PROJECT CATEGORY 'A'

DRAFT REPORT

ON

EXECUTIVE SUMMARY

FOR

PROPOSED 2 X 2, 25,000 TPA DRI PLANT; 3,10,000 TPA STEEL MELT SHOP; 19,800 TPA OXYGEN PLANT & 2 X 8 MW WHRB POWER PLANT

F.No.11011/141/2013-IA.II (I)

OF

M/s. NACHIKETA POWER & STEEL PVT. LTD.

AT —SILPAHARI INDUSTRIAL AREA, BILASPUR DISTRICT, CHHATTISGARH.

Prepared by:- JANUARY 2015

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ISO 9001:2008
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1. INTRODUCTION

M/s Nachiketa Power & Steel Private Limited (herein after referred to as 'NPSPL') has proposed 2 X 2,25,000 TPA DRI plant; 3,10,000 TPA Steel Melt Shop; 19,800 TPA Oxygen Plant & 2 X 8 MW WHRB based power plant at- Silpahari Industrial Area, Bilaspur District, of Chhattisgarh state.

Terms of Reference (TOR) has been granted for the proposed project by MoEF vide F. No. J-11011/141/2013-IA.II (I) dated 7th November, 2014.

❖ Proposed plant capacity:

S.No	Particulars	Install Capacity
1.	DRI Plant	2 X 2,25,000 TPA
2.	Steel Melt Shop ➢ Induction Furnace ➢ LRF	3,10,000 TPA
3.	Oxygen Plant	19,800 TPA
4.	WHRB Power Plant	2 x 8 MW

❖ Site Description

The proposed project is located at Silpahari Industrial Area of Bilaspur district, Chhattisgarh. Project site lies between 22° 01' 0.33" N latitude and 82° 11' 16.08"E longitude as per Topo sheet no NF 44/7 of Survey of India. The mean elevation of the plant site is about 263 m above mean sea level (AMSL).

The district head quarters i.e. Bilaspur is about 4.80 km from the project site. NH 5 is passing at a distance of 7.8 Km from plant site. The nearest railway station is Bilaspur at about 4.8 km from the project site. The nearest airstrip is at Chakrabhata (at about 8 km).

2. PROJECT DESCRIPTION

❖ Land Requirement

The proposed project is planned to be set up over 57.62 Acre (23.32 Ha).The total land has already been identified and acquired

LAND USE BREAKUP

SR NO	DESCRIPTION	AREA (ACRE)
1	MRSS	0.96
2	IN WEIGH-BRIDGE	0.09
3	OUT WEIGH-BRIDGE	0.09
4	CENTRAL STORE	0.37
5	ADMIN BUILDING	0.36
6	CAR PARKING	0.42
7	STEEL MELT SHOP	5.44
8	WATER COMPLEX & SETTLING TANK-1	0.24
9	OXYGEN GAS PLANT	0.63
10	PROCESS WATER POND	0.20
11	RAW WATER POND	0.20
12	STEEL MAKING OFFICE	0.23
13	WATER COMPLEX & SETTLING TANK-2	0.24
14	FES DUST STORAGE	0.33
15	BILLET STORAGE YARD	0.62
16	CANTEEN	0.43
17	POWER GENERATION FROM WHRB UNIT	1.50
18	POWER GENERATION FROM WHRB UNIT	1.50
19	WATER POND	1.28
20	SL/RN PLANT	8.88
21	RAW MATERIAL HANDLING SYSTEM	1.67
22	GRINDING SECTION	0.05
23	GREEN BELT	24.72
24	ROAD	7.15
	TOTAL AREA	57.62

❖ **Raw Material Requirement**

Details of Raw Materials requirement

Description	Consumption	Source	Mode of Transportation
Iron ore (dry basis)	6,75,000 MTPA	NMDC/Near by mines	By Rail/Road
Coal (dry basis)	3,15,000 MTPA	Imported from Indonesia & South Africa or can be sourced from India	By Road/ Rail from Port
Dolomite	22,500 MTPA	Open market	By Rail/Road
Bentonite	3,600 MTPA	Gujarat	By Rail/Road
Light diesel oil	3,150 KLPA	IOCL	By Rail/Road
Steel Scrap	51,500 TPA	In house	

Manufacturing Process

i. DRI plant (SL/RN Process):

- Ore and Additive Grinding
- Ore dosing & mixing
- Green pelletizing
- Coal injection
- Hardening grate
- Rotary kiln
- Rotary cooler
- Product separation
- Product handling
- After burning chamber
- Waste heat recovery
- Kiln waste gas system

- Grate exhaust gas system
- Plant de-dusting system
- Cooling water system
- Turbine/generator system
- De-mineralized water system
- Utility systems

ii. Steel Melting Shop(SMS)

The DRI obtained from the SL/RN Xtra Plant shall be fed into the Steel Melt Shop (SMS).

Process of making billets in the SMS is carried out in 3 steps:

- Melting of metal in induction furnace
- LRF (Laddle Refining Furnace) to refine the molten metal and
- CCM (Continuous Casting Machine)of size 7/13 to cast /form the billets of size 150 mm x 150 mm.

Material charged into the induction furnace includes:

- DRI
- Steel Scrap of suitable composition.

Charging is normally done using Charging Buckets. Charging Buckets are filled with respective pre-decided charge material and weighed to ensure adequate proportioning. The Charging Buckets are moved to the top of the Furnace. The Furnace roof opens and the Charge Bucket unloads charge into the Furnace. The size of the Charging Buckets is designed to minimize Charging time and thereby maximize furnace productivity.

Induction furnace

The heating system in an induction furnace includes:

- Induction heating power supply.

- Induction heating coil.
- Water-cooling source, which cools the coil and several internal components inside the power supply.

Laddle Refining Furnace (LRF)

This is the second stage in SMS. Molten steel is further refined in Ladle Refining Furnace (LRF). LRFs are ladles with heating source and lid. It ensures the following:

- Maintain the molten steel temperature to the precise range as required for refining
- Refine the molten steel to exact chemical specification
- Add chemicals to adjust composition as required by the end-user

Continuous Casting Machine (CCM)

Continuous casting is a casting process in which the operation of pouring, solidification and withdrawal of casting from an open mould are carried out continuously. Continuous casting machine size will be 1 X 7/13 X 3 Strand. Casting size will be 150 X 150 mm2. Billets, so obtained from the above process shall be sold as product.

iii. Oxygen Plant

Vapour Pressure Swing Adsorption (VPSA) plant working Principle

This process consists of 2 to 4 beds filled with Molecular Sieves. These cycles are alternately in Production and in Regeneration. Feed air pressure is supplied with air blowers at 0.25 to 0.5 bar, which gives Oxygen production at 0.20 to 0.45 Bar. Regeneration of Molecular sieves is achieved by a highly efficient water cooled Vacuum pump at 0.6 bar pressure. As a result, 90 to 95% pure Oxygen gas is achieved. The waste gas is 80-85% Nitrogen and 11-15% Oxygen which is vented to atmosphere via discharge silencer. Specialized X type molecular sieves are used as adsorption agents when producing oxygen from the air by adsorptive means. They adsorb nitrogen, water vapor, and carbon dioxide to a much higher

degree than oxygen. This means that a product flow comprising essentially only oxygen and argon can be removed from the process air being passed through the adsorption bed. The compressed air enters the adsorbers. The nitrogen is adsorbed while the oxygen product leaves the vessels. After a certain time the adsorption is interrupted and evacuation by a vacuum pump desorbs the enriched nitrogen. During this time the second unit becomes active ensuring uninterrupted production of pure oxygen.

iv. Waste Heat Recovery boiler(WHRB)

Part of the gas leaving the after burning chamber is carried via an elbow duct into the hood of the hardening grate. The remainder of the after burned kiln off-gas is directed into the waste heat boiler. The waste heat boiler consists of 3 passages:

- Radiation zone
- Super heater bundles
- Economizer bundles

The boiler is designed to meet the specific requirements of the SL/RN process with regard to the high dust load. The temperature of the kiln waste gas at the outlet of the waste heat boiler is sufficiently low to enable further treatment by an electrostatic precipitator.

Make-up water for the waste heat boiler is supplied by means of the boiler feed water de- mineralization & de-aeration plant.

❖ **Water Requirement**

Average water requirement for the proposed project is 90m^3/hr which will be sourced by Chhattisgarh State Industrial Development Corporation.

❖ **Power Requirement**

Power requirement for proposed plant shall meet partially from the WHRB power plant of capacity 2x8 MW and balance from Chhattisgarh State Electricity Board.

❖ **Manpower Requirement**

It is estimated that the total requirement of manpower for the whole organization will be 300.

❖ **Project Cost**

An indicative estimated capital cost of the proposed 2 X 2,25,000 TPA DRI Plant; 3,10,000 TPA Steel Melt Shop; 19,800 TPA Oxygen Plant & 2 X 8 MW WHRB Power Plant is Rs. 756 Cr. Including the Pre-operative expenses, contingency and interest during construction.

3. DESCRIPTION OF ENVIRONMENT

The study area of 10 Km radius is considered for Baseline data collection. Comprehensive primary data collection has been undertaken during 20th October 2014 – 19th January 2015 through site visits and monitoring.

❖ **Air Environment**

Study indicates that, temperature in the area varies from 28.1- 32.4°C., relative humidity varies from 67-96 % and the maximum wind speed observed during the study period was 1.8 m/s. Predominant wind direction for the study period was observed from NE preceded by N. The ambient air quality was monitored at eight (8) locations with respect to PM10, PM2.5, SO2, NOX, CO, O3, , NH3. AAQ monitoring indicates that the concentration of PM10 varies in the range of 26.8-72.8µg/m3, PM2.5 in the range of 13.9-37.8 µg/m3, SO2 in the range of <4- 16.5 µg/m3, NOX in the range of <9- 21.5 µg/m3, CO in the range of <0.1-0.28 mg/m3, Concentrations of all the AAQ parameters were within NAAQS.

❖ **Water Environment**

The analysis of surface water samples (3 locations) from study area as per IS 2296, Class "C" shows that pH varied from 6.85 to 7.18 while turbidity varied from 0.3 to 0.6 NTU. Total Dissolved Solids varied from 152-170 Chloride varied between 12 mg/l and 18 mg/l. Zinc concentration varied from <0.001 mg/l, Nitrates varied from 2.3 to 3.23 mg/l, while sulphates varied from 6.09 to 8.91 mg/l.

Heavy metals are well within the limit with most of the reported values are below standard limit.

The ground water analysis of the study area (8 locations) as per IS 10500 shows that pH value varied from 6.7 to 7.4 while turbidity ranged from 1.6 to 2.1 NTU. pH value varied from 6.85 to 7.18 while turbidity ranged from 0.3 to 0.6 NTU. Dissolved Solids varied between 152 mg/l to 170 mg/l. Chloride varied between 12 mg/l & 18 mg/l. Calcium varied between 28.86 mg/l & 36.07 mg/l, Sulphate varied from 7.17 to 8.91 mg/l, Nitrate varied from 2.3 to 3.34 mg/l and Fluoride varied from 0.08 to 0.16. Values of Zinc, Boron Lead, Copper, Manganese, Mercury, Cadmium, Cyanide, Arsenic, Selenium, Chromium, Phenolic compounds, Aluminium, Residual free chlorine, Anionic Detergents, Mineral Oil and Poly nuclear aromatic hydrocarbon were found below detection limit.

❖ **Noise Environment**

Noise monitoring has been carried out at eight (8) locations. Noise levels were recorded on hourly basis for 24 hours, once in a month, for three months during the study period. Noise level varies from 35.1 – 76.7 dB (A) during day time and 24.6 -70.7 dB (A) during night time, which are below the prescribed limits of CPCB.

❖ **Soil Quality**

It is evident from the results, soil within the study area is found to be coarse textured and designated as sandy loam at all locations except at Lalkadan

village and Karaar where it is sandy loam other location is found Sandy clay loam respectively. Soil is brown in colour and acidic in nature with pH varies from 6.26 to 6.75. The infiltration rate in the soil samples varies from 1.6 to 2.4 cm/hr. The soil samples indicate low levels of phosphorous and potassium but high level of nitrogen, showing an unbalanced ratio of N:P:K (nitrogen/phosphorous/potassium) for agricultural productivity. Soil of the study area is mineral soil as organic carbon varied from 0.41 to 0.78 %.

❖ **Biological Environment**

The flora and fauna are identified and listed as per Wildlife Protection Act 1972. As per the study, it is observed that no endangered species of flora and fauna exist within the study area.

❖ **Socio-economic Environment**

Total population of the study area is 1465724 with 51.30% males and 48.70% females. Sex ratio is 1010 females per 1000 males. The main workers mainly comprise of cultivators and agricultural labourers. All the basic facilities like education, drinking water, medical, post and telegraph, etc. are available in all the villages, either at doorstep or within 5-10 Km area. Main crop of the area is paddy.

4. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

❖ **Land Environment**

➢ **Construction Phase**

Anticipated Impacts

Proposed project is planned over total land of 57.62 Acre which is already identified and acquired. The total land falls under Silpahari Industrial Area. No Minor vegetation is present within the site. Hence, there will be no impact on land environment during construction.

Mitigation Measures

Green Belt shall be development over an area of 24.72 acre i.e. 33% areas of total plant premises.

- **Operation Phase**

Anticipated Impacts

The impact on land use pattern during operation phase will be only due to permanent change in land use of the project site to industrial set up. The effluent generated from the plant will be recycled / reused after adequate treatment and solid waste will be reused / handled as per standard practices.

Mitigation Measures

The proposed project site is devoid of major vegetation and forest land. There will be loss of very less vegetation, which will be compensated by developing green belt (over 33% of total plant area) with selected native species.

Air Environment- Construction Phase

Anticipated Impacts

Construction activities involve excavation of top soil, stock piling of excavated soil. These activities can generate fugitive dust. Fugitive dust generation will be confined to plant premises and will have short term impact.

Apart from particulate matter, SO2, NO× and CO will be generated during movement of vehicles at construction site, which have detrimental effects on the working environment.

Mitigation Measures

Water sprinkling will be carried out across the approach roads at suitable interval to control dust generation.

Top soil generated during site leveling will be compacted and stock piled to avoid airborne dust emission.

Emissions from vehicles will be controlled by using good quality fuel and through regular inspection of engine.

- **Operation Phase**

Sources of air pollution from proposed project and pollution control equipments are tabulated below-

Sl. no.	Particulars	Sources	Parameter	Control/Treatment
1	Stack emission	Stacks attached to bag filters at DRI plant	PM, SO2, NOx & CO	1. ESP, bag filters etc with designed outlet dust concentration of 30 to 150 mg/Nm3; 2. Stack height as per H=14Q0.3, where Q is the SO2 generation in Kg/hr; 3. A well-designed burner system to limit the core flame temperature to keep the NOx concentration; and 4. Keeping a positive oxygen balance.
		DG sets		1. Stack height as prescribed by CPCB.
2	Fugitive Emission	Transfer points during collection and transportation of raw materials	PM	1. Bag filters with designed outlet dust concentration of 50 mg/Nm3 2. Water sprinklers and spray system.
		Storage of raw materials and waste materials		1. Water sprinklers and spray system

3	Thermal Emission	Boilers and pipelines used for steam	Heat	1. Adequate thickness of insulating material with proper fastening shall be provided

The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 2.50 µg/m3, 1.88µg/m3, 13.72µg/m3 with respect to the PM10, SO2 & NOx respectively which is minimal. The GLC predicted at all receptor locations after the proposed project are well within the limit prescribed in NAAQS.

WATER ENVIRONMENT- CONSTRUCTION PHASE

Anticipated Impacts

During the construction phase of proposed project, estimated total water requirement is 50-100 m3/day, depending upon the type of construction activities. This requirement of water will be supplied by Chhattisgarh State Industrial Development Corporation (CSIDC).

Mitigation Measures

- All the debris generated at the site will be disposed off separately.
- Sediment trap will be provided to prevent the discharge of excessive suspended solids.
- Oil and grease trap will be provided in plant drainage lines to prevent contamination by accidental oil spillage.
- To prevent contamination from accidental spillage of oil at storage and handling area, the storage area will be made up of concrete structure and will be inspected and cleaned at regular intervals.
- Proper storm water drainage network will be provided.
- Domestic effluent will be treated in STP & treated water will be utilized in plantation.

OPERATION PHASE

Water requirement for proposed project is 90 m3/hr. This water requirement will be sourced by CSIDC.

Details of Waste Water (m3/hr)

Process Unit	Waste Water Qty (m^3/day)	Source	Waste Water Characteristics	Waste Water Management
DRI Plant	nil	Furnace Bottom Cooling	High Temp	Water will be circulated
Sewage water	5	Domestic Effluent	TSS, BOD, pH, O & G	Treated in STP & reused in green belt development.
TOTAL	5			

Mitigation Measures

- Rainwater harvesting will be implemented to meet the water demand during lean season. Harvested rainwater will also be used for ground water recharge as water conservation measure.
- Storm water management will be done by providing adequate storm water drainage network and settling tank.
- Water conservation measures will be implemented.

BIOLOGICAL ENVIRONMENT- CONSTRUCTION PHASE

Anticipated Impacts

No additional land is proposed to be acquired and construction activities shall be confined to premises of existing plant. Project site does not consist of any ecologically sensitive area.

Mitigation Measures

Thick green belt will be developed over 33% of total plant area.. Native species will be preferred for plantation. Plantation activities will be initiated during the construction phase, wherever possible.

OPERATION PHASE

Anticipated Impacts

During operation phase, wastewater discharges may have negative impact on flora and fauna in the surrounding. The noise generation from the plant and high illumination in night may have impact on fauna in the surrounding. The company will undertake massive plantation in and around the plant boundary which will improve the ecology of the area.

Mitigation Measures

There will not be any discharge of effluents from plant to surrounding area and no solid waste will be disposed off on the land of surrounding area, hence the impact of operation of the plant on the ecological environment will be minimal. A thick green belt will be developed along the plant periphery. This will act as noise barriers to reduce noise propagation from the plant site to the surrounding. Positioning of the lights will be done in such a way that lighting will be concentrated within the factory area and impact to outside will be bare minimum.

NOISE ENVIRONMENT - CONSTRUCTION PHASE

Anticipated Impacts

The general noise levels due to construction activities and machinery installation may sometimes go up to 85 dB (A) at the work sites during day time. Workers in

general are likely to be exposed to an equivalent noise level of 80-85 dB (A) in 8 hour shift. During construction phase, there will be vehicular movement involved in transportation of construction materials; machinery etc. which will lead to noise pollution but this will be temporary.

Mitigation Measures

- Noise prone activities will be restricted to the extent possible during day time in order to have minimum impact of noise pollution.
- Provision of rubber padding / noise isolators.
- Provision of silencer to noise generating machines.
- Provision of Personal Protective Equipments (PPEs) like ear muff/ plugs to the workers.
- All precautions as per applicable regulations will be implemented for reduction of noise level.

OPERATION PHASE

Anticipated Impacts

Equipments are designed based on guidelines of OSHA. Therefore, the noise level at the sources will not exceed 85 dB(A) as per the requirement of OSHA. The higher noise levels will be limited to a short distance from source and will be prevailing in the plant area.

Mitigation Measures

All rotating items will be well lubricated and provided with enclosures as far as possible to reduce noise transmission, provision of silencers will be made wherever possible, equipments and machineries generating higher noise will be provided with padding/isolators to reduce the noise level at source, necessary acoustic enclosures will also be provided wherever possible in high noise level areas, operators will be provided with necessary safety and protection equipment such as ear plugs, ear muffs etc, provision of green belt/plantation around the plant premises to mitigate the noise pollution.

SOIL ENVIRONMENT- CONSTRUCTION PHASE

Anticipated Impacts

During construction phase, solid waste i.e. excavated soil, construction debris, metal waste and oil & grease from construction machinery/equipment will be generated. Certain hazardous wastes such as used oil, lubricants and used containers will be generated.

Mitigation Measures

- Generated topsoil will be partly used for leveling and remaining will be stored for utilization in plantation.
- Land clearing for construction site will be kept at the absolute minimum as practicable;
- Sewage Sludge generated from STP will be used as manure.
- Install and maintain effective run-off control, including siltation ponds, traps and diffusion methods so as to minimize erosion;

OPERATION PHASE

Solid Waste Generation & Management

Solid Waste		
Source	**Quantity (T/Hr)**	**Disposal**
Waste Gas dust	8710 TPA	Mixed with water and collected for reuse.
Grate Dust	5540 TPA	Mixed with water and collected for reuse.
Oversize material	1190 TPA	Will be circulated back to the system
In-plant dust	14,250 TPA	Will be collected and circulated in system through Pneumatic conveying

Hazardous Waste Management

Waste oil, used batteries, containers of hazardous materials (Oil drums, Chemical drums) etc. will be handled as per Hazardous Waste (Management,

Handling & Transboundary Movement) Rules' 2008. All these recyclable waste will be collected on leakage proof container on impervious floor under the shed. These wastes will be given to authorized re-processor.

❖ **Socio-economic Environment**

As the proposed project will be located in Silpahari industrial Area. Thus, there is no negative impact of the proposed project on local habitants. Impact on Socio-economic environment is positive because of employment & other opportunities due to plant.

5. ANALYSIS OF ALTERNATIVES

No alternative sites have been considered for the proposed project.The project site is located in Silpahari Industrial Area, which is already developed with respect to infrastructure required for industrial set up. The raw material required for the plant is available in the vicinity of the project area. Water will be sourced from Arpa River by CSIDC. Thus the proposed plant of NPSPL at Silpahari Industrial Area is best option.

6. ENVIRONMENTAL MONITORING PROGRAMME

❖ **Environment Monitoring Plan during Construction**

Sl. No.	Component	Parameter	Locations	Frequency
1	Ambient Air	PM10, PM2.5. SO2, NOx, CO	3-4 locations at the boundary of plant premises	24 hourly samples, twice in a week
2	Waste Water	pH,TDS, SS, BOD3, COD, Oil & grease and Heavy metals	Drain from septic tank	Once in a month
3	Noise Level	Hourly Leq	3-4 locations within the plant premises	Continuously during working hour, twice in a week

❖ Environment Monitoring Plan during Operation

Sn	Component	Parameter	Locations	Frequency
1	Ambient Air	PM_{10}, $PM_{2.5}$, SO_2, NOx, CO, NH_3, Ozone, Pb, As, Ni, Benzene, Benzo(a) pyrene,	5-6 locations at the boundary of premises and 3 locations in the buffer zone	24 hourly samples, twice in a week
2	Fugitive emission	PM_{10}, $PM_{2.5}$	8-10 locations at dust generation points	8 hourly samples, twice in a month
3	Stack	PM, SO_2, NOx, CO	All stacks attached to units where combustion take place	Once in a month
		PM	All stacks attached to dust generating units	Once in a month
3	Noise Level	Hourly Leq	At the boundary of the plant premises and at 1 m distance from major noise polluting equipments	Once in two week for 24 hours
4	Waste water	As per GSR 422 (E) for inland surface water	At outlet of STP/ETP (in case excess water to be drained)	Once in three months

7. ADDITIONAL STUDIES

❖ Risk Assessment & mitigation measures

Risks anticipated due to operation of proposed project will be fire hazard due to handling of HSD and byproduct gases from DRI & SMS. NPSPL will form Emergency Response Team equipped with trained personnel to look after issues corresponding to fire and other hazards. Apart from these, workers will be provided with fire safety equipments. Use of proper PPEs will be a regular practice.

❖ Rehabilitation & Resettlement (R & R) Plan

Proposed project is planned within Silpahari Industrial Area; no additional land acquisition is envisaged, hence R & R is not applicable.

❖ **Occupational Health Study**

Pollutants which can cause occupational health hazards due to proposed plant are particulate matter, heat and noise from the machineries used. Inspection and maintenance of pollution control systems will be undertaken regularly. Periodic training of employees for safe operation of instruments/machineries will be carried out. Pre-placement health check up during new recruitment & periodical health check-up will be carried out.

❖ **Rain Water Harvesting**

Rain water harvesting structures will be constructed to store and utilize rain water to improve the ground water resources of the area and to reduce the impact of water drawl from surface water source.

8. PROJECT BENEFITS

The proposed project will have operational as well as socio-economic benefits resulting into overall benefit to State and Nation, in general. NPSPL is committed for improvement of the socio-economic conditions of the area and will actively participate in implementing Government schemes for the welfare of the area to the maximum possible extent. In addition to payment of sales tax and excise duty to the Government, NPSPL will improve the socio-economic status of the local habitants in consultation with district authorities. It will review various welfare schemes going on in the area from time to time and take appropriate decisions of modifications/additions of welfare initiatives as per requirement of local people.

NPSPL has proposed to spend Rs.3780.00 Lakhs (5% of the project cost) towards CSR activities in next five years.

9. ENVIRONMENTAL MANAGEMENT PLAN

NPSPL through EMC (Environment Management Cell) will maintain data regarding monitoring & analysis and implement all the mitigation measures during construction & operation phases of the project. The estimated capital cost and recurring cost of Environment Management is Rs. 2794.00 Lakhs & Rs. 569.80 lakhs, respectively.

10. CONCLUSION

The proposed project has taken into consideration best suited site and technology. The project is designed with minimal effect on environment and project proponent assures to monitor & mitigate any probable damage to the environment due to project. In addition, the industrial development of the area will ultimately result in the socioeconomic upliftment. Moreover, the proponent will act for socioeconomic development of the area, which will keep on adding benefits to the local people. Thus, the project not only achieves the objective of production of Steel, which is the need of time but also will result in consequent development of region with overall benefits to State & Nation.