

EXECUTIVE SUMMARY

Introduction

M/s. N.N Global Mercantile has a dry de-shaling plant of 0.5 Million tons per annum capacity which is now in operation at the existing site at Village Muthara, Taluka Rajura on part of KH No. 131/1 (Part) & 131/2 (Part). The plant has received 'Consent to Establish' from the MPCB vide Letter No. MPCB/14/09386 dated 10th October, 2014 and 'Consent to Operate' vide Letter No. MPCB/01876/2015 dated 20th February, 2015 and plant is in operation. It is now proposed to modernize and expand its capacity by installing a wet de-shaling plant with associated equipment. M/s. N.N. Global Mercantile Pvt. Ltd. has proposed to modernize the existing plant from dry de-shaling plant to wet de-shaling plant and expand its capacity from 0.5 to 0.96 million tons per annum for wet de-shaling plant.

Project proponent:

Shri Inish Pal Singh Bhatia, Director of M/s. N.N. Global Mercantile Pvt. Limited is a young dynamic professional engaged in coal supply and trading Business since last 5 years. Mr. Manjeet Singh Bhatia is one of the directors of Bhatia Coal India and is part of the larger Bhatia Group. The group is engaged in coal supply and trading business including imported coal. He has experience of over two decades in managing coal related business.

Type of Project:

The project is neither an interlinked project nor an interdependent project. It is the expansion & modernization of existing dry de-shaling plant to wet de-shaling plant. The project falls under category 'B', section 2(a) "Coal Washeries" of EIA notification, 2006 and subsequent amendments.

Project cost:

The cost of the proposed project is Rs. 125 Lacs. (1.25 Crores)

Location of the Project Site:

The company owns 7.55 Ha of land comprised in Survey No. 131/1, 131/2, 131/3 & 131/4 at Village: Muthra, Tehsil Rajura, District: Chandrapur, State: Maharashtra, India. The existing dry-de-shaling plant is located within this larger land (7.55 Ha) over a small portion of land admeasuring 4.0 acres. The proposed expansion project will also be located within the same area at Survey No. 131/1 (Part) & 131/2 (Part). The coordinates of site are 19°45'17.16" N and 79°16'19.36" E.

The site is well connected by road and rail network. The nearest railway station is Manikgarh railway station (3.74 km, ENE) and MSH-236 (Gadchandur Road) is near to Project site in South

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Direction. Nagpur Airport (Dr. Babasaheb Ambedkar International Airport) is 149.58 km away from project site in north direction.

Nature and Size of the project:

At present, the unit is Dry de-shaling plant of 0.5 Million tons per annum capacity and has been supplying coal to its customers after dry de-shaling only using manual picking of shale and stone. However, keeping in view the limitation of manual operations and the deterioration in coal quality, it is proposed to modernize the process of existing dry-de-shaling plant to wet de-shaling plant and expand its capacity to 0.96 million tons per annum. The proposed project will produce metallurgical grade coal to be used in Sponge Iron, CPP and Cement plants thus resulting in savings to the national exchequer by reduction in imports. Washing will keep the age percentage in coal below 34% in compliance with MoEF guide lines / Notification.

The various products obtained during the course of wet de-shaling shall be transported out of the plant through road way using trucks which will be properly covered with tarpaulin for onward dispatch to the respective consumers as per their requirement. There is a railway siding attached to the Plant site, for all long distance consumers, washed coal shall be dispatched by rail.

Water Requirement:

The source of water for the project shall meet through a low height bund over nearby nallah and Storage pond for process water and existing tube wells for domestic use. Total water requirement for the proposed project will be 207.5 KLD. Out of which 200 KLD will be used in process, 5 KLD shall be used for dust suppression and pollution control measures. 0.5 KLD water shall be used for domestic purpose.

Waste water generation & Management:

The water used in the process will be carried away with cleaned coal, sized coal and rejects (Water loss). The wet de-shaling process will be operated in closed water circuit hence there is no process effluent generation from the proposed project. It is proposed to use Powdered Coal (-200 Micron) as the washing Media. The media will be recollected from below the de-watering screens and taken to a conical vessel. Since the screens are fitted with showers for washing off the Media, the collected media would be diluted, so to maintain the required gravity in the system, fresh Media will be added from another Vessel and reused in the barrel washer. The effluent shall be recycled via the slurry pond and Zero discharge shall be ensured. About 0.4 KLD domestic waste water will be disposed through septic tank & soak pit.

Electricity Requirement:

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Electricity is already available at site; Enhanced requirement shall be obtained from MSEDCL and total Power requirement is 0.6 MW. D. G set (1 No. x 125 KVA) installed for Emergency use only.

Fuel Requirement & Stack details:

Diesel (26.25 Litres/hr) will be used as a fuel for DG set.

Manpower Requirement:

There are 40 peoples are working in existing plant and around 4 peoples will be required for the proposed expansion project. Thus, total manpower will be 44 workers.

Solid & hazardous waste management:

The solid wastes generated during the course of washing are mostly shale and small quantity of stones associated with the mining operation. The stones having no calorific value will be used for paving of the surrounding area and for making of approach road. The shale which has low calorific value is a good fuel for brick kilns and will be disposed off by selling it to the owners of brick Kilns. Used oil (Cat. 5.1, Qty: 60 Litres) will be generated annually from D. G set which will be sold off to authorized re-processor.

Pollution control measures:

Air Pollution control measures:

- Proper covering (tarpaulin) shall be provided to the raw coal while transferring to avoid dust emission.
- Water shall be sprayed on the coal during the unloading of trucks to prevent fugitive dust emission.
- All transfer points of the belt conveyors shall be provided with water mist sprays to prevent formation of dust.
- All screens shall be provided with top hood to arrest any fine dust generated during the screening operation.
- Prior to the crusher, atomized water spray nozzles shall be installed so as not to allow any generation of dust during the crushing.
- Enclosed chutes shall be used for the discharge of coal on ground so as not to allow fugitive dust emission.
- Clean coal shall be transferred by truck which will be properly covered with tarpaulin for onward dispatch to the respective consumers as per their requirement.
- Rain guns are provided along the roads and washery boundary to suppress the dust generation.

Water pollution control:

- The effluent shall be recycled via the slurry pond and Zero discharge shall be ensured.
- About 0.4 KLD domestic waste water will be disposed through septic tank & soak pit.

Green Belt Development:

About 1584 sq. m area has already been developed as green area. Additionally, 3760 sq. m area will be earmarked for green belt development, which is under progress. Hence, total 5344 sq. m area (33.013%) will be green area.

Description of the Environment

Study area

The baseline quality of various components of the environment, viz. air, noise, water, land, biology, meteorological and socio-economic is assessed within the impact zone of about 10 km around the proposed site. The report presents the data collected during the sampling period of three months during post monsoon season from October'16 to December'16.

Climate of the study area

The Climate of the district is characterized by a hot summer and general dryness throughout the year except during the south-west monsoon season. The annual maximum temperature is 43.8°C in the month of May and minimum temperature is 12.2°C in the month of December. The average annual rainfall for the Chandrapur as a whole is between 1200 to 1450 mm.

Seismicity

According to the seismic-zoning map of India, the project area falls in Zone II.

Air Environment

AAQM was carried out in 9 locations on 24 hourly average basis as per guidelines of CPCB and NAAQS within 10 km radius of the study area. PM₁₀ and PM_{2.5} was found in the range of 67.98 to 84.32 µg/m³ and 30.22 to 38.79 µg/m³ respectively. SO₂ found in the range of 6.12 to 9.20 µg/m³ and NO_x: 16.16 to 22.67 µg/m³. The PM₁₀, PM_{2.5}, SO₂ & NO_x parameters are found well within the permissible limit as per NAAQS level. Other parameters like VOCs, Heavy metals, Benzene etc. were found within permissible limit.

Noise Environment

Noise can be defined as an unwanted sound. A total of 8 locations were identified for ambient noise monitoring in the study area. The daytime varied from 47.1 dB(A) to 68 dB(A) and night time noise varied of 39.2 dB(A) to 56.4 dB(A). Both daytime noise and night time noise were found within the limit.

Water Environment

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In order to establish the baseline water quality, 8 ground water and 8 surface water samples were collected and analyzed in the study area. The analysis result for ground water samples were within drinking water limit as per IS 10500: 2012.

Soil Quality

Soil samples were collected from 8 locations in the study area and analyzed for physico-Chemicals characteristics. Soil quality was found to be normal.

Land Use/Land Cover of the Study Area

Land use pattern of the study area covering 10 km radius includes Pond / Lake, Crop Land, Barren Land, Land with Scrub, Fallow Land, Settlement, Industry, Quarry and Hilly Forest Land. This comprises of Industrial area 225.27 ha and crop land 22478.31 ha.

Biological Environment

Biological environment includes flora and fauna including aquatic species found in the study area of 10 km radius. The various animal species in the study area are found, detailed study is given in Baseline Chapter-3.

Socio-economic Environment:

Socio-economic data were collected from within 10 km radius of the Project site. These include 38 villages as per census of India 2011. Total population was 41968, out of which male population is 21616 and female population is 20352 with Sex ratio is 940.86. The total no. of household was 10096. The total literate population was 29163, male literacy was 16331 and female literacy was 12832 and literacy rate was 69.49%.

Anticipated Environmental Impacts & Mitigation Measures

Air Environment

- In order to estimate the ground level concentrations due to the emission from the proposed project, AERMOD View – Lake Environmental Software has been employed.
- These predicted ground level concentrations when added to baseline scenario, the overall scenario levels of PM₁₀, SO₂, NO_x, are well within the permissible limits specified by CPCB.
- All other NAAQS parameters are observed within below detectable limit, the detail explanation is mentioned in Baseline chapter-3.
- Adequate mitigation measures have been already installed to control air pollution.

Noise Environment

During operational phase, noise will be generated from coal crushing, screening & conveying and from operation of D.G set. The noise levels were below the stipulated standards of CPCB for

residential and industrial areas. Technical and administrative measures are already implemented to minimize the noise levels.

Water Environment

The wet de-shaling process will be operated in closed water circuit hence there is no process effluent generation from the proposed project. Water sprinkling system for the storage area will be designed in such manner that the water requirement is optimized and overflow avoided. Spent oil and lubricants will be collected from engines and motors in leak proof drums. The drums will be stored in earmarked area with adequate safety, which will be sold to authorized vendors. No oil or lubricant will be discharged into any water body. The impact of the project on the water bodies of study area will be insignificant in nature.

Land Environment

There will be little impact envisaged due to the operation of the plant. Greenbelt will further trap the fugitive dust. The incremental quantity of dust going out will be very low to create any perceptible qualitative changes on the soil and agriculture of surrounding area. The impact on the land of study area will be insignificant in nature.

Biological Environment

Analysis of abiotic factors reveals that ambient air and fresh water quality will remain practically unaffected. Hence no impact on flora and fauna is envisaged. Moreover there are no reserve forest and protected areas within 10 km radius.

Socio-economic Environment

The proposed expansion project is expected to provide direct and indirect employment opportunity to skilled and unskilled workers. The project will contribute to the socio-economic development of the area at the local level in turn reducing migration for employment. Hence, the proposed project will have positive impact on the socio-economic environment.

Environmental Monitoring Program

Environmental Monitoring Program is designed for operation phase of the project for monitoring of various environmental parameters like air, water, noise, soil and ecology etc.

Environmental Management Plan

The EMP presents the project specific guidelines on:

- Environmental management strategies

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- Specialized engineering construction procedures in relation to environmental guidelines of the country
- Spill prevention and control
- Management of wastes and hazardous Chemicals
- Air, water and soil quality protection
- Noise control
- Soil erosion control and slope stabilization
- Vegetation, wildlife and habitat protection
- Socio-economic and welfare considerations
- Risk and disaster management plan
- To prepare a checklist for statutory compliance
- Budget allocation for environment management plan.

Hazard Identification

The HIRA & HAZID has been conducted for all the operations involved in the project. The study considers all the hazards associated with all the activities which will be involved. The hazards leading to possible consequences are summarised in the chapter-7 and the risk mitigation measures and intended safeguards are specifically mentioned in the chapter-7 in the EIA report. The risk to personnel, process / operation is considered in the study.

Disaster Management Plan

Disaster Management Plan is prepared for identification of various hazards addressed qualitatively and included onsite and off-site emergency plan. A Disaster Management Plan is prepared to meet any grave emergency which can occur due to Natural Disasters such as Floods, Earthquakes, or due to Man-Made Disasters such as Acts of war and Fires, Power failures. Details of risk assessment and disaster management plan are given in the EIA report.

Project Benefits

Growth in the industrial sector creates new opportunities for employment and can also help diversify the economy.

Conclusion:

- The project proponent will follow all the statutory norms and guidelines as per EPA, 1986 to safeguard environment.
- Domestic wastewater generated from the proposed project will be disposed into septic tank & soak pit. Zero Liquid Discharged (ZLD) will be achieved.

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- Ambient Air Quality of the project site are concerned viz. SPM (PM₁₀ & PM_{2.5}), SO₂ and NO_x, their concentrations in the ambient air at the proposed site were well within the prescribed limits.
- The operational phase noise shall be within industrial premises which will not exceed 75 dB(A).
- No significant impact is seen on flora and fauna as no reserve forest and eco-sensitive zones are present within 10 km.
- The project will generate employment opportunities during construction stage and also at operational stage. The standard of living of local people due to employment is likely to be better, so we may say that it is positive socio-economic impact. The region will get economic boost.
- Overall the project will have positive impact for socio-economic and cultural development.