



CHAPTER – VIII

PROJECT BENEFITS

The proposed plant will benefit the local area in the following ways.

8.1 PHYSICAL INFRASTRUCTURE

Once the proposed activity is commissioned, the socio-economic status of the local people will improve and there by infrastructure facilities like communication systems will improve.

8.2 SOCIAL INFRASTRUCTURE (TOR # 30)

With the implementation of the proposed plant, the socio-economic status of the local people will improve substantially. The land rates in the area will improve in the nearby areas due to the proposed activity. This will help in upliftment of the social status of the people in the area. Educational institutions will also come-up and will lead to improvement of educational status of the people in the area. Primary health the medical facilities will certainly improve due to the proposed plant.

8.3 EMPLOYMENT POTENTIAL

The proposed plant creates employment to 350 people during construction and 100 people during operation of the proposed plant.

8.3.1 SKILLED

Total skilled employment in the proposed plant will be 22.



8.3.2 SEMI-SKILLED

Total Semi-skilled employment in the proposed plant will be 36. Priority will be given to local people for semi-skilled jobs.

8.3.3 UNSKILLED

Total Unskilled employments in the proposed plant will 42. Top priority will be given to local people for unskilled jobs.

8.4 OTHER TANGIBLE BENEFITS

The following are the other benefits to the area due to the proposed plant.

- Educational status will improve in the area
- Medical standards will improve due to the proposed project.
- Overall economic upliftment of socio-economic status of people in the area.
- Ancillary developmental activities will be created due to the establishment of the proposed unit.
- Merit scholarships to school children.
- Providing furniture to schools.
- Regular medical check-ups.



CHAPTER – IX

ENVIRONMENTAL COST BENEFIT ANALYSIS

In the proposed plant manufacturing of Sponge Iron, manufacturing of Steel Ingot/ Billets, a Rolled Products, Power generation have well proven technologies at affordable cost All required pollution control systems will be implemented . Rs. 8.0 Crores is envisaged towards capital cost for Environment protection.



CHAPTER -X

ENVIRONMENTAL MANAGEMENT PLAN

10.0 INTRODUCTION

The major objective and benefit of utilising Environmental Impact Assessment in project planning stage itself, is to prevent avoidable losses of environmental resources and values as a result of Environmental Management. Environmental Management includes protection / mitigation / enhancement measures as well as suggesting post project monitoring programme. Environmental management may suggest revision of project site or operation to avoid adverse impacts or more often additional project operations may have to be incorporated in the conventional operation.

The industrial development in the study area needs to be intertwined with judicious utilization of non-renewable resources of the study area and with in the limits of permissible assimilative capacity. The assimilative capacity of the study area is the maximum amount of pollution load that can be discharged in the environment without affecting the designated use and is governed by dilution, dispersion, and removal due to physico-chemical and biological processes. The Environment Management Plant (EMP) is required to ensure sustainable development in the study area of the proposed plant site, hence it needs to be an all encompassive plan for which the proposed industry, Government, Regulating agencies like Pollution Control Board working in the region and more importantly the affected population of the study area need to extend their cooperation and contribution. It has been evaluated that the study area has not been affected adversely and is likely to get new economical fillip.

The affected environmental attributes in the region are air quality, water quality, soil, land use, ecology and public health.



The Management Action Plan aims at controlling pollution at the source level to the possible extent with the available and affordable technology followed by treatment measures before they are discharged.

Environmental Management aims at the preservation of ecosystem by considering the pollution abatement facilities at the plant inception. In the upcoming modern steel plants, pollution abatement has become an integral part of planning and design along with Techno economic factors.

10.1 MANAGEMENT DURING CONSTRUCTION PHASE

Environmental pollution is inevitable during the construction phase. The project proponent should take appropriate steps to control pollution during construction phase. The following are the factors requiring control during construction phase.

10.1.1 SITE PREPARATION

At the time of construction there will be some quantity of soil and debris and produce unstable material. The disturbed slopes shall be well stabilized before the on set of the monsoon. The leveling operation will also involve piling up of backfill materials. Use of dust suppressant spraying to minimize fugitive dust during construction activities is recommended.

10.1.2 WATER SUPPLY AND SANITATION

The employees at the plant shall be provided with water for their requirement and for the construction activities. The proposed plant shall be provided with sufficient and suitable toilet facilities to allow proper standards of hygiene. These facilities would preferably be connected to a septic tank and shall be maintained properly to have least environmental impact.

10.1.3 NOISE

Noise pollution is anticipated during the construction phase due to the usage of various construction equipment such as mechanical vibrator, mixers etc. The noise effect on the nearest habitations due to construction activity will be negligible. However, it is advisable that



onsite workers working near the noise generating equipment shall be provided with noise protection devices like earplugs.

10.1.4 MAINTENANCE OF VEHICLES

One should be very careful in selecting the site for vehicle maintenance, so as to prevent the ground water contamination due to the spillage of oil. Both diesel and petrol engine vehicles shall be maintained properly. Unauthorized dumping of waste oil should be prohibited. Wastes should be disposed off to the CECB approved vendors.

10.1.5 WASTE

The solid waste shall be collected and disposed off as per norms.

10.1.6 STORAGE OF HAZARDOUS MATERIAL

The following hazardous materials need to be stored at the site during construction.

- a. Gas for welding purpose
- b. LDO
- c. Painting materials

All these materials would be stored as per international safety standards.

10.1.7 LAND ENVIRONMENT

The proposed plant will not create any major impact on land environment. As soon as the construction activity is over the surplus earth will be utilized to fill up low lying areas, the rubbish will be cleared and all in built surfaces will be reinstated. Appropriate vegetation will be planned and all such areas shall be landscaped. 9.0 acres of extensive greenbelt (inclusive of existing) will be developed within the premises.

10.2 POST CONSTRUCTION PHASE (TOR # 18)**10.2.1 AIR EMISSION MANAGEMENT**

The following pollution control systems are proposed.

S. No.	Source	Control Equipment	Guaranteed Outlet Dust Emission
1.	Kilns (3 x 100 TPD) with WHRB	Electro Static Precipitators (ESP) – 3 nos.	< 50 mg/Nm ³
2.	Induction Furnace with CCM	Fume Extraction & cleaning system with bag filters	< 50 mg/Nm ³
3.	FBC Boiler	Electro Static Precipitator	< 50 mg/Nm ³

The hot waste flue gases from the DRI kilns will pass through Waste Heat Recovery Boilers and after heat recovery the gases will be treated in state-of-the-art ESPs to bring down the particulate emission in the exhaust gases to below 50 mg/Nm³ to comply with CREP recommendations and will be discharged in to the atmosphere through a combined stack (with twin flues) of 60 m height and a stack of height 50 m height.

The Fugitive emissions from the SMS will be treated in a fume extraction & cleaning system comprising of suction hoods, bag filters and then discharged into the atmosphere through Combined stack (With twin flues) of 30m height for 2 x 15 MT Induction Furnaces. The dust will be pneumatically carried to covered bins. The outlet dust emission will be less than 50 mg/Nm³.

The flue gases from the Rolling Mill will be discharged into the atmosphere through a stack of 40 m height for effective dispersion of emissions into the atmosphere.

The flue gases from the FBC boiler will be treated in a state-of-the-art Electro Static Precipitator to bring down the particulate emission to less than 50 mg/Nm³ and will be let out through a stack of 50 m height for effective dispersion of emissions into the atmosphere.

All the CREP recommendations will be implemented & followed strictly.



practices will be maintained in all sections of the plant.

The following are the details of dust extraction system & dust suppression system proposed in the plant.

10.2.1.1 DUST EXTRACTION AND DUST SUPPRESSION SYSTEM

S. No	Location	Pollution control system proposed
1	<ul style="list-style-type: none"> ➤ Coal screen House ➤ Crusher House ➤ Junction houses and surge hopper ➤ Iron ore screen house and bins ➤ Product discharge ➤ Junction House & SMS bins 	These areas will be provided with Dust extraction systems - each comprising of pulse jet type bag filter, centrifuged fan and motor, duct work including suction hoods, duct supports, stack, dust hopper rotary air lock valves etc.
2	Junction houses and truck hoppers	Dust suppression system with plain water - comprising of spray nozzles, piping network, valves, pumps, instrumentation & controls, water tank etc.
3	Stock piles in DR route	Dust suppression system with plain water - comprising piping network, valves pumps, instrumentation & control, water tank etc.

10.2.1.2 TECHNICAL SPECIFICATIONS OF CONTROL SYSTEMS

10.2.1.2.1 TECHNICAL SPECIFICATIONS OF ELECTROSTATIC PRECIPITATOR

A. for Waste Heat Recovery Boilers (WHRB)

No. of ESP's attached to WHRB's in the project : 2

ESP MAKE		M/S. THERMAX LIMITED
Design volume	Am ³ /hr	70,000
Design Temperature	Deg C	180 - 220
Maximum Inlet dust Load	Gm/Nm ³	18
Outlet Emission	mg/Nm ³	50
Moisture in gas	%w/w	17(at Heat Exchanger) 36 to 40 (at ESP)
Collection area	m ²	1343
Specific Collection Area	m ² /m ³ /s	69.1



No. of gas passages		11
Velocity through ESP	m/s	0.73
Residence Time	sec	10.52
Migration velocity	cm/s	7.08

Note: An interlocking system will be provided to each of the ESP's in such a way that whenever the emission in the exhaust exceeds the standard, then the raw material feed to the kiln will be stopped. The unit will be restarted only when the pollution control systems are able to comply with Norms.

B. For AFBC Boiler

Gas flow rate, m ³ /hr	: 83,200
Flue gas temperature (°C)	: 180
Inlet dust concentration, gm/nm ³	: 35
Guaranteed outlet dust Concentration, mg/nm ³	: < 50 (at max. flow conditions)
Design pressure, mm wg	: 300
Number of fields	: Three
Pressure drop across the ESP, mm wg	: 25 (max)
Collection efficiency	: 99.95 %

10.2.1.2.2 SPECIFICATIONS OF FUME EXTRACTION SYSTEM FOR INDUCTION FURNACES

Volumetric Flow rate	: 20781 m ³ /hr
Inlet dust load	: 10 gms/Nm ³
Guaranteed outlet dust emission	: < 50 mg/Nm ³
Type of bag filters	: Pulse jet
Pressure drop across bag filters	: 25 mm wg

Note: Pressure drop measuring system across bag filters will be installed.

SOURCES OF AIR POLLUTION (DRI Kilns)



S.No	AREA OF AIR POLLUTION	MEASURES ADOPTED FOR CONTROL
1.	<u>RAW MATERIAL HANDLING</u>	<ol style="list-style-type: none">1. All vibrating screens will be totally covered, to prevent the leakages of dust.2. Throughout the length, the conveyor is covered with G.I. Sheets to prevent the dust pollution3. All the material handling systems will be connected with de dusting system. All the discharge points and feed points wherever the possibility of dust generation is there a de dusting suction point will be provided to collect the dust. <p>4. <u>DUST SUPPRESSION SYSTEM-</u> It is the most effective and successful system to prevent the fly-off of dust. Dust suppression system will be adopted to control the fugitive dust emanated during raw material unloading operations.</p>
2.	<u>RAW MATERIAL STORAGE SYSTEM</u>	<ol style="list-style-type: none">1. All conveyors will be covered with G.I. Sheets to control the dust.2. All bins will be totally packed and covered, so that there will not be any chance of dust leakage.<ol style="list-style-type: none">i. Weigh feeders will be kept below the hopper and used to feed the known quantity of raw material per hour; it also seals the discharge area.ii. All discharge and feed points wherever the possibility of dust generation is there, will be provided with dust suppression system.iii. All material transfer points will be connected with dust suppression water nozzles to avoid the fugitive dust emission.
3.	<u>KILN FEED SYSTEM</u>	The raw material will be fed into the kiln through a double pendulum valve, which seals the false air entry into the rotary kiln and gas leakage from the kiln. The chute will be sealed with a double pendulum flap.
4.	<u>MAIN PROCESSING SYSTEM KILN</u>	Sealed system to avoid false air entry as well as exit. So that the desired quality can be produced. Hence no dust escapes outside.



5.	<u>KILN COOLER TRANSFER BUILDING</u>	The transfer point between kiln to coolers is completely sealed to avoid the false air entry and gas leakages.
6.	<u>ROTARY COOLER</u>	<ol style="list-style-type: none">1. The water will be circulated again and again. Hence there will not be any water pollution problem.2. There will be slip seals at cooler inlet & cooler outlet. The seals are also being lubricated to avoid false air entry and gas leakages.3. Cooler discharge and feed points wherever the possibility of dust generation is there will be provided with de dusting system will be provided.
7.	<u>WASTE GAS CLEANING SYSTEM</u>	<p><u>AFTER BURNING CHAMBER</u> Then the gas passes through the after burning chamber in which the combustion of carbon monoxide and unburnt carbon takes place by supplying required air. The basic purpose of after burning chamber is to reduce the carbon monoxide content in waste flue gases.</p> <p><u>ELECTRO STATIC PRECIPITATOR</u> Then the flue gas from DRI kilns after heat recovery will pass through an electro static precipitator in which the gases will be cleaned to achieve < 50 mg/Nm³ of particulate emission in the exhaust gas. The clean gas will be discharged into the atmosphere through a combined stack (with twin flues) of 60 m & a stack of 50m height based on CPCB guidelines.</p>
8.	<u>PRODUCT SEPARATION SYSTEM</u>	<ol style="list-style-type: none">1. All conveyors will be covered with G.I. Sheets, to control the dust emission.2. All bins will be totally packed and covered. So that there will not be any chance for dust leakage.3. Telescopic chutes will be provided below the hopper to discharge the product directly into the truck for dispatch to avoid the pollution.4. All the above material handling system will be connected with de-dusting system5. All discharge points and feed points wherever the possibility of dust generation is there, a de-dusting suction point will be provided to collect the dust.6. The collected dust will be taken by pneumatic conveying system and stored in a dust storage bin.

**7. Bag housing system**

In the bag house the dry dust will be collected in an enclosed housing containing fabric filter bags which are suspended inside the unit. The dust laden air will pass through bag filters forming a dust cake to separate the particulate from the clean air.

The collected dust will be taken by a pneumatic conveying system and stored in a dust storage bin.

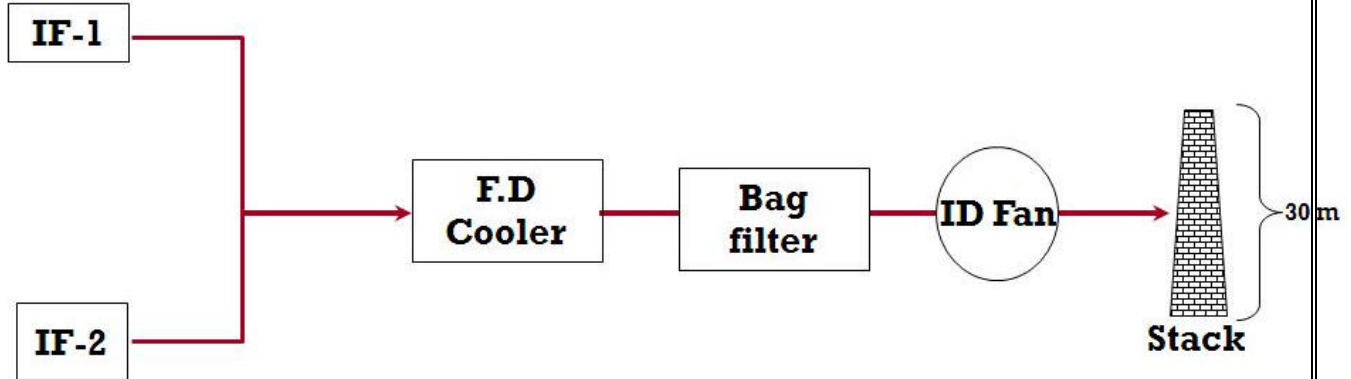
10.2.2 ACTION PLAN FOR CONTROL AND MONITORING OF FUGITIVE EMISSIONS (TOR # & 19)

10.2.2.1 Control of Secondary Fugitive Emissions (Induction Furnace)

The secondary emissions from the Induction furnaces, continuous casting machine area will be extracted and treated in fume extraction systems. Fumes will be evacuated directly from induction furnaces through hoods with swiveling mechanism and ducting. The duct carrying fumes from Induction furnaces will be led to the bag house by means of ID fan. Clean gases having less than 50 mg/Nm³ of dust content will be exhausted through a stack of 30 m height. A line diagram showing the fume extraction system is as follows.

A line diagram showing the fume extraction

system is enclosed as Fig.10.1



10.2.2.2 Monitoring of secondary fugitive emissions

Sponge Iron plant

The fugitive emissions of particulate matter should not exceed 2000 µg/M³ at a distance of 10 m from the sources identified and mentioned below in table, where fugitive dust emissions are anticipated.

S. No	Area	Monitoring Location
1.	Raw material handling area	Wagon tippler, Screen area, Transfer Points, Stock Bin area
2.	Crusher area	Crushing plant, vibrating screen, transfer points
3.	Raw material feed area	Feeder area, Mixing area, transfer points
4.	Cooler discharge area	Over size discharge area, Transfer Points
5.	Product processing area	Intermediate stock bin area. Screening plant, Magnetic Separation unit, Transfer Points, Over size discharge area, Product separation area, Bagging area
6.	Other areas	Areas as specified by State Pollution Control Board

Fugitive emission will be monitored at aforementioned locations as above and the reports will be submitted to MoEF & CECB regularly.

10.2.2.3 CREP Recommendations for Sponge Iron Plant (TOR # 32)

Fugitive dust emissions are likely in the unloading areas, material transfer point, cooler discharge area, product separation area, etc. Fugitive emission in the material unloading area can be avoided by providing dust suppression system. More over the raw material will be stored in covered sheds. Fugitive emission from material unloading operations, material transfer points will be controlled fully with total enclosure and all the transfer emission will be connected with extractor inlet point and will pass through a high efficiency Bag Filter before discharging into the atmosphere. All internal roads will be asphalted. Fugitive emissions will be regularly monitored in the plant area as per CPCB stipulation.

10.2.2.4 DUST SUPPRESSION SYSTEM

Water sprinklers will be provided at the unloading areas of the raw materials for dust suppression. Dust suppression system with plain water - comprising piping network, valves pumps, instrumentation & control, water tank etc. will be provided.

10.2.2.5 INTERNAL ROADS

All internal roads will be asphalted to prevent the fugitive dust emission due to vehicular movement.

10.2.3 COMPLIANCE ON CREP RECOMMENDATIONS

All the CREP recommendations will be implemented & followed strictly. The following will be the compliance of CREP recommendations.

- Energy meters will be installed for all the pollution control systems.
- Rain water harvesting will be implemented in consultation with SGWB officials

Recommendations

- a) The proposed air pollution control equipment will be installed prior to commissioning the plant.
- b) Pressure drop measuring system will be installed to measure the pressure drop across the bag filters.



c) All the internal roads shall be asphalted to

reduce the fugitive dust due to truck movement.

102.4 WATER POLLUTION MANAGEMENT (TOR # 16 & 24)

- There will not be any process waste water (or) cooling blow down generation from the DRI Kilns, SMS & Rolli
- ng mill plants as closed circuit cooling system will be followed.
- The effluent generated will be in the form of Cooling tower blow down, Boiler blow down, D.M. Plant regeneration water from the power plant and sanitary water.
- Sanitary waste water will be treated in septic tank followed by soak pit.

Effluent Treatment Plant:

pH of the boiler blowdown will be between 9.5 to 10.5. Hence a neutralization tank will be constructed for neutralizing the boiler blow down. DM plant regeneration water will be neutralized in a neutralization tank. After neutralization these two effluent streams will be mixed with Cooling Tower blowdown in a Central Monitoring Basin (CMB). The treated effluent will be utilized for dust suppression, ash conditioning and for Green belt development. No effluent will be discharged out of the plant premises. Hence Zero discharge will be implemented in the proposed plant. Sanitary waste water will be treated in Septic tank followed by soak pit.

The following will be treated combined effluent characteristics:

pH	6.5 - 8.5
TSS	< 100 mg/l
Oil & Grease	< 10 mg/l
Free available chlorine	< 1.0 mg/l
Copper	<1.0 mg/l
Iron	< 1.0 mg/l
Zinc	< 1.0 mg/l
Chromium	< 0.2 mg/l
Phosphates	< 5.0 mg/l



TREATED EFFLUENT DISPOSAL (TOR # 13)

Total effluent generation from project : 370 m³/day
(Excluding sanitary waste)

Effluent qty. to be used for ash conditioning : 200 m³/day

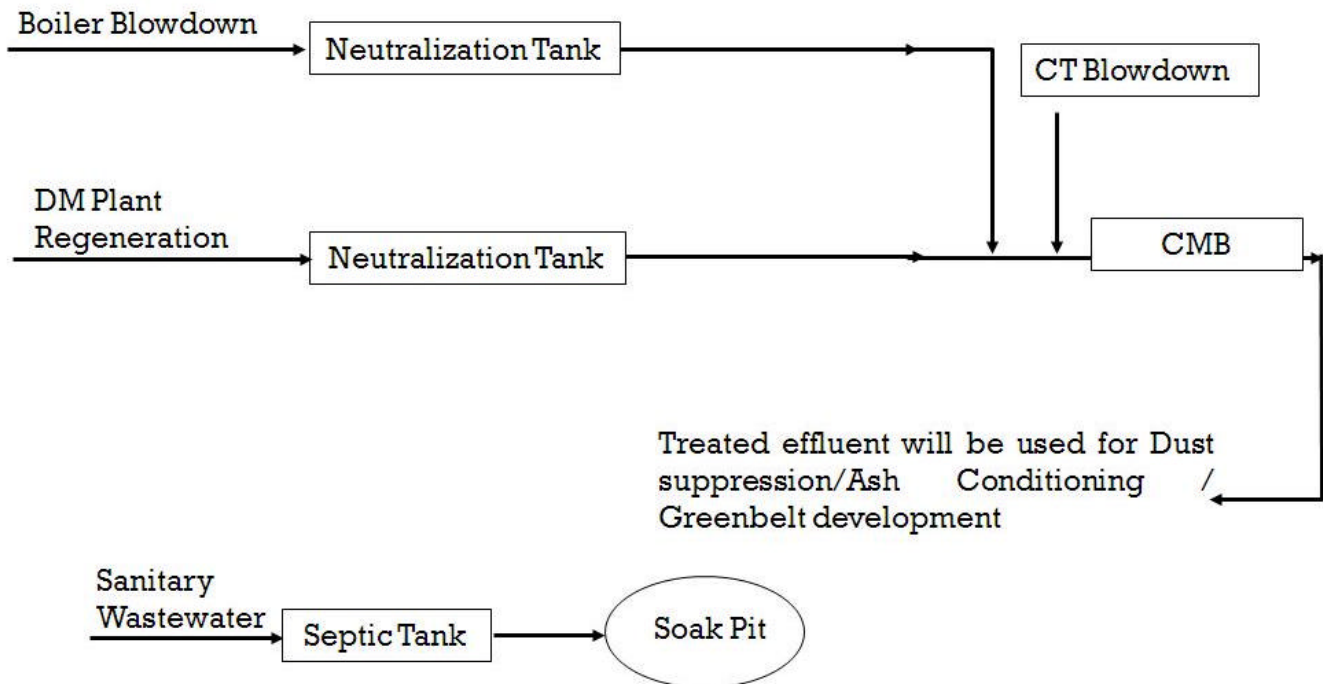
Effluent to be used for dust suppression : 30 m³/day

Balance effluent to be used for onland for irrigation : 140 m³/day

Hence a greenbelt of 9.0 acres (inclusive of existing) will be developed within the plant premises by using the treated effluent. A dedicated pipe distribution network will be

provided for using the treated effluent for greenbelt development. The characteristics of the treated effluent will comply with the CECB Standards for on-land irrigation. Hence there will not be any adverse impact on ground water / surface water due to the proposed project.

Effluent Treatment Plant Flow Chart



10.2.5 SOLID WASTE GENERATION & DISPOSAL (TOR # 25)

The following will be the solid waste generation & proposed method of disposal.

S. No	Solid waste	Quantity (TPD)		Total (TPD)	Method of disposal
		Existing	Expansion		
1	Dolochar	--	90	90	Captively consumed in FBC boiler as fuel
2	Accretion slag	--	3	3	Used in road construction
3	Wet scrapper sludge	--	12	12	Used in road construction
4	Ash/dust	--	120	120	Given to Brick Making units / cement plants
5	Slag from SMS	5.6	30	35.6	Used in road construction
6	Mill Scales	0.8	15	15.8	Re used in SMS

We do here by confirm that total Dolochar generated will be captively consumed in FBC boiler as fuel. Ash utilization will be in accordance with Fly ash notification issued by MoEF. Copies of MOU regarding utilization of ash is enclosed as Annexure.

Identification and details of land to be used for Slag disposal (TOR # 25)

SMS Slag will be used in road construction.

10.2.6 NOISE LEVEL MANAGEMENT

The major noise generating sources in the plant are Turbines, Boilers, DG set & Compressors. All equipments will be of internationally reputed make and will be manufactured as per OSHA & other international guidelines. Acoustic enclosure will be provided to Turbines. Silencers will be provided to DG set. The major noise levels will be confined to the working zones of the plant. The Leq of eight hours will be within the prescribed standards. Community noise levels are not likely to be effected due to the proposed thick green belt and attenuation due to the physical barriers. The ambient noise levels will be less than 75 dBA during day time & less than 70 dBA during night time. So there will not be any adverse impact on habitations due to the proposed activities.

Recommendations

- a) Acoustic enclosures to turbines.
- b) The impact can be reduced by adopting shock absorbing techniques.
- c) The Noise absorption will improve by using hollow concrete blocks in the construction of the proposed Plant.
- d) Ear plugs shall be provided to the workers and this shall be enforced strictly.
- e) Extensive greenbelt shall be developed for further attenuating the noise levels.

10.2.7 LAND ENVIRONMENT

All the required Air pollution Control systems will be provided in the proposed plant. The treated effluent will conform to the Chhattisgarh Environment Conservation Board's standards for onland for irrigation. Hence there will not be any impact on land environment due to the proposed plant. The solid waste generated from the project will be reused / disposed as per norms. Hence there will not be any adverse impact on land environment due to the solid waste generated from the proposed activities. Extensive greenbelt development will have positive impact on land environment. Land prices in the area will increase due to the proposed plant.

Recommendations

Land scaping can be done around the Administrative building, raw material storage sheds etc. This will help in preserving the ecological conditions.

10.2.8. MEASURES FOR IMPROVEMENT OF ECOLOGY

There are no National Parks, Wild life sanctuaries, Bird sanctuaries within 10 Km. radius of the plant. There is no rare and endangered species in the area. Hence there will not be any adverse impact on flora & fauna due to the proposed plant.

Recommendations

Plantation programme should be undertaken at several areas. They should include plantation, along the internal and external roads and along the administrative buildings and the stacking yards. People should be educated and trained in social forestry activities by local governmental and non-governmental organizations.

10.2.8.1 GREEN BELT DEVELOPMENT (TOR # 29)

The greenbelt shall be developed simultaneously with the plant construction. This will further mitigate the pollution impacts. 15m wide greenbelt will be developed all around the plant. A detailed greenbelt plan will be developed in as per CPCB guidelines in consultation with local DFO.

Greenbelt plantation

Greenbelt will be developed in a set of rows of trees planted in such a way that they form an effective barrier between the plant and the surroundings. The main purpose of greenbelt development is to contribute to the following factors.

- To maintain the ecological homeostatus.
- To attenuate the air emissions from the kiln and the fugitive dust emissions.
- To prevent the soil erosion.
- To attenuate the noise levels.

Plantation of grass, flowers, bushes and trees will be taken up to reduce the generation of dust from the bare earth and to enhance the aesthetic value.

Plantation species

Plantation species will be considered based on the following.

- Suitable to the Geo-climatic conditions of the area.
- Mix of round, spreading, oblong and conical canopies.
- Ever green trees.
- Different heights ranging from 4m to 20m.

Plantation for Arresting dust

Trees particularly having compact branching closely arranged leaves of simple elliptical and hairy structure, shiny or waxy leaves and hairy twigs are efficient filters of dust. The following species are suggested to arrest the dust

Alstonia Scholaris
Bauhinia purpurea
Cassia siamea
Peltoferrum ferrugineum
Butea monosperma
Tamarindus indica
Azadirachta indica

Plantation to absorb SO₂ emissions

The following plants are suggested for plantation to absorb SO₂ in the air.

Azadirachta indica
Albizia lebbek
Alstonia scholaris
Lagerstroemia flosregineae
Melia azedarach
Minusops elangi
Poloyalthia longifloia

Plantation to reduce noise pollution

Trees having thick and flushy leaves with petioles are suitable. Heavier branches and trunks of trees also deflect the sound waves. The following plant species are suggested to reduce noise pollution.

Alstonia scholaris
Azadirachta indica
Melia monosperma
Grevillea peridifolia
Tamarindus indica
Greavillea robusta

Plantation along the roads (Avenue plantation)

Alstonia scholaris
Cassia fistula
Bauhinia purpurea



Mimusops elangi
Pongamia pinnata
Polyalthia longifolia
Poluferrum ferrugineum
Lagerstroemia flosreginea
Cassia siamea.

Greenbelt development plan

- Local DFO will be consulted in developing the green belt.
- A greenbelt of 9.0 acres (inclusive of existing greenbelt) will be developed in the plant premises. A 15 m wide greenbelt will be developed all around the plant.
- The tree species to be selected for the plantation are pollutant tolerant, fast growing, wind firm, deep rooted. A three tier plantation is proposed comprising of an outer most belt of taller trees which will act as barrier, middle core acting as air cleaner and the innermost core which may be termed as absorptive layer consisting of trees which are known to be particularly tolerant to pollutants.
- Greenbelt will be developed simultaneously with the construction of the plant as per CPCB guidelines.
- 600 plants will be planted per acre as per CPCB norms.

10.2.9. RAINWATER HARVESTING (TOR # 21 & 29)

Rainwater harvesting structures will be constructed to harvest the run-off water from roof tops by laying a separate storm water drainage system for recharging of ground water.

Rain water harvesting structures each of size 10m x 10m will be provided in the plant to recharge the precious ground water. Rain harvesting will be taken-up in consultation with Central Ground Water Board.

10.3 POST PROJECT MONITORING STRATEGY

The monitoring of various environmental parameters is necessary which part of the environmental protection measures is. Monitoring is an important feature because the efficiency of control measures can only be determined by monitoring. A comprehensive



monitoring programme is given under. Locations

and frequency of monitoring as per the guidelines of CECB and MOEF are tabulated below.

MONITORING SCHEDULE FOR ENVIRONMENTAL PARAMETERS

S. No.	Particulars	Frequency of Monitoring	Duration of sampling	Parameters required to be monitored
1. Water & Waste water quality				
A.	Water quality in the area	Once in a month except for heavy metals which will be monitored on quarterly basis.	Composite sampling (24 hourly)	As per IS: 10500
B. Waste water quality				
i.	Effluent at the outlet of ETP	Twice in a month	Composite sampling (24 hourly)	As per EPA Rules, 1996.
ii.	Sanitary waste water	Twice in a month	Composite sampling (24 hourly)	As per EPA Rules, 1996.
2. Air Quality				
A.	Stack Monitoring	Online monitoring (for all major stacks)		SPM
		Once in a month		SO ₂ & NO _x
B.	Ambient Air quality	Twice a week	24 hours continuously	RSPM, SPM, SO ₂ & NO _x
C.	Fugitive emissions	Once in a Month	8 hrs	SPM
3. Meteorological Data				
	Meteorological data to be monitored at the proposed project site.	Daily	Continuous monitoring	Temperature, Relative Humidity, rainfall, wind direction & wind speed.
4. Noise level monitoring				
A.	Ambient Noise levels	Twice in a year	Continuous for 24 hours with 1 hour interval	

Infrastructure for Environmental Protection**Man Power**

The project proponent shall provide a fully equipped laboratory to carry out the analysis. The following manpower shall be provided on regular basis.

1. Environmental Engineer / Safety Officer

He should be a graduate engineer with adequate experience. He will be responsible for implementing and monitoring the environmental impacts and all the safety aspects. He should be a liaisoning officer between the proposed plant and with regulatory agencies like CECB, CPCB etc.

2. Chemist

He should be a qualified chemist to carry out the analysis of various samples.

3. Monitoring equipment and Consumables

Environmental monitoring during the operation phase of the plant will be entrusted to a third party. Monitoring will be carried out as per CPCB/CECB norms. A budgetary allocation of Rs 20 Lakhs has been earmarked for Environmental monitoring.

Noise levels

A sound level meter shall be purchased to record noise levels in different scales like A, B and C with slow and fast response options at various generating source from D.G set which will be used only when there is an interruption in the power supply of CSEB.

10.4 COST FOR ENVIRONMENTAL PROTECTION (TOR # 33)

Capital Cost for Environment Protection for proposed plant: Rs. 8.0 Crores

Recurring Cost for Environmental protection: Rs.60 Lakhs



CHAPTER - XI

SUMMARY

- The exhaust gases from the rotary kilns will pass through Waste heat recovery boilers and then through a state-of-the-art Electro Static precipitators to bring down the particulate matter in the exhaust gases to less than 50 mg/Nm³. Then the treated gases will be discharged into the atmosphere through combined a stack (with twin flues) of 60 m height for 2 x 100 TPD kilns & a stack of 50 m height for 1 x 100 TPD kiln.
- The Fugitive emissions from the SMS will be treated in a fume extraction & cleaning system with bag filters and then discharged into the atmosphere through a combined stack (with two flues) of 30m height. The outlet dust emission will be less than 50 mg/Nm³
- The flue gases from the Rolling Mill will be discharged through a stack each of 40 m height for effective dispersion of emissions into the atmosphere.
- Interlocking system will be provided to ESP in such a way that , when the particulate matter in the exhaust gas exceeds the norms the feed to raw material will stop and thereby no production in the unit. The unit will be restarted only when the air pollution control system is able to comply with the norms.
- Energy meters will be provided to air pollution control systems to ensure continuous operation of the control systems.
- Dust extraction system with bag filters will be provided at material transfer points, crushers, junction towers, cooler discharge area, product separation area, etc.
- Raw material unloading areas will be provided with water sprinklers to suppress the fugitive dust.
- All internal roads will be asphalted.
- All conveyors will be covered with GI sheets.
- Closed circuit cooling system will be provided in the cooling of DRI, SMS & Rolling Mill. Hence there will not be any waste water generation from process and cooling



from these units. Boiler blow down & cooling tower blow down from the power plant will be treated in Neutralization tank and will be utilized for green belt development, ash conditioning and dust suppression after confirming to the standards of CECEB / CPCB for onland for irrigation.

- The dolochar generated from the proposed project will be utilized as fuel FBC boiler to generate power. Accretion slag, ash & dust from bag filters will be given to brick manufacturers in the area. Slag from SMS will be used in road construction. Mill scales from Rolling mill will be used in Induction furnace. Hence there will not be any adverse impact on land environment due to the solid waste generation. 15 m wide greenbelt will be developed all round the plant.
- 9.0 Acres of extensive greenbelt (inclusive of existing) will be developed to further mitigate the impacts on Air environment & noise environment.

Satellite Imagery
of
Shree Rupanadham Steel (P) Ltd.



Forest Permission letter regarding impact

कार्यालय वन मण्डलाधिकारी रायगढ़ वन मण्डल रायगढ़(छ.ग.)

☎ 07762-220303, 224426, 226047 (O), 07762-222178 (R) Fax- 07762-226047

www.natureconvention.org, E-mail::dfo raigarh@yahoo.co.in

क्रमांक/मा.दि./ 3843 / 2009/ रायगढ़/ दिनांक - 13/10/09

प्रति,

श्री रूपनाथाम स्टील प्र. लि.
ग्राम - सराईपाली (मेरवानी) रायगढ़ (छ.ग.)

विषय :- Application for Permission and recommendation regarding impact of
Proposed expansion on the surrounding reserve Forest
संदर्भ :- आपका पत्र दिनांक - 08.10.09

विषयांतर्गत ग्राम सराईपाली तह - घरघोडा, जिला - रायगढ़ के आवेदित क्षेत्र खसरा क्र. 49/6ख.
45, 62/2, 50/1, 50/2, 49/6क, 49/7, 45/5, 51, 52, 59(प.ह.न-35) रकबा क्रमशः 1.012, 1.805, 0.809,
1.361, 1.371, 1.011, 0.405, 1.618, 0.624, 0.611, 0.514. कुल रकबा 27.52 एकड़ (11.14 हे.) का मौका जाच उप
वन मण्डलाधिकारी घरघोडा द्वारा किया गया जो किसी भी प्रकार के वन अधिपत्य की भूमि नहीं है। दर्शित खसरे
की भूमि के 10कि मी.के परिधि में किसी प्रकार की अग्यारण्य/नेशनल पार्क एव एलिफेन्ट कोरिडोर (Elephant
Corridor) नहीं है।

उक्त क्षेत्र में प्रस्तावित विस्तार में आरक्षित वन तराईमाल, राबो, उदना में स्थित वन क्षेत्र में
नकारात्मक प्रभाव पडने की संभावना नहीं है।

वन मण्डलाधिकारी
रायगढ़ वनमण्डल
रायगढ़ (छ.ग.) 13/10/09

Copy of Consent to Establish



Regional Office
C.G. Environment Conservation Board
T.V. Tower Road, Raigarh
Phone -226569

D.No. / 153 /R.O. / T.S./ C.E.C.B./ 2008

Raigarh, Dated: 16.05.08

To,

M/S Shree Rupanadham Steel (P) Ltd.

Kh. No. 45, 50/1, 50/2, 49/6Ka, 49/6Kha, 49/7, 49/5 & 62/2, P.H. No. 35

VIII. - Saraipali, Teh. - Temnar

Distt. - Raigarh (C.G.)

Sub: Consent of the Board Under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981.

Ref: Your application inward no. 298 dated 06.05.08

With reference to above application, consent is hereby granted subject to the terms and conditions incorporated in the schedule annexed hereto for the period of 12 months from the first date of the month of commissioning of the plant.

Name of Product	Production capacity
1) M.S. Ingots	: 33500 MT/Annum (Thirty Three Thousand Five Hundred Metric Tones Per Annum)
2) TMT Bar	: 4800 MT/Annum (Four Thousand Eight Hundred Metric Tones Per Annum)

This production capacity is as per your application. Industry has to submit a copy of permanent registration from DT & IC for the proof of actual production capacity.

Conditions :-

1. The date of commissioning of the industry shall be informed at least one month in advance.
2. Industry shall provide proper air pollution control equipments of adequate capacity at all the points of emissions of the plant.
3. Effective steps shall be taken to avoid fugitive emissions if any generated from the various activity of the industry. All internal roads shall be made pucca.
4. Emissions from the stack shall conform to the standards prescribed by the board as mentioned below.

Particulate Matter	-	150 Mg/Nm ³
--------------------	---	------------------------
5. Ambient air quality at the boundary of factory premises shall conform to the standards pre-scribed by the Board as mentioned below :-

1. Suspended Particulate Matter	-	500 Microgrammes/m ³
2. Sulphur Dioxides (SO ₂)	-	120 Microgrammes/m ³
3. Nitrogen Oxides (NO _x)	-	120 Microgrammes/m ³
4. Carbon MonoOxide (CO)	-	5000 Microgrammes/m ³

6. Environmental clearance as applicable shall be taken from Ministry of Environment and Forest as per EIA Notification as amended upto date.
7. Industry should submit the land diversion certificate within six months of issue of this consent letter.
8. Minimum height of stack attached to various emission points/sources shall be as per norms of the Board.
9. Industry shall submit six monthly stack and ambient air quality monitoring report to the Board regularly.
10. Industry shall take proper action to control the noise pollution. The noise level should not exceed the limit 75 dB(A) during the day time and 70 dB(A) during the night time within factory premises.
11. Good house keeping practices shall be adopted by the industry.
12. Extensive tree plantation and green belt shall be done in and around factory premises . The tree plantation shall be carried out in phase manner preferably with local species.
13. The industry shall establish an Environment Management Cell to carryout function relating to environmental management under the supervision of senior executive, who will directly report to the head of organization.
14. The submission of Environmental Statement by the industries who seek consent under Air & Water Acts or both and authorization under the Hazardous Waste (Managment & Handling) Rules, 1989/2000 has been made mandatory under the Environment (Protection) Act, 1986. As per the provision, such industries are required to submit environmental statement for the previous year ending 31st March on or before 30th September every year to the Board.
15. Any change in product, production capacity, process, raw materials used etc. shall be intimated to the Board. For any change of the above, prior permission of the Board shall be obtained.
16. Industry shall obtain statutory clearances/licenses from concerned Central/State Government, Boards, Bodies and Corporations etc. as applicable before establishment of the plant. Industry shall follow direction issued by Central/State Government, Central Pollution Control Board/ Chhattisgarh Environment Conservation Board from time to time regarding control of water & air pollution and for environmental conservation.
17. The issuance of this permission does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorized any injury to private property or any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.
18. Board reserves the right to amend/ cancel any of the above conditions and add new conditions as and when deemed necessary.

This consent is valid upto twelve months starting from first day of month of commissioning of the industry and has to be renewed every year. Application with annual license fee in this regard shall reach the office 180 days before the expiry of this consent.

For & on behalf of
C.G. Environment Conservation Board


REGIONAL OFFICER
C.G. Environment Conservation Board
(Chhattisgarh P.E.G.)



Regional Office
C.G. Environment Conservation Board
T.V. Tower Road, Raigarh
Phone -226569

D.No. / 151 /R.O. / T.S./ C.E.C.B./ 2008

Raigarh, Dated: 16.05.08

To,

M/S Shree Rupanadham Steel (P) Ltd.
Vill. - Saraipali, Teh. - Temnar
Distt. - Raigarh (C.G.)

Sub: Consent of the Board Under Section 25/26 of the Water (Prevention and Control of Pollution) Act, 1974.

Ref: Your application inward no. 298 dated 06.05.08

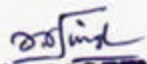
With reference to above application, consent is hereby granted subject to the terms and conditions incorporated in the schedule annexed hereto for the period of 12 months from the first date of the month of commissioning of the plant.

	Name of Product	Production capacity
1)	M.S. Ingots	: 33500 MT/Annum (Thirty Three Thousand Five Hundred Metric Tones Per Annum)
(2)	TMT Bar	: 4800 MT/Annum (Four Thousand Eight Hundred Metric Tones Per Annum)

This production capacity is as per your application. Industry has to submit a copy of permanent registration from DT & IC for the proof of actual production capacity.

Please acknowledge the receipt of this letter.

For & on behalf of
C.G. Environment Conservation Board


REGIONAL OFFICER
C.G. Environment Conservation Board
Raigarh (C.G.)

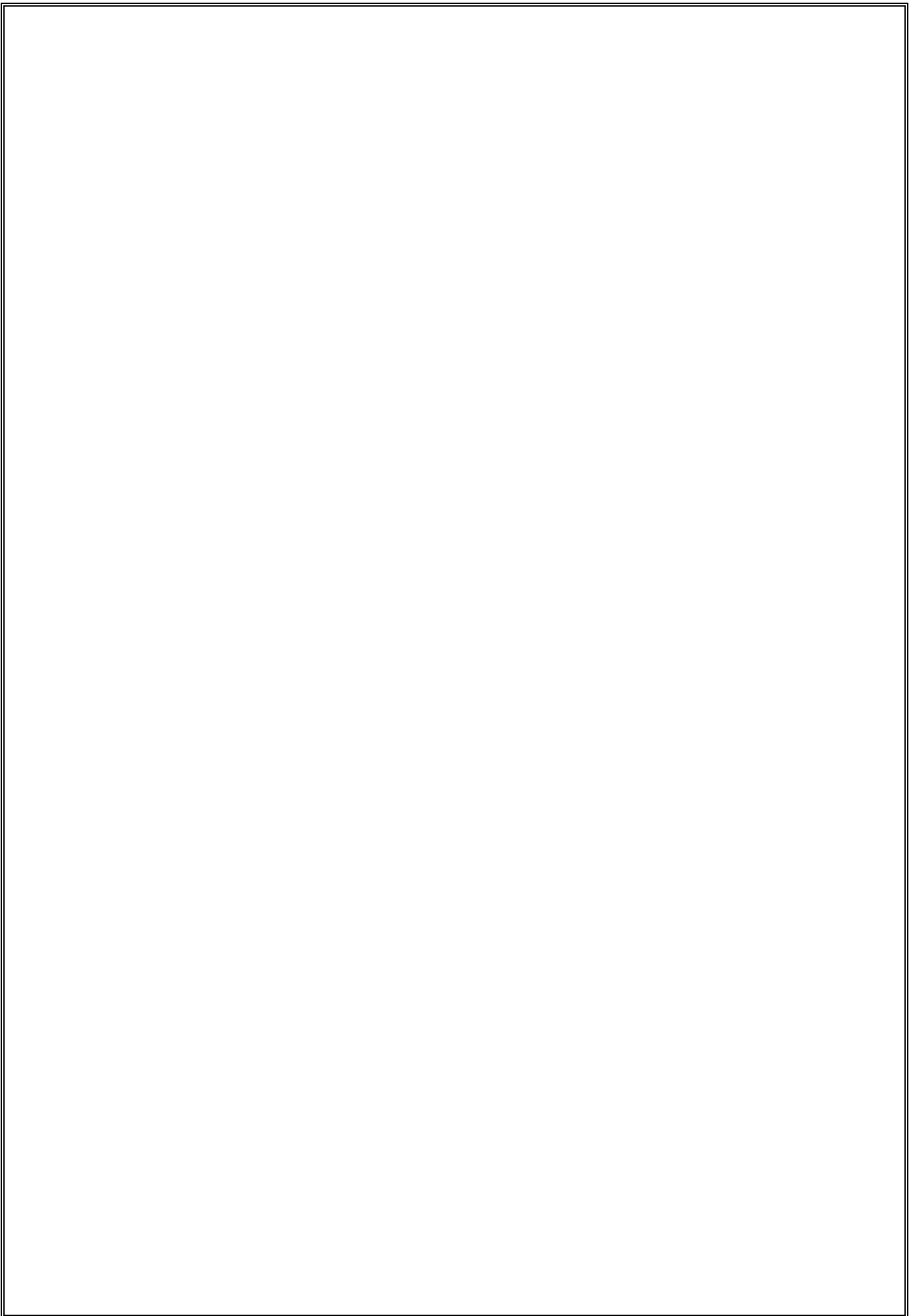
D.No. / /R.O. / T.S./ C.E.C.B./ 2008

Copy to :-

Cess Section, C.G. E.C.B., Raigarh for information Please.

Raigarh, Dated:


Regional Officer
REGIONAL OFFICER
C.G. Environment Conservation Board
Raigarh (C.G.)





CHHATTISGARH
ENVIRONMENT CONSERVATION BOARD

CONSENT LETTER

No. RGH /P/ Water/ May /2008/R

/C.E.C.B./2008

Raigarh, Dated 16.05.08

Subject : Consent to **M/S Shree Rupanadham Steel (P) Ltd., Vill. - Saraipali, Teh. Tamnar, Distt. - Raigarh (C.G.)** for the discharge of effluent under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974.

Ref: Your application inward no. 298 dated 06.05.08

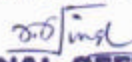
With reference to the above application for consent to discharge effluent into the natural water courses under the Water (Prevention and Control of Pollution) Act, 1974 herein referred to as per the Act, **M/S Shree Rupanadham Steel (P) Ltd., Vill. - Saraipali, Teh. Tamnar, Distt. - Raigarh (C.G.)** is authorised by the State Board to discharge its industrial and other and special conditions as mentioned in the Annexure.

With reference to above application, consent is hereby granted subject to the terms and conditions incorporated in the schedule annexed hereto for the period of 12 months from the first date of the month of commissioning of the plant.

Name of Product	Production capacity
1) M.S. Ingots	: 33500 MT/Annum (Thirty Three Thousand Five Hundred Metric Tones Per Annum)
(2) TMT Bar	: 4800 MT/Annum (Four Thousand Eight Hundred Metric Tones Per Annum)

This production capacity is as per your application. Industry has to submit a copy of permanent registration from DT & IC for the proof of actual production capacity.

For & on behalf of
C.G. Environment Conservation Board


REGIONAL OFFICER
Regional Officer
C.G. Environment Conservation Board
Raigarh (C.G.)

ANNEXURE

Enclosure to Consent Letter issued to
M/s Rupanadham Steel Pvt. Ltd. Vill. Saraipali, Teh. Tamnar, Distt. Raigarh (C.G.)
Location of factory - Kh. No. 45, 50/1, 50/2, 49/6Ka, 49/6Kha, 49/7, 49/5 & 62/2, P.H. No. 35, Vill. Saraipali, Teh. Tamnar, Raigarh
Vide CONSENT No. RGHP/Water/May-2008/ R /DATE- 16-05-08

A. GENERAL CONDITIONS :-

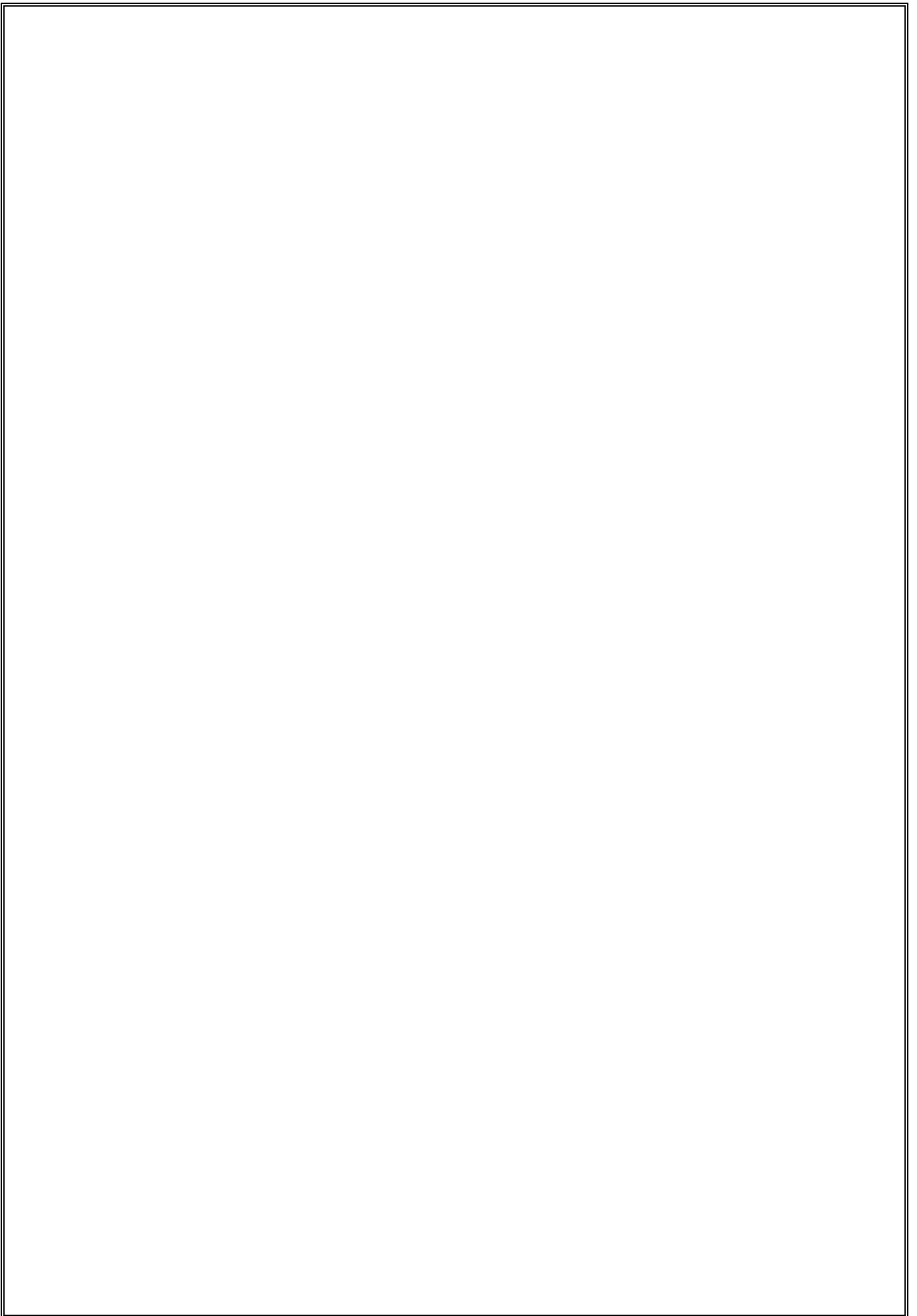
1. All discharges authorized shall be consistent with terms and conditions of this Consent facility expansions, production, increases or process Modifications which result in new or increased discharges of pollutants must be reported by submission of a new Consent, application or if such new, or increased discharge does not violate the effluent limitations specified in the Consent, by submission to the Board details of such new or increased discharges of pollutants in which case the consent may be modified to specify effluent limitations for any pollutants not identified and limited here in the discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by the Consent shall constitute a violation of the terms and conditions of the Consent.
2. After notice and opportunity for the hearing, this consent may be modified, suspended or revoked by the Board in whole or in part during its term for cause including, but not limited to the following: -
 - (a) violation of any terms and conditions of this Consent.
 - (b) Obtaining this Consent by misrepresentation or failure to disclose fully all relevant facts.
 - (c) A change in any condition that requires temporary or permanent reduction or elimination of the authorized discharge.
3. Notwithstanding para (2) above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for a toxic pollutant which is present in the discharge authorized here in and such standard or prohibition is more stringent than any limitation upon such pollutant in this Consent the Consent shall be revised or modified in accordance with the toxic effluent standard or prohibition that the Board may consider and the applicant shall be so notified.
4. The applicant shall allow the staff of Chhattisgarh Environment Conservation Board and/or their authorized representative, upon the Presentation or credentials:
 - (a) To enter upon the applicant's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this Consent.
 - (b) To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this Consent.
 - (c) To inspect at reasonable times any monitoring equipment or monitoring method required in this Consent; or
 - (d) To sample at reasonable times any discharge or pollutants.
5. The Application shall at all times maintain in goods working order and operate as efficiently as possible all treatment or control facilities of system installed or used by him to achieve compliance with the terms and conditions of this Consent.
6. The issuance of this Consent does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State or local laws or regulation.
7. The Consent does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any water course.
8. The specific effluent limitations and other pollution controls applicable to the discharge permitted here in are set forth below specific conditions. Also set forth below are self-monitoring and reporting requirements. Unless otherwise specified, the applicant shall submit duplicate original copies of all reports to the Chhattisgarh Environment Conservation Board. Expect for date determined to be confidential all such reports shall be available for public inspection at the office of the Chhattisgarh Environment Conservation Board. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provide for in section 42 of the Act.

B. SPECIAL CONDITIONS:-

1. Initial Effluent limitation during the period beginning on the effective date of this consent and lasting until calendar year discharge from outfalls shall be limited and monitored by the applicant as specified below: -
 - (a) The following shall be limited by the applicant as specified

S.No	Effluent Characteristics	Discharge Limitation				Monitoring Requirements	
		Average		Maximum		Frequency of Measurement*	Type of Sample+
		Mg/L	Kg/Day	Mg/L	Kg/Day		

* Daily/Weekly/Monthly/Six monthly.
* Grab/ 24 Hours Composite



S.No	Effluent Characteristics	Discharge Limitation				Monitoring Requirements	
		Average		Maximum		Frequency of Measurement*	Type of Sample+
		Mg/L	Kg/Day	Mg/L	Kg/Day		

* Daily/Weekly/Monthly/Six monthly.

* Grab/ 24 Hours Composite

For the purpose of this sub-section, the daily average discharge is the total discharge by weight during the calendar month divided by the number of days in month the production or commercial facility was operating for the purpose of the sub-section the daily maximum discharge means the total discharge by weight during any calendar day.

(b) The pH shall not be less than 5.5 or greater than 9.0

2. Final effluent Limitation: - During the period beginning from 1st day of month of commissioning of the industry and lasting until the date of expiration of this Consent, discharge from the outfalls shall be limited and monitored by the applicant as specified below :

(a) The following shall be limited and monitored by the applicant as specified.

S.No	Effluent Characteristics	Discharge Limitation				Monitoring Requirements	
		Average		Maximum		Frequency of Measurement*	Type of Sample+
		Mg/L	Kg/Day	Mg/L	Kg/Day		
1.	B.O.D.		30	0.04	Six monthly Composite	24 hours	
2.	C.O.D.		250	0.37			
3.	S.S.		100	0.15			
Flow:	PH 5.5 to 9.0 Industrial :-Nil M ³ /Day Domestic - 1.5 M ³ /Day				Daily	Grab	

* Daily/Weekly/Monthly/Six monthly.†

* Grab/ 24 Hours Composite

Additionally, out falls shall be monitored as follows:

- Flow, Temperature and Total solids : Daily
- Grab Samples Maximum discharge temperature above upstream receiving water shall be in accordance with the standard of ISI at 400 C.
- Uniform as per ISI at 400 C.

The temperature shall be monitored daily on each outfall. For the purpose of the sub-section the daily average is the total discharge by weight during calendar month divided by the number of days in month that the production or commercial facility was operating for the purpose of this sub-section, the daily maximum discharge means the total discharge by weight during any calendar day.

(b) The pH shall not be less than 5.5 or greater than 9.0 for out fall. The samples are taken daily, grab samples.

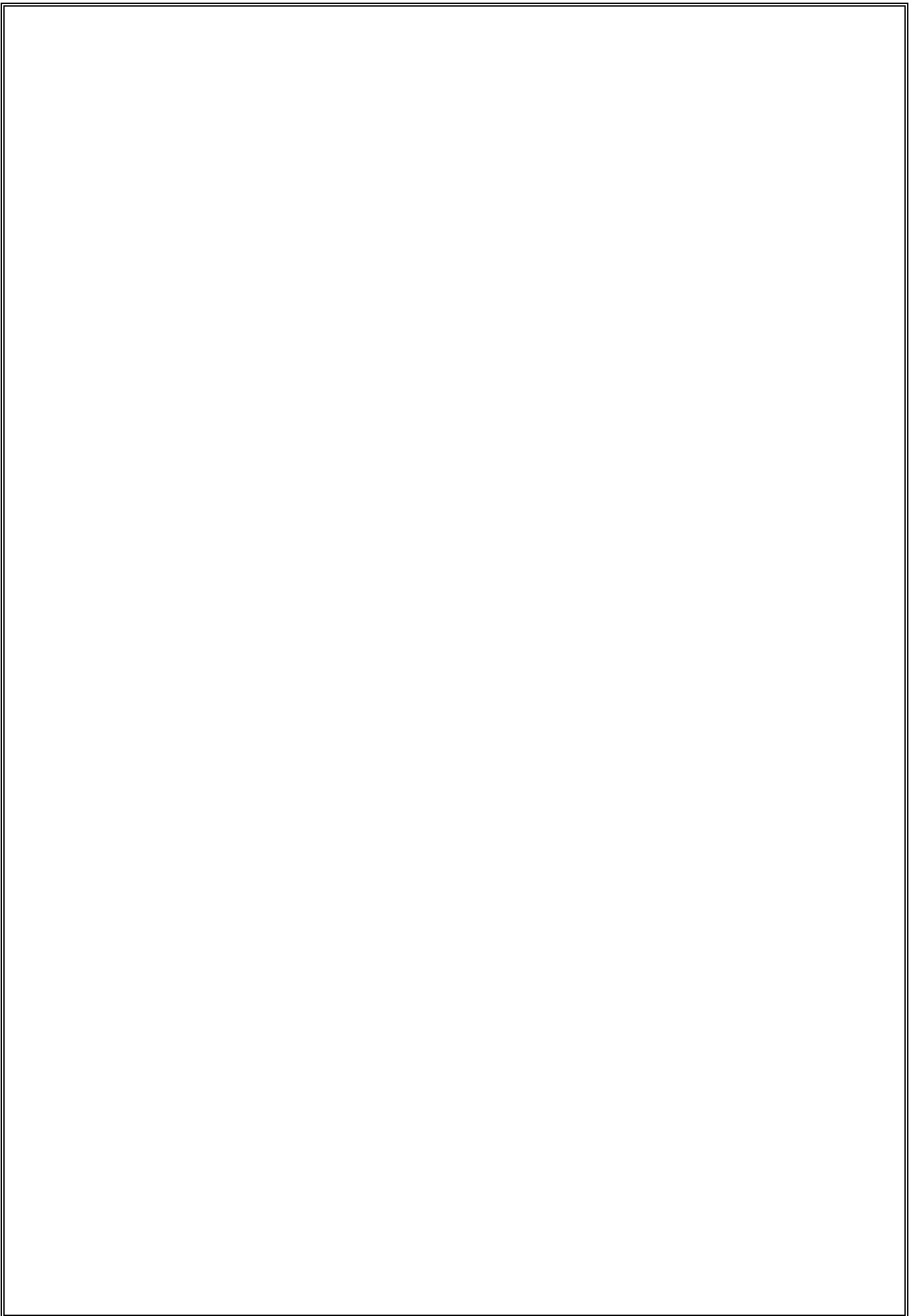
3. Schedule of compliance for effluent limitation:-

(a) The applicant shall achieve compliance with the effluent limitation. Specified above for discharge from out falls in accordance with the following schedule :

- Report of Progress Monthly
- Completion of final plans by
- Award of contract of other commitment of financing
- Commencement of construction by
- Report of construction progress
- Completion of construction by
- Attainment of operational level by

(b) The applicant shall submit to the Consent issuing Authority the required report of progress or where a specific action is required in (a) above to be taken by a certain date A written notice of compliance or non-compliance with each of the above scheduled dates, post marked not later than 14 days following each elapsed date. Each notice of non compliance shall include the following :-

- A short description of the non-compliance.
- A description of any action taken or proposed by the applicant to comply with the elapsed scheduled requirement without further delay.
- An estimate of any factors which tend to explain or mitigate the non-compliance, and
- An estimate of the date, the applicant will comply with the elapsed scheduled requirement and assessment of the possibility that the applicant will meet the next scheduled requirement time.



5. Compilation of monitoring Data

(a) Samples and measurements taken to meet the monitoring requirements specified above shall be representative of the volume and nature of monitored discharge

(b) Following promulgation of guidelines establishing test procedures for the analysis of pollutants, all sampling and analytical methods used to meet monitoring requirements specified above shall conform to such guidelines. Unless otherwise specified sampling and analytical methods shall conform to the latest edition of the Indian Standard specifications and here it is not specified the guidelines as per standard methods for the examination of Water & Waste Waters 13th Edition of the American Public Health Association, New York U.S.A. shall be used.

(c) The applicant shall take samples and measurement to meet the monthly requirements specified above at the location indicated below:

POINT OF SAMPLING

(i) Out falls of waste.

(ii) 100 meters from point to confluence, down stream to river or lake.

6. Recording of Monitoring activities and Results:

(a) The applicant shall make and maintain records of all information resulting from monitoring activities by this Consent.

(b) The applicant shall record for each measurement of sample take pursuant to the requirements of this Consent the following information

(1) The date exact place and time of sampling

(2) The dates on which analysis were performed.

(3) Who performed the analysis.

(4) The analytical techniques of methods used and,

(5) The result of all required analysis.

(c) If applicant monitors any pollutant more frequently as is required as is by this Consent he shall include the results of such monitoring in the calculation and reporting of values required in the discharge monitoring reports which may be prescribed by the Board, such increased frequency shall be indicated on the Discharge Monitoring Report form.

(d) The applicant shall retain for a minimum of 3 years all records of monitoring activities and results including all records of calibration and maintenance of instrumentation and original strip chart regarding continuous monitoring instrumentation. The period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the applicant or when requested by the Central or State Board.

7. Reporting of Monitoring Results:

(a) Monitoring information required by this Consent shall be summarized and reported by submitting a Discharge Monitoring Report form duly filled in and signed, to the Board's office at the following address:

CHHATTISGARH ENVIRONMENT CONSERVATION BOARD

T.V. TOWER ROAD

RAIGARH (C.G.) 496001.

(b) Each submitted Discharge Monitoring Report shall be signed as follows:

(i) If submitted by Corporation by a Principal Executive Officer of at least the level of Vice-President or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the discharge Monitoring Report originates,

(ii) If submitted by a partnership by a general partner.

(iii) If submitted by a sole proprietor, the proprietor.

(iv) If submitted by a Municipal, State or Central Government or other public enterprises, by a Principal Executive Officer, ranking elected official commanding officer, or other duly authorized employee.

(c) All information submitted on the Discharge Monitoring Form shall be based upon measurements and sampling carried out during the three previous calendar months. The first Discharge Monitoring Report shall be submitted for a period ending 60 days from issuance. Thereafter reporting period shall end on the last date of each month. The applicant shall submit a Discharge Monitoring Report post marked no later than 28th day of the month following each completed reporting period.

8. Limitation of Discharge of Oil Hazardous Substance in harmful quantities: The applicant shall not discharge oil in quantities defined as harmful in regulations. In addition the applicant shall not discharge hazardous substance into natural water course in quantities defined as harmful in regulations promulgated by the Board. Nothing in this Consent shall be deemed to preclude the institution of any legal action nor relieve the applicant from any responsibilities, liabilities, or penalties to which the applicant is or may be subject to clauses.

9. Limitation of visible Floating Solids and Foam: During the period beginning date of issuance and lasting until the date of expiration of this Consent the applicant shall not discharge floating solids or visible foam.

10. Disposal of Collected Solids:

(a) Intake Water Treatment: Solids Sludge, dirt, silt or other pollutant separated from or resulting from treatment of intake or supply waters period to use by the applicant shall be disposed of in such a manner as to prevent any pollutant from such materials from entering any such water. Any live fish, shell fish or other animals collected or trapped as a result of intake water screening or treatment may be returned to water shall be disposed of in such a manner as to prevent any pollutants from such materials from entering natural water.

(b) Waste water Treatment, Solids sludge, filter, backwash of other pollutant removed from or resulting from treatment or control of waste wasters shall be disposed of in such a manner as to prevent any pollutants from such materials from entering natural water.

11. Non-compliance with Effluent Limitations:

(a) If for any reason the applicant does not comply with or will be unable to comply with or will be unable to comply with any daily maximum effluent limitations specified in this Consent the applicant shall immediately notify the Consent issuing authority or his designee by telephone No. _____ and provide the Consent issuing Authority with the following information in writing within 5 days of such notification:

- (a) Cause of non-compliance.
- (b) A description of the non-complying discharge including its impact upon the receiving water.
- (c) Anticipated the time condition of non compliance is expected to continue or if such condition has been corrected, the duration of non-compliance.
- (d) Steps taken by the applicant to reduce and eliminate the non-complying discharge and;
- (e) Steps to be taken by the applicant to prevent recurrence of conditions of not compliance.
- (b) The applicant shall take all responsible steps to minimize any adverse impact to natural waters resulting from non-compliance with any effluent limitation specified in this Consent including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.
- (c) Nothing in this Consent shall be constructed to relieve the applicant from civil or criminal penalties for non-compliance, whether or not such non-compliance is due to factors beyond his control such as equipment break down electric power failure, accident or natural disaster.

Limitation of Batch Discharge.

SPECIAL CONDITIONS :

12. Provision for Electric Power Failure: The applicant shall either-

(a) No later than _____, certify in writing to the consent issuing authority that applicant has installed or provided for an alternative electric power sources sufficient to operate all facilities utilized by the applicant to maintain compliance with the terms and conditions of the Consent or

(b) No later than 30 days after the effective date of his Consent, certify in writing to the consent issuing authority that upon the reduction, loss, or failure of one or more of the primary sources of electric power to any facilities utilized by he applicant to maintain compliance with the terms and conditions of his consent, the applicant shall halt, reduce or otherwise Control production and/or all discharges in order to maintain compliance with the terms conditions of this Consent.

13. Prohibition of By-pass of Treatment Facilities: The diversion or by-pass of any discharge from facility utilised by the applicant to maintain compliance with the terms and conditions of this Consent is prohibited except:

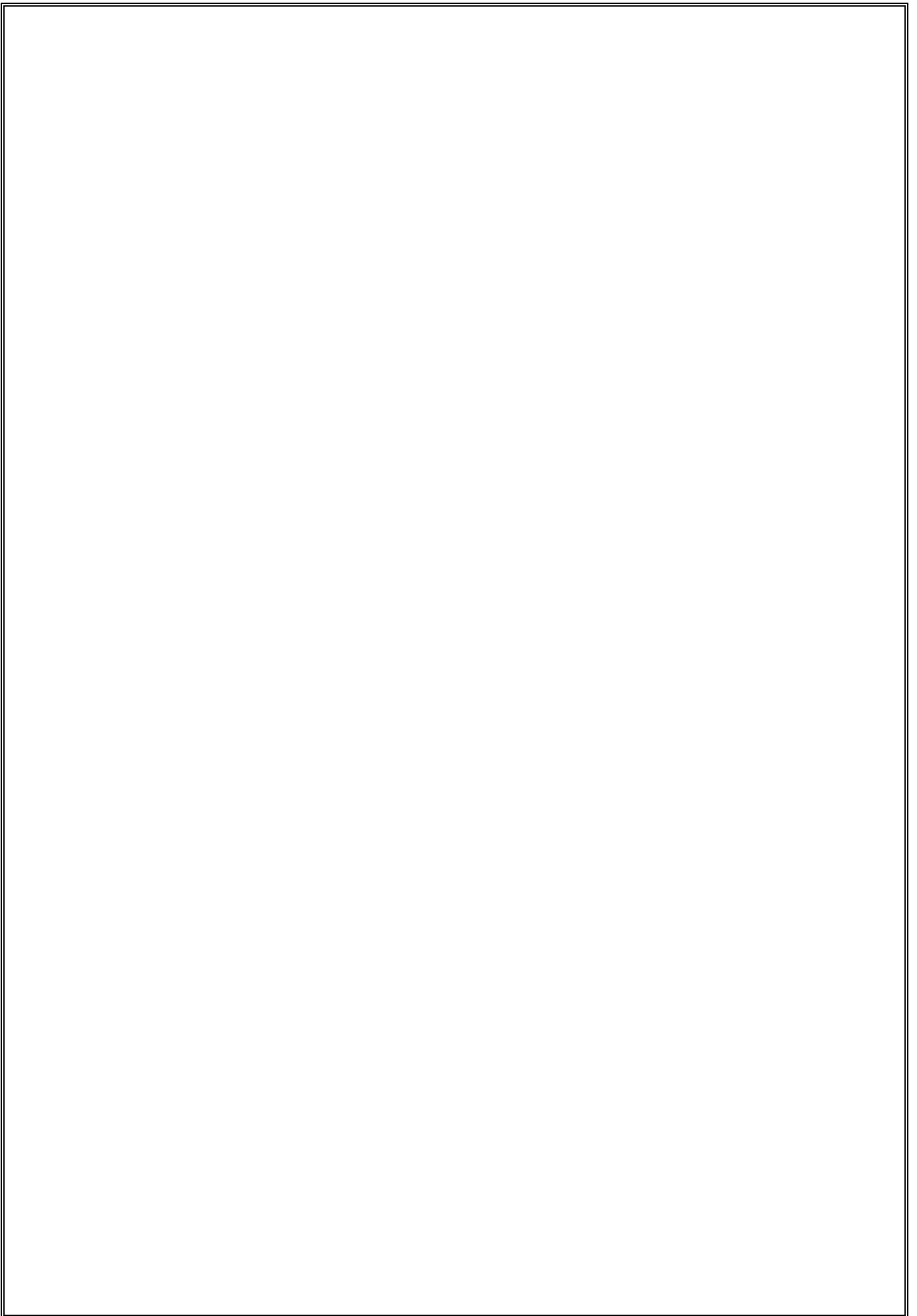
- (i) Where unavoidable to prevent loss of life severe property damage, or
- (ii) Where excessive storm drainage or run of f would damage any facilities necessary for compliance with the terms and conditions of this Consent. The applicant shall immediately notify the consent issuing authorities in writing of each such diversion or by-pass in accordance with the procedure specified above for reporting non-compliance.

14. Spill Prevention and Containment Plan: Within 90 days of the effective date of the Consent the applicant shall prepare and submit to the consent issuing authority; a Spill Prevention, Containment and Countermeasure Plan for the facility covered by this Consent. Such plan shall include the following information and procedures relating to the prevention of spills and unauthorized discharges or oil and hazardous substances;

- (a) A description of a reporting system to be used to notify immediately persons responsible for management of a facility and appropriate State and Central authorities;
- (b) A description of equipment or facilities (including overall facility) for the prevention, containment of spills and unauthorized discharge;
- (c) A list of all oil and hazardous materials used processed or stored at the facility including the normal quantity maintained on the premises for each listed material;
- (d) A brief description of any spills or unauthorized discharge which occurred during the 36 months period preceding the effective date of this Consent and subsequent measures taken by the applicant or reduce the possibility or further spills or unauthorized discharges; and.
- (e) An implementation schedule for additional equipment or facilities which might be required for sub para (b) above but which are not yet operational.

SPECIAL CONDITIONS

1. The date of commissioning of the industry shall be informed at least one month in advance.
2. Industry shall provide proper treatment facility of adequate capacity for treatment of all industrial effluent and domestic effluent to ensure the treated effluent quality meets the standards prescribed by the Board and notified in gazette dated 25-03-88.
3. The treated industrial & domestic effluent shall be utilized for plantation within premises in any circumstances. The concept of 'Zero Discharge' condition at all the time shall be maintained.
4. Industry shall install separate electric metering arrangement for running of all pollution control devices and this arrangement shall be made in such a fashion that any non-functioning of pollution control device shall stop the electric supply to the production and tripped till such time unless the pollution control devices are made functional again. A log book for consumption of electricity and chemical in the pollution control devices shall be maintained.
5. Extensive tree plantation shall be done in and around factory premises. The tree plantation shall be carried out in phase manner preferably with local species as far as possible.
6. Environmental clearance as applicable shall be taken from Ministry of Environment and Forest as per EIA Notification as amended upto date.
7. Industry should submit the land diversion certificate within six months of issue of this consent letter.
8. Industry shall provide safe and scientific arrangement for handling storage and disposal of all solid wastes and dust generated/collected in furnace/pollution control devices etc as applicable. Industry shall not store these materials for longer period. Industry shall provide pucca platform above ground level for temporary storage area to avoid erosion due to rain.
9. Industry shall use fly ash based bricks, tiles, blocks etc. for their civil construction work as far as possible.
10. The industry shall establish an Environmental Management Cell to carryout function relating to environmental management under the supervision of senior executive, who will directly report to the head of organization.
11. The submission of Environmental Statement by the industries who seek consent under Air & Water Acts or both and authorization under the Hazardous Waste (Management & Handling) Rules, 1989/2000 has been made mandatory under the Environment (Protection) Act, 1986. As per the provision, such industries are required to submit environmental statement for the previous year ending 31st March on or before 30th September every year to the Board.
12. Good house keeping practices shall be adopted by the industry.



13. A regular monitoring report of the treated effluent shall be submitted to the Board every six months.
14. Industry shall obtain letter of authorization under Hazardous Waste Management Rule 1989 (As amended on 20th May,2003) from the Board (if required).
15. Industry shall provide adequate collection/ treatment arrangement for proper management of storm water. Industry shall adopt rain water harvesting techniques in the plant premises for ground water recharging and conservation of water.
16. Industry shall obtain statutory clearances/licenses from concerned Central/State Government, Boards, Bodies and Corporations etc. as applicable before establishment of the plant. Industry shall follow direction issued by Central/State Government, Central Pollution Control Board/Chhattisgarh Environment Conservation Board from time to time regarding control of water & air pollution and for environmental conservation.
17. The issuance of this permission does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorized any injury to private property or any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.
18. Any change in product, production capacity, process, raw materials used, project profile etc. shall be intimated to the Board. For any change of the above prior permission of the Board shall be obtained.
19. Board reserves right to amend/ cancel any of the above conditions and add new conditions as and when deemed necessary.

This consent is valid upto twelve months starting from first day of month of commissioning of the industry and has to be renewed every year. Application with annual license fee in this regard shall reach the office 180 days before the expiry of this consent.

For & on behalf of
C.G. Environment Conservation Board


REGIONAL OFFICER
C.G. Environment Conservation Board
Raigarh (C.G.)

COMPLIANCE OF CONDITIONS STIPULATED IN CONSENT OF THE BOARD
UNDER SECTION 21 OF THE AIR (PREVENTION AND CONTROL OF POLLUTION)
ACT, 1981

CONDITIONS:

Condition - 1	The date of commissioning of the industry shall be informed as least one month in advance.
Compliance	<i>Industry will give prior information (one month in advance) of date of commissioning of proposed products.</i>
Condition - 2	Industry shall provide proper air pollution control equipments of adequate capacity at all the points of emissions of the plant
Compliance	<i>Industry will provide proper Air Pollution Control equipments of adequate capacity at all the points of emissions of the plant.</i>
Condition - 3	Effective steps shall be taken to avoid fugitive emissions if any generated from the various activity of the industry. All internal roads shall be made pucca.
Compliance	<i>Will be complied and all internal road will be made pucca.</i>
Condition - 4	Emissions from the stack shall conform to the standards prescribed by the board as mentioned below. Particulate Matter - 150Mg/Nm ³
Compliance	<i>Will be complied.</i>
Condition-5	Ambient air quality at the boundary of the factory premises shall conform to the standards prescribed by the board. 1. Suspended Particulate Matter - 500 mg/m ³ 2. Sulphur dioxide (SO ₂) - 120 mg/m ³ 3. Nitrogen Oxide (NO _x) - 120 mg/m ³ 4. Carbon Mono-oxide (CO) - 5000 mg/m ³
Compliance	<i>Will be complied.</i>
Condition-6	Environmental clearance as applicable shall be taken from Ministry of Environment and Forest as per EIA Notification as amended upon date.
Compliance	<i>Proposed project does not come under the purview of EIA Notification 2006, in view of that EC is required.</i>
Condition-7	Industry should submit the land diversion certificate within six months of issue of this consent letter.
Compliance	<i>Land diversion certificate is enclosed for your reference</i>
Condition-8	Minimum height of stack attached to various emission points / sources shall be as per norms of the Board.
Compliance	<i>Will be complied.</i>
Condition-9	Industry shall submit six monthly stack and ambient air quality monitoring report to the Board regularly.

Compliance	Stack monitoring and ambient air quality monitoring report will be submitted to board regularly.
Condition-10	Industry shall take proper action to control the noise pollution. The noise level should not exceed the limit 75 dB (A) during the day time and 70 dB(A) during the night time within factory premises.
Compliance	Industry will be take proper action to control Noise pollution and standard will be maintained as per norms.
Condition-11	Good house keeping practices shall be adopted by the industry,
Compliance	Will be complied.
Condition-12	Extensive tree plantation and green belt shall be done in and around factory premises. The tree plantation shall be carried out in phase manner preferably with local species.
Compliance	Will be complied.
Condition-13	The industry shall establish an Environment Management Cell to carryout function relating to environmental management under the supervision of senior executive who will directly report to the head of organization.
Compliance	Will be established.
Condition-14	The submission of Environmental Statement by the industries who seek consent under Air & Water Acts or both and authorization under the Hazardous Waste (Management & Handling) Rules, 1989/2000 has been made mandatory under the Environment (Protection) Act, 1986. As per the provision, such industries are required to submit environmental statement for the previous year ending 31 st March on or before 30 th September every year to the Board.
Compliance	Will prepared and submitted on or before 30th September of every year to the board.
Condition-15	Any change in product, production capacity, process, raw materials used etc. shall be intimated to the Board. For any change of the above, prior permission of the Board shall be obtained.
Compliance	Any change in product, production capacity, process , raw materials used will be intimated to board.
Condition-16	Industry shall obtain statutory clearances/licenses from concerned Central/ State Government Boards, Bodies and Corporations etc. as applicable before establishment of the plant. Industry shall follow direction issued by Central/ State Government, Central Pollution Control Board/ Chhattisgarh Environment Conservation Board from time to time regarding control of water & air pollution and for environmental conservation.
Compliance	Will be taken before establishment and will follow the direction issued by Central/ State Government, Central Pollution Control Board/ Chhattisgarh Environment Conservation Board from time to time regarding control of water & air pollution and for environmental conservation.
Condition-17	The issuance of this permission does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorized any injury to private property or any invasion of personal

	rights, not any infringement of Central, State or local laws or regulations.
Compliance	Condition accepted.
Condition-18	Board reserves the right to amend/ cancel any of the above conditions and add new conditions as and when deemed necessary.
Compliance	Condition accepted.

**COMPLIANCE OF CONDITIONS STIPULATED IN CONSENT OF THE BOARD
UNDER SECTION 25 / 26 OF THE WATER (PREVENTION AND CONTROL OF
POLLUTION) ACT, 1974**

A. GENERAL CONDITIONS:

S. No.	
Condition 1	All discharges authorized shall be consistent with terms and conditions of this Consent facility expansions, production, increases or process Modifications which result in new or increased discharges of pollutants must be reported by submission of a new Consent, application or if such new, or increased discharge does not violate the effluent limitations specified in the Consent, by submission to the Board details of such new or increased discharges of pollutants in which case the more frequently than or at a level in excess of that identified and authorized by the Consent shall constitute a violation of the terms and conditions of the Consent.
Compliance	Condition accepted.
Condition 2	After notice and opportunity for the hearing, this consent may be modified, suspended or revoked by the Board in whole or in part during its term for cause including, but not limited to the following - a) Violation of any terms and conditions of this Consent b) Obtaining this consent by misrepresentation of failure to disclose fully all relevant facts. c) A change in any condition that requires temporary or permanent reduction or elimination of the authorized discharge.
Compliance	Condition accepted.
Condition 3	Notwithstanding Para (2) above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for a toxic pollutant which is present in the discharge authorized here in and such standard or prohibition is more stringent than any limitation upon such pollutant in this consent the Consent shall be revised or modified in accordance with the toxic effluent standard or prohibition that the Board may consider and the applicant shall be so notified.
Compliance	Will be complied.
Condition 4	The applicant shall allow the staff of Chhattisgarh Environment Conservation Board and / or their authorized representative, upon the presentation or credentials: a) To enter upon the applicant's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this Consent. b) To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this

	<p>Consent.</p> <p>c) To inspect at reasonable times any monitoring equipment or monitoring method required in this consent; or</p> <p>d) To sample at reasonable times any discharge or pollutants.</p>
Compliance	Condition is accepted.
Condition 5	The Application shall at all times maintain in goods working order and operate as efficiently as possible all treatment or control facilities of system installed or used by him to achieve compliance with the terms and conditions of this Consent.
Compliance	Will be complied.
Condition 6	The issuance of this Consent does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorized any injury to private property or any invasion of personal rights, nor any infringement of Central, State or Local laws or regulation.
Compliance	Condition accepted.
Condition 7	The Consent does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any water course.
Compliance	Will be complied.
Condition 8	The specific effluent limitations and other pollution controls applicable to the discharge permitted here in are set forth below specific conditions. Also set forth below are self-monitoring and reporting requirements. Unless otherwise specified, the applicant shall submit duplicate original copies of all reports to the Chhattisgarh Environment Conservation Board. Except for date determined to be confidential all such reports shall be available for public inspection at the office of the Chhattisgarh Environment Conservation Board. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provide for in section 42 of the Act.
Compliance	Will be complied.

B. SPECIAL CONDITIONS:	
Condition 1	Initial Effluent limitation during the period beginning on the effective date of this consent and lasting until calendar year discharge from outfalls shall be limited and monitored by the applicant as specified. For the purpose of this sub-section, the days in month the production or commercial facility was operating for the purpose of the sub-section the daily maximum discharge means the total discharges by weight during any calendar day.
Compliance	Will be complied.
Condition 2	Final effluent limitation - During the period beginning from 1 st day of the month of commissioning of the industry and lasting until the date of expansion of this Consent, discharge from the outfalls shall be limited and monitored by the applicant as specified.
Compliance	Will be complied.
Condition 3	<p>Schedule of compliance for effluent limitation-</p> <p>a) The applicant shall achieve compliance with the effluent limitation. Specified above for discharge from out falls in accordance with the following schedule :</p> <ol style="list-style-type: none"> i) Report of Progress Monthly ii) Completion of final plans by..... iii) Award of contract of other commitment of financing..... iv) Commencement of construction by..... v) Report of construction progress..... vi) Completion of construction by..... vii) Attainment of operational level by..... <p>b) The applicant shall submit to the Consent issuing Authority the required report of progress or where specific action is required in (a) above to be taken by a certain date. A written notice of compliance or non-compliance with each of the above scheduled dates post marked not later than 14 days following each elapsed date. Each notice of non compliance shall include the following :</p> <ol style="list-style-type: none"> 1) A short description of the non - compliance. 2) A description of any action taken or proposed by the applicant to comply with the elapsed scheduled requirement without further delay. 3) An estimate of any factors which tend to explain or mitigate the non-compliance, and 4) An estimate of the date, the applicant will comply

	with the elapsed scheduled requirement and assessment of the possibility that the applicant will meet the next scheduled requirement time.
Compliance	Will be complied
Condition-5	<p>Compliance of monitoring data</p> <p>a) Samples and measurements taken to meet the monitoring requirements specified above shall be representative of the volume and nature of monitored discharge.</p> <p>b) Following promulgation of guidelines establishing test procedures for the analysis of pollutants, all sampling and analytical methods used to meet the monitoring requirements specified above shall conform to such guidelines. Unless otherwise specified sampling and analytical methods shall conform to the latest edition of the Indian Standard specifications and here it is not specified the guidelines as per standard methods for the examination of Water & Waste Waters 13th Edition of the American Public Health Association, New York U.S.A. shall be used.</p> <p>c) The applicant shall take samples and measurement to meet the monthly requirements specified above at the location indicated below:</p> <p>POINT OF SAMPLING</p> <p>i) Out falls of waste</p> <p>ii) 100 meters from point to confluence, down stream to river or lake.</p>
Compliance	Will be complied.
Condition-6	<p>Recording of Monitoring activities and Results</p> <p>a) The applicant shall make and maintain records of all information resulting from monitoring activities by this Consent.</p> <p>b) The applicant shall record for each measurement of sample take pursuant to the requirements of this Consent to the following information:</p> <ol style="list-style-type: none"> 1. The date exact place and time of sampling 2. The dates on which analysis were performed 3. Who performed the analysis 4. The analytical techniques of methods used and 5. The result of all required analysis.

	<p>c) If applicant monitors any pollutant more frequently as is required as is by this Consent he shall include the results of such monitoring in the calculation and reporting of values required in the discharge monitoring reports which may be prescribed by the Board, such increased frequency shall be indicated on the Discharge Monitoring Report form.</p> <p>d) The applicant shall retain for a minimum of 3 years all records of monitoring activities and results including all records of calibration and maintenance of instrumentation and original strip chart regarding continuous monitoring instrumentation. The period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the applicant or when requested by the applicant or when requested by the Central or State Board.</p>
Compliance	Will be complied
Condition-7	<p>Reporting of Monitoring Results :</p> <p>a) Monitoring information required by this Consent shall be summarized and reported by submitting a Discharge Monitoring Report form duly filled in and signed, to the Board's office at the following address:</p> <p style="text-align: center;">CHHATTISGARH ENVIRONMENT CONSERVATION BOARD T.V. TOWER ROAD RAIGARH (C.G.) 496001</p> <p>b) Each submitted Discharge Monitoring Report shall be signed as follows :</p> <p>i) If submitted by Corporation by a Principal Executive Officer of at least the level of Vice-President or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the discharge Monitoring Report originates.</p> <p>ii) If submitted by a partnership by a general partner</p> <p>iii) If submitted by a Municipal, State or Central Government or other public enterprises, by a Principal Executive Officer, ranking elected official commanding officer, or other duly authorized employee.</p> <p>c) All information submitted on the Discharge Monitoring</p>

	<p>Form shall be based upon measurements and sampling carried out during the three previous calendar months. The first Discharge Monitoring Report shall be submitted for a period ending 60 days from issuance. Thereafter reporting period shall end on the last date of each month. The applicant shall submit a Discharge Monitoring Report post marked no later than 28th day of the month following each completed reporting period.</p>
Compliance	All report will be submitted and norms will be complied
Condition 8	<p>Limitation of Discharge of Oil Hazardous Substance in harmful quantities. The applicant shall not discharge oil in quantities defined as harmful in regulations. In addition the applicant shall not discharge hazardous substance into natural water course in quantities defined as harmful in regulations promulgated by the Board. Nothing in this Consent shall be deemed to preclude the institution of any legal action nor relieve the applicant from any responsibilities, liabilities, or penalties to which the applicant is or may be subject to clauses.</p>
Compliance	Will be complied.
Condition 9	<p>Limitation of visible Floating Solids and Foam: During the period beginning date of issuance and lasting until the date of expiration of this Consent the applicant shall not discharge floating solids or visible foam.</p>
Compliance	Will be complied.
Condition 10	<p>Disposal of Collected Solids:</p> <ol style="list-style-type: none"> a) Intake Water Treatment : Solids Sludge, dirt, slit or other pollutant separated from or resulting from treatment of intake or supply water period to use by the applicant shall be disposed off in such a manner as to prevent any prevent any pollutants from such materials from entering natural water. b) Waste Water Treatment, Solid Sludge, filter, backwash of other pollutants removed from or resulting from treatment or control of waste waters shall be disposed off in such a manner as to prevent any pollutants from such materials form entering natural water.
Compliance	Will be complied
Condition 11	<p>Non – compliance with Effluent Limitations:</p> <ol style="list-style-type: none"> a) If for any reason the applicant does not comply with or will be unable to comply with or will be unable to notify the Consent issuing authority or his designee by telephone No.----- and provide the Consent issuing Authority with the following information in writing within 5 days of such notification: b) Cause of non – compliance c) A description of the non-complying discharge including its impact upon the receiving water.

	<p>d) Anticipated the time condition of non compliance is expected to continue or if such condition has been corrected, the duration of non – compliance.</p> <p>e) Steps taken by the applicant to reduce and eliminate the non – complying discharge and ;</p> <p>f) Steps to be taken by the applicant to prevent recurrence of conditions of non compliance.</p> <p>g) The applicant shall take all responsible steps to minimize any adverse impact to natural waters resulting from non – compliance with any effluent limitation specified in this Consent including such accelerated or additional monitoring as necessary to determine the nature and impact of the non – complying discharge.</p> <p>h) Nothing in this Consent shall be constructed to relieve the applicant from civil or criminal penalties for non – compliance, whether or not such non – compliance is due to factors beyond his control such as equipment break down electric power failure, accident or natural disaster.</p>
Compliance	Will be complied
SPECIAL CONDITIONS	
Condition 12	<p>Provision for Electric Power Failure : The applicant shall either-</p> <p>a) No later than ----- certify in writing to the consent authority that applicant has installed or provided for an alternative electric power sources sufficient to operate all facilities utilized by the applicant to maintain compliance with the terms and conditions of the Consent or,</p> <p>b) No later than 30 days after the effective date of his Consent, certify in writing to the consent issuing authority that upon the reduction, loss, or failure of one or more of the primary sources of electric power to any facilities utilised by the applicant to maintain compliance with the terms and conditions of his consent, the applicant shall halt, reduce or otherwise Control production and / or all discharges in order to maintain compliance with the terms conditions of this Consent.</p>
Compliance	Will be complied
Condition 13	<p>Prohibition of By – pass of Treatment Facilities : The diversion or by-pass of any discharge from facility utilised by the applicant to maintain compliance with the terms and conditions of this Consent is prohibited except:</p> <p>i) Where unavoidable to prevent loss of life severe property damage, or</p> <p>ii) Where excessive storm drainage or run off would damage any facilities necessary for compliance with the terms and conditions of this Consent. The applicant shall immediately notify the consent issuing authorities in</p>

	writing of each such diversion or by-pass in accordance with the procedure specified above for reporting non-compliance.
Compliance	Will be complied
Condition 14	<p>Spill Prevention and Containment Plan: Within 90 days of the effective date of the Consent the applicant shall prepare and submit to the Consent issuing authority; a Spill Prevention; Containment and Countermeasure Plan for the facility covered by this Consent. Such plan shall include the following information and procedures relating to the prevention of spills and unauthorized discharges or oil and hazardous substances;</p> <ul style="list-style-type: none"> a) A description of a reporting system to be used to notify immediately persons responsible for management of a facility and appropriate State and Central authorities; b) A description of equipment or facilities (including overall facility) for the prevention, containment of spills and unauthorized discharge c) A list of all oil and hazardous materials used processed or stored at the facility including the normal quantity maintained on the premises for each listed material; d) A brief description of any spills or authorized discharge which occurred during the 36 months period preceding the effective date of this Consent and subsequent measures taken by the applicant or reduce the possibility or further spills or unauthorized discharges; and e) An implementation schedule for additional equipment or facilities which might be required for sub Para (b) above but which are not yet operational.
Compliance	Condition accepted.
<u>SPECIAL CONDITIONS</u>	
Condition 1	The date of commissioning of the industry shall be informed at least one month in advance.
Compliance	Will be informed.
Condition 2	Industry shall provide proper treatment facility of adequate capacity for treatment of all industrial effluent and domestic effluent to ensure the treated effluent quality meets the standards prescribed by the Board and notified in gazette dated 25-03-88.
Compliance	Will be complied
Condition 3	The treated industrial & domestic effluent shall be utilized for plantation within premises in any circumstances. The concept of 'Zero Discharge' condition at all the time shall be maintained.
Compliance	Will be complied
Condition 4	Industry shall install separate electric metering arrangement for running of all pollution control devices and this arrangement

	shall be made in such a fashion that any non - functioning of pollution control devices are made functional again. A log book for consumption of electricity and chemical in the pollution control devices shall be maintained.
Compliance	Will be complied.
Condition 5	Extensive tree plantation shall be done in and around factory premises. The tree plantation shall be carried out in phase manner preferably with local species as far as possible.
Compliance	Will be complied.
Condition 6	Environmental clearance as applicable shall be taken form Ministry of Environment and Forest as per EIA Notification as amended up to date.
Compliance	Proposed project does not come under the purview of EIA Notification 2006, in view of that EC is required.
Condition 7	Industry should submit the land diversion certificate within six months of issue of this consent letter
Compliance	Land diversion certificate is enclosed for your reference
Condition 8	Industry shall provide safe and scientific arrangement for handling storage and disposal of all solid wastes and dust generated / collected in furnace / pollution control devices etc as applicable. Industry shall not store these materials for longer period. Industry shall provide pucca platform above ground level for temporary storage area to avoid erosion due to rain.
Compliance	Will be complied
Condition 9	Industry shall use fly ash based bricks, tiles, blocks etc. for their civil construction work as far as possible
Compliance	Will be complied.
Condition 10	The industry shall establish an Environmental Management cell to carryout function relating to environmental management under the supervision of senior executive, who will directly report to the head of organization
Compliance	Will be maintained
Condition 11	The submission of Environmental Statement by the industries who seek consent under Air & Water Acts or both and authorization under the Hazardous Waste (Management & Handling) Rules, 1989/2000 has been made mandatory under the Environment (Protection) Act, 1986. As per the provision, such industries are required to submit environmental statement for the previous year ending 31 st March on or before 30 th September every year to the Board.
Compliance	Will prepared and submitted on or before 30th September of every year to the board.
Condition 12	Good house keeping practices shall be adopted by the industry
Compliance	Will be maintained.
Condition 13	A regular monitoring report of the treated effluent shall be submitted to the Board every six months.
Compliance	Will be submitted to board every six months.

Condition 14	Industry shall obtain letter of authorization under Hazardous Waste Management Rule 1989 (As amended on 20 th May, 2003) from the Board (if required)
Compliance	<i>Will be obtained.</i>
Condition 15	Industry shall provide adequate collection / treatment arrangement for proper management of storm water. Industry shall adopt rain water harvesting techniques in the plant premises for ground water recharging and conservation of water.
Compliance	<i>Will be complied.</i>
Condition 16	Industry shall obtain statutory clearances/ licenses from concerned Central / State Government Boards, Bodies and Corporations etc. as applicable before establishment of the plant. Industry shall follow direction issued by Central / State Government, Central Pollution Control Board/ Chhattisgarh Environment Conservation Board from time to time regarding control of water and air pollution and for environmental conservation.
Compliance	<i>Will be taken before establishment and will follow the direction issued by Central/ State Government, Central Pollution Control Board/ Chhattisgarh Environment Conservation Board from time to time regarding control of water & air pollution and for environmental conservation.</i>
Condition 17	The issuance of this permission does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorized any injury to private property or any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.
Compliance	<i>Condition accepted.</i>
Condition 18	<i>Any change in product, production capacity, process, raw materials used, project profile etc. shall be intimated to the Board. For any change of the above prior permission of the Board shall be obtained.</i>
Compliance	<i>Will be informed.</i>
Condition 19	Board reserves right to amend/ cancel any of the above conditions and add new conditions as and when deemed necessary.
Compliance	<i>Condition accepted.</i>

**Ambient Air Quality Data At 8 Location for One Season
(March 09 to May 09)**

Annexure- 4

Plant Site				
DATE	RPM	SPM	SO2	NOX
5/3/2009	38.2	126.3	8.8	10.8
6/3/2009	39.5	125.9	9.2	10.5
12/3/2009	38.5	125.1	9.4	10.1
13/3/2009	40.2	126.7	9.5	10.9
19/3/2009	40.5	127.3	10.1	11.3
20/3/2009	42.3	127.1	9.8	11.8
26/3/2009	44	130.1	9.6	11.1
27/3/2009	42.3	132.7	9.5	10.2
2/4/2009	41.8	126.5	9.4	10.3
3/4/2009	41.2	126.5	9.3	9.9
9/4/2009	40.2	125.5	8.8	10.1
10/4/2009	39.6	124.5	8.6	10.5
16/4/2009	38.4	124.7	9.1	10.9
17/4/2009	42.3	123.4	8.7	10.2
23/4/2009	43.2	122.5	8.8	10.9
24/4/2009	41.2	121.2	8.7	11.4
30/4/2009	40.2	119.2	8.9	11.3
1/5/2009	37.2	116.5	8.5	11.6
7/5/2009	41.3	110.9	8.4	11.9
8/5/2009	42.2	115.6	8.2	12.1
14/5/2009	40.1	117.4	8.1	12.2
15/5/2009	39.4	118.5	7.9	11.9
21/5/2009	38.5	119.5	8.1	11.5
22/5/2009	37.8	118.6	8.2	11.8
30/5/2009	39.4	120.2	8.3	11.6
31/5/2009	38.9	129.5	8.6	10.9
MAXIMUM	44	132.7	10.1	12.2
MINIMUM	37.2	110.9	7.9	9.9
AVERAGE	40.3	123	8.9	11.1
98 %ile	43.9	132.4	10	12.1

Barpali				
DATE	RPM	SPM	SO2	NOX
5/3/2009	38.6	129.8	8.8	9.5
6/3/2009	39.5	129.3	9.1	9.9
12/3/2009	40.2	133.1	9.4	10.1
13/3/2009	41.1	130.2	8.9	10.3
19/3/2009	40.4	127.5	8.7	10.9
20/3/2009	39.5	125.4	8.5	10.4
26/3/2009	36.5	124.5	8.4	10.5
27/3/2009	38.6	123.8	8.3	10.6
2/4/2009	37.5	125.9	8.1	10
3/4/2009	38.4	126.3	8.7	10.2
9/4/2009	38.5	125.5	8.9	10.1
10/4/2009	38.4	124.5	8.4	10.2
16/4/2009	38.5	121.3	8.7	9.9
17/4/2009	37.9	121.4	8.5	9.4
23/4/2009	39.8	121.6	8.2	9.6
24/4/2009	36.8	121.3	8.4	9.5
30/4/2009	37.8	121.2	8	9.3
1/5/2009	36.9	120.3	8.1	9.8
7/5/2009	36.3	118.5	8.2	9.7
8/5/2009	36.8	117.4	8.4	9.6
14/5/2009	37.8	119.5	8.3	9.7
15/5/2009	38.9	121.2	8.5	9.5
21/5/2009	39.8	123.5	8.7	9.2
22/5/2009	37.8	125.6	8.9	9.5
30/5/2009	37.8	127.6	8.8	9.7
31/5/2009	39.7	129.8	8.7	9.8
MAXIMUM	41.1	133.1	9.4	10.9
MINIMUM	36.3	117.4	8	9.2
AVERAGE	38.4	124.4	8.6	9.9
98 %ile	41	132.7	9.3	10.7

Jamadbhari				
DATE	RPM	SPM	SO2	NOX
5/3/2009	37.8	112.3	8.5	10.7
6/3/2009	39.8	111.5	8.2	10.3
12/3/2009	40.2	118.9	8.3	10.8
13/3/2009	39.8	116.5	8.1	10.2
19/3/2009	38.7	113.5	8.7	10.3
20/3/2009	38.4	109.5	9	10.9
26/3/2009	36.7	107.9	9.2	11
27/3/2009	36.8	109.5	9.6	11.2
2/4/2009	38.6	110.2	9.3	10.9
3/4/2009	39.8	114.5	9.1	10.8
9/4/2009	37.8	116.5	9.2	10.1
10/4/2009	39.9	115.6	9.1	10.5
16/4/2009	40.1	117.5	8.9	10.3
17/4/2009	39.8	119.5	8.4	10.3
23/4/2009	38.7	119.6	9.3	10.5
24/4/2009	36.5	121.5	9.1	10.3
30/4/2009	38.7	125.6	8.9	10.9
1/5/2009	38.9	128.4	8.5	10.2
7/5/2009	39.1	127.5	8.6	10.5
8/5/2009	41.9	129.1	8.3	10.3
14/5/2009	39.5	126.5	8.2	10.1
15/5/2009	39.3	125.4	7.9	10
21/5/2009	38.9	124.5	7.5	9.9
22/5/2009	38.5	122.4	8.2	10.3
30/5/2009	38.7	121.3	8.3	10.4
31/5/2009	37.8	120.1	8.5	10.8
MAXIMUM	41.9	129.1	9.6	11.2
MINIMUM	36.8	107.9	7.5	9.9
AVERAGE	38.8	118.4	8.6	10.5
98 %ile	41.7	128.8	9.5	11.1

Taraimal				
DATE	RPM	SPM	SO2	NOX
5/3/2009	35.6	115.6	10.9	11.9
6/3/2009	34.5	114.3	10.8	11.3
12/3/2009	35.6	112.3	10.9	11.1
13/3/2009	36.5	111.3	11.6	11.5
19/3/2009	36.9	110.5	10.2	11.1
20/3/2009	35.6	108.6	10.6	10.6
26/3/2009	34.2	107.5	10.3	10.2
27/3/2009	31.2	104.2	10.9	10.9
2/4/2009	32.3	109.5	10.5	10.8
3/4/2009	33.4	111.3	10.6	11.2
9/4/2009	34.1	112.3	10.6	11.3
10/4/2009	35.6	113.6	10.6	11.6
16/4/2009	36.5	106.5	10.3	11.8
17/4/2009	35.5	107.5	10.4	12.1
23/4/2009	36.9	109.8	10.1	12.4
24/4/2009	37.8	110.2	10.3	12.8
30/4/2009	39.8	116.5	9.9	13.9
1/5/2009	38.9	119.3	9.6	13.5
7/5/2009	40.9	125.5	9.1	13.1
8/5/2009	39.6	126.5	9.4	12.4
14/5/2009	35.3	129.4	9.8	12.1
15/5/2009	35.6	119.5	9.9	11.9
21/5/2009	34.5	111.3	9.8	11.5
22/5/2009	34.2	108.5	9.9	11.2
30/5/2009	34.3	107.2	9.8	10.9
31/5/2009	33.2	105.6	9.9	10.6
MAXIMUM	40.9	129.4	11.6	13.9
MINIMUM	31.2	104.2	9.4	10.2
AVERAGE	35.5	112.9	10.2	11.6
98 %ile	40.8	129	11.4	13.8

Saraipali				
DATE	RPM	SPM	SO2	NOX
5/3/2009	39.8	121.3	10.1	11.3
6/3/2009	40.3	120.3	10.2	11.2
12/3/2009	41.3	122.3	9.8	11.1
13/3/2009	40.2	124.3	9.9	11.3
19/3/2009	42.3	123.6	9.8	10.8
20/3/2009	42.1	126.5	9.9	9.9
26/3/2009	40.1	129.5	9.7	9.6
27/3/2009	39.5	132	9.3	9.8
2/4/2009	41.2	128.6	8.9	9.7
3/4/2009	43.7	126.5	9.1	10.3
9/4/2009	42.5	125.4	8.6	10.4
10/4/2009	41.3	120.2	8.5	10.3
16/4/2009	38.7	118.5	8.9	11.7
17/4/2009	39.8	114.8	8.8	11.9
23/4/2009	38.7	116.5	8.6	11.5
24/4/2009	36.5	113.5	8.7	11.8
30/4/2009	38.9	112.3	8.5	11.9
1/5/2009	37.8	115.6	8.7	11.9
7/5/2009	39.8	116.5	8.9	11.6
8/5/2009	38.7	119.8	8.8	11.3
14/5/2009	39.5	120.3	9.3	11.2
15/5/2009	38.9	122.3	9.5	11.7
21/5/2009	39.8	125.6	9.1	11.9
22/5/2009	39.8	129.8	9	12.4
30/5/2009	37.8	123.5	9.2	11.6
31/5/2009	37.1	124.5	9.3	11.8
MAXIMUM	43.7	132	10.2	12.4
MINIMUM	36.5	112.3	8.5	9.6
AVERAGE	39.8	122.1	9.1	11.2
98 %ile	43.6	131.6	10	12.1

Delari				
DATE	RPM	SPM	SO2	NOX
5/3/2009	39.8	142.2	9.7	12.1
6/3/2009	41.2	140.2	9.2	12.3
12/3/2009	43.2	138.9	9.1	11.9
13/3/2009	41.2	137.5	9	11.5
19/3/2009	41.3	139.6	9.1	11.4
20/3/2009	42.3	136.5	9.2	11.5
26/3/2009	44.5	139.5	9.1	10.9
27/3/2009	43.2	145.9	9.6	11.6
2/4/2009	45	142.3	10.5	11.9
3/4/2009	39.8	141.2	10.5	12.5
9/4/2009	39.8	139.8	10.1	12.5
10/4/2009	40.2	136.5	10.6	12.3
16/4/2009	41.2	135.4	10.5	11.5
17/4/2009	43.5	134.5	10.9	11.6
23/4/2009	42.3	130.3	10.4	11.1
24/4/2009	39.8	122.5	10.1	11.2
30/4/2009	38.9	121.6	9.7	11.5
1/5/2009	38.2	123.5	9.6	11.8
7/5/2009	40.2	124.5	9.8	11.3
8/5/2009	41.1	125.6	9.5	12.5
14/5/2009	39.8	126.5	9.4	12.9
15/5/2009	40.2	129.8	9.5	12.7
21/5/2009	40.7	129.5	9.4	13.1
22/5/2009	42.3	128.7	9.8	13.4
30/5/2009	41.2	128.6	9.5	12.9
31/5/2009	39.8	129.8	9.9	12.3
MAXIMUM	45	145.9	10.9	13.4
MINIMUM	38.2	121.6	9	10.9
AVERAGE	41.1	133.5	9.8	12
98 %ile	44.8	145.4	10.8	13.3

Bhulkuri				
DATE	RPM	SPM	SO2	NOX
5/3/2009	35.6	111.4	8.6	10.1
6/3/2009	37.6	112.3	8.1	10.4
12/3/2009	39.8	113.2	8.3	10
13/3/2009	38.7	118.5	8.8	9.7
19/3/2009	39.8	120.2	8	9.5
20/3/2009	40.1	125.5	8.5	9.3
26/3/2009	39.8	128.6	8.1	9.1
27/3/2009	38.7	125.6	8.3	9.8
2/4/2009	36.5	123.9	8.6	9.3
3/4/2009	38.7	125.4	8.9	9.5
9/4/2009	36.4	124.5	9	9.9
10/4/2009	37.8	118.5	9.2	10.1
16/4/2009	36.5	112.3	8.8	9.9
17/4/2009	37.8	119.5	8.6	9.6
23/4/2009	37.5	114.6	9.1	9.4
24/4/2009	36.5	111.2	9	9.1
30/4/2009	35.6	112.3	8.7	9.5
1/5/2009	36.5	112.9	8.3	9.2
7/5/2009	34.4	107.3	9	9
8/5/2009	34.9	113.5	8.8	9.8
14/5/2009	35.6	114.4	8.3	9.2
15/5/2009	35.6	113.4	8.9	9.3
21/5/2009	38.9	116.5	8.1	9.5
22/5/2009	36.8	113.5	8.6	9.9
30/5/2009	35.8	114.3	8.8	9.8
31/5/2009	36.5	112.6	8.1	9.3
MAXIMUM	40.1	128.6	9.2	10.4
MINIMUM	34.4	107.3	8.1	9
AVERAGE	37.2	116.7	8.6	9.5
98 %ile	39.9	128.3	9.1	10.2

Bagbura				
DATE	RPM	SPM	SO2	NOX
5/3/2009	36.5	102.3	8.5	10.7
6/3/2009	34.5	105.6	8.6	10.1
12/3/2009	35.1	101.5	8.3	10.7
13/3/2009	34	109.5	8.1	10.8
19/3/2009	37.6	105.6	8.3	10.1
20/3/2009	38.6	106.5	8	10.2
26/3/2009	36.5	109.5	7.9	10.5
27/3/2009	37.6	108.5	8.3	10.2
2/4/2009	38.6	106.5	8.6	9.8
3/4/2009	38.5	102.3	8.3	9.8
9/4/2009	36.5	106.5	8.2	9.5
10/4/2009	37.8	105.4	8.6	9.2
16/4/2009	38.9	103.2	8.3	9.7
17/4/2009	36.5	119.3	8.8	9.9
23/4/2009	36.1	118	8.4	10
24/4/2009	39.1	120.1	8.9	9.6
30/4/2009	37.5	121.2	9	9.1
1/5/2009	36.7	122.2	8.9	9.8
7/5/2009	35.9	119.9	8.8	9.6
8/5/2009	36.3	106.8	8.9	9.6
14/5/2009	34.9	105.8	9.1	9.5
15/5/2009	36.9	110.7	8.6	9.4
21/5/2009	34.6	107.3	8.2	9.6
22/5/2009	36.9	105.6	8	9.8
30/5/2009	36.5	107.3	8.1	9.9
31/5/2009	34.8	109.5	8.2	9.7
MAXIMUM	39.1	122.2	9.1	10.8
MINIMUM	34	101.5	7.9	9.4
AVERAGE	36.6	109.4	8.4	9.9
98 %ile	39	121.7	9	10.7