<u>APPENDIX - I</u> (See paragraph - 6)

UPDATED FORM- I FOR RE-VALIDATION OF ENVIRONMENTAL CLEARANCE

(I) Basic Information:

(1)	Basic Information:	
	Item	Details
S. No		
1	Name of the project/s:	M/s Essar Power Orissa Ltd.
2	S. No. in the schedule	1 (d)
3.	Proposed capacity/area/ length/	Renewal/Extension of existing environmental
	tonnage to be handled/ command	clearance for (2x30) MW Coal based Captive
	area/lease area/ number of Wells to be	Power Plant (Phase-II) of M/s Essar Power Orissa
	drilled.	Ltd. (EPOL) at village: Bijaychandrapur, Tehsil:
		Kujang, Dist: Jagatsinghpur, Odisha. (Vide letter no
		- 638/SEIAA dated 17.11.2011)
4.	New/Expansion/Modernization	Not applicable; Only renewal of existing
		Environmental Clearance vide ref No. 638/SEIAA
		dtd. 17.11.11.
5.	Existing Capacity Area etc.	2x30 MW (As mentioned earlier)
6.	Category of Project i.e.' A' or 'B'	В
7.	Does it attract the general condition?	Not applicable
	If yes, Please specify.	<u></u>
8.	Does it attract the specific condition? If	No
9.	yes, Please specify. Location	Latitudes and Langitudes
9.	Location	Latitudes and Longitudes
		Point 1: 20°18'44.93" N, 86°38'57.51" E
		Point 2: 20°18'48.37" N, 86°38'52.48" E
		Point 3: 20°18'27.72" N, 86°38'26.29" E
	7) (0 (17)	Point 4: 20°18'21.96" N, 86°38'30.49" E
·	Plot/Survey/Khasra No.	Land is already acquired.
	Village	Bijaychandrapur
	Tehsil	Kujang
	District	Jagatsinghpur Odisha.
10	State Negreet wileyey station (signest class	
10.	Nearest railway station/airport along with Distance in kms.	Paradeep Railway Station 4 Km Bhubaneswar Airport, Bhubaneswar 140 Km.
11.	Nearest Town, city, District	Paradeep
11.	Headquarters along with distance in	Distance – 5.0 Km
	kms.	Distance on ini
12.	Village Panchayats, Zilla Parishad,	Village – Bijayachandrapur
	Municipal Corporation, Local body	Dist- Jagatsinghpur
	(complete postal Address with	
	telephone nos. to be given)	
13.	Name of the applicant	Essar Power Orissa Limited
14.	Registered Address	27 th km,Surat Hazira road,Hazira -394270
15.	Address for correspondence:	
	Name	Mr. Santosh K Thatte
	Designation (Owner/Partner/CEO)	Vice President

	Address	At-Udayabatta, P.OParadeep, Dist- Jagatsinghpur, Odisha.
	Pin Code	754103
	E-mail	s.thatte@essarpower.co.in
	Telephone No.	06722-216031/32/33
	Fax No.	00722 210031/32/33
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a topo sheet.	Project land is already acquired , Phase-I is already commissioned since from the year 2015 & Phase – II work is in progress.
17.	Interlinked Projects	Phase-I, is already commissioned and in operational since from 2015 & Phase-II work in progress.
18.	Whether separate application of interlinked Project has been submitted?	Not applicable
19.	If yes, date of submission	Not applicable
20.	If no, reason	
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?	Not applicable
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

 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.,)

I hereby given undertaking that the data and information given in the application and enclosure 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 shall be rejected and clearance give, if any to the project shall be revoked at our risk and cost.

Date: 97/10/2018
Place: Bhubanesan.

Signature of the applicant
With Name and Full Address
(Project proponent / Authorised Signatory

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 corridors of wild Animals, the project proponent shall submit the map duly authenticated showing by chief wildlife warden showing these features visavis the project location and the Recommendation 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/Environment Clearances, 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 authorized signatory only. The authorized signatory should also submit a document in support of his claim of being an authorized signatory for the specific project.

(II) Activity

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

S.No.	Information/Checklist confirmation	Yes / No					nate quantities /rates, e of information data
1.1	Permanent or temporary	Yes					and Phase-I, is already
	change in land use, land cover						al since from 2015 &
	or topography including increase in intensity of land				_		land use is Industrial. in Annexure-I.
	use (with respect to local		Lanu umiza	tion breakt	ıp ıs g	IVEILI	III AIIIIEXUI E-I.
	land use plan)						
1.2	Clearance of existing land,	Yes	Already do	ne, Phase-I	, is al	lready	y commissioned and in
	vegetation and buildings?			since from	2015	& Ph	ase-II work in progress.
1.3	Creation of new land uses?	Yes	No				_
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Investigate				
1.5	Construction works?	Yes	Constructio	n work has	alrea	dy be	en done.
1.6	Demolition works?	No	Not envisag				
1.7	Temporary sites used for	Yes					commissioned so there
	construction works or housing of construction workers?		is no tempo	rary site for	r cons	tructi	ion work.
1.8	Above ground buildings,	Yes	Not applica	hle since	nhase	a-I ic	already completed &
1.0	structures or earthworks	103	commission				
	including linear structures, cut						- F 9
	and fill or excavations						
1.9	Underground works including	No			-		s already completed &
1.10	mining or tunneling?		commission		[I wor]	k is in	n progress.
1.10	Reclamation works?	No	Not applical				
1.11	Dredging? Offshore structures?	No No	Not applical Not applical				
1.12	Production and manufacturing		Not applical	bie			
1.13	processes?	103					
1.14	Facilities for storage of goods or materials?	Yes	10 days of s	torage shed	ds is e	nvisa	ged.
1.15	Facilities for treatment or	Yes	Solid Waste				
	disposal of solid waste or liquid		Type of Waste	Source	Quai	ntity	Disposal
	effluents?		Fly Ash	Boilers	504	TPD	Supply to cement,
							bricks/blocks
			Bottom		126	TPD	manufacturers. Disposed off in dry form
			Ash				in the ash mound.
			Used Oil	CPP Operation	25 K	LPA	Will be sent to CPCB registered recyclers.
			Liquid E00	onto			
			Liquid Efflu	ents			
			Particulars	Generati Rate	ion	Disp	osal

			(m³/hour)
			Cooling 67 The waste water generated
			Tower blow from the sources is collected
			down in holding pond and treated
			Boiler blow 7.5 to achieve required down standards as per EC vide
			DM water 0.8 letter no 638/SEIAA dated
			Raw water 29 17.11.11.
			treatment
			plant
			Total 104.3
			The total effluent after treatment is being used for dust suppression, ash conditioning, and gardening and in cooling tower. The domestic waste water is discharged to septic tank followed by soak pit.
1.16	Facilities for long term housing of operational workers?	No	Not envisaged
1.17	New road, rail or sea traffic during construction or operation?	No	Not envisaged
1.18	New road, rail, air waterborne or other transport infrastructure including new or	No	Not envisaged
	altered routes and stations, ports, airports etc?		
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Not applicable
1.20	New or diverted transmission lines or pipelines?	No	Not applicable
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not applicable
1.22	Stream crossings?	Yes	No streams are crossing.
1.23	Abstraction or transfers of water form ground or surface waters?		About 6200 m3/day of water will be drawn from Taladanda canal.
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	Transportation of Materials during construction and operational phase by Road.
1.26	Long-term dismantling or decommissioning or restoration works?	No	Not envisaged
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	Yes	Workers are/ shall be employed from the local area on

	either temporarily or		priority or may be brought from outside.
	permanently?		
1.29	Introduction of alien species?	No	Not envisaged
1.30	Loss of native species or	No	Not envisaged
	genetic diversity?		
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):

S.No.	Information/checklist	Yes/	Details thereof (with approximate quantities
	confirmation	No	/rates, wherever possible) with source of
			information data
2.1	Land especially undeveloped or agricultural land (ha)	Yes	Project land is already acquired, Phase-I is already commissioned since from the year 2015 & Phase –II work is in progress.
2.2	Water (expected source & competing users) unit: KLD	Yes	The required water of 6200 KLD is being drawn from Taladanda Canal.
2.3	Minerals (MT)	Yes	Coal 1400 TPD
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	Yes	Civil Construction for the entire project (Phase-I & Phase-II) both are already completed, only Electrical & Mechanical works are going on.
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	Coal-1400 TPD, HSD-5000 L The power requirement is available from Phase-I which is operational since 2015.
2.7	Any other natural resources (use appropriate standard units)	No	Not applicable

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.

S.No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)		Max storage capacity HSD: 55 m³ storage As per approved EC /638/SEIAA dated 17.11.11
	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)		Not applicable
	Affect the welfare of people e.g. by changing living		CSR activities are done through Essar Foundation.

	conditions?		
3.4	Vulnerable groups of people	No	Not applicable
	who could be affected by the		
	project e.g. hospital patients,		
	children, the elderly etc.,		
3.5	Any other causes	No	Not applicable

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

S.No	Information/Checklist	Yes	Details thereof (with approximate quantities
Sirve	confirmation	/No	/rates, wherever possible) with source of
		/	information data
4.1	Soil, overburden or mine wastes	Yes	Already done, Phase-I, is already commissioned and in operational since from 2015 & Phase-II work in progress.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Municipal solid waste generated from temporary sanitary facilities during construction phase will be properly collected segregated according to waste types and subsequently disposed as per MSW Rules.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	Recyclable
4.4	Other industrial process wastes	Yes	Bottom ash Fly ash
4.5	Surplus product	No.	No Applicable
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Domestic sewage would be treated in septic tanks/ soak pits.
4.7	Construction or demolition wastes	Yes	At present Civil Construction work has been already completed and there are no permanent structures on the site, therefore no demolition waste will be generated during the construction activities.
4.8	Redundant machinery or equipment	No	Not applicable
4.9	Contaminated soils or other materials	No	Proper precautionary measures during construction would ensure no such contamination
4.10	Agricultural wastes	No.	Not applicable
4.11	Other solid wastes	No	Not applicable

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

S.No	Information/Checklist	Yes	Details thereof (with approximate quantities
	confirmation	/No	/rates, wherever possible) with source of
			information data
5.1	Emissions from combustion of	Yes	Particulate matter: (As per EC no 638/SEIAA)
	fossil fuels from stationary or		Particulate matter emission <100 mg/Nm3
	mobile sources		SO2: coal burnt has sulfur < 0.5 %
			NOx: AFBC boilers are fitted with low NOx burners.
5.2	Emissions from production	Yes	Particulate / Gaseous emissions are limited to the

	processes		regulatory norms through appropriate control equipment.
5.3	Emissions from materials handling including storage or transport	Yes	Dust from i. Coal handling site and ii. Fly ash storage area. Water sprinkling in coal handling plant. Fly ash silos will be provided with bag filters on top.
5.4	Emissions from construction activities including plant and equipment	Yes	From all combined sources in Plant, the Ambient Air quality (24 hrs) shall be (As per approved/existing EC & CTE)
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Fugitive emission is envisaged from handling of construction materials and from vehicular movement. Therefore, water sprinkling will be done to reduce fugitive dust.
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 applicable
5.8	Emissions from any other sources	No	Not applicable

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

S. 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	Turbine generator, other rotating equipment coal handling are the source of noise in a power plant. All the equipments in the plant are designed/operated to have noise level not exceeding 85 to 90 dB(A) at 1 meter from source.
6.2	From industrial or similar processes	Yes	Cumulative noise shall be <75 Db (A) at the boundary of the plant.
6.3	From construction or demolition	Yes	Maximum cumulative noise shall be varied from 85 to 100 dB (A) at the construction site.
6.4	From blasting or piling	No	No blasting activity. Piling noise is minimized by avoiding night time piling.
6.5	From construction or operational traffic	Yes	Cumulative noise shall be varied from 75 – 80 dB(A) Leq
6.6	From lighting or cooling systems	No	Noise generated from the Cooling Tower is within the Industrial 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:

S.No	Information/Checklist	Yes	Details	thereof ((with	appro	ximate	quantit	ies
	confirmation	/No	/rates,	wherever	r pos	sible)	with	source	of
			information data						

7.1	From handling, storage, use or spillage of hazardous materials	No	Safe storage facilities are provided for elimination of any contamination
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Plant is designed for Zero discharge
7.3	By deposition of pollutants emitted to air into the land or into water	Yes	Air emissions level is maintained well within the standard stipulated by OSPCB/CPCB/ MoEF & CC.
7.4	From any other sources	No	Not applicable
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	Not applicable

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

S. No.	Information/Checklist	Yes	Details thereof (with approximate quantities		
	confirmation	/No	/rates, wherever possible) with source of		
			information data		
8.1	From explosions, spillages,	Yes	Fire hazard from Oil & Coal Storage. It will be		
	fires etc from storage,		controlled by regular water sprinkling and		
	handling, use or production of		compaction of coal stock pile to avoid auto ignition		
	hazardous substances		and chlorine release.		
8.2	From any other causes	No	Not applicable		
8.3	Could the project be affected	No	The project site is located in Zone III in the Seismic		
	by natural disasters causing		Zonation Map as per IS: 1893.		
	environmental damage (e.g.				
	floods, earthquakes, landslides,				
	Cloudburst etc.)?				

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

S. 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.: • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.)		EPORL, always giving priority to locals in direct and indirect employment and business opportunities.
	housing developmentextractive industriessupply industries		

	• other		
9.2			Not applicable
	which could have an impact		
	on the environment		
9.3	Set a precedent for later	Yes	Contribute to the maximum possible extent.
	developments		
9.4	4 Have cumulative effects due No		Number of processing and handling of iron ore
	to proximity to other existing		facilities are in operation or planned in the region.
	or planned projects with		Hence, this project shall have cumulative effects
	similar effects		with respected to all parameters.

Environmental Sensitivity

S. No.	Areas	Name/ Identity	Aerial distance (within 10km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	None	Not applicable
2	Areas which are important or sensitive for ecological reasons – Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Reserved Forest Water Bodies Mahanadi River Nuna nadi Taladanda canal Gupti nadi Kharnasi nadi Bhitargarh Nala Santra nadi Atharabanki nala Shyamkoti Nala Kaduamodali nala	Nil 1.5 km, NE 5.0 km, NW 0.7 km, SW 3.3 km, NNW 3.0 km, NE 1.1 km, SW 7.8 km, SW 4.0 km, S 4.5 km, SSW 4.0 km, E
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering,		Mangrove swamp more than 6 kms
4	Inland, coastal, marine or underground waters	Bay of Bengal	5.5 km, SE
5	State, National boundaries	None	Not applicable
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas.	1,111 20	• 0.8 km, SW • 3.6 km, S
7	Defense installations	None	

8	Densely populated or built-up area (population more than 2000) as per 2001 census data.	 Bagadia Bhutumundai Gandakipur Paradeepgarh Kharinasi Ramanagar Paradeep 	 7.1 km SW 7.2 km W 9.0 km WSW 3.5 km W 6.0 km NE 6.0 km NNE 5.0 km, SE
9	Areas occupied by sensitive man- made land uses (hospitals, schools, places of worship, community facilities)	Hospital	within 10 km
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)		Not applicable
11	Areas already subjected to pollution or environmental damage (those where existing legal environmental standards are exceeded)	;	Not applicable
12	Areas susceptible to natural hazard which could cause the project to present environ-mental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)		Not applicable