

FORM I

FOR PROPOSED 2 X 660 MW SUPER CRITICAL THERMAL POWER PROJECT NEAR DADRI KHURDH VILLAGE, TEHSIL MIRZAPUR SADAR, DIST. MIRZAPUR (U.P.)

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(I) Basic Information

Sl. No.	Item	Details
1	Name of the project	Proposed 2x660 MW Super Critical Thermal Power Project Near Dadri Khurdh Village, Tehsil Mirzapur Sadar, Dist. Mirzapur, Uttar Pradesh
2	S. No. of the schedule	1 (d)- Coal based Thermal Power Plant of more than 500 MW
3	Proposed capacity/area/length/tonnage to be handled/ command area/ lease area/number of wells to be drilled	Proposed Power Generation Capacity: 2 x 660 MW (Super Critical) Total Area : 875 acres (354.25 ha) Project Cost: Rs.10,956 Crores
4	New/Expansion/Modernization	New Project
5	Existing Capacity/Area etc.	Not Applicable
6	Category of the Project i.e. 'A' or 'B'	Category A
7	Does it attract the general condition? If yes, please specify.	No
8	Does it attract the specific condition? If yes, please specify.	No
9	Location	
	Plot/Survey/Khasra No.	Attached as Annexure 1
	Village	Near Dadri Khurdh
	Tehsil	Mirzapur Sadar
	District	Mirzapur
	State	Uttar Pradesh
10	Nearest railway station/ airport along with distance in kms.	<ul style="list-style-type: none"> • Railway Station: Sakteshgarh Railway Station, ~15 km, ENE and Sarsongram Railway Station (abandoned), ~18 km, E from where the railway connectivity will be taken for the proposed project. • Airport: Varanasi Airport, approximately 50 km, NNE
11	Nearest Town, city, District Headquarters along with distance in kms.	<ul style="list-style-type: none"> • Town : Mirzapur, approximately 18 km, NW • City : Mirzapur, approximately 18 km, NW • District Headquarters: Mirzapur, approximately 18 km, NW
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	<ul style="list-style-type: none"> • Village-Dadri Khurd • Village Panchayats- Darhi Ram • Zilla Panchayat- Mirzapur (Ph. No. 05442 253 081)
13	Name of the applicant	Welspun Energy UP Pvt. Limited.
14	Registered Address	Welspun House, 7th Floor, Kamla City, Senapati Bapat Marg Lower Parel Mumbai – 400 013
15	Address for Correspondence:	
	Name	Harshankar Soni

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	Designation (Owner/ Partner/ CEO)	General Manager
	Address	C-11, Sector-65, Noida
	Pin Code	201307
	E-mail	welspunenergypvtltd@gmail.com
	Telephone No.	0120- 6757000
	Fax No.	0120 - 4128330
16	Details of Alternative Sites examined, if any. Location of these sites should be shown on a topo sheet	<p>The site in Dadri Khurd Village in Mirzapur District was found to be most suitable from among five sites examined for the proposed project. The five sites examined are:</p> <ol style="list-style-type: none"> 1. Dadri Khurd in Mirzapur District, UP 2. Alor in Sonebhadra District, UP 3. Bishunpur in Mirzapur District, UP 4. Pindari in Sonebhadra District, UP 5. Kesurva in Mirzapur District, UP <p>The detailed comparative analysis of these sites is attached as Annexure 2.</p>
17	Interlinked Projects	No interlinked projects associated
18	Whether separate application of interlinked project has been submitted?	No
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.	Yes
	a) The Forest (Conservation) Act, 1980?	<p>There is a forest involvement in water pipeline (5.8162 ha) and approach road (2.5419 ha). Stage I Forest Clearance has already been applied vide Proposal no. FP/UP/THE/14236/2015 and the same is under due consideration with MoEF&CC.</p> <p>The survey for land schedule involved in railway siding and transmission line shall be carried out at the later stage considering the short construction period involved in these activities. However, any involvement of forestland in railway siding and transmission line shall be applied for Forest Clearance as per the process.</p> <p>A small patch of land (gatta 180) of 1.01 ha of "jhari" like within the plant area transferred from UP govt. to the Welspun Energy UP Ltd (vide letter no. D20151653001315 dtd. 28.09.2015).</p>
	b) The Wildlife (Protection) Act, 1972?	<p>The project does not attract clearance under The Wildlife (Protection) Act, 1972. The nearest Wildlife Sanctuary is Kaimur which is at a distance of approximately 16.5 km from the project site.</p> <p>However due to presence of Reserve Forests & Schedule I species within 10km from the project site, wildlife conservation plan has been prepared which was approved by Principal Conservator of Forest and Wildlife on 15th October, 2014. The letter of Approval of the Biodiversity &</p>

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		Wildlife Conservation Plan is attached as Annexure 3 .
	c) The C.R.Z Notification, 1991?	The project is not located in coastal zone.
22	Whether there is any Government Order/Policy relevant/relating to the site?	Order issued from Commissioner, Vindhyachal Mandal regarding establishment of the proposed Thermal power plant by M/s WEUPPL at this site.
23	Forest land involved (hectares)	<p>Yes.</p> <p>There is a forest involvement in water pipeline (5.8162 ha) and approach road (2.5419 ha). Stage I Forest Clearance has already been applied vide Proposal no. FP/UP/THE/14236/2015 and the same is under due consideration with MoEF&CC.</p> <p>The survey for land schedule involved in railway siding and transmission line shall be carried out at the later stage considering the short construction period involved in these activities. However, any involvement of forestland in railway siding and transmission line shall be applied for Forest Clearance as per the process.</p> <p>A small patch of land (gatta 180) of 1.01 ha of "jhari" like within the plant area transferred from UP govt. to the Welspun Energy UP Ltd (vide letter no. D20151653001315 dtd. 28.09.2015).</p>
24	Whether there is any litigation pending against the project and/or land in which the project is propose to be set up?	NGT case disposed
	a) Name of the Court	National Green Tribunal, Delhi Bench
	b) Case no.	a)Appeal No. 79 of 2014 b) Review Applications No. 4/2017, 2/2017 and 6/2017
	c) Orders/directions of the Court, if any and its relevance with the proposed project	<p>a) Judgment dtd. Dec. 21st 2016 in Appeal No. 79 of 2014</p> <p>b) Judgment dated May 01, 2017 and Order dated March 31, 2017 in Review Applications No. 4/2017, 2/2017 and 6/2017.</p> <p>All judgments attached as Annexure-4</p>

• 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.)**

S. No.	Information / Checklist confirmation	Yes / No	Details there of (with approximate quantities/rates, wherever possible) with source of information data
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S. No.	Information / Checklist confirmation	Yes / No	Details there of (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	<p>The proposed project is a greenfield project and 875 acres (354.25 ha) of land will be acquired for setting up of the project (excluding railway corridor, water pipeline and approach roads). The construction of the proposed plant along with associated facilities including ash pond and township will lead to permanent change in land use of 875 acres (354.25 ha) of land from its existing land use to industrial use. Break up of existing land use as per revenue records in the identified site is as follows:</p> <table><thead><tr><th>Land use type</th><th>Area (acres)</th></tr></thead><tbody><tr><td>Fallow land</td><td>831.50</td></tr><tr><td>Banjar Land</td><td>31.90</td></tr><tr><td>Water body</td><td>10.90</td></tr><tr><td>Pathrail</td><td>0.49</td></tr><tr><td>Road</td><td>0.22</td></tr><tr><td>Total</td><td>875</td></tr></tbody></table> <p>The new land use to be created in the project site is as follows:</p> <table><thead><tr><th>Particulars</th><th>Area (acres)</th></tr></thead><tbody><tr><td>Main Plant</td><td>360</td></tr><tr><td>Ash disposal area</td><td>180</td></tr><tr><td>Colony</td><td>50</td></tr><tr><td>Greenbelt</td><td>285</td></tr><tr><td>Total area</td><td>875</td></tr></tbody></table>	Land use type	Area (acres)	Fallow land	831.50	Banjar Land	31.90	Water body	10.90	Pathrail	0.49	Road	0.22	Total	875	Particulars	Area (acres)	Main Plant	360	Ash disposal area	180	Colony	50	Greenbelt	285	Total area	875
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1.2	Clearance of existing land, vegetation and buildings?	Yes	As the existing land cover of the area shows presence of vegetation, clearance of the existing land and vegetation will be required. No buildings are present. However, plant layout shall be done in a way to ensure minimal disturbance to existing vegetation.																										
1.3	Creation of new land uses?	Yes	<p>The proposed plant with its associated facilities will permanently change the existing land use of the identified 875 acres (354.25 ha) of land to industrial use.</p> <p>ROW for ancillaries (like railway siding, water pipeline, approach road and transmission line) shall be required which will consequently lead to new land uses in those areas.</p>																										
1.4	Pre-construction investigations e.g. bore holes, soil testing?	Yes	Detailed land survey, topographical survey, boreholes, soil testing has been carried out.																										
1.5	Construction works?	Yes	Construction works envisaged for proposed project includes installation of 2x660 MW units along with associated facilities viz. township and ash pond.																										
1.6	Demolition works?	No	Existing project has no built-up feature within the identified project site and no demolition will be required.																										
1.7	Temporary sites used for construction	Yes	Temporary accommodation with proper sanitation will be																										

S. No.	Information / Checklist confirmation	Yes / No	Details there of (with approximate quantities/rates, wherever possible) with source of information data
	works or housing of construction workers?		provided for construction workers.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Construction of Main Plant, Township and Ash Disposal Areas as well as for making ROW for railway corridor, water pipeline and approach roads, will require earth work including cut and fill etc.
1.9	Underground works including mining or tunneling?	No	No underground works are involved.
1.10	Reclamation works?	No	No reclamation works involved
1.11	Dredging?	No	No dredging works involved
1.12	Offshore structures?	No	No offshore structures involved
1.13	Production and manufacturing processes?	Yes	<p>Coal based power generation of 2x660 MW (1320 MW.) Process is based on Super-critical technology with enhanced steam parameters. The conversion from coal to electricity takes place in three stages.</p> <p>Stage 1 The first conversion of energy takes place in the boiler. Coal is burnt in the boiler furnace to produce heat. Carbon in the coal and Oxygen in the air combine to produce Carbon Dioxide and heat.</p> <p>Stage 2 The second stage is the thermodynamic process. The heat from combustion of the coal boils water in the boiler to produce steam. In modern power plant, boilers produce steam at a high pressure and temperature. The steam is then piped to a turbine. The high-pressure steam impinges and expands across a number of sets of blades in the turbine. The impulse and the thrust created rotates the turbine. The steam is then condensed and pumped back into the boiler to repeat the cycle.</p> <p>Stage 3 In the third stage, rotation of the turbine rotates the generator rotor to produce electricity.</p>
1.14	Facilities for storage of goods or materials?	Yes	Coal stockyard for storage of coal, storage cylinders for chlorine, tanks for HFO and LDO are proposed. Closed storage yard for chemicals, spare parts, equipments, tools, etc. are involved.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	<ul style="list-style-type: none"> A comprehensive Environmental Management Plan shall be formulated which shall include Effluent treatment plant and Sewage Treatment plant to suffice the requirement for treatment of liquid effluents and sewage generated. Maximum 2.3 MTPA ash will be generated. 100% fly ash utilization will be done by selling fly ash to

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			<p>potential buyers for commercial purpose, cement plant, ready mix concrete, brick making, road making etc.</p> <ul style="list-style-type: none"> • Unused ash shall be disposed in ash pond in slurry form which in future will be used for land filling and other purposes. • The municipal solid wastes generated from the colony will be converted to manure and used in gardening. • Recyclable waste will be sold to recyclers. Inert waste will be sent to MSW Disposal sites for land fill. • Hazardous waste shall be disposed in accordance with Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016.
1.16	Facilities for long term housing of operational workers?	Yes	A full-fledged township is envisaged for the permanent employees of the power plant.
1.17	New road, rail or sea traffic during construction or operation?	Yes	<p>During construction of the project, new roads shall be created for transportation of construction material, and equipment as well as for operational activities of the plant. A road will be connected from the project site to SH 5 which is about 1.7 km from site in SW direction.</p> <p>During operation, for transport of coal, a dedicated rail link will be connected to the project site from Sarsongram Railway Station (abandoned), ~18 km from the site in E direction.</p>
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	Yes	<p>As the proposed project is a greenfield project, new roads connecting the nearest National/State Highway will be constructed for connectivity to site. Railway connectivity will also be created for coal transportation route.</p> <p>A dedicated rail link will be connected to the project site from Sarsongram Railway Station (abandoned), ~18 km from the site in E direction and a road will be connected from the project site to SH 5 which is about 1.7 km from site in SW direction to transport heavy equipment during construction period, fuel oil and raw material during O & M of the plant.</p> <p>Additionally, power transmission infrastructure will also be created in the area.</p>
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	No closure or diversion of existing transport routes or infrastructure is involved
1.20	New or diverted transmission lines or pipelines?	Yes	New power transmission lines will be created as well as new water pipelines will be laid for supply of water to the proposed plant from identified water source i.e.

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S. No.	Information / Checklist confirmation	Yes / No	Details there of (with approximate quantities/rates, wherever possible) with source of information data
			water from River Ganga at 17km from proposed site will be pumped to Upper Khajuri reservoir and then from reservoir to the proposed plant. High tension lines passing through plant area shall be diverted.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	Yes	Water pipelines shall be laid for supply of water from identified water source i.e. River Ganga through Upper Khajuri reservoir along best environmentally viable pipeline route, which will increase the water availability of the Upper Khajuri reservoir and will also lead to higher availability of water in the Lower Khajuri reservoir which is also fed by the Upper Khajuri reservoir. Additionally, seasonal nallas associated with ephemeral drains present within the project site shall be realigned suitably by maintaining minimal disturbance to existing hydrological features.
1.22	Stream crossings?	Yes	Seasonal nallas associated with ephemeral drains are passing through the site.
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	GROUND WATER: No abstraction of ground water is envisaged. SURFACE WATER: 36 MCM of Water from River Ganga (17 km from site) through pipelines will be pumped to Upper Khajuri Dam as intermediate storage, from where the proposed plant will subsequently draw water to meet its requirements. Additionally, 9.5 MCM shall be pumped for irrigation/farmers of the nearby region.
1.24	Changes in water bodies or the land surface affecting drainage or runoff?	Yes	Seasonal nallas associated with ephemeral drains present within the project site shall be realigned suitably by maintaining minimal disturbance to existing hydrological features. Pumping of water from River Ganga into the Upper Khajuri Dam will improve its water storage and will bring more water to the area for irrigation purposes.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Construction Material, Labour and Main Plant Equipment shall be transported through roads/ rail route. Chemicals shall be transported through roads. Personnel during construction and operation phases shall be transported through roads.
1.26	Long-term dismantling or decommissioning or restoration works?	No	Long term dismantling or decommissioning or restoration works shall not be involved.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	No such activities involved.
1.28	Influx of people to an area in either	Yes	There will be immigration of people in two phases:

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	temporarily or permanently?		<ul style="list-style-type: none"> During peak construction phase, which will reduce significantly after completion of construction, temporary work force of approximately 3000 workers will be deployed. Local skilled and semi-skilled workers will be engaged during construction phase. During O&M Phase, the permanent workforce will be 300.
1.29	Introduction of alien species?	No	Introduction of alien species is not involved.
1.30	Loss of native species or genetic diversity?	No	The project site does not involve large scale clearing of vegetation or disturbance of natural habitat of local fauna. Additionally, the 33% of project area will be provided with greenbelt having native species. So, no loss of native or local species or genetic diversity is anticipated due to the project activities.
1.31	Any other actions?	No	No other actions are anticipated.

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)	Yes	<p>779 acres land is under private ownership while 96 acres is under Government land. Majority of the land is under possession of the Project Proponent and already diverted for industrial use.</p> <table><tr><th colspan="3">Land-use of the Site as per Revenue Records</th></tr><tr><th>Sl. No.</th><th>Land Usage</th><th>Area (acres)</th></tr><tr><td>1</td><td>Fallow land</td><td>831.50</td></tr><tr><td>2</td><td>Banjar Land</td><td>31.90</td></tr><tr><td>3</td><td>Water body</td><td>10.90</td></tr><tr><td>4</td><td>Pathrail</td><td>0.49</td></tr><tr><td>5</td><td>Road</td><td>0.22</td></tr><tr><td></td><td>Total</td><td>875</td></tr></table>	Land-use of the Site as per Revenue Records			Sl. No.	Land Usage	Area (acres)	1	Fallow land	831.50	2	Banjar Land	31.90	3	Water body	10.90	4	Pathrail	0.49	5	Road	0.22		Total	875
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2.2	Water (expected source & competing users) unit:	Yes	<ul style="list-style-type: none">Water for the project will be sourced from Ganga River (17 km away from proposed site) via pipelines through Upper Khajuri Dam.Competing users from Ganga River is agricultural users, domestic users and Mirzapur City.Clearance from UP Government (vide letter dtd 09-09-2011) and approval CWC (vide letter dated 12-10-2011) had been obtained for drawl of water from River Ganges and to use Upper Khajuri Dam as storage for lean period.UP Government reviewed and confirmed the																								

S. No.	Information / checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			suitability of Upper Khajuri Dam considering its live Storage, their irrigation requirement and 6 months plant's storage.
2.3	Minerals (MT)	Yes	It is proposed that the plant will go ahead on imported coal from Indonesia for an interim period until domestic coal is available. Imported Coal requirement will be 5.27 MTPA. Domestic coal requirement is 6.74 MTPA.
2.4	Construction material - stone, aggregates, sand / soil (expected source - MT)	Yes	Quantum of material to be used is difficult to estimate at present as constructive activity for the plant will be generally outsourced. Construction materials like steel, aggregates, sand and cement will be sourced through local traders and transported by road.
2.5	Forests and timber (source - MT)	No	Forest or timber resources will not be used.
2.6	Energy including electricity and fuels (source, competing users) Unit: Fuel (MT), Energy (MW)	Yes	Electricity for construction purpose will be obtained from the nearby sub-station from the project site. Also DG sets during construction phase will be used as a backup arrangement. During operation phase, electricity required will be sourced from the generated power itself. Fuel 1. Imported Coal requirement will be 5.27 MTPA. Domestic coal requirement is 6.74 MTPA. 2. LDO and HFO: 18,000 KL/annum for Power Plant.
2.7	Any other natural resources (use appropriate standard units)	No	No other natural resources will be used.

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	Chlorine, Hydrochloric Acid, Ammonia and sulfuric acid will be stored and used during operation of proposed of power plant as per MSIHC Rules. Additionally, hazardous fuels as HFO & LDO will also be stored and handled at the proposed plant as per MSIHC Rules. Appropriate Risk Management plan will be prepared and, would be followed to mitigate the risk related to these materials.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	No such changes is envisaged
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	Improvement in socio-economic condition of nearby villages is foreseen as a result of the project which

Sl. No.	Information / Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			includes: <ul style="list-style-type: none"> • Creating job opportunity to local people especially in unskilled category. • Creating/improving facilities for vocational training to local youth. Support to education facilities by providing assistance to meet requirements. • Providing safe drinking water wherever necessary. • Providing medical assistance to local people. • Local infrastructure development. • Social afforestation. • Extending support to games, sports and cultural activity to local community.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	Yes	An educational institute i.e. the South campus of BHU, is present ~7 km NW of project site. A government hospital is also present in Marihan within 10km from the project site.
3.5	Any other causes	No	No other causes are anticipated.

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	No spoil, overburden or mine wastes will be generated.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	During operation phase, domestic waste of about 0.4 MTPD will be generated from residential quarters. The wastes will be sent to the nearest MSW Facility for treatment.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	Used oil from transformers, waste oil and grease, discarded batteries, used barrels/containers etc. once in one or two years. The waste/used oil shall be sold to authorised re-processors or reused within the power plant.
4.4	Other industrial process wastes	Yes	Based on Imported Coal: 5.27 MTPA X 14% = 0.74 MTPA ash Based on Domestic Coal: 6.74 MTPA X 34% = 2.3 MTPA ash 100% utilization of fly ash as per stipulated norms laid down by MoEF&CC.
4.5	Surplus product	No	No surplus products will be produced.
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Treated sludge from sewage treatment plant shall be used as manures within plant premises.
4.7	Construction or demolition wastes	Yes	Construction wastes will be re-used for on-site leveling/construction works. None will be disposed-off site. However, quantification of the construction waste is not possible at this stage. No demolition activities involved.

4.8	Redundant machinery or equipment	No	Not applicable as is when required, the machineries will be hired from contractors.
4.9	Contaminated soils or other materials	No	The project will not lead to contamination of soil or other materials as appropriate management measures envisaged for preventing leaching from ash pond.
4.10	Agricultural wastes	No	No agricultural wastes will be generated
4.11	Other solid wastes	Yes	Generation of hazardous wastes is anticipated from proposed activities such as ETP sludge etc. which will be disposed as per guidelines of State Pollution Control Board/ MoEF&CC.

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	Combustion of coal for power generation shall result in emission of flue gases containing particulates, SO ₂ , NO _x , CO ₂ and Hg. From vehicular movement, PM, NO ₂ and CO and CO ₂ will be additionally generated besides fugitive dust generation.
5.2	Emissions from production processes	Yes	The production process involves combustion of fossil fuels in boiler for production of steam which is used for production of electricity. The emissions due to combustion are primarily particulates, SO ₂ , NO _x , Hg, CO and CO ₂ . The estimated pollution loads for PM, SO ₂ , NO _x and Hg emission due to combustion of domestic coal is 156 kg/hr, 520 kg/hr, 520 kg/hr and 0.16 kg/hr respectively. However, as imported coal is envisaged until domestic coal linkage is obtained, thus the pollution loads for PM, SO ₂ , NO _x and Hg emission due to combustion of imported coal is 122kg/hr, 407 kg/hr, 407 kg/hr and 0.13 kg/hr respectively.
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive Dust generation is anticipated from coal storage and handling as well as ash handling. An estimated maximum quantity of 0.04 kg/hr of fugitive dust generation is anticipated. Arrangements for dust suppression systems for wetting by water spraying and dust extraction system of emission from transfer points of conveyor systems will be provided. Provision of water sprinkling system at material handling and storage yard is envisaged. Fugitive dust anticipated from vehicular movement will be minimised by having concrete roads and covered vehicles for material movement.
5.4	Emissions from construction activities including plant and equipments	Yes	Emission from diesel operated vehicles, concrete mixers and excavators are anticipated. However, these equipments will be maintained properly to ensure minimum emissions. During construction, approximately 1.7 kg/day of PM ₁₀ generation is

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			estimated.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Plant management will ensure use of water sprinklers liberally to minimize/ eliminate fugitive dust nuisance. Odour generation from material handling is not expected.
5.6	Emissions from incineration of waste	No	Incineration of wastes is not involved.
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Burning of wastes will be discouraged.
5.8	Emissions from any other sources	No	Emission from other sources is not anticipated.

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 equipments e.g. engines, ventilation plant, crushers	Yes	The major noise generations sources are the turbines, turbo-generators, pumps, compressors, fans, coal-handling plant etc. from where noise is continuously generated. Acoustic enclosures shall be provided wherever required to control the noise level below 80 dB (A) in work area. Wherever it is not possible technically to meet the required noise levels, personal noise protection appliances shall be provided to workers. Efforts will be made to ensure that noise levels at plant boundary after peripheral greenbelt during plant operation does not exceed prescribed limit.
6.2	From industrial or similar processes	Yes	Noise shall be generated from boilers, compressors, etc. during operation phase. However, the noise levels will be limited to threshold limits through design specification and provisions of acoustic enclosures, laggings and Silencers. Heat will also be dissipated from boilers due to coal burning but it will be controlled within tolerable limits due to thermally insulated design.
6.3	From construction or demolition	Yes	Noise will be emitted from construction equipment and machineries. The equipment which are the source of the noise will have inbuilt noise control/abatement system.
6.4	From blasting or piling	No	No blasting or piling is involved.
6.5	From construction or operational traffic	Yes	During construction and operational phase noise will be slight increase in the noise level generated due to movement of trucks and other vehicles.
6.6	From lighting or cooling systems	Yes	Marginal increase in noise levels due to operation of cooling towers (85-90 db (A)).
6.7	From any other sources	No	Generation of noise and vibration and emission of heat and light from other sources is not envisaged.

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

Sl. No.	Information / Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	Yes	Occasional & minor spillage of HSD/HFO may occur. These will not affect water or land because of appropriate flooring & presence of spill control procedures. LDO and HFO will be stored in properly designed steel tanks and handled with all safety measures in place. Tank farm area will have impermeable surface with proper dykes. Moreover, all of the hazardous wastes will be disposed as per guidance of State Pollution Control Board/MoEF&CC.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	Yes	Zero water discharge system is envisaged for the project with RO system and using the treated effluent water for dust suppression and in greenbelt. However, Sewage and all plant effluents will be treated appropriately to conform to regulatory limits and recycled and reused to the maximum extent possible within the plant premises during non-monsoon seasons. Storm water (during rainfall) will be collected separately and rain water harvesting will be done to minimize fresh water requirement as far as possible.
7.3	By deposition of pollutants emitted to air into the land or into water	Yes	Air Environment: It is proposed to restrict particulate matter emission to 30 mg/Nm ³ with use of high efficiency ESPs. Increase in levels of SO ₂ and NO ₂ will be within permissible limit as a result of use of low sulphur coal (0.34% /w) and use of pulverized coal, low NO _x burners with low NO ₂ generation. Additionally, FGD and DeNO _x system shall be provided as per the latest notification which will control Hg emission also. Thus, minimal impact of pollutants emitted in the air environment due to the proposed plant is anticipated. Water Environment: There will be no discharge of any liquid effluent outside the plant premises and hence no impact is anticipated due to effluents on the water bodies of the study area. The envisaged scheme for withdrawal of intake water from River Ganga consists of De-siltation chamber for controlling suspended solids in the water before pumping it to Upper Khajuri reservoir for storage, which shall ensure no pollution of the existing water quality of the Upper Khajuri Dam

Sl. No.	Information / Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			Land Environment: 100% Fly Ash Utilisation envisaged for the project. However, in emergency situation, ash will be disposed in the ash pond in form of High density slurry. The ash pond will be lined to prevent leaching and subsequent contamination of groundwater.
7.4	From any other sources	Yes	An additional pollution is anticipated due to increase of traffic during construction and operation phase of the proposed plant. Storage of chemicals such as chlorine, flammable substances as HFO/LDO as well as coal stockyard etc. at plant site can result in a chemical as well as flammable hazard on release into the environment.
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	Yes	Ash storage envisaged for the project may result in contamination of groundwater resources due to leaching from the ash ponds. However, 100% fly ash utilization is envisaged for the project as well as a liner will be provided in the ash pond to minimize the long term risks associated with leaching from the storage of high density ash slurry.

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	Fire hazards associated with handling and storage of coal, LDO as well as HFO within the plant premises. A comprehensive Onsite and Offsite Emergency Plan will be prepared to handle risks associated with the identified hazards due to the proposed plant activities and will be integrated with the District Disaster Management Plan for effective implementation.
8.2	From any other causes	Yes	Common risks in factories such as Electric Shock, Hit by Objects, Fall / Slips, Hot Work such as Welding and Cutting & during maintenance activities as well as vehicular accidents are anticipated. Adequate safety measures and Standard Operating Procedures shall be implemented to minimise possibility of these hazards.
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides,	Yes	The project site is not susceptible to floods, landslides or cloud bursts. Further, the project site is located in Earthquake Zone-III (moderate

Sl. No.	Information/Checklist confirmation	Yes /No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
	cloudburst etc)?		damage risk zone) of India. Adequate care will be taken during design and construction to avoid any disaster like earth quake. Entire Mirzapur falls under high damage risk zone of wind hazard ($V_b = 47$ m/s)

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.: a. Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) b. Housing development c. Extractive industries d. Supply industries e. Other	Yes	<ul style="list-style-type: none"> Economic growth associated with proposed project leads to Semi urban like development. This supports development of ancillary & supporting industries and other related activities. There will also be an improvement in local infrastructure particularly road and/or rail connectivity, power transmission and supply, waste water and sewage treatment etc. A colony will be developed which will lead to development of secondary market as well as generate demand for local household shopkeepers for household necessities.
9.2	Lead to after-use of the site, which could have an impact on the environment	No	No such planning has been proposed.
9.3	Set a precedent for later developments	Yes	Small ancillary industries will be developed as a consequence of the establishment of the proposed plant.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	No cumulative effect anticipated as the proposed plant is not located in a Critically polluted area as well as there are no major industries within the 15 km radius of the proposed plant. However, there are small stone crushes within 10km from the site

(III) Environmental Sensitivity

Sl. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from proposed project boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other	Yes	There are no areas protected under international conventions. Reserved forests, temples and BHU (South

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Sl. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from proposed project boundary			
	related value		Campus) are existing within 15 km from project site.			
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, Forests	Yes Yes	The following forests, water bodies & threatened flora and fauna species are present within 15 km radius of the project:			
			Sl. No.	Feature	Distance in km	Direction
			Forests			
			1	Mirzapur RF	Adjacent to plant boundary	SE
			2	Danti RF	Adjacent to plant boundary	N
			3	Bahuti RF	8.0	SW
			4	Patehra RF	5.6	SW
			3	Karaunda RF	7.0	SW
			4	Sarson RF	6.0	SE
			5	Gohlanpur RF	8.0	E
			6	Barkachha RF	6.4	NW
			7	Chandlewa Khurd RF	6.0	NE
			8	Nanauti RF	8.6	ESE
			9	Malua RF	9.3	SW
			10	Newaria RF	9.4	SW
			11	Kakrad RF	11.5	SW
			12	Saktesgarh RF	11.5	ESE
			13	Piori RF	13.0	SW
			14	Parts of Semra RF	14.0	S
			15	Dadra Rampur RF	13.0	SE
			16	Bhiskuri RF	14.0	NW
			17	Gorthara RF	14.5	SE
			18	Patharkhura RF	14.5	SE
			19	Machharmara RF	12.3	NE
			20	Malua RF	9.3	SW
			Water Bodies			
			RIVERS/NALAS/CANALS FLOWING WITHIN 10 KM			
			1. Jamthwa Nadi (~1.6 km N to W side of the plant boundary)			
			2. Jogiadri Nadi (2 km NE to E side of the plant boundary)			
			3. Jogidari Nala (1.8 km E to SE side of the plant boundary)			
			4. Pahiti Nadi (4 km NE)			
			5. Paintidari Nadi (5.7 km ESE)			
			6. Charar Nadi (4.5 km N)			

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Sl. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from proposed project boundary
			<p>7. Right Upper Khajuri Canal (3.7 km WNW)</p> <p>8. Belwan Nadi (6.6 km NNE)</p> <p>9. Barhaiya Nala (9.5 km NE)</p> <p>10. Marihan Branch (Ghaghar Canal) (6.4 km S)</p> <p>11. Hinauta Distributary (7.6 km S)</p> <p>RIVERS/NALAS/CANALS FLOWING BETWEEN 10 KM TO 15 KM</p> <p>12. Bharpura Distributary of R. Ganga (10.6 km NNE)</p> <p>13. Kanauraghat Pump Canal (13.8 km NNE)</p> <p>14. Right Lower Khajuri Canal (10.8 km NNW)</p> <p>15. Madho Nala (11.3 km NW)</p> <p>16. Left Lower Khajuri Canal (12 km NW)</p> <p>17. Ojhala Nala (11.9 km NW)</p> <p>18. Khajuri Nala (15 km NNW)</p> <p>19. Gurkhauli Nala (13.3 km NE)</p> <p>20. Kaalyawa Nala (14 km NE)</p> <p>21. Usrabawa Nala (15 km NE)</p> <p>22. Nanauti Left Canal (10.5 km E)</p> <p>23. Jirgo Nadi (15 km ESE)</p> <p>24. Magardaha Nala (14.5 km SE)</p> <p>25. Banki distributary (11.4 km SE)</p> <p>26. Karaunbia Nala (11.5 km SE)</p> <p>27. Patbar Nala (13 km SE)</p> <p>28. Gotutwa Nala (12.9 km SE)</p> <p>29. Bidaula Nala (11.8 km SSE)</p> <p>30. Gopalpur Distributary (13.8 km SSE)</p> <p>31. River Ganga (17 km N side of plant boundary)</p> <p>RESERVOIR/DAMS (WITHIN 10KM)</p> <p>1. Upper Khajuri Dam (6 km W)</p> <p>2. Dhenkwan Dam (6.2 km E)</p> <p>3. Imiliya Bandhwa (9.82 km E)</p> <p>RESERVOIR/DAMS (BETWEEN 10KM TO 15KM)</p> <p>4. Lower Khajuri Dam (10.6 km W)</p> <p>5. Bhonka Dam (12.0 km NW)</p> <p>6. Barkachha Dam (10.4 km NW)</p> <p>7. Hinauti Dam (12.3 km ENE)</p> <p>Threatened species of Flora & Fauna found within 15km area:</p> <p>A) Endangered Flora</p> <ul style="list-style-type: none"> - <i>Terminalia arjuna</i> (Arjun) - <i>Boswellia serrata</i> (Salai) <p>B) Endangered amphibians & reptiles</p> <ul style="list-style-type: none"> - <i>Crocodylus palustris</i>-Marsh Crocodile - <i>Gavialis gangeticus</i>- Gharial - <i>Lissemys punctata</i>- Indian Flapshell Turtle - <i>Varanus bengalensis</i>- Common Monitor Lizard <p>C) Endangered Avifauna</p> <ul style="list-style-type: none"> - <i>Grus antigone</i>-Sarus Crane

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Sl. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from proposed project boundary
			<ul style="list-style-type: none"> - <i>Gyps indicus</i>-Long-billed Vulture - <i>Gyps bengalensis</i>-White-rumped Vulture - <i>Sarcogyps calvus</i>-Red-headed Vulture - <i>Pavo cristatus</i>- Indian Peafowl - <i>Neophron percnopterus</i>-Egyptian Vulture <p>D) Endangered Mammals</p> <ul style="list-style-type: none"> - <i>Gazella bennettii</i>- Indian Gazelle - <i>Tetracerus quadricornis</i>-Four Horned Antelope - <i>Melursus ursinus</i>- Sloth Bear - <i>Canis lupus</i>- Wolf - <i>Cuon alpinus</i>- Wild Dog - <i>Panthera pardus</i>- Common Leopard - <i>Caracal caracal</i>-Caracal - <i>Lutrogale perspicillata</i>-Smooth-coated Otter - <i>Melivora capensis</i>-Honey Badger
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	No areas for sensitive species of flora and fauna for breeding, nesting, foraging, resting, over wintering, migration. The list of important species is furnished in Point no. 2 above. The approved Biodiversity Assessment & Wildlife Conservation Management Plan is attached as Annexure 5 .
4	Inland, coastal, marine or underground waters	Yes	Surface Water bodies are present in 15 km radius which is already mentioned in point no. 2 above.
5	State, National boundaries	No	None within 15 km
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Yes	The major public access routes within 15 km from project site are SH-5, 1.7 km SW and NH-7, 10 km, NNE used for visiting nearby temples.
7	Defence installations	No	None within 15 km
8	Densely populated or built-up area	No	There is no densely populated habitation that exists near the proposed site. Mirzapur town is located at ~18km in the NW direction. A number of other habitations in the area are: <ul style="list-style-type: none"> • Dadri khurd (project site) • Dadri Gahira • Darhram • Bharpura • Putariha
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	The following sensitive facilities exist within 15 km radius of the project site: South campus of BHU is situated at ~7km from the project site in NW direction. A Primary health centre is also present in Marihan. Lurki Mahadev temple (~6km NW) is present near the project site. Wyndham Fall is present ~18.6 km away from the project site in the NW direction.
10	Areas containing important, high quality or	Yes	Forest patches and surface water bodies present

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Sl. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from proposed project boundary
	scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)		within 15km of the project site. Presence of Kaimur sand stone and Alluvium found within 15km from the site.
11	Areas already subjected to pollution or environmental damage, (those where existing legal environmental standards are exceeded)	No	No area subjected to pollution or environmental damage
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	Yes	The project site is not susceptible to subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions. Further, the project site is located in Earthquake Zone – III of India which has moderate damage risk due to earthquakes.

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UNDERTAKING BY PROJECT PROPONENT

I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost.

Date : 17/06/17

Place : NOLDA

For Welspun Energy UP Private Limited

[Signature]
17/06/17
Authorized Signatory

Name of Authorized Signatory : Harishankar Saini

Full Address : Welspun Energy UP Pvt. Ltd.
C-11, Sector-65, Noida
201301

Note:

1. The projects involving clearance under Coastal Regulation Zone Notification, 1991 shall 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 CRZ notifications, 1991 for the activities to be located in the CRZ.
2. The Projects to be located within 10km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief wildlife Warden showing these features vis-a-vis the project location and the recommendations or comments of the Chief Wildlife Warden thereon (at the stage of EC).
3. All correspondence with Ministry of Environment & Forests including submission of application for the TOR/Environment Clearance, 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 authorised signatory should also submit a document in support of his claim of being an authorised signatory for the specific project.



**CERTIFIED TRUE COPY OF THE RESOLUTION PASSED AT THE MEETING
OF THE BOARD OF DIRECTORS OF WELSPUN ENERGY UP PRIVATE
LIMITED HELD ON MAY 27, 2017**

Additional authority to represent the Company with the Forest Department, Uttar Pradesh and Ministry of Environment, Forest and Climate Change, New Delhi, as regards to the Thermal Power Project of the Company to be located at District Mirzapur in the State of Uttar Pradesh:

"RESOLVED THAT in partial modification to earlier resolution(s) passed by the Board of Directors of the Company in this regard, the consent of the Board of Directors of the Company be and is hereby accorded to confer additional authority on Mr. Rajeevan Nair, Mr. Vinay Kumar, Mr. Hari Shankar Soni and Mr. Ashish Bhardwaj, Authorised Representatives of the Company, to sign and file online/offline applications and necessary documents, papers, affidavits, undertakings etc., for and on behalf of the Company with the Forest Department, Uttar Pradesh and Ministry of Environment, Forest and Climate Change, New Delhi, with respect to the proposed Thermal Power Project of the Company to be located at District Mirzapur in the State of Uttar Pradesh."

For Welspun Energy UP Private Limited

Mitish Somani
Director