

Revised Form-I
(Appendix-I of EIA Notification, 2006)

**For Amendment of Environmental Clearance for
Farakka STPP (2100 MW) of NTPC Limited
(for Use of Blended Coal and Transport of
Imported/ Domestic Coal Through Inland
Waterway No.1)**

I. Basic Information

Sl. No	Item	Details
1	Name of the Project	Farakka Super Thermal Power Project (2100 MW), Murshidabad, West Bengal The project is already under operation. The present proposal is for Amendment in Environmental Clearance for: <ul style="list-style-type: none">• Use of blended coal and;• Transport of imported/ domestic coal through inland waterway no.1.
2.	Serial No. in the schedule	S. No. 1(d)
3.	Proposed capacity/ area/ length/ tonnage to be handled/ command area/ lease area/number of wells to be drilled	It is an operating project with a generation capacity of 2100 MW. MoEF & CC has already accorded permission for use of blended coal in Farakka STPP, Stage-I, II & III (Domestic 70%: Imported 30%) and transportation of imported coal through National Waterway No.1. for a period of one year vide letter no. J-13011/28/2006-IA.II(T) dated 31.07.2014, 29.09.2015 and 26.10.2016. Further extension of permission for 5 years is sought in respect of the amended conditions.
4.	New Expansion/ Modernization	Transport of imported/ domestic coal through inland waterway no.1.
5.	Existing capacity/ Area etc.	Capacity of the project is 2100 MW. The project is spread over an area of 4436 acres.
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	Farakka Super Thermal Power Project is located

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

		near village Andhua, Farakka tehsil, Murshidabad district of West Bengal at a latitude and longitude of 24° 49' N and 87° 54'30" E respectively.
	Plot/Survey/ Khasra No.	
	Village	Andhua
	Tehsil	Farakka
	District	Murshidabad
	State	West Bengal
10	Nearest Railway station/ airport along with distance in Kms.	Farakka Railway Station on Eastern Railway line towards NE of Farakka STPP at a distance of approx. 3 kms (aerial). Nearest airport is at Kolkata at a distance of approx. 240 kms (aerial).
11	Nearest town, city, district Headquarters along with distance in Kms.	District headquarter Murshidabad is at a distance of approx. 75 kms (aerial). Farakka town is at about 3 kms (aerial) from the project.
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local Body (Complete Postal Address with Telephone Nos. to be given	Village – Andhua Tehsil – Farakka District - Murshidabad
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	
	Name	R. K. Baderia
	Designation(Owner/Partner/ CEO)	HOD (Environmental Engineering)
	Address	Environmental Engineering Department, Engg. Office Complex, NTPC Limited, Sector – 24, Noida (U.P.) – 201 301
	Pin Code	201301
	Email	rajeshbaderia@yahoo.com
	Telephone	0120-2410325
	Fax	0120-2410506
16	Details of alternative sites examined, if any, location of these sites should be shown on a topo sheet	Not applicable
17	Interlinked Projects	Nil
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.

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

21	Whether the proposal involves approval/clearance under (details of the same and their status to be given) :	
	(a) The forest (Conservation) Act, 1980	Not applicable.
	(b) The Wildlife (Protection) Act, 1972	Not applicable.
	(c) The C.R.Z. Notification, 1991	Not applicable.
22	Whether there is any Government Order/ Policy relevant/ relating to the site	Yes. Ganga-Bhagirathi-Hooghly river system from Allahabad to Haldia is declared as National Waterway No.1 vide National Waterway (Allahabad-Haldia stretch of the Ganga-Bhagirathi-Hooghly river) Act 1982 (49 of 1982). Out of the total 1620 Km stretch of National Waterways No.1, only 560 Km stretch from Sagar to Farakka of river Hooghly is being utilized for transportation of imported coal.
23	Forest land involved (hectares)	No additional land is proposed to be acquired.
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	None

- 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.,)

(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)	No	Not applicable as the infrastructure required to carry out transportation, loading and unloading activities for coal are already in place at Sandheads and Kanika Sands, Farakka Feeder Canal and at Farakka.

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

1.2	Clearance of existing land, vegetation and buildings?	No	Not applicable as the infrastructure required for the afore-mentioned activities is already in operation.
1.3	Creation of new land uses?	No	Not applicable
1.4	Pre-construction investigations e.g. bore holes, soil testing?	No	Not applicable
1.5	Construction works?	No	Infrastructure facilities are already in place and being used by various users at: <ul style="list-style-type: none"> • Sandheads and Kanika Sands for unloading, • Farakka Feeder Canal for unloading and; • At Farakka for material handling and coal conveying. Therefore no construction works are envisaged.
1.6	Demolition works?	No	No demolition work is envisaged.
1.7	Temporary sites used for construction works or housing of construction workers?	No	-
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	No	Infrastructure facilities such as Tran-shipper, unloading, loading, material handling structures such as service platforms, conveyor system and pollution control facilities have already been constructed.
1.9	Underground works including mining or tunneling?	No	No underground work including mining or tunneling is envisaged.
1.10	Reclamation works?	No	No reclamation works are envisaged.
1.11	Dredging?	Yes	No capital dredging is involved. However, maintenance dredging is undertaken by IWAI within the navigation channel at few locations to maintain Least Available Depth (LAD).
1.12	Offshore structures?	No	No new facility is being created and only a part of existing one is intended to be used.
1.13	Production and manufacturing processes?	No	The proposed activity does not involve any production or manufacturing process. Coal is being used as the fuel in Farakka STPP, only use of blended coal and change in mode of transportation of coal through existing inland waterways is envisaged.

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

1.14	Facilities for storage of goods or materials?	No	No additional facilities for storage of goods or materials are proposed to be created as the unloaded coal will be directly transported to Farakka STPP through dedicated Coal Conveying System.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	No	Facilities for treatment or disposal of solid wastes or liquid effluents are already available and functional. <ul style="list-style-type: none"> • Bilge holding tanks for waste oil used during servicing, • Sewage Treatment Plants (STP) on the Barges and sewage discharging facility to shore support base at Nurpur. • Galley/ accommodation garbage is kept in disposable bags and stored in garbage bins and is disposed off at Nurpur. • Coal slurry management system alongside the Conveyors to collect the slurry and transfer the same to coal settlement tank. After settlement and recirculation of the slurry, the clear water is collected and further pumped ahead to Farakka STPP's STP.
1.16	Facilities for long term housing of operational workers?	No	Farakka STPS already has a full-fledged township. No additional housing infrastructure need to be developed.
1.17	New road, rail or sea traffic during construction or operation?	No	National Waterway No.1 is operational since 1986 and used by various users. No new facility is being created and only a part of it is intended to be used.
1.18	New road, rail, air, waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	National Waterway No.1 is operational since 1986 and used by various users. No new facility is being created and only a part of it is intended to be used.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Use of blended coal in the ratio of 70:30 (Domestic:Imported) is envisaged. Therefore, existing transport routes w.r.t. coal transportation shall also be majorly used for domestic coal along-with inland waterway no.1 for imported coal.
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	No	National Waterway No.1 is operational since 1986 and used by various users. No new facility is being created and only a part of it

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

	aquifers?		is intended to be used.
1.22	Stream crossings?	No	--
1.23	Abstraction or transfers of water from ground or surface waters?	No	Not applicable.
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?	No	Not applicable as the infrastructure required for transport of coal through inland waterways is already in place.
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?	No	--
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)	No	No additional land is proposed to be acquired as the project is in operation and facilities for transportation of imported coal through National Inland Waterway No.1 are already in place.
2.2	Water (expected source & competing users) unit: KLD	No	No additional water requirement is envisaged as the project is in operation. Service water for cleaning/ washing, fire fighting and potable water to the coal unloading facility is being supplied from existing water system of Farakka STPP. Effluents are being treated and recycled in dust suppression system.
2.3	Minerals (MT)	Yes	Originally the coal requirement for Farakka STPP, Stage-I, II and III was about 16.4 MTPA which was met from domestic coal mines. In order to supplement the shortfall of coal supply to the project, coal blending

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

			with imported coal from Indonesia/Australia is being done which is estimated to the tune of about 5 MTPA (max.) depending on availability of domestic coal.
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	No	--
2.5	Forests and timber (source – MT)	No	No timber is required for the project.
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	The power required for the coal unloading facility is being supplied from existing power system of Farakka STPP, under auxiliary power consumption.
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	The waste oil used for servicing, sewage and solid waste is generated. Appropriate facilities for treatment or disposal of solid wastes or liquid effluents are already available and functional.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	---
3.3	Affect the welfare of people e.g. by changing living conditions?	No	Not envisaged as the project has already been established and operating. However, use of blended coal shall bring reduction in ash generated from the project (from 40% to 31.6%). Transportation coal through inland waterways shall bring reduction in congestion at Kolkata and Paradip Ports, as well as Eastern Railway line.
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	--

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

**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	--
4.2	Municipal waste (domestic and or commercial wastes)	Yes	The galley/ accommodation garbage from barges/ vessels is kept in disposable bags and stored in garbage bins and disposed off when the vessel reaches Nurpur. The municipal solid wastes generated at Farakka STPP are already being handled and disposed of in environmentally safe manner.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	The waste oil used during servicing of the vessel machinery is stored in the bilge holding tanks. As per orders no pollutants or oils contained within bilges are to be pumped overboard into the river/ sea. When the tank is nearing filling, the same is communicated to the control room for its disposal at Farakka. The hazardous wastes generated at Farakka STPP are already being handled and disposed of in environmentally safe manner.
4.4	Other industrial process wastes	No	-
4.5	Surplus product	No	-
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Sewage Treatment Plants (STP) are operational on the barges and running continuously. As per instruction, no direct discharge to the river/ sea is undertaken. The disposable sewage is stored in sewage tank and discharged to shore support base at Nurpur. When the tank is nearing filling, the same is communicated to Operations Centre for arrangement of its disposal. Concrete drains are laid alongside the conveyors to collect the slurry which transfers the slurry to coal settlement tank. After settlement and recirculation of the slurry, the clear water is collected and further pumped ahead to Farakka STPP's STP ensuring no slurry discharged into the river. The sewage & ETP sludges generated at Farakka STPP are already being handled and disposed of in environmentally safe manner.

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

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	-

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.	No	No additional emissions are envisaged to be generated due to proposed activity. The emissions generated at Farakka STPP are already being treated in High Efficiency ESPs and discharged through tall stacks.
5.2	Emissions from production processes.	Yes	Marginal increase in SO ₂ (about 4%) due to blending with imported coal.
5.3	Emissions from materials handling including storage or transport.	Yes	Unloading (from Transhipper to Barges), transportation through Barges, Unloading at Farakka Terminal and Transport from Farakka Terminal to Project may generate fugitive dust emissions. However, adequate systems for control of fugitive dust in the form of Dry Fog Based Dust Suppression System at Transfer Points, Plain Water Dust Suppression System at Fixed Hopper and Chute, Tarpaulin Cover on Barges and Closed Coveyor Galleries have been provided.
5.4	Emissions from construction activities including plant and equipment.	No	
5.5	Dust or odors from handling of materials including construction materials, sewage and waste.	No	No dust or odour from handling of materials is expected.
5.6	Emissions form 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	-

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

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.
6.1	From operation of equipment e.g. engines, ventilation plant, crushers.	Yes	Generation of noise from loading/ unloading and conveyor systems is being controlled.
6.2	From industrial or similar processes.	No	--
6.3	From construction or demolition.	No	--
6.4	From blasting or drilling	No	--
6.5	From construction or operational traffic.	No	--
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	Risks of water contamination due to spillage of Coal and Oil exists on account of transport of coal through waterway. Adequate safety measures shall be adopted as per Manuals/ Standard Operating Practices of Inland Waterways Authority of India and Jindal ITF Limited to control the same. The hazardous solid wastes generated at Farakka STPP are already being handled and disposed of in environmentally safe manner.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Sewage Treatment Plants (STP) on the barges are operation and running continuously. As per instruction, no direct discharge to the river/ sea is undertaken. The disposable sewage is stored in sewage tank and discharged to shore support base at Nurpur.
7.3	By disposition of pollutants emitted to air into the land or into water.	No	Spillage of coal and oil may lead to contamination of water in the navigation channel. Adequate safety measures shall be adopted as per Manuals/ Standard Operating Practices of Inland Waterways Authority of India and Jindal ITF Limited to control the same.
7.4	From any other sources.	No	-
7.5	Is there a risk of long term buildup of pollutants in the environment from these sources?	Yes	Spillage of coal and oil may lead to long term build-up in the navigation channel. Adequate safety measures shall be adopted as per Manuals/ Standard Operating Practices of Inland Waterways Authority of India and Jindal ITF Limited to control the same.

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

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	Risks of Fire and Spillage of Coal and Oil exists on account of transport of coal through waterway. The safety measures are covered under Manuals/ Standard Operating Practices of Inland Waterways Authority of India and Jindal ITF Limited.
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.)?	Yes	Proper operation and maintenance procedure will be followed and necessary corrective and preventive measures will be taken to avoid such occurrences.

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. Supporting infrastructure (roads, power supply, waste or waste water treatment etc.). <ul style="list-style-type: none"> • Housing development • Extractive industries • Supply industries • Others 	No	As the project is already in operation for more than two decades and as the proposal does not involve any increase in capacity, additional developments stimulated by project are not expected. Infrastructure like roads, power supply, water supply & other community facility is already being provided to the local population under CSR programme of Farakka STPP. Housing facility with market and basic amenities has been already been created at Farakka STPP. Ancillary & supply industries have got developed which in turn generate employment indirectly and lead to growth in income generation opportunities.
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	The experience gained will be helpful in future to take decision on dealing with the issue of coal transportation through inland waterways.

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

Sl. No.	Information / Checklist confirmation	Yes / No.	Details thereof (with approximate quantities / rates, wherever possible) with source of information data.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects.	No	--

(III) Environmental Sensitivity

S.No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from 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
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes, Farakka Feeder Canal and Ganga River	400-600 m and 2 km. respectively
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration	No	No
4	Inland, coastal, marine or underground waters	Yes, Ganga River	400-600 m and 2 km. respectively
5	State, National boundaries	No	No
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Yes, NW-I may be used for pilgrimage	400-600 m
7	Defence installations	No	No
8	Densely populated or built-up area	No	No
9	Areas occupied by sensitive man-made land uses (<i>hospitals, schools, places of worship, community facilities</i>)	These facilities exist at Permanent Township of Farakka STPP	6 km.
10	Areas containing important, high quality or scarce resources (<i>ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals</i>)	Yes, Farakka Feeder Canal and Ganga River	400-600 m and 2 km. respectively
11	Areas already subjected to pollution or environmental damage. (<i>those where existing legal environmental standards are exceeded</i>)	No	No
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (<i>earthquakes,</i>	No	No

**Form-1 for Amendment of Environmental Clearance for Farakka
Super Thermal Power Project of NTPC Limited**

	<i>subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)</i>		
--	---	--	--

I hereby give an 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 will be rejected and clearance given, if any to the project will be revoked at our risk and cost.

Date: 16.01.2017
Place: Noida



R. K. Baderia
GM & HOD
(Env. Engg.)
NTPC Limited