APPENDIX I
(See paragraph – 6)
FORM 1

(I) Basic Information

Sl. No.	Item	Details
1.	Name of the project/s	Bellary Thermal Power Station Unit -3
2.	S.No. in the schedule	The location is situated inside the BTPS plant towards south side of existing Unit-2
3.	Proposed capacity/area/length/ tonnage to be handled/command area/lease area/ number of wells to be drilled	Coal based thermal power station Unit-3 of 1 x 700 MW capacity 40 Ha
4.	New/Expansion/Modernization	Expansion
5.	Existing capacity/area etc.,	Unit-1 – 500 MW capacity Unit-2 - 500 MW capacity
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	The site is located in the vicinity of the Kudatini village, at about 22 km from Bellary adjacent to the National Highway NH-63 from Bellary to Hospet. Latitude : 15^0 11' 58"- N Longitude: 76^0 43' 23"- E
	Plot/Survey/Khasra No.	Inside the BTPS plant. Adjacent South side of Unit-2
	Village	KUDITHINI
	Tehsil	Bellary
	District	Bellary
	State	Karnataka
10.	Nearest railway station/airport along with distance in Kms	Toranagallu JSW Vidyanagar air port
11.	Nearest Town, city, District Headquarters along with distance in Kms	Bellary 22 Kms
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	KUDITHINI - 583 115 Bellary Taluk and Dist Tel : 08392 – 248 025

13	Name of the applicant	Sri.Shashikanth
14	Registered Address	Chief Engineer(Elec)U3and CHP
15	Address for correspondence:	
	Name	Sri.Shashikanth
	Designation (Owner/Partner/CEO)	Chief Engineer(Elec)U3and CHP
	Address	Bellary Thermal Power Station Karnataka Power Corporation Ltd KUDITHINI
	Pin Code	583 115
	E-Mail	ceeconstrn@gmail.com safetybtps@gmail.com
	Telephone No.	08392 288 669
	Fax No.	08392 288669
16	Details of Alternative Sites examined, if any. Location of these sites should be shown on a topo sheet	NA (Expansion Project)
17	Interlinked Projects	No
18	Whether separate application of interlinked projects has been submitted?	NA
19	If yes, date of submission	NA
20.	If no, reason	NA
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 ?	NO
22	Whether there is any Government Order/Policy relevant/relating to the site ?	NO
23	Forest land involved (hectares)	NO
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

(I) 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 total area available is 741 ha for establishing the proposed Unit-3 including Unit-1&2. The Unit-1 and Unit-2 of 500 MW capacity are in working stage. The area is mostly barren and generally plain. The project site is located at an average elevation of about 475.00 m above MSL.
1.2	Clearance of existing land, vegetation and buildings?	No	Vacant land available has been utilized for the proposed project. The land does not have any vegetation or buildings.
1.3	Creation of new land uses?	Yes	Establishing the proposed unit-3 Thermal Power Plant
1.4	Pre-construction investigations e.g. bore holes, soil testing?	Yes	Soil testing has been carried out in the study area to examine the impacts of industrial activities on the soil. Physical and chemical characteristics of soil are being obtained by collecting soil samples. Bore wells have been drilled to test ground water for impacts due leachet.
1.5	Construction works?	Yes	Construction works include: i) Main plant building ii) Boiler structure iii) Transformer bay iv) Switch yard v) Chimney vi) Coal handling system vii)Water system (DM plant & CW pump house) viii) Cooling towers ix) Ash Handling unit and other miscellaneous buildings like ESP control room, Switch yard control room, Diesel generator building, Fuel oil pump house, Raw water pump house etc,.
1.6	Demolition works?	No	-

1.7	Temporary sites used for construction works or housing of construction workers?	No	All the works are being executed through contractors. During construction labour camps are established by the contractors. It has stipulated in the contracts to establish labour camps with amenities like drinking water supply, health & sanitation and medical facilities. The contractors will be insisted to engage local laborers to the maximum extent.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	The building construction works for the proposed project include: i) Main plant building ii) Boiler structure iii) Transformer bay iv) Switch yard v) Chimney vi) Coal handling system vii) Water system (DM plant & CW pump house) viii) Cooling tower ix) Ash Handling Plant And other miscellaneous buildings like ESP control room, Switch yard control room, Diesel generator building, Fuel oil pump house, Raw water pump house etc. The excavated earth will be used for embankment etc., to the extent possible.
1.9	Underground works including mining or tunneling?	Yes	Such as wagon tippler, transfer houses, underground conveyors and circulating water piping system
1.10	Reclamation works?	No	-
1.11	Dredging?	No	-
1.12	Offshore structures?	No	-
1.13	Production and manufacturing processes?	Yes	The project is for power generation to an extent of 1x700 MW using coal as main fuel.

1.14	Facilities for storage of goods or materials?	Yes	The HFO & LDO tanks installed to cater the requirement of Unit-1&2 are sufficient to cater to Unit-3 requirement However, one set of HFO pumps (1W + 1S) and one set of LDO pumps to be installed in extension of existing pump house. Presently TWO stack yards are available for Unit 1&2, A coal stockyard for stacking of crushed coal required for a minimum of 30 days has been established for Unit-3 on south side of existing yard. For meeting the additional coal requirement of Unit-3, one more Wagon Tippler with one stream of conveyor will be installed up to transfer house of Coal Handling system-II.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	Solid wastes generated during the operation phase from the power plant operations will be: • Fly ash and bottom ash- 1920 tonnes per day. The disposal of the above wastes will be as follows: • The collection of fly ash in dry form in silos for utilization in cement plants and for manufacturing other construction materials like bricks, paver blocks, filling low laying areas etc. • The disposal of bottom ash and unutilized fly ash in slurry form into the already existing ash pond. • Effluent treatment plant will be set up to treat all the liquid effluents generated in the plant area. The effluents generated in the proposed thermal plant will be mainly inorganic in nature and the treated effluents will be used for secondary usages. Sludge from the treatment plant will be disposed off suitably. Construction waste from the proposed project is limited and will be disposed off as per the guidelines of KSPCB. The sludge from sewage treatment

			plant (in the plant area) will be used for horticultural purposes.
1.16	Facilities for long term housing of operational workers?	Yes	Residential colony is in construction stage.
1.17	New road, rail or sea traffic during construction or operation?	No	Existing infrastructure of Unit-1 & 2 within the plant area will cater to the requirements of unit-3 also.
1.18	New road, rail, air, waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	-
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	-
1.20	New or diverted transmission lines or pipelines?	Yes	The power will be evacuated into KPTCL network through Existing 400 KV and 220 KV lines.
1.21	Impoundment, damming, converting, realignment or other changes to the hydrology of watercourses or aquifers?	No	-
1.22	Stream crossings?	No	-
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	The water required for the project will be obtained from Narayanapura reservoir. The Government of Karnataka has allotted required quantity of water from River Krishna to the proposed project.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	-
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Personnel transportation will be by private or public transport. Construction Material will be transported during construction stage of the power plant through the access road. During operation phase, Coal, HFO and LDO will be transported to the plant by rail.

1.26	Long-term dismantling or decommissioning or restoration works?	No	-
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	-
1.28	Influx of people to an area in either temporarily or permanently?	Yes	During construction phase, laborers are being employed by contractors, temporarily.
1.29	Introduction of alien species?	No	-
1.30	Loss of native species or genetic diversity?	No	-
1.31	Any other actions?	No	-

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):**

Sl. 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	The land identified for the Unit-3 (expansion unit) is vacant land available in the existing Bellary Thermal Power Station adjacent to Unit-2. Total area available is 741 ha.
2.2	Water (expected source & competing users) unit: KLD	Yes	The water required will be drawn from existing raw water pond. Operational Phase- 53,976 KLD This requirement will be met by drawing water from Narayanapura reservoir, for which approval has been accorded by the Water Resources Department (Government of Karnataka).
2.3	Minerals (MT)	Yes	Mainly Coal – 2.12 million tonnes per year.
2.4	Construction material – stone, aggregates, sand / soil (expected source –	Yes	Approximate quantity of construction materials : i) Stone/Aggregate = 80,000 m^3 from Kudalu & Anthapura quarries at a

	MT)		distance of 10 kms. ii) Sand = 40,000 m^3 from Hagari river at a distance of 40 kms.
2.5	Forests and timber (source – MT)	No	-
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	Construction power will be obtained from KPTCL – 4 MW. The coal required during operational phase will be from WCL/SCCL/MCL.
2.7	Any other natural resources (use appropriate standard units)	No	-

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	In the proposed Power Plant, the substances / materials which are hazardous as per the MSIHC rules are mainly HFO and LDO, which will be used for startup and oil support for low load operations. In addition to that, HCl and Cl_2 Gas will also be required. All the necessary safety precautions will be taken as per the guidelines of KSPCB/ CPCB.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Adverse impacts may be due to dust & gaseous emissions as well as discharge of effluents into water bodies. However, it is planned to install the pollution control devices to control emissions at source. Also, effluents will be treated as per the guideline of KSPCB/ CPCB to meet the discharge standards on land/ water body. In addition to that all other precautionary and safety measures will be taken to avoid any adverse impact.
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	The project will provide additional direct / indirect employment opportunities as a positive impact of the project for the welfare of people.

3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	-
3.5	Any other causes	No	-

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	No	The project site is almost flat and hence no major earthwork is involved. All the excavated earth will be used within the project site to the extent possible.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	All measures towards health and sanitation of the construction labourers are being ensured. During the operation phase, some municipal waste being generated from the facilities like administrative office and warehouse etc., which is being disposed off as per the guidelines given in Municipal Solid Waste (Management & Handling) Rules, 2000.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	From the proposed project hazardous waste will be generated in the form of waste oil, empty oil barrels, grease, lubricating and insulating oils from Turbo generator and Transformer. Waste oil will be collected in dedicated drums and stored on impervious concrete floor. The same will be sold to the vendors authorized by MOEF/ KSPCB for recycling.
4.4	Other industrial process wastes	Yes	Bottom Ash in wet form
4.5	Surplus product	No	-

4.6	Sewage sludge or other sludge from effluent treatment	Yes	Effluent treatment plant will be set up to treat the liquid wastes. Sludge from the treatment plant and from DM plant will be suitably disposed off.
4.7	Construction or demolition wastes	Yes	Construction waste is being minimized as much as possible. Excavated earth is being utilized for filling works etc., within the project site.
4.8	Redundant machinery or equipment	No	-
4.9	Contaminated soils or other materials	No	The waste oil from the power plant will be collected and stored in empty oil barrels/containers. The barrels/containers will be stored in an open and isolated place inside the plant having concrete floor housed in a shed and will be sold to authorized recyclers approved by KSPCB/CPCB, to comply with the Hazardous Waste (Management & Handling) Rules 1989 and amended thereafter.
4.10	Agricultural wastes	No	-
4.11	Other solid wastes	No	-

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	SO_2 = 2,456 kg/hr NOx = 2,763 kg/hr SPM = 222 kg/hr
5.2	Emissions from production processes	Yes	Same as 5.1.
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive emissions from coal handling are anticipated. Coal stackyard and conveyors for transporting coal from yard to silos may generate fugitive emissions.
5.4	Emissions from construction activities including plant and equipment	Yes	Fugitive emissions during construction phase in the form of dust from the construction activities.
5.5	Dust or odors from handling of materials including construction materials,	Yes	Dust will be generated from coal handling (loading and unloading) and coal crushing unit during operation

	sewage and waste		phase and due to civil work during construction activities. Chlorine smell in case of leakage.
5.6	Emissions from incineration of waste	No	-
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	-
5.8	Emissions from any other sources	No	-

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	During construction phase, is being generated from various construction machineries such as: • **Earth Movers** ▪ Tractors ▪ Loaders ▪ Tippers/Trucks ▪ Dozers • **Material Handlers** ▪ Concrete mixers ▪ Concrete pumps ▪ Vehicular Traffic ▪ Construction machinery and plant machinery. During operation phase noise will be generated from the following equipment: • Turbo-generators • Coal Crushers • Pumps • DG Sets • Air Compressors
6.2	From industrial or similar processes	Yes	The noise is generated from steam turbines and leakage of steam if any.
6.3	From construction or demolition	Yes	Noise generation is from construction activities. However, necessary measures will be taken to minimize any disturbance caused during construction.

6.4	From blasting or piling	Yes	Controlled / muffled blasting is being carried out during hard rock excavation which is very minimal
6.5	From construction or operational traffic	Yes	Since the project area is close to National Highway and railway track, emissions from vehicular traffic is anticipated. During operational phase, vehicles will be maintained to ensure minimal emissions.
6.6	From lighting or cooling systems	No	-
6.7	From any other sources	No	-

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	
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Sewage and other effluent will be treated before using it for secondary usages.
7.3	By deposition of pollutants emitted to air into the land or into water	No	Emissions will be from the stack of Power Plant and vehicular traffic on the National Highway. Also, fugitive emissions will be from coal handling. Stack of height 275 m will be provided as per CPCB norms. Moreover, Dust Suppression / Extraction system will also be provided.
7.4	From any other sources	No	-
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	-

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	No	All necessary precautionary measures will be taken to avoid any accidents.
8.2	From any other causes	No	-
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	No flooding or earthquake disaster is reported in this area in the past. As per the Seismic Zoning Map of India, the site falls in Zone-II. i.e. low seismic intensity area.

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 facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:	Yes	The project will lead to the development of additional infrastructure in the area which will contribute to the development to the area.
	•Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.)	No	Existing infrastructure of unit-1&2 will be sufficient for unit-3.
	•housing development	No	-
	•extractive industries	No	-
	•supply industries	No	-
	•other	No	-
9.2	Lead to after-use of the site, which could have an impact on the environment	No	-
9.3	Set a precedent for later developments	No	-
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects.	Yes	Existence of M/s JSW Vijayanagara Steel Plant and M/s JSW Thermal Power Plant located at 7 kms from the project site.

(II) 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	-
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	1) Thoranagallu reserved forest at about 1 km. 2) Chikkantapur reserved forest at about 7 kms. 3) Daroji Tank at 6.5 kms. 4) Wild bear sanctuary at about 10 kms.
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	-
4	Inland, coastal, marine or underground waters	Yes	
5	State, National boundaries	Yes	State boundary (Andhra Pradesh) – 12 km
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Yes	National Highway (adjacent to the project site)
7	Defense installations	No	-
8	Densely populated or built-up area	No	No major towns within 15 kms radius.
9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	No	No major towns.
10	Areas containing important, high quality or scarce resources *(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	No	
11	Areas already subjected to pollution or environmental damage. *(those where existing legal environmental standards are exceeded)*	No	-

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*)	No	-

(IV). Proposed Terms of Reference for EIA studies

"I hereby given undertaking that the data and information given in the application and enclosures and 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:12.11.2014
Place: KUDITHINI

(Shashikanth)
Chief Engineer (Elec)U-3 and CHP
Ballari Thermal Power Station
Karnataka Power Corporation Ltd.,
KUDITHINI-583 115
Ballari Tq and Dist
Karnataka state
(Signature of the applicant)
(Full address)