other activity. The solid wastes generated in the process and from utilities may have significant negative impacts if disposed indiscriminately. There are no endangered flora and fauna in the impact area. Employment generation and socio economic development of the backward area is the major benefit of this project. The area which has low industrial density and medium agricultural activity will have positive benefits due to this project.

Environment Management Plan

The management plan is drawn in consultation with the project proponents, technical consultants after evaluating a number of technologies available for mitigation and control of pollution. The environment management plan is drawn to address the impacts monitored, identified and predicted.

Construction Stage

The potential of pollution during the construction phase will be less when compared to the operational stage. During the dry season it is necessary to control uplift of dust during the excavation, leveling and transportation by spraying water in the paths, and along the temporary roads. The clearing of plants, shrubs and trees will be kept to the minimum so as to leave sufficient space for erection of mechanical units and for few civil constructions. The facilities like toilets, drinking water and proper shelter for the persons staying in the construction site will be provided with utmost importance. The toilets will be attached to septic tank so as to minimize the percolation and to control the subsequent impact on the environment. The construction activity may involve movement of heavy vehicles for earth moving and to move the equipment like dozers and cranes, etc. The vehicles will be maintained properly so as to minimize the emissions from exhaust. The hazardous wastes of waste oil and used batteries will be sold to authorized recyclers. The construction wastes shall be used for leveling purpose.

Operation Stage

Air Pollution

FBC boiler is proposed for this project. Particulate matter and NO_x emissions are not significant as imported coal is used. Electrostatic Precipitators (ESP) will be installed at the exit of boiler to limit the suspended particulate matter (SPM) in the flue gas to less than 100 mg/Nm³ as per pollution control board norms. The transportation of process materials would be taken with due care to safeguard against dust emissions by coverage as well as by sprinkling water coal is the feed stock. The emissions from the construction activities will be only during the construction phase and every attempt would be made to reduce the dust phase in the construction activity.

Solid Waste

Ash generation is major solid waste in the captive power plant. The production and disposal of solid wastes is presented in the following table.

Solid Wastes Generated and Disposal facilities

S.No	Description	Quantity	Remarks
1.	Ash (Boiler)	45 TPD	Sold to Cement unit
2.	Used Batteries	3 no./year	Sold to authorized recyclers
3.	Waste Oil	100 l/year	Sold to authorized recyclers
4.	Sludge from ETP	5 Kg/day	Sent to landfill

Liquid Effluents

Domestic effluent of 6 KLD shall be sent to septic tank followed by soak pit.

Noise Pollution

Noise is anticipated from material the major noise producing equipment such as Boiler and super heater safety valves, Start up vent, Steam turbine, Gear Box, ID fans, fans and compressors will be provided with suitable noise abatement devices. The DG set shall be kept in a separate enclosed room with acoustic enclosure. The compressors and other equipment shall be provided with guards and shall be mounted adequately to ensure the reduction of noise and vibration. The employees working in noise generating areas shall be provided with earmuffs. The employees shall be trained in the mitigation measures and personal protection measures to be taken to avoid noise related health impacts.

Occupational Safety and Health

Workers working in areas like raw material handling yard and product house that generates fugitive dust shall wear nose masks/dust filters. Personal protective equipment viz. Hand gloves, safety goggles, nose masks, and safety helmets are provided to all the employees working in the plant. Company has a policy of providing protective equipment for all personnel including contract and casual workers. In order to safe guard the health of the employees, all the employees undergo periodic health checkup. All the employees will be trained and educated periodically.

Prevention, maintenance and operation of Environment Control System

The environmental monitoring results will be evaluated to identify the problems/under performance of the equipment. Necessary steps will be taken to rectify the identified problems/defects. The management agrees that the evaluation of the performance of pollution control measures and occupational safety measures to arrive at their efficiency and proposes to adopt new measures for efficient pollution control which will be a regular exercise.

Transport Systems

The raw materials and finished products are mainly transported by trucks. Trucks transporting raw materials from the mines to plant are covered so as to reduce emissions to the surrounding environment. Sufficient parking facilities are provided for vehicles loading and unloading of goods. The vehicles are provided with parking space near the gate, and traffic signs are placed in the battery limit.

Green Belt Development

Green belt is recommended as one of the major components of Environmental Management Plan. The industry have green belt and the management emphasizes the development of further greening of the site to enhance environmental quality through; mitigation of fugitive emissions, attenuation of noise levels, balancing eco-environment, prevention of soil erosion, and creation of aesthetic environment. The density of greenbelt shall be increased in an area of 13.5 acres, based on the CPCB guidelines for greenbelt development.

Post Project Monitoring - in plant

Environmental monitoring for water, air, noise and soil quality shall be conducted periodically either by the proponent or a third party. The frequency of monitoring and the quality parameters shall be as suggested by the Ministry of Environment and Forests, Government of India and explained in the environmental monitoring chapter.
