

Updated Form-I for Amendment in EC for Change in Source of Coal for Vindhyachal Super Thermal Power Project, Stage-V (1x500 MW) Accorded Vide Letter No. J-13012/08/2009-IA.II (T), Dated 02.05.2012.

FORM - I

(I) Basic Information

S. No.	Item	Details
1	Name of the Project:	Vindhyachal Super Thermal Power Project, Stage-V (1x500 MW)
2	S. No. in the Schedule	1(d)
3	Proposed capacity/ area length /tonnage to be handled/ command area/ lease area / number of wells to be drilled	VSTPP Stage-V project (1x500 MW) is based on Sub Critical Technology is under operation. Environmental Clearance to Vindhyachal Super Thermal Power Project (VSTPP), Stage-V (1x500 MW) has been accorded by MOEF&CC on 02.05.2012.
4	New/ Expansion/ Modernization	Plant is under operation. Amendment in Environmental Clearance is sought for change in coal source.
5	Existing Capacity/ Area	Existing capacity of Vindhyachal STPP is 4760 MW (Stage-I 1260 MW + Stage-II 1000 MW + Stage-III 1000MW + Stage-IV 1000MW + Stage-V 500 MW).
6	Category of the project	'A' category
7	Does it attract the General condition? If yes, please specify	Yes. The project is located near interstate boundary of U.P. and M.P. and Critically Polluted Area.
8	Does it attract the special condition? If yes , please specify	No
9	Location	The project site is located on North Western Bank of Rihand Reservoir in Singrauli district of MP at latitudes of 24° 04'58" - 24°06'19" N and longitudes 82° 38'34" - 82° 41'29" E respectively. All units of VSTPP Stage-I (6x210 MW) Stage-II (2x500 MW), Stage-III (2x500 MW), Stage-IV (2x500MW) and Stage-V (500MW) of the project are already in operation. The vicinity map of the project is shown in Exhibit-I.
	Plot / Survey/ Khasra No.	Vindhyanagar
	Village	Waidhan
	Tehsil	Waidhan
	District	Singrauli
	State	Madhya Pradesh
10.	Nearest railway station / airport along with distance in kms.	Nearest Railway Station Shakti Nagar Railway Station (about 2 km. from

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		project) Nearest Commercial Airport: Varanasi (about 220 Km. from project site).
11.	Nearest Town, city, District Head-quarters along with distance in km.	Waidhan (about 5 km)
12.	Village Panchayats, Zila Parishad, Municipal Corporation, Local body (complete postal addressed with telephone nos. to be given)	Village: Waidhan Tehsil: Waidhan, District: Singrauli State: Madhya Pradesh
13.	Name of the applicant	NTPC Limited,
14.	Registered Address	NTPC Bhawan, Core-7 Scope Complex, Lodhi Road, New Delhi – 110 003
15.	Address for correspondence	Dr. Vijay Prakash, GM & HOD (Environmental Engineering) Engineering Office Complex, NTPC Limited, Plot No. A-8A, Sector – 24, Noida (U.P.) – 201301
	Name	Dr. Vijay Prakash
	Designation (Owner/Partner/CEO)	GM & HOD (Environmental Engineering)
	Address	Environmental Engineering Department Engg. Office Complex, NTPC Limited, Plot No. A-8A, Sector – 24, Noida (U.P.) – 201 301
	Pin Code	201301
	E-mail	vijayprakash@ntpc.co.in, environment.ntpc@gmail.com
	Telephone No.	0120-2416930
	Fax No.	0120-2410206
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a topo sheet.	Not applicable as the proposal is for amendment of EC and units are under operation.
17.	Interlinked Projects	None
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, 2011	Not applicable.
22.	Whether there is any Government Order / Policy relevant / relating to the site?	To the best of our knowledge, no such order exists.

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23.	Forest land involved (hectares)	Nil.
24.	Whether there is any litigation pending against the project and / or land in which the project is proposed 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.	Nil.

(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.)

S. 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)	No	Not applicable as the proposal is for Change of coal source.
1.2	Clearance of existing land, vegetation and buildings?	No	Not applicable as plant is under operation and all infrastructure and facilities already developed at site.
1.3	Creation of new land uses?	No	Not applicable.
1.4	Pre-construction investigations e.g. boreholes, soil testing?	No	Not applicable as plant is under operation.
1.5	Construction works.	No	Construction of main plant, associated facilities completed.
1.6	Demolition works?	No	Not envisaged.
1.7	Temporary sites used for construction works housing of construction workers?	No	Not applicable as construction is complete and plant is under operation.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	No	Not applicable as construction is complete and plant is under operation.
1.9	Underground works including mining or tunnelling?	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	Thermal power generation (500 MW) process based on sub critical technology.

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S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.14	Facilities for storage of goods or materials?	Yes	Storage of Materials & Plant Equipment, Coal, Fuel Oil, Chemicals, etc. are already developed.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	A comprehensive Environmental Management Plan (EMP) has been implemented, which covers solid waste management as well as liquid effluent treatment and disposal facilities. The measures have been also highlighted in EIA Report already submitted to MOEF&CC.
1.16	Facilities for long term housing of operational workers?	Yes	Various Residential and Non-residential Buildings within the township already established.
1.17	New road, rail or sea traffic during construction or operation?	Yes	The coal from NCL shall be transported to Vindhyachal STPP through existing MGR. It will create additional traffic.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	Not applicable as plant is under operation and all infrastructure and facilities already developed at site. Existing MGR shall be used.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	No such activity was undertaken.
1.20	New or diverted transmission lines or pipelines?	No	Plant is under operation and no diversion is envisaged.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not applicable as construction is complete and plant is under operation.
1.22	Stream crossings?	No	Not applicable
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	The project is using surface water from hot water discharge channel of Singrauli STPS for power generation. The ground water sources not being used.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	Nil.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	No	Not applicable as proposal is for Change in coal source.
1.26	Long-term dismantling or	No	Plant is under operation and no

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S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
	decommissioning or restoration works?		dismantling or decommissioning or restoration works are required.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not applicable as proposal is for Change in coal source.
1.28	Influx of people to an area in either temporarily or permanently?	No	Existing MGR is proposed to be used.
1.29	Introduction of alien species?	No	Native plants along with some ornamental plants have been planted in plant area and township.
1.30	Loss of native species or genetic diversity?	No	Not applicable as proposal is for Change in coal source.
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):

S. 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)	No	Plant is under operation and land is already under industrial use.
2.2	Water (expected source & competing users) unit: KLD	Yes	The make-up water requirement for Stage-V is 1800 m ³ /hr with ash water recirculation system, which is being drawn from hot water discharge Channel of Singrauli STPP.
2.3	Minerals (MT)	Yes	The Annual coal requirement for VSTPP Stage-V is about 2.5 MTPA, which will be sourced from NCL. Lime stone requirement for proposed project is envisaged about 6.25 Tonnes/hour.
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	Yes	Not applicable as Stage-V is already constructed.
2.5	Forests and timber (source – MT)	No	Nil
2.6	Energy including electricity and fuels (source, competing)	Yes	Auxiliary power is being sourced from Stage-V itself. For coal requirement and source of coal, please refer para 2.3 above.

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	users) Unit: fuel (MT), energy (MW)		
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.

S. 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	Hydrochloric acid, Caustic Soda, Liquid Ammonia and Liquid Chlorine is being stored at plant.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Not applicable as proposal is for Change in coal source.
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	The project is providing job opportunities to people and improving infrastructure facilities in the area.
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)

S. 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	Nil
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Small quantities of domestic wastes are being generated from township and administrative areas, which is being disposed off in environment friendly manner.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	Used oil/, Resin etc. are being generated. These wastes are being disposed off in accordance to the applicable rules and regulations.
4.4	Other industrial process wastes	Yes	Fly ash and bottom ash are being generated due to combustion of coal.

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S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			Fly Ash= 0.64 MTPA & Bottom Ash=0.16 MTPA Total Ash= 0.8 MTPA Gypsum generation is about 10.5 T/hr.
4.5	Surplus product	No	-
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Small quantities are being generated, which are being disposed off in ash disposal area or used as manure.
4.7	Construction or demolition wastes	No	-
4.8	Redundant machinery or equipment	No	-
4.9	Contaminated soils or other materials	No	-
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)

S. 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	Emission from stack comprises of particulates, SO ₂ , NO _x and PM due to coal combustion.
5.2	Emissions from production processes	Yes	In order to mitigate these emissions and to ensure compliance to revised environmental norms of air emission following measures are envisaged: PM: ESP has been designed to meet the limit of PM < 50mg/Nm ³ . SO ₂ : FGD has been installed for limiting SO ₂ emission within 200mg/Nm ³ . NO _x : NO _x emission from the steam generator shall be controlled by employing low NO _x burners (LNB) and improving operating conditions limiting NO _x .
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive dust from coal and ash handling, preparation and storage.
5.4	Emissions from construction activities including plant and equipment	No	Not applicable as plant is under operation and construction has been completed already.

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5.5	Dust or odour from handling of materials including construction materials, sewage and waste	Yes	Dust emissions are being limited to material handling and storage area etc. Odour from sewage is restricted to the sewage treatment area. Construction has been completed already
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:

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	Noise is being generated during operation of the power plant.
6.2	From industrial or similar processes	Yes	From turbines, pumps, fans etc.
6.3	From construction or demolition	No	Not applicable as plant is under operation and construction has already been completed.
6.4	From blasting or piling	No	Not applicable as construction has already been completed.
6.5	From construction or operational traffic	Yes	Due to vehicular movement, there could be slight increase in the ambient noise level.
6.6	From lighting or cooling systems	Yes	The noise level due to operation of Cooling Towers is in the order of 75 dB (A).
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:

S. 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	All due care is taken to avoid spillage of hazardous materials.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	Yes	Sewage and all plant effluents are treated appropriately to conform to regulatory limits and to avoid impact on water or land.
7.3	By deposition of pollutants	No	Not expected, as suitable environmental

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	emitted to air into the land or into water		control measures are provided.
7.4	From any other sources	Yes	Ground water contamination from ash pond is possible. However all due care is taken to prevent the same.
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	Not expected, as suitable environmental control measures are provided.

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

S. 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	On site and off-site Disaster Management Plan have already been prepared and being implemented
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	The project is situated in Seismic zone – III (safe earthquake zone area). Adequate care has been taken during design and construction to resist natural disaster.

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.: <ul style="list-style-type: none"> ➤ Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) ➤ housing development ➤ extractive industries ➤ supply industries ➤ other 	Yes	The project is located in a remote area with stressed infrastructural facilities. The construction of project has already improved infrastructural facilities and led to all round development of the area. This is being further strengthened during operation of plant. Moreover, it has also promoted establishment/ expansion of ancillary and small scale industries and service sector in the area to meet the requirement of the project.
9.2	Lead to after-use of the site, which could have an impact on	No	-

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S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
	the environment		
9.3	Set a precedent for later developments	No	Not applicable as plant is under operation.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	The EC was accorded to project on 02.05.2012 and project is already in operation.

(III) Environmental Sensitivity:

Vicinity Map is enclosed at Exhibit-I.

S. 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	None exists in the surrounding area to the best of our knowledge.
2.	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	No	No ecologically sensitive area located within 15 km radius. However, Rihand Reservoir is located adjacent to the project.
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	Rihand lake is located adjacent to the project.
5.	State, National boundaries	Yes	The project is located adjacent to the border of UP & MP.
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	No	Nil
9.	Areas occupied by sensitive man-made land uses (<i>hospitals, schools, places of worship, community facilities</i>)	No	Nil
10.	Areas containing important, high quality or scarce resources (<i>ground water resources, surface</i>	Yes	Rihand Reservoir is located adjacent to the project.

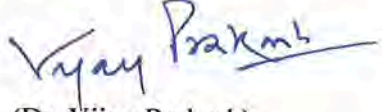
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S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
	<i>resources, forestry, agriculture, fisheries, tourism, minerals)</i>		
11.	Areas already subjected to pollution or environmental damage. <i>(those where existing legal environmental standards are exceeded)</i>	No	Singrauli Area has been declared as critically polluted area by CPCB.
12.	Areas susceptible to natural hazard which could cause the project to present environmental problems <i>(earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)</i>	No	Adequate care has been taken during design and construction to resist the natural disaster.

(IV) Proposed Terms of Reference for EIA Studies: Not Applicable

I hereby give an 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: 7/12/18
Place: NOIDA


(Dr. Vijay Prakash)
GM & HOD (Env. Engg.)
Engineering Office Complex,
NTPC Limited,
A-8A, Sec-24, Noida

डा० विजय प्रकाश / Dr. Vijay Prakash
महाप्रबन्धक एवं विभागाध्यक्ष (पर्या. अभि.)
General Manager & HOD (Env. Engg.)
एन टी पी सी लिमिटेड / NTPC LIMITED
EOC, A-8A, Sector-24, Noida-201 301 (U.P.)

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Exhibit-1

Vicinity Map of Vindhyachal STPP (1x500 MW)

