APLICATION

IN

REVISED FORM - I

FOR

AMENDEMENT TO EARLIER ENVIRONMENTAL CLEARANCE CONDITIONS

ISSUED BY MoEF Lr.NO J-13012/88/2008-IA. II (T) Dt.27.12.2010 &Dt.10.08.2016

IN RESPECT OF THE

2X600 MW COAL BASED SINGARENI THERMAL POWER PLANT

NEAR PEGADAPALLI VILLAGE & JAIPUR MANDAL

MANCHERIAL DISTRICT

TELANGANA STATE

DEPARTMENT OF ENVIRONMENT

(QCI / NABET Accredited EIA Consultant Organization)

THE SINGARENI COLLIERIES COMPANY LIMITED

(A Government Company)

KOTHAGUDEM COLLIERIES - 507 101

TELANGANA STATE

MAY-2018

FORM -1

"A" Category Projects

(I)Basic Information

Sl. No.	*Item*	*Details*
1	Name of the project/s	**2x600 MW COAL BASED SINGARENI THERMAL POWER PLANT**
2	S.No. in the schedule	1(d)
3	Proposed capacity/area/length/tonnage to be handled/command area/lease area/number of wells drilled	Existing capacity 2x600MW
4	New/Expansion/Modernization MoEF&CC File number Uploaded EC letter	Existing Power plant which is under operation. (i) J-13012/88/2008-IA.II(T),Dt.27.12.2010.(EC) (ii) J-13012/88/2008-IA.II(T)10.08.2016 (amendment of EC)
5	Existing capacity/Area etc.,	Existing capacity : 2x600 MW/300.972 Ha
6	Category of the 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 Plot/Survey/Khasra No. Village Tehsil District State	Survey of India Topo sheet No : 56 N/9Latitude(North): 18º 48'30"to 18º 50' 35"Longitude(East):79º 34'00"to 79º 35' 30"Pegadapalli Jaipur Mancherial Telangana State The plan showing location of Existing power plant is furnished as **Fig. No-I**
10	Nearest railway station/airport along with distance in Kms.	Railway station: Mancherial (14.6 Kms) Airport: Shamshabad (Hyderabad) (250 Kms)
11	Nearest Town, City, District headquarters along with distance in Kms	Town: Mancherial (14.6 Kms) City: Hyderabad (250 Kms) District headquarters: Mancherial(14.6 Kms)
12	Village panchayats, Zillaparishad,MunicipalCorporation,LocalBody(Completepostaladdresseswithtelephone no's to be given)	Village: Pegadapalli Panchyath: Jaipur Zilla parishad: Mancherial Pin code:504216 Telephone No.:08737-200200 Fax N .08737-200210
13	Name of the applicant	S. Shankar
14	Registered Address	Singareni Collieries Company Limited Kothagudem Collieries-507101 Bhadradri Kothagudem District, Telangana state.
15	Address for correspondence Name Designation (owner/partner/CEO) Address Pin Code E-mail	 S. Shankar Director (E& M) Singareni Collieries Company Limited KothagudemCollieries-507101 denm@scclmines.com

	Telephone No. Fax No.	08744-245005 08744-241201
16	Details of alternative sites examined, if any Location of these sites should be shown on a topo sheet	No this is existing project and requesting MOEF&CC for amendment in earlier EC conditions.
17	Interlinked projects	No
18	Whether separate application of interlinked projects 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 CRZ Notification, 1991?	Not Applicable
22	Whether there is any Government Order/Policy relevant/relating to the site?	No
23	Forest land involved (Hectares)	No Forest land involved in the project
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 relevance with the proposed project	No
25	Project cost (in lakhs)	Rs 757351

(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	The 2X600 MW STPP is under operation in an area of 300.972 Ha. Total land is under possession of SCCL. The land use is changed from open barren land to mixed use development as the land is occupied by Thermal power plant.

1.2	Clearance of existing land, vegetation and buildings?	Yes	The power plant is already constructed and in operation. Unit-1 COD completed on 25.09.2016 and Unit-2 COD completed on 02.12.2016and both the units are under operation. Hence there is no requirement for clearance of land.
1.3	Creation of new land uses?	Yes	After completion of the project, the land use is permanently changed from open barren land to mixed use development as the acquired land is occupied by the Singareni thermal power plant.
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Detailed soil investigation work involving borehole and trial pit tests and electrical resistivity tests has been carried.
1.5	Construction works?	Yes	Office buildings and Civil structures are constructed to accommodate Boiler, Turbine, Generator, Condenser, Cooling water system, Coal handling system, Ash handling system, Coal plant, ESPs, Switchyard and other mechanical and electrical plant and equipment.
1.6	Demolition works?	No	Not envisaged
1.7	Temporary sites used for construction works or housing of construction workers?	No	Temporary Sheds are provided within the site identified for the plant for material storage, fabrication, handling, etc. The housing for the construction workers is not required as the labour are being deployed from the nearby villages & townships.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Boiler, Turbine, Generator, Condenser Cooling Tower, Chimney, Water system, Ash Dyke, Coal Handling Plant, ESP, ETP, Switchyard, Office Buildings, and other civil, mechanical and electrical facilities required for the project.
1.9	Underground works including mining or tunnelling?	No	Not Applicable
1.10	Reclamation works?	No	Not required.
1.11	Dredging?	No	Not Applicable
1.12	Offshore structures?	No	Not Applicable
1.13	Production and manufacturing processes?	Yes	Coal received from the mines at (-)200 mm size is crushed in the crusher house to (-)20 mm size, which is subsequently pulverized in the coal mill. The powdered coal is burnt in the furnace to generate steam in the boiler. The steam generated in the boiler is expanded in the HP, IP & LP turbines and power is generated in the generator. The steam after expansion in the turbine is condensed in the condenser and the condensed steam is replaced back to the

			boiler. The hot gasses from the furnace after losing heat in different areas goes through the Electrostatic Precipitators (ESP) where ash is trapped. The clean gas goes through the chimney. Stack height of 275 m is provided.
1.14	Facilities for storage of goods or materials?	Yes	The following facilities are provided for storage of goods or materials. • Stores • Workshop • Coal Yard • Chlorine storage • Fuel tanks
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	Solid Waste: Dry ash handling systems are provided for collection of fly ash in dry form and storage facilities (Silo) and is being supplied to cement or brick industries or end users and balance is sent to ash pond area. Hydro bins are provided to utilize bottom ash and is sent to nearby coal mines of SCCL for stowing/void filling or for embankments of roads and others. Liquid effluents: ETP is provided for treatment of plant effluents. Construction of STP for treatment of sewage from plant and colony is completed and commissioning is under process by installation of necessary mechanical equipment.
1.16	Facilities for long term housing of operational workers?	Yes	Staff quarters are constructed for the operational manpower for the plant in the space available outside the main plant area.
1.17	New road, rail or sea traffic during construction or operation?	No	No sea traffic facilities required. The project area is having well developed road and rail network. Additional internal roads required will be formed. Railway line is being extended from the existing Srirampur CHP of the SCCL to STPP for transportation of coal. Until completion of Railway line, the coal will be transported by well-developed existing road. Existing road network is sufficient to transport the coal from SCCL mines to 2x600MW STPP.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports,	No	As mentioned in the item 1.17

	airports etc?		
1.19	Closure or diversion of existing transport routes or infrastructure	No	No changes in existing road network are envisaged.
1.20	New or diverted transmission lines or pipelines?	No	No diversion of transmission or pipelines required.
1.21	Impoundment, damming, culver ting, realignment or other changes to the hydrology of watercourses or aquifers?	No	No surface water bodies will be disturbed.
1.22	Stream crossings?	No	There are no stream crossings.
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	Required water for the power plant is being met from the River Godavari and Pranahita through pipeline.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	No Changes in water bodies or the land surface affecting drainage or runoff.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	At present Transportation of material i.e. coal for operation of power plant is being done through well-developed road network. It will be done through rail network which is expected to be commissioned at the earliest i.e. after completion of laying of 0.4 Km length of balance track line near SC colony. Manpower will be met from the nearby villages and existing township. Operational manpower will be accommodated in the township of power plant provided outside the main plant area.
1.26	Long-term dismantling or decommissioning or restoration works?	No	No long term dismantling works involved
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not envisaged
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Total 1420 people (Permanent and Out sourcing employees) are working in the Power plant.(i.e.153 permanent employees of SCCL and 1267 employees through outsourcing).
1.29	Introduction of alien species?	No	No Introduction of alien species
1.30	Loss of native species or genetic diversity?	No	No loss of native species or genetic diversity

1.31	Any other actions?	No	Nil

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):

No.	Information/checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	Yes	Land already developed for Existing 2x600MW power plant is 300.972 Ha (Main plant 280.40 Ha, Land for Rail system:15.245 Ha, Land for water pipe line :5.327 Ha) Plot plan is furnished as Fig no II
2.2	Water (expected source & competing users) unit: KLD	Yes	Requirement of water for existing 2x600 MW power plant is 88800 KLD (3700 m3/hr). The required water will be met from River Godavari & Pranahitha. 1.05 TMC of water from Godavari River and 2.00 TMC of water from Pranhitha River were allocated by State Government.
2.3	Minerals (MT)	Yes	Coal requirement for 2x600 MW power plant is 4784 MTPA. The required coal is being supplied from SRPOC-I, SRPOC-II , RKP OC Phase-I, KK OCP and future OCP mines like SRPOC-III and RKP OC phase-II of SCCL mines
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	Yes	The power plant is already constructed and is in operation and the requirement of construction materials needed during operation period is very marginal.
2.5	Forests and timber (source – MT)	No	Not Applicable.
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	The auxiliary power consumption is 6.5% i.e. 78 MW.
2.7	Any other natural resources (use appropriate standard units)	Yes	Support fuel is LDO/HFO. The quantity of LDO/HFO is 8935 KL per annum and will be met from the nearest oil depots

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	Precautions and safe operating practices will be followed in storage, handling and use of Hazardous material like Furnace Oil, HSD, Chlorine, Alum, Caustic soda, HCL, etc will be used immediately.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	No changes in occurrence of disease
3.3	Affect the welfare of people e.g. by changing living conditions?	yes	The existing 2x600 MW power plant which is under operation will lead to upliftment of socio-economic conditions of the local people.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	All pollution control norms will be strictly followed with respect to Particulate Matter (PM), SO2 and NOx emissions by installation of pollution control equipment. There is no effect envisaged for the vulnerable groups of people who could be affected by the project.
3.5	Any other causes	No	No other causes 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	The spoil generated during the construction will be reused for leveling within the plant site and green belt development
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Collection and handling of domestic solid waste will be disposed as per the provisions of Municipal Solid Waste management & Handling Rules, 2000.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	The Hazardous wastes generated will be disposed as per the provisions of Hazardous wastes (Management, Handling & Transboundary Movement) Rules, 2008.
4.4	Other industrial process wastes	Yes	During the process of power generation, about 3316.02 TPD of Fly ash and 1421.15 TPD will be generated in 2x600 MW Plant. The fly ash will be collected and disposed

			in dry form for utilization for cement & other end users and bottom ash will be collected through hydro bins and utilized for stowing/void filling in SCCL mines.
4.5	Surplus product	No	There is no surplus product generation.
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Sewage Sludge generated from the STP will be used as manure in greenbelt development.
4.7	Construction or demolition wastes	Yes	While construction of various buildings some amount of construction debris may be generated which will be segregated and whatever is re-saleable will be sold to buyers and rest of the waste will be used for filling up of low lying areas and development of internal roads and boundary walls.
4.8	Redundant machinery or equipment	No	Not envisaged
4.9	Contaminated soils or other materials	No	No contamination is anticipated.
4.10	Agricultural wastes	No	Not Envisaged
4.11	Other solid wastes	No	No other solid wastes

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	Vehicles transporting man and material for construction, operations are sources of emission from fossil fuel. The pollutions likely to be released are PM_{10}, $PM_{2.5}$, SO2, NOx, CO and HC etc. control measures will be taken to keep these pollutants with in the prescribed norms of CPCB and TSPCB.
5.2	Emissions from production processes	Yes	PM_{10}, $PM_{2.5}$, SO2, Nox will be the major emissions from the power plant operations. The boiler is attached to Electrostatic Precipitator (ESP) of 99.9% efficiency with 275 m stack height to restrict the emissions of particulate matter within prescribed limits.
5.3	Emissions from materials handling including storage or transport.	Yes	Fugitive emissions are envisaged from material handling and transportation areas during construction stage. These will be controlled by good housekeeping, sprinkling water in dust prone areas, providing paved roads, proper fencing and green belt development. Fly ash collected in ESP will be stored in ash silos for transportation to cement & brick industries. Unutilized ash if any during exigency will be disposed in the ash pond.
5.4	Emissions from construction activities including plant and	Yes	The gasses emissions like oxides of Nitrogen and CO will be emitted from the

	equipment		equipment during construction phase only. However, these are fugitive emissions of temporary nature and will be controlled by sprinkling water.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste.	Yes	Dust generated due to handling construction material will be controlled by sprinkling of water. The sewage will be treated in septic tanks followed by soak pits.
5.6	Emissions from incineration of waste	No	No incineration is proposed
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	No material will be openly burnt in air.
5.8	Emissions from any other sources.	No	Nil

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	i) Noise will be generated during operation of generator, Turbines, compressors, pumps, fans, coal handling plant etc. The expected noise level during those operations is 85 dB (A), necessary PPEs will be provided. Noise level will be limited as per Norms. Suitable acoustic enclosures will be provided. ii) Most of the equipment structures are static. The vibration effect of these will be only local and the design of supports and foundations will nullify the intensity. iii) Light emissions are not envisaged iv) Heat emissions will be felt nearby boiler, generator areas.
6.2	From industrial or similar processes.	Yes	Heat is released in the furnace that heats up the surrounding air due to convection. Therefore, insulation will be applied to furnace walls to minimize the heat transfer to air.
6.3	From construction or demolition	Yes	Noise generated from Excavation, drilling and welding will be temporary.
6.4	From blasting or piling	No	Not envisaged
6.5	From construction or operational traffic	Yes	There will be marginal additional traffic which may lead to the slight increase in the noise levels.
6.6	From lighting or cooling systems	Yes	The noise level due to operation of cooling towers will be of the order of 75 dB(A)
6.7	From any other sources	No	Nil

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	Yes	Precautions and safe operating practices will be followed to minimize hazard due to accidental spill of hazardous materials which are stored in small quantities.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	Yes	No discharge of sewage or other effluents to water or the land is envisaged outside the plant boundary. Power plant waste water and sewage water will be treated in Treatment Plants and 100% reused for green belt development, dust control, etc. A zero discharge concept will be followed.
7.3	By deposition of pollutants emitted to air, into the land or into water	No	The major emission from the proposed project are Particulate Matter (PM), SO2 and NOx. Adequate control systems like ESP and stack height meeting the MoEF guidelines are provided to control the emissions. Hence there will not be any chance of contamination of land and water.
7.4	From any other sources	No	No other sources
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	Adequate safety measures are being followed to control fire and other disasters by preparing and implementation of Disaster Management Plan during operation. LDO/HFO will be stored and handled as per all applicable safety regulations.
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)?	Yes	The proposed project site falls in Zone III as per the IS 1893 (Part-1): 2002. It is lesser seismic prone zone. There are no landslides, erosion, floods and other natural calamities.

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, lities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:	Yes	The existing power plant will result in considerable growth of service sector, which will lead to supporting and ancillary development in the region. New housing facilities and social infrastructure may come up due to influx of the people.
	• Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.)	No	No major impacts are envisaged Ancillary industries would develop.
	• housing development	Yes	Cumulative impact of proposed and existing units will be in the statutory limits.
	• extractive industries	No	The existing power plant will result in considerable growth of service sector, which will lead to supporting and ancillary development in the region. New housing facilities and social infrastructure may come up due to influx of the people.
	• supply industries	Yes	
	• other	No	No major impacts are envisaged
9.2	Lead to after-use of the site, which could have an impact on the environment	Yes	Ancillary industries would develop.
9.3	Set a precedent for later developments	No	Cumulative impact of proposed and existing units will be in the statutory limits.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	The existing power plant will result in considerable growth of service sector, which will lead to supporting and ancillary development in the region. New housing facilities and social infrastructure may come up due to influx of the people.

(III)Environmental Sensitivity

Sl.No.	Areas	Name/Identity	Aerial distance (within 15 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	No areas protected under international conventions, national or local legislation for their ecological ,landscape, cultural or other related value are present.
2	Areas which are important or sensitive for ecological reasons-Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	No	No wildlife sanctuary and National park exists. River Godavari, Tekumatla Vagu, Elkanti Cheruvu, Indaram Tank, etc and Indaram R.F.,Kundaram R.F present in buffer zone.
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, for breading, resting, over wintering, migration	No	Nil
4	Inland, coastal, marine or underground waters	Yes	Godavari River at a distance of 4 Kms
5	State, National boundaries	No	Nil
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	Nil
7	Defence installations	No	Nil
8	Densely populated or built-up area	Yes	Mancherial at a distance of 14 Kms
9	Areas occupied by sensitive man-made land uses*(hospitals, schools, places of worship, community facilities)*	Yes	There is no. of schools, hospitals, temples, churches, majids, etc within15 Kms.
10	Areas containing important, high quality or scarce resources*(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	No	Nil
11	Areas already subjected to pollution or environmental damage.*(those where existing legal environmental standards are exceeded)*	No	Nil
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*)	Yes	The proposed project site falls in Zone-III as per the IS1893 (Part-1): 2002.It is lesser seismic prone zone. There are no landslides, erosion, flooding and other natural calamities.

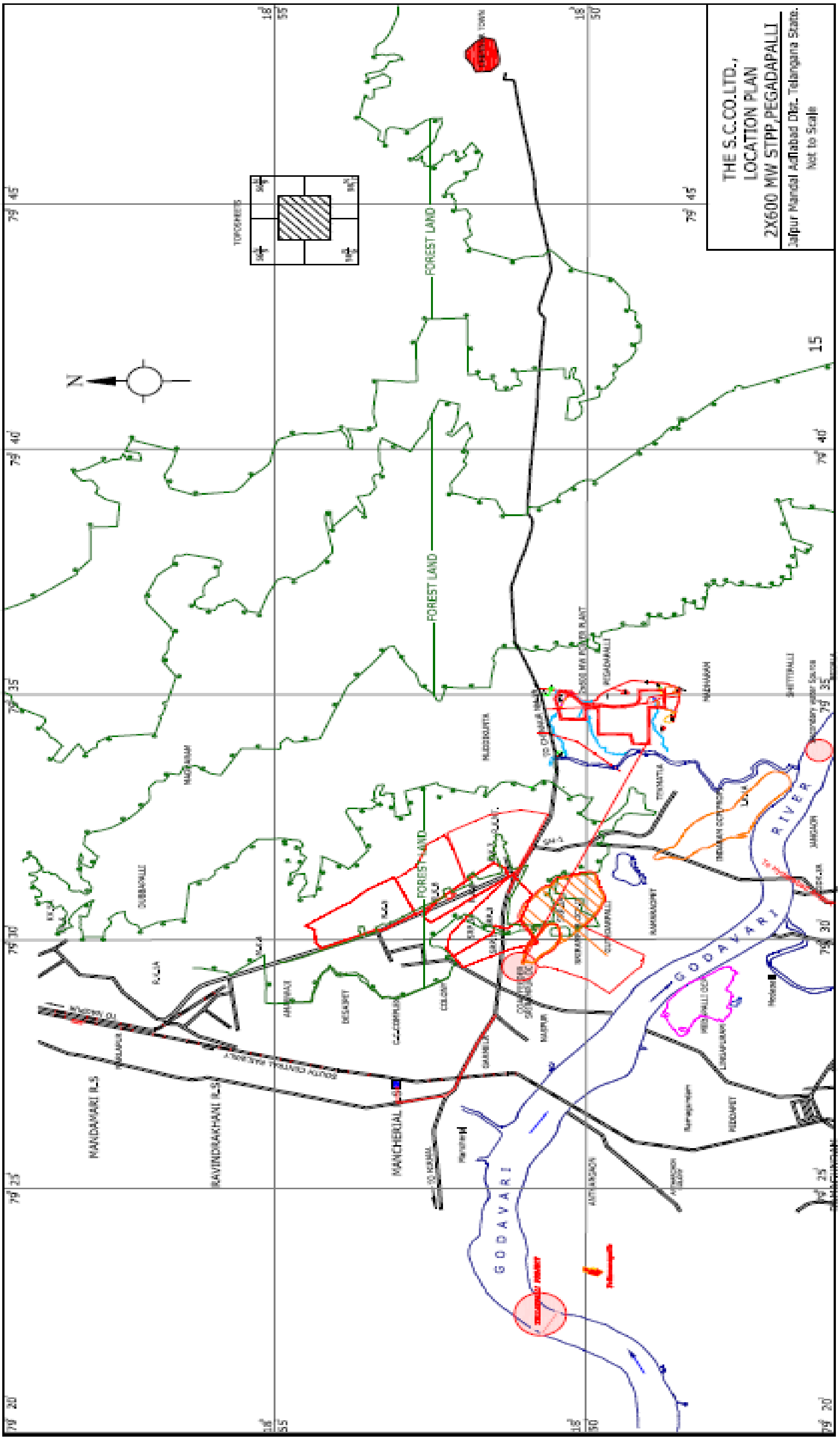
(IV). Proposed Terms of Reference for EIA Studies: Not applicable as the proposal is for amendments in existing EC conditions of 2x600MW Singareni Thermal Power plant.

"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 given, if any to the project will be revoked at our risk and cost".

Date:02.05.2018
Place: Kothagudem.

(S. Shankar)
Director (E&M)
The Singareni collieries Company Limited
(A Government Company)

Signature of the applicant
With full Address.
(Project proponent/Authorised Signatory).


THE S.C.CO.LTD.,
LOCATION PLAN
2X600 MW STPP,PEGADAPALLI
Jaipur Mandal Adilabad Dist. Telangana State.
Not to Scale
FOREST LAND
FOREST LAND
FOREST LAND
GODAVARI
GODAVARI RIVER
GODAVARI
MANCHERIAL
MANDAMARI R.S
RAVINDRAKHANI R.S
PEGADAPALLI