FORM-1

On

PROPOSED 1320 MW (2 X 660 MW) Coal Based Supercritical Thermal Power Plant At – Dimirimunda,Samasingha & Mahula-munda Villages, Tehsl – Rairakhol, Dist – Sambalpur, Odisha

OF

M/s. VISAKA THERMAL POWER LTD.

Prepared by:-

JANUARY 2015

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

(An Enviro Engineering Consulting Cell)

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ISO 14001:2004
ISO 9001: 2008
OHSAS 18001:2007

APPLICATION FORM-1
(AS PER EIA NOTIFICATION 2006 & REVISIONS THEREOF)

(I) Basic Information

Sl. No.	Item	Details
1.	Name of the project/s	1320 MW (2X660 MW) coal- based supercritical thermal power project of M/s Visaka Thermal Power Limited.
2.	S. No. in the schedule	Activity 1(d)
3.	Proposed capacity/area/length/tonnage to be handled/command area/lease area/number of wells to be drilled	Thermal power project-1320 MW (2X660 MW)
4.	New/Expansion/Modernization	New Project
5.	Existing Capacity/Area etc.	Not applicable
6.	Category of Project i.e. 'A' or 'B'	'A'
7.	Does it attract the general condition? If yes, please specify.	No
8.	Does it attract the specific condition? If yes, please specify.	No
9.	Location	At: Villages Dimirimunda, Samasingha & Mahulamunda, Tehsil-Rairakhol, District-Sambalpur, Odisha. The index map and location map shown in **Annexure-VI.**
	Plot/Survey/Khasra No.	Details attached in **Annexure -V**
	Village	Dimirimunda, Samasingha & Mahulamunda
	Tehsil	Rairakhol
	District	Sambalpur
	State	Odisha
10.	Nearest railway station/airport along with distance in kms.	Nearest Railway Station: Rairakhol- 8 km Nearest Airport: Bhubaneswar- 159 km.
11.	Nearest Town, City, District Headquarters along with distance in kms.	Sambalpur- 70 Kms
12.	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal address with telephone nos. to be given)	Village Panchayat: Kadaligarh, Tahasil: Rairakhol Dist: Sambalpur
13.	Name of the applicant	Er. U. S. Rath, Director M/s Visaka Thermal Power Limited
14.	Registered Address	"Visaka Towers" 1-8-303/69/3, S.P Road, Secunderabad- 500003
15.	Address for correspondence	Plot No.- A- 91/ 1, Sahid Nagar Bhubaneswar- 751007 (Odisha)
	Name	Er. U. S. Rath
	Designation	Director
	Address	"Visaka Towers" 1-8-303/69/3, S. P. Road, Secunderabad- 500003
	Pin Code	500003

	E-mail	umashankar.rath@visaka.in umashankarrath@yahoo.com
	Telephone No.	0674-2543619
	Fax No.	0674-2543619
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a topo sheet.	**Site 1:** Bhandaripokhari, Bhadrak (Initial location, State Govt advised to shift) **Site2:** Presently shifted to village Dimirimunda, Samasingha and Mahulmunda in Rairakhol Tahasil of Sambalpur district.
17.	Interlinked Projects	No
18.	Whether separate application of interlinked project has been submitted?	Not Applicable
19.	If yes, date of submission	Not Applicable
20.	If no, reason	Not Applicable
21.	Whether the proposal involves approval/clearance under: if yes, details of the same and their status to be given. (a) The Forest (Conservation) Act, 1980? (b) The Wildlife (Protection) Act, 1972? (c) The C.R.Z Notification, 1991?	**(a) Yes.** The user agency has applied for forest diversion proposal. **(b)** No National park and sanctuary are within 10 km radius of the project site. However following RF forests listed below, i) Tal RF -7km towards NE ii) Sanarengali RF - 6km towards NE iii) Raun RF - 5 km towards SW iv) West Barni RF - 6km towards SW v) Mangalpur RF - 7km towards South vi) East Barini RF - 8km towards SE vii) Guja RF - 4km towards SE viii) Bindhabasini RF-10km towards NE **(c) Not applicable**
22.	Whether there is any Government Order/Policy relevant/relating to the site?	Not Applicable
23.	Forest land involved (hectares)	33.15 Hectares
24.	Whether there is any litigation pending against the project and/or land in which the project is propose to be set up? (a) Name of the Court (b) Case no. (c) Orders/directions of the Court, if any and its relevant with the proposed project.	No litigation is pending against the project.
25.	Project Cost	**Rs. 7616.24 Cr.**

"I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance give, if any to the project will be revoked at our risk and cost.

Date: 16.01.2015

Place: Bhubaneswar

For **M/s Visaka Thermal Power Ltd.**

(U. S. RATH)
Director.
Plot No.- A- 91/ 1, Sahid Nagar
Bhubaneswar- 751007 (Odisha)

NOTE:

1. The projects involving clearance under Coastal Regulation Zone Notification, 1991 shall submit with the application a C.R.Z map duly demarcated by one of the authorized agencies, showing the project activities, w.r.t. C.R.Z (at the stage of TOR) and the recommendations of the State Coastal Zone Management Authority (at the stage of EC). Simultaneous action shall also be taken to obtain the requisite clearance under the provisions of the C.R.Z notification, 1991 for the activities to be located in the CRZ.
2. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridor of Wild Animals, the project proponent shall submit the map duly authorized by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden thereon (at the stage of EC)."
3. All correspondence with the Ministry of Environment & Forests including submission of application for TOR/Environmental Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC Meeting on behalf of the project proponent shall be made by the authorised signatory only. The authorised signatory should also submit a document in support of his claim of being an authorised signatory for the specific project."
4. Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area for mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.,)

N.B:

1. *The full name, designation and signature of the project proponent/authorized signatory should be mentioned.*
2. *The above highlighted points should also be noticed by the project proponent/authorized signatory*

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

Sl. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	Yes	Total 821 Acres of land will be required for the proposed project. The unit has already acquired 47 acres of private land in Samasingha/ Dimirimunda village. Rest land is under process through IDCO i.e Nodal Agency for land acquisition in Odisha.
1.2	Clearance of existing land, vegetation and buildings?	No	The entire land is under barren.
1.3	Creation of new land uses?	Yes	No new land uses other than industrial use. Detailed land use plan for the proposed projects is given in **Annexure-I**
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Soil testing under process for foundation work of all the plant facilities.
1.5	Construction works?	Yes	The project will involve construction works like site preparation, erection of building structures & equipments, roads, boundary walls, fencing etc. for power plant & ash pond area.
1.6	Demolition works?	No	Nil. There will not be any demolition works.
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	Temporary site will be developed for workers during construction phase as the company will engage local with surrounding labour from nearby villages. Also for sanitation of workers toilet, septic tank and soak pit will be made within the plant premises.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Earthwork, excavation work will be carried out for foundation work, water storage tank, which will be stored inside the premises and will be used in land filling & development of land, internal road construction, landscaping and construction of ash dyke etc. Super structure will be constructed above the ground.
1.9	Underground works including mining or tunneling?	No	Not applicable
1.10	Reclamation works?	No	Not Applicable
1.11	Dredging?	No	Not applicable
1.12	Offshore structures?	No	Not applicable
1.13	Production and manufacturing processes?	Yes	It is proposed for 2 x 660 MW Coal based Supercritical Thermal Power Plant. Detailed Production manufacturing process details

			enclosed in pre feasibility report.
1.14	Facilities for storage of goods or materials?	Yes	Covered sheds will be made for storage of Cement and rods. Stone chips / bricks will be stored in open area within the project premises.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	Details are described in Pre-feasibility report.
1.16	Facilities for long term housing of operational workers?	Yes	Local people will be engaged during construction works as well as in operation. It is proposed to provide accommodation for the staffs.
1.17	New road, rail or sea traffic during construction or operation?	No	The site is at a distance of 8 km from NH-42. The nearest Railway station is Rairakhol which is about 8 km away from the project site
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	Yes	Existing road from Kadaligarh to the site will be widened and strengthened.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Not envisaged
1.20	New or diverted transmission lines or pipelines?	Yes	The power will be evacuated at 400 kV (proposed) from VTPL and will be connected to 400 kV grid of the State at Rairakhol for the State share and at a location as identified by Power Grid Corporation of India (PGCIL). The most likely place is again Rairakhol to the existing PGCIL 400 KV line. For Intake water supply pipe line from Mahanadi River will be constructed.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	No such proposals
1.22	Stream crossings?	No	There is no Stream passing through the project site.
1.23	Abstraction or transfers of water form ground or surface waters?	Yes	The total water requirement for the proposed project is 4180 m^3/hr. The unit will draw water from nearest river Mahanadi, Recommendation letter is enclosed in **Annexure –III.**
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	Not applicable.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	2100-4100 people will be employed during construction phase and operation phase 450 nos. The employees will adopt the existing transport system available in the area.

			Raw materials will be transported by roads through trucks or using railway sidings. Construction materials such as Sand, Stone, Cement etc. will be procured from local market.
1.26	Long-term dismantling or decommissioning or restoration works?	No	Not applicable
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not applicable
1.28	Influx of people to an area in either temporarily or permanently?	Yes	During construction phase mostly local labourers will be engaged. But for works like fabrication & erection of large structures skilled technicians may come from outside temporarily. Also some of the upper level personnel may come from outside permanently.
1.29	Introduction of alien species?	No	Not envisaged
1.30	Loss of native species or genetic diversity?	No	Not envisaged
1.31	Any other actions?	No	Not envisaged

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

<table>
<tr><th>Sl. No</th><th>Information/checklist confirmation</th><th>Yes/ No</th><th>Details thereof (with approximate quantities /rates, wherever possible) with source of information data</th></tr>
<tr><td>2.1</td><td>Land especially undeveloped or agricultural land (ha)</td><td>Yes</td><td>Total 821 Acres of land will be required for the project. The unit has already acquired 47 acres of private land in Dimirimunda / Samasingha village. Rest land is under process of acquisition.</td></tr>
<tr><td>2.2</td><td>Water (expected source & competing users) unit: KLD</td><td>Yes</td><td>The total fresh water requirement of the proposed plant is about 4180 m³/hr.</td></tr>
<tr><td>2.3</td><td>Minerals (MT)</td><td>Yes</td><td>The estimated consumption of coal according to 100% PLF would be 6.8 MTPA.</td></tr>
<tr><td>2.4</td><td>Construction material-stone, aggregates, sand / soil (expected source – MT)</td><td>Yes</td><td>
<table>
<tr><th>Item</th><th>Units</th><th>Approx. Qty.</th></tr>
<tr><td>Cement</td><td>Ton</td><td>3,96,000</td></tr>
<tr><td>Coarse aggregate</td><td>Cu.m</td><td>5,288</td></tr>
<tr><td>Fine aggregate</td><td>Cu.m</td><td>2,640</td></tr>
<tr><td>Reinforcing steel</td><td>Ton</td><td>5,280</td></tr>
<tr><td>Structural steel</td><td>Ton</td><td>25,080</td></tr>
<tr><td>GCS sheets</td><td>Sq.m</td><td>30,360</td></tr>
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</td></tr>
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2.5	Forests and timber (source – MT)	No	Not envisaged
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	120 MW of power will be required for operation phase which will be sourced from the own power plant and for construction phase power will be sourced from WESCO.
2.7	Any other natural resources (use appropriate standard units)	No	Not envisaged

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

Sl. No	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate Quantities/ rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	Yes	HSD will be used for Start-up and warm up of the equipments (Storage capacity 2X3000 KL)
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Not envisaged
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	The proposed project will generate employment (both direct and indirect) and business to the local people during construction and operation phase.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	Vulnerable groups of people are not present in the near Vicinity of the area. **Nearest Village:** Dimirimunda at a distance of 0.5 Km. **School/ Institution at distance:** Nearest School at Dimirimunda about 0.5 km from the proposed site. **Nearest Hospital:** Rairakhol about 8 km from the proposed site.
3.5	Any other causes	No	Not envisaged

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

Sl. No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	Yes	No mining activity is involved in the proposed project. Construction waste will be generated which will be disposed off suitably without causing any public nuisance and environmental contaminations.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	**Canteen waste and Sludge:** 4.0 Ton/Annum
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	**a) Used oil -** 2.0 KL/Annum will be stored in closed drums and will be given to authorized

			reprocessors. **b) DM Plant Resin -** 40Kg/Annum will be stored in closed drums
4.4	Other industrial process wastes	No	Not Applicable
4.5	Surplus product	No	Not envisaged
4.6	Sewage sludge or other sludge from effluent Treatment	Yes	Sludge from STP will be utilized as manure in green belt area.
4.7	Construction or demolition wastes	Yes	The construction wastes will be used in land filling.
4.8	Redundant machinery or equipment	No	Not envisaged
4.9	Contaminated soils or other materials	No	There will not be any soil contamination as no such hazardous liquid will be used in construction/operation.
4.10	Agricultural wastes	No	No agricultural waste will be generated.
4.11	Other solid wastes	No	No other solid wastes likely to be generated.

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

Sl. No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	Coal will be used for power generation. However HSD will be used for mobile vehicles and DG sets. SO2 and NOx and particulate matter will be emitted from the power plant but it will be remain within CPCB norms. However Regular maintenance of vehicles will be done and adequate stack height will be provided to the DG set as per norms.
5.2	Emissions from production processes	No	Not applicable.
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive dust emission will take place from coal handling, plant ash handling and coal stock etc. However adequate air pollution control measure will be taken.
5.4	Emissions from construction activities including plant and equipment	Yes	During transportation and handling of construction materials, water sprinkling arrangement will be provided to suppress fugitive emission.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Dust emission due to handling of construction materials and construction waste will be minimized by adopting adequate dust suppression system.
5.6	Emissions from incineration of waste	No	Not Applicable

5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Not envisaged
5.8	Emissions from any other sources	No	Not envisaged

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

Sl.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	Noise will be generated during construction, erection, welding, fabrication and operation of motor, Steam turbine generator, Other rotating equipment and Steam safety valve etc. Noise prone activities will be restricted to the extent possible in order to have minimum noise impact. There will be provision of rubber padding/noise isolators, silencer to modulate the noise generated from machineries. Personal protective equipments such as earmuffs/plugs will be provided to the employees those who will be exposed to noise prone areas.
6.2	From industrial or similar processes	Yes	Noise will be generated during the process. However measures will be taken to keep the noise level within the prescribed standard of 85 dBA.
6.3	From construction or demolition	No	There will be generation of noise during construction which is temporary in nature and will be within bearable limit. The effect of noise on nearby habitants will be insignificant. Further noise prone activities will be restricted to a possible extent in order to have minimum noise impact.
6.4	From blasting or piling	No	Not Applicable.
6.5	From construction or operational traffic	Yes	Noise is envisaged from the traffic during both constructional as well as operational phases. Measures shall be taken to control noise with proper preventive maintenance and lubrications.
6.6	From lighting or cooling systems	Yes	Noise from lighting and cooling system will be kept within norms.
6.7	From any other sources	No	Not Applicable

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

Sl.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	No hazardous material storage or handling is envisaged. Oiling and lubrication of hauling vehicles will be done by using oil tray to prevent spillage on soil. Vehicles and machineries will be well maintained to prevent leakage of oil.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Domestic effluent and Canteen effluent will be treated in STP and treated effluent will be reused for plantation.
7.3	By deposition of pollutants emitted to air into the land or into water	No	Adequate air pollution devices will be installed. Fugitive dust will be suppressed by water sprinkling.
7.4	From any other sources	No	Not envisaged
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	Not envisaged

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

Sl.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	Yes	HSD being considered as hazardous waste the mitigative measures for this will be covered under Risk assessment and Disaster Management Plan during EIA Study.
8.2	From any other causes	No	Not envisaged
8.3	Could the project be affected by natural disasters causing environmental damage (e.g floods, earthquakes, landslides, cloudburst etc)?	No	The proposed area does not come under any flood and Seismic zone. Hence the area is not sensitive to any possible earthquake.

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

Sl. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting laities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries • other	Yes	There is scope for Ancillary and Downstream Industries, which in turn will increase the commercial trade and business in the region. Proposed project will create direct & indirect employment opportunity to people and supportive infrastructure facilities during implementation of the proposed project which will also enhance the socio-economic status of people in that area.
9.2	Lead to after-use of the site, which could have an impact on the environment	No	Not envisaged
9.3	Set a precedent for later developments	Yes	1. Employment Opportunity 2. Socio-economic Development 3. Ancillary industry
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	Detailed study will be carried out to check for cumulative effects due to proximity to other existing or planned projects.

(III) Environmental Sensitivity

Sl. No	Areas	Name/ Identity	Aerial distance (within15 km.) Proposed project location boundary
1.	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	This area is not protected under any International Conventions, National or Local Legislation for their ecological, landscape cultural or other related value.
2.	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	No	The proposed project site is not in under Eco-Sensitive zone.
3.	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	The proposed project area is not used by any protected, important or sensitive species of flora or fauna for breeding, nesting, foraging resting over, winter migration.
4.	Inland, coastal, marine or underground waters	None	There is no coast line or marine ecosystem in the zone.

5.	State, National boundaries	No	Not applicable
6.	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	No such route is within proposed project area.
7.	Defense installations	No	Not existing within 10km buffer zone
8.	Densely populated or built-up area	No	Kadaligarh village having population 774nos at a distance of 4 Km from the site.
9.	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	No	There is no sensitive man made land uses in the vicinity. Nearest school is located at – 0.5 km distance, Nearest hospital is located at 8 km distance.
10.	Areas containing important, high quality or scarce resources *(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	No	**List of RF falling with in 10km buffer zone listed,** i) Tal RF-7km towards NE ii) Sanarengali RF -6km towardsNE iii) Raun RF-5 km towards SW iv) West Barni RF-6km towards SW v) Mangalpur RF-7km towards South vi) East Barini RF-8km towards SE vii) Guja RF-4km towards SE viii) Bindhabasini RF-10km towards NE All are depicted in Vicinity Map **(Annexure –VI).** Moreover, the area does not fall in over exploited/critical area on Ground Water Resources consideration.
11.	Areas already subjected to pollution or environmental damage. *(those where existing legal environmental standards are exceeded)*	None	Not applicable
12.	Areas susceptible to natural hazard which could cause the project to present environmental problems (*earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions*)	None	Not applicable

(IV) Proposed Terms of Reference for EIA studies.

The following terms of reference (TOR) are being proposed for environmental impact assessment:

1. Introduction

- Purpose of the report.
- Identification of project & project proponent.
- Brief description of nature, size, location of the project and its importance to the country, region.
- Scope of the study – details of regulatory scoping carried out (As per Terms of Reference).

2. Project Description

- Condensed description of those aspects of the project (based on project feasibility study), likely to cause environmental effects. Details should be provided to give clear picture of the following:
- Type of project
- Need for the project
- Location (maps showing general location, specific location, project boundary & project site layout)
- Size or magnitude of operation (incl. Associated activities required by or for the project
- Proposed schedule for approval and implementation
- Technology and process description
- Project description. Including drawings showing project layout, components of project etc. Schematic representations of the feasibility drawings which give information important for EIA purpose
- Description of mitigation measures incorporated into the project to meet environmental standards, environmental operating conditions, or other EIA requirements (as required by the scope)
- Assessment of New & untested technology for the risk of technological failure

3. Description of the Environment

- Study area, period, components & methodology
- Establishment of baseline for valued environmental components, as identified in the scope
- Base maps of all environmental components

4. Anticipated Environmental Impacts & Mitigation Measures

- Details of Investigated Environmental impacts due to project location, possible accidents, project design, project construction, regular operations, final decommissioning or rehabilitation of a completed project
- Measures for minimizing and / or offsetting adverse impacts identified
- Irreversible and Irretrievable commitments of environmental components
- Assessment of significance of impacts (Criteria for determining significance, Assigning significance)
- Mitigation measures

5. Analysis of Alternatives (Technology & Site)

- In case, the scoping exercise results in need for alternatives:
- Description of each alternative
- Summary of adverse impacts of each alternative
- Mitigation measures proposed for each alternative and
- Selection of alternative

6. Environmental Monitoring Program

Technical aspects of monitoring the effectiveness of mitigation measures (incl. Measurement methodologies, frequency, location, data analysis, reporting schedules, emergency procedures, detailed budget & procurement schedules)

7. Additional Studies

- Public Consultation
- Risk assessment
- Social Impact Assessment. R&R Action Plans

8. Project Benefits

- Improvements in the physical infrastructure
- Improvements in the social infrastructure
- Employment potential –skilled; semi-skilled and unskilled
- Other tangible benefits

9. Environmental Cost Benefit Analysis

If recommended at the Scoping stage

10. Environmental Management Plan

Description of the administrative aspects of ensuring that mitigative measures are implemented and their effectiveness monitored, after approval of the EIA.

Taking the aforesaid facts and figures in to considerations, we request the hon'ble committee to grant the Terms of Reference for the proposed project in order to prepare REIA & EMP for Environmental Clearance.

Annexure - I

LAND USE BREAK UP

Item Wise Break Up Of Land Use		
Sl No	**Plan Layout Units**	**Total Lands In Acres**
1	Land for Main Plant with Switchyard, Transform Yard, Roads etc.	60.00
2	Land for Water Reservoir, Rain Water Harvesting, Water Treatment Plant & Cooling Towers	140.00
3	Land for Coal Handling Plant Area	100.00
4	Land for Ash Disposal Area	225.00
5	Land for Green Belt Area	271.00
6	Land for Colony Area	25.00
	Grand Totals	**821.00**

Annexure-II

SOLID WASTE GENERATION & MANAGEMENT

Sl. No.	Source of Generation	Maximum Quantity (Domestic Coal)	Maximum Quantity (Imported Coal)	Management Plan
1	Fly Ash	2.20 MTPA	0.42 MTPA	Will be sent to cement industries/Brick industries/ Fly Ash aggregate making industry/Road making
2	Bottom Ash	0.56 MTA	0.11 MTPA	

Annexure-III

WATER REQUIREMENT

Sl. No.	System Description	Water Requirement (in m^3/hr)
A	Water Consumption (1.1+1.2+1.3+1.4+1.5+1.6)	3677
1.1	Condenser Cooling system make-up	3302
1.2	DM Plant make-up	70
1.3	Drinking & Sanitation water for plant & colony	19
1.4	Plant Service water	164
1.5	Clarifier Sludge	120
1.6	Filter Backwash waste	2
2	Recovery from clarifier sludge	100
3	Make up to ash water(Non recovery stage of ash water) CHP emergency, cooling & Quenching etc	164
B	Net water requirement in the system (Item A- Item 2+ Item 3)	3791
C	Loss in resevoir	70
D	Total water requirement(Optimal)	3791
E	Considering exigency and margin over the net water requirement	389
Total water allocation		**4180 m^3/hr**

Annexure-IV

Raw Material Requirement

S. No.	Raw Materials	Source	Transportation Mode	Requirement MTPA
Coal Based Supercritical Thermal Power Plant				
1	Coal	MCL	Rail / Road	6.8 MTPA
2	LDO/HFO	IOCL/HPCL/BPCL Local depots	Rail/Road	11564 KLPY

ANNEXURE-V

Land Documents

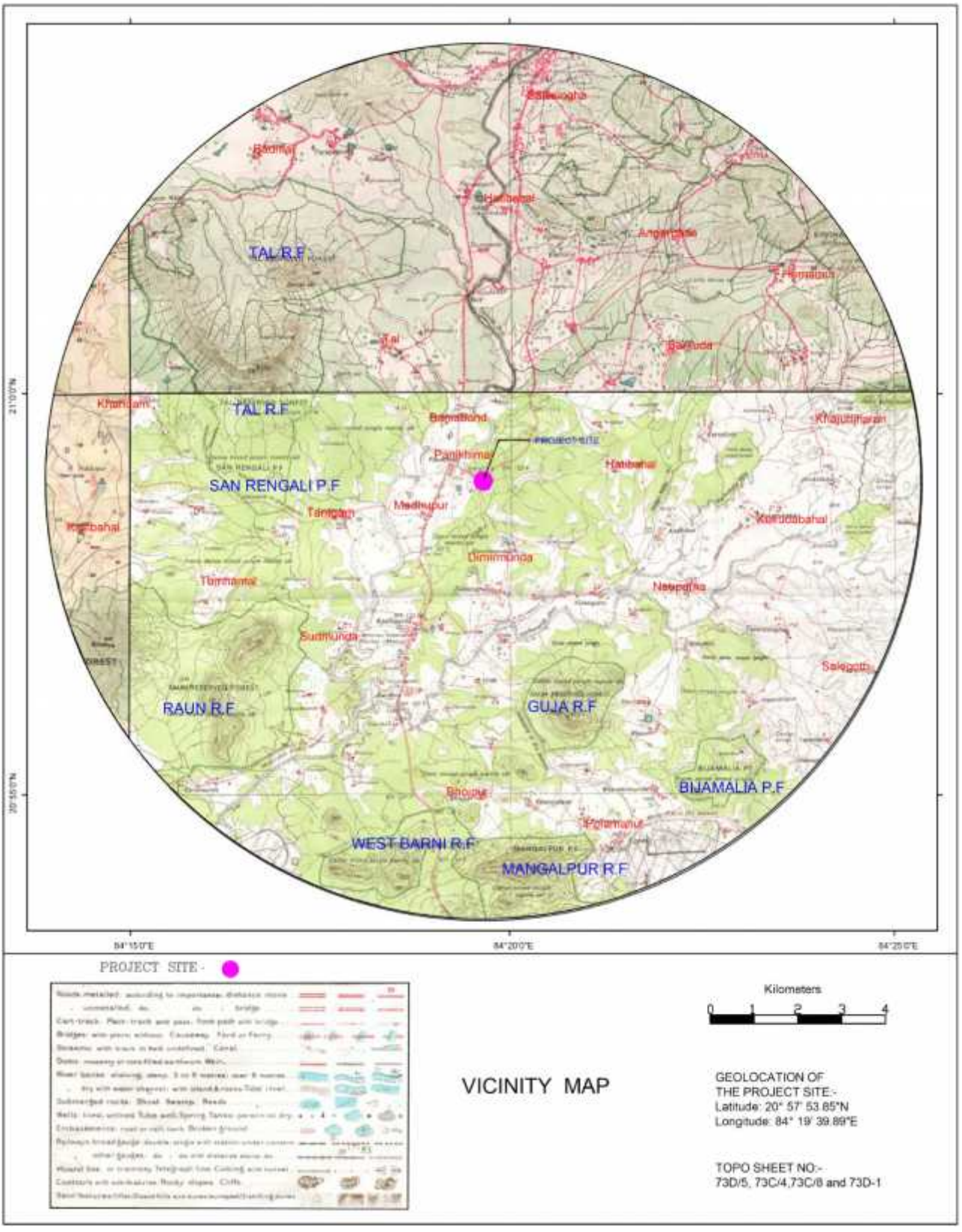
Land Schedule of Private land

Village : Samasingha
P.S : Rampur No.78
Tahasil : Rairakhol
Dist : Sambalpur

Khata No.	Name of the tenent	Plot No.	Total Area in Acres	Area to be acquired in Acres	Kisam	Remark
3	Agasti Bisi,s/o Hadibandhu Bisi , Vil-own, Caste-Suda	84/1644	0.08	0.08	Mala sadharana	
3	-Do-	80	0.11	0.11	Mala sadharana	
3	-Do-	82	0.11	0.11	Mala sadharana	
3	-Do-	821 (P)	0.05	0.03	Berna Sadharana	
3	-Do-	835	0.02	0.02	Atta Sadharana	
3	-Do-	893	0.09	0.09	Bahala sadharana	
3	-Do-	894	0.13	0.13	Mala sadharana	
3	-Do-	930	0.07	0.07	Bahala sadharana	
3	-Do-	964	0.06	0.06	Mala sadharana	
3	-Do-	1003	0.07	0.07	Berna sadharana	
3	-Do-	1016	0.03	0.03	Mala sadharana	
3	-Do-	1082	0.10	0.10	Mala sadharana	
3	-Do-	1084	0.07	0.07	Mala sadharana	
3	-Do-	1425	0.12	0.12	Atta Sadharana	
4	Achuta Bisi, s/o. Hadibandhu Bisi, Vil-Own, Caste-Suda.	84/1642	0.05	0.05	Mala sadharana	
4	-Do-	84/1641	0.05	0.05	Mala sadharana	
4	-Do-	85	0.11	0.11	Mala sadharana	
4	-Do-	823 (P)	0.05	0.04	Berna Sadharana	
4	-Do-	836	0.03	0.03	Atta Sadharana	
4	-Do-	838	0.08	0.08	Mala Sadharana	
4	-Do-	932	0.06	0.06	Bahala sadharana	
4	-Do-	956	0.07	0.07	Mala sadharana	
4	-Do-	958	0.02	0.02	Mala sadharana	
4	-Do-	959	0.03	0.03	Mala sadharana	
4	-Do-	965	0.09	0.09	Mala sadharana	
4	-Do-	1004	0.05	0.05	Berna sadharana	
4	-Do-	1055	0.04	0.04	Berna sadharana	
4	-Do-	1085	0.04	0.04	Mala sadharana	
4	-Do-	1424	0.10	0.10	Atta Sadharana	
7	Ahalya baghara, W/o Udhaba Baghara, Adhi Baghara, s/o. Sahadeb Baghara, Baghabati Baghara, W/o.Sahadeb Baghara, Khira Baghara, Amruti Baghara, s/o.Bainsi	130	0.12	0.12	Bahala sadharana	

ANNEXURE-VI

PLANT LOCATION



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