

WELSPUN



Dare to Commit

WELSPUN ENERGY UP PVT. LTD.

No.; WEUPPL/MZP/MoEF/2013/09

April 24, 2013

The Director (Thermal)

Ministry of Environment and Forest
Paryavaran Bhawan, CGO Complex
New Delhi – 110 003

0615 113
Kind Attn.: Dr Saroj

Sub : Request for grant of Environment Clearance for our 1320 MW coal based Power Plant at village Dadri Khurd, Distt. Mirzapur, Uttar Pradesh.

Ref: File No. J – 13012/12/2011 – IA.II (T)

Respected Madam,

At the outset, we thank you for giving us an opportunity to present our case before the Hon'ble Expert Appraisal Committee on 26th March 2013.

We are submitting herewith the required information/clarification on all the issue raised by Hon'ble Members during the presentation. We are also submitting the supporting documents along with relevant Annexures for your kind perusal.

Hope the enclosed information shall suffice your requirement.

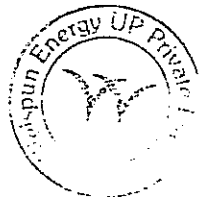
We request you to kindly grant EC for our proposed coal based 1320 MW Thermal Power Project.

Thanking You.

Yours Faithfully,
For **Welspun Energy UP Private Limited**

Kuku Tacker
Vice President
Authorised Signatory

Encl.: As above



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Point wise Information/ clarifications on issues raised during presentation before Hon'ble EAC Meeting held on 26th March, 2013

Point: 1

A. Information on Source of Imported Coal :

We have signed a Coal supply agreement for importing 5.5 MTPA coal with M/s Siridi Sai Good Earth International Pte. Ltd.- a trading company which has its own coal mines in Indonesia. The said company would supply the coal from its mines in Indonesia with Gross Calorific Value 4400 kcal/kg on "As Received Basis" (ARB).

Siridi Sai Goodearth International Pte Ltd is a coal mining company with about 9 concessions of coal of specifications ranging from 5100 GCV upwards to 7200 GCV ADB and coal reserves of about 380 Million MT in Indonesia. The company decided in 2008 to have an independent company based in Singapore to handle its coal mining and trading arm, and Siridi Sai Goodearth International Pte Ltd was incorporated in Singapore in 2009.

Siridi Sai Goodearth International Pte Ltd, Singapore with its subsidiary company in Indonesia is purely dealing in minerals and coal. The company's Indonesian arm is operating from Jakarta & Samarinda and is represented by having gained vast experience in the field of Mining, Generation and power. It was decided that the company shall move out of India and become a Global player in mineral & Coal. It was decided to open a company exclusively for minerals and coal to cater to the Indian and South Asia markets. The company decided to acquire some more mines of different grades of coal to suit Indian and Chinese market.

Company has acquired its first Coal mine in Indonesia of 14500 Hect., East Kalimantan near the mining town of Samarinda on the Mahakam River in July 2009. It has acquired two more coal mines in East Kalimantan of 1054 Hect. and 1099 Hect. in August 2009 and one mine of size 1560+ Hect. in Sumatra in Indonesia in Sept 2009. It has started mining operations in one of its mines in December 2009.

Minable reserves 150 Millon TPA, Present mining capacity is 2.0 MTPA of the coal mine proposed for Mirzapur TPP which would be raised to 6.0 MTPA by 2017.

SSGI has two subsidiary company incorporated in Indonesia; i.e. PT INDO NORNEO KATYA, INDONESIA and PT KALIMANTHAN INDO ENERGY, INDONESIA.



The company has completed its 1st phase of acquisition in the year 2009-2010 and has now entered into trade of coal from its captive mines and also from its 100% off take held mines. It has plans of opening its mines in a phased manner keeping the demand and supply ratio in mind to service its present and future clients with good quality and adequate quantity of coal at reasonable price. The company has signed deals with end users in India and also in the process of signing long term sale agreements with power plants in China and Korea and committed to provide service its clients from the coal produced from its mines and its 100% controlled mines.

A Brochure of this company with details on their mining assets is enclosed as **Annexure 1.**

B. Welspun Coal Mines in Indonesia - :

Welspun Group has three Coal Mines namely KP32, KP17, KP22 with a capacity of about 300 Million Tonnes of reserves with present coal production capacity of 4 Million Tonne per annum. We have acquired these mines in 2010. We also have a facility of stock pile at Kota Bayu in Indonesia.

We have already committed to supply the coal from these mines to other projects and various customers. Presently, there is no proposal to take more coal from our existing Indonesian Mines due to limitation of the mining plan.

We have signed a legal agreement with M/s Sirdi Sai Good Earth International Pte. Ltd to supply imported coal (5.5 MTPA) for 2 x 660 MW (1320 MW) for Welspun Energy UP Pvt. Ltd. Coal Supply Agreement along with "Coal quality" is enclosed as **Annexure 2.**

Point: 2

Source of Fuel & impact of low grade imported Coal on the boiler efficiency

We have identified Indonesian coal as source for the interim arrangement. The details are clarified in Point no.1.

Impact of lower grade imported coal on Boiler Efficiency -

Coal Analysis of Indonesian coal envisaged to be used in the Mirzapur TPP is enclosed as Annexure 2.

To improve the boiler efficiency, we have planned to reduce the moisture content in the coal, 2 no's Coal Dryers (fluidized bed type) of 175 TPH capacity each being envisaged at mine end. Moisture content in the Coal is reduced to 20 % post dryer.

Coal Analysis pre / post drying of imported coal & Comparison with Domestic coal					
Sr. No.	Constituent	Unit	Indonesian ROM Coal	Indonesian Dried Coal	Domestic Coal
1	Total Moisture	% Wt	32	20	13
2	Ash Content	% Wt	14	16.4	40
3	Volatile matter	% Wt	31	36.3	21
4	Fixed carbon	% Wt	23	27.0	26
5	Sulphur	% Wt	0.34	0.4	0.4
6	GCV	Kcal/ Kg	4400	5500	3500

Boiler efficiency estimated for pre & post drying of imported Coal and comparison done with Domestic coal .

Minimum Boiler Efficiency for dried coal being calculated as per CEA "Gazette of India" August 2010 guidelines.

$$\text{Minimum steam Generator Efficiency (\%)} = 92.5 - \frac{(50XA + 630(M + 9XH))}{\text{HHV}}$$

Where, A = % Ash in fuel, M = % Moisture in fuel, H= % Hydrogen in fuel & HHV =High heat value of fuel in Kcal/kg

Coal Type	Minimum Boiler Efficiency (%)
Imported ROM Coal	83.76
Imported Dried Coal	86.85
Domestic Coal	84.72

It may be noted that boiler efficiency of imported dried coal is approx 2 % higher with respect to domestic coal.

Point: 3

Coal Transportation from the country origin to TPP site & the bottle necks of Port and railways

A. Coal transportation logistics from Indonesian Mines to Indian Port

- I) M/s Siridi Sai Goodearth International Pte Ltd will supply 5.5 Million TPA of coal from their operating mines in East Kalimantan near the mining town of Samarinda on the Mahakam River.
- II) Coal will be transported by Truck from Mines up to loading point at Mahakam River and further transported to Balikpapan Coal Terminal (BCT).
- III) From Anchorage point to Indian Dhamra Port coal will be transported through 1, 00,000 MT capacity vessel.

B. Details of Coal logistics from Dhamra Port to site:-

Imported Coal will be received at Dhamra Port & transported to site (distance 875 Km) through Indian railway network .

➤ Saiient features of Port –

- A. 50:50 joint venture between L&T and TATA Steel ; upcoming private port
- B. 2 dedicated dry bulk berths under operation, capable of handling two Cape size vessels. 4 more dry bulk berths planned as per Master Plan.
- C. Present handling capacity 25 MTPA which will be expanded up to 50 MTPA in next 2-3 years as per their Master Plan .
- D. Deep draught (16.1M), all weather sea port, capable of handling vessels up to 180,000 DWT when dredged up to designed depth.
- E. Fully mechanized and efficient cargo handling system, capable of:
 - Discharging vessels at the rate of 50,000 MT/day

- Loading rakes within 1.25 hours

F. Port currently has capacity to store about 1.0 million MT of coal

G. Good Rail network up to Bhadrakh 62.7 km. Further Indian Railways connectivity from Bhadrakh onwards.

H. Present facilities to unload imported coal – Ship Un loaders 2x2800 TPH ,
Stacker Re-claimers 2 x 5500 / 3750 TPH, Rail Loading facility 1 x 3500 TPH

I. The proposed master plan of the port provides for a total of 15 berths to handle more than 100 MTPA of all types of cargo such as dry bulk, break bulk, liquid bulk and containerized cargo.

➤ Rail connectivity Route to site –

STATION CODE	STATION NAME	CUMULATIVE DISTANCE	INTER - DISTANCE	Zone
BHC	Bhadrakh	0.0	0	
BLS	Balasore	62.16	62.16	SER
ROP	Rupsa Jn.	80.02	17.86	SER
BPE	Benapur	166.02	86.0	SER
HIJ	HIJLI	174.09	8.07	SER
KGP	Kharagpur	177.85	3.76	SER
GKL	Gokulpur	183.92	6.07	SER
MDN	Midnapore	190.65	6.73	SER
ODM	Ondagram	277.06	86.41	SER
BQA	Bankura	292.87	15.81	SER

ADRA	Adra	345.95	53.08	SER
SNKR	Sanka	353.31	7.36	SER
RUI	Rukni	360.77	7.46	SER
SNTD	Santaldih	369.12	8.35	SER
BJE	Bhojudih Jn.	375.66	6.54	SER
SBW	Shewbabudih	381.68	6.02	SER
TLE	Talgoria	387.83	6.15	SER
MHQ	Mohuda	398.48	10.65	SER
KNF	Khanodih	408.11	9.63	SER
GMO	NSC BOSE J GOMO	418.71	10.6	ECR
KQR	Koderma	512.11	93.4	ECR
MPO	Manpur Jn.	582.97	70.86	ECR
GAYA	Gaya Jn.	588.21	5.24	ECR
SEB	Son Nagar jn.	667.61	79.4	ECR
DOS	Dehri-on-Son	673.37	5.76	ECR
SSM	Sasaram	691.21	17.84	ECR
GAQ	GANJ KHWAJA	784.57	93.36	ECR
MGS	Mughal Sarai Jn.	791.22	6.65	ECR
BHBV	BLOCK HUT 'B' (BHB)	793.18	1.96	ECR

JEP	Jeonathpur	798.66	5.48	NCR
CAR	Chunar Jn.	822.97	24.31	NCR
LUSA	Lusa	864.6	41.63	NCR
SARSOGRAM	Sarsogram	875	11	NCR

The existing railway network is being strengthened by MoR , following expansions are under progress in the proposed route :-

- a. Kharagpur- Bhadrakh section - Additional loops in down direction (3 stations) & up direction (2 stations) under SER zone
- b. Track renewal in various sections of SER under progress like Gokulpur- Midnapore (0.6 Km) , Bhadrakh- Kharagpur (29.7 Km)
- c. Line doubling in Kharagpur – Gokulpur (6 Km) section under SER zone
- d. Track renewal in Chunar – Chopan 16.62 Km under NCR zone
- e. Gaya – Mugalsarai crossover line in grand cord section (common loops 6 no's) under ECR zone
- f. Gaya – Full length platform on line 8&9 under construction under ECR zone
- g. Mugalsarai yard- Additional 3rd line entry from grand chord with signaled movement in up receiving yard & engine line under ECR zone
- h. Mugalsarai – Chunar Section – Road over bridge under construction under ECR/NCR zone
- i. Chunar – Chopan section 16 no's road under bridge under construction under NCR zone

Development of Railway Infrastructure-

- Ministry is also creating Infrastructure and capacity build-up to increase the transportation of all commodities including coal and also to decrease the transportation time like:
 - Doubling/ Tripling of tracks- 1000 kms

- Gauge conversion – 2500 kms
- Construction of New lines – 1000 kms
- Electrification – 2000 kms
- The Railways has mega plans to create new facilities to build Coaches, Wagons, Locomotives both Diesel and Electric. The procurement of wagons, locomotives is high on agenda. The revised XI plan targets are as follows:
 - Procurement of Wagons – 33,909
 - Procurement of Diesel Locomotives – 690
 - Procurement of Electric Locomotives – 555.
 - There is vision 2020 of Indian Railways. The planned targets are 255,227 Wagons, 4644 Diesel Loco and 3726 Elect Locomotives.

Other features of Raii Transportation -

- In-principle approval for Private Railway Siding feasibility report has been granted from Ministry of railways.
- 4 rakes/ day will be required for movement of 5.27 MTPA of coal to our proposed Plant.
- Requirement of trains in circuit will be 8 (Turn around time of rake 44 hrs, considering 45 Km/ hr train average speed and 5 hrs of loading & unloading time)
- Private siding will be constructed from proposed take off station

From above facts & figures , it may be seen that there is no such bottleneck in coal transportation from Indonesian mines till site via Dhamra Indian Port as Indian Railways expansion is going on to strengthen proposed route to further enhance the traffic loading & IR is enhancing rolling stock too . In addition, Dhamra port is all weather port having fully mechanized unloading capacity & having future expansion plans too .

Point: 4

A. Financial Viability of using Imported Coal from Indonesia

Imported coal from India will be received from Indonesia at Dhamra Port and after unloading shall be transported to Mirzapur project site via Indian Railway network. We have worked out the tariff considering the following three options.

1. 100% imported coal from Indonesia
2. Blended coal with Indonesian coal 30% and domestic coal from MCL coal mines 70%
3. 100% Domestic coal

Tariffs have been worked out based on the latest Coal prices and the latest Rail Transportation charge and is enclosed as **Annexure 3**.

It can be seen from the enclosure that the first year tariff with imported coal is Rs. 4.48 per unit which is considered reasonable viewing the present Capital Costs of the project.

B. Information on financial of UPPCL and PPA entered with UPPCL

The company has entered into a PPA on 4th Jan, 2011, for supply of 100 percent of Power i.e. 1320 MW to UPPCL. Our company was selected to set up a project in the State as per UP Power Policy, 2009 of Energy Deptt, Govt of UP. UPPCL has taken prior approval of UPERC before signing the PPA. This PPA is on cost plus basis. Now, UP Govt has taken steps to improve its financial health of its DISCOMs. They have revised their power tariff for Industrial and Commercial customers recently. Overall an average hike of 17.63% has been effected by UPSERC. They have also signed a agreement for Financial Restructuring Package announced by Planning Commission to assist State DISCOM to improve their financial health. Sanction of Transitional Loan of Rs. 1558 crores by PFC to fund 50% of outstanding power purchase liabilities towards IPPs. State Govt has also planned to privatize electricity distribution in high AT & C loss area i.e. Ghaziabad, Merrut, Kanpur and Varanasi. Recently UPPCL has invited bid for power under Case-1

bidding and they have agreed to purchase power upto Rs. 5.50 per unit (Levelised tariff). The further details are attached as **Annexure 4**.

Point: 5

Ensure of Self sufficiency of water requirement for WEUPPL

Water requirement of the Project is 4002m³/hr which is also in line with the CEA recommendation of 3.0 m³/hr/MW.

Assignment for Water Study was entrusted to WAPCOS to identify reliable water source (36 MCM per annum) for the project among various alternatives, i.e River Ganges, Bansagar Canal and River Sone, River Ganges was identified as reliable Water source for this project. As per International Water Agreement, water drawn from Ganges is not permitted during January to May and hence water storage of 5 months (@ 3 MCM per month) that is, 15 MCM need to be created/identified. WAPCOS also reviewed the status/capacity of existing dams/reservoirs to identify storage for this large quantum of water and among the existing dams, Upper Khajuri Dam near the project (about 7 KM) was identified as suitable for the same.

History of Upper Khajuri Dam:

The construction of Upper Khajuri Dam was started in the year 1957 and completed in 1962. The dam is situated in Village Kotwa, Tehsil Sadar, District- Mirzapur in the state of Uttar Pradesh. The estimated cost for this project in the year 1956 prices was Rs. 8.665 Lacs. The Dam is constructed across river Chaudari and Sibatai. The dam was built to supply water for irrigation purposes and store the excess water drained during rainy season. The dam provides water for Rabi, Khariff as well as Sugar Cane crop. The dam is an earthen embankment and composed of the materials i.e. compacted earth and pitched with stone on the water side. The stone filling has also been provided at the toe on the downstream side. The dam consists of two feeder canals, right and left. Right Canal is 3.2 KM long and has one minor known as Majhwari Minor. The Left canal is 11.3 KM long and

has two minor known as Haraura Minor and Bahuti Minor. The proposed cultivable command area (CCA) is 24000 Hectare. The catchment area of dam is 9488.05 Hectare. The length of dam is 2.313 KM, the maximum height of dam is 24.084 M and the top width is 7.62 M. The dam has 11 gates for releasing of water. At present total live storage capacity of Khajuri Dam is 42.39MCM.

We have requested UP State Govt for allocation of water from River Ganges and permission to use Upper Khajuri Dam for storage of water for project. We have taken In Principal Clearance from Irrigation Department of UP Govt vide letter dated 09-09-2011 for drawl of 36 MCM water from River Ganges and to use Upper Khajuri Dam as Storage during lean period (non-monsoon) subject to CWC/MOWR clearance. CWC was requested for clearance of water allocation by UP Govt. Welspun also requested CWC for grant necessary clearance with schematic diagram of water drawl & pumping system. Approval from CWC/ MOWR was obtained vide letter dated 12-10-2011. UP Govt reviewed and confirmed the suitability of Khajuri Dam considering its live Storage (42.39 MCM), their irrigation requirement of 9.5MCM and 6 months plant's storage i.e. 18MCM. In principal approval and relevant documents are enclosed as **Annexure 5**.

It can be seen from above that water source, i.e. Ganges has adequate availability of water during monsoon periods, is reliable and can be stored for use during non-monsoon periods in Upper Khajuri of UP Government Dam which has adequate spare storage capacity after meeting the UP Irrigation dept requirements. We have also offered to transport additional water of 9.5 MCM for use by locals during lean season for agricultural purposes and we have finalized an agreement with irrigation Department in this regard. We will supply the water free of cost. We will also do the repair work of the reservoir and its annual maintenance (as required).

Point: 6

Water Harvesting scheme, Development of Check Dams, flood water storage

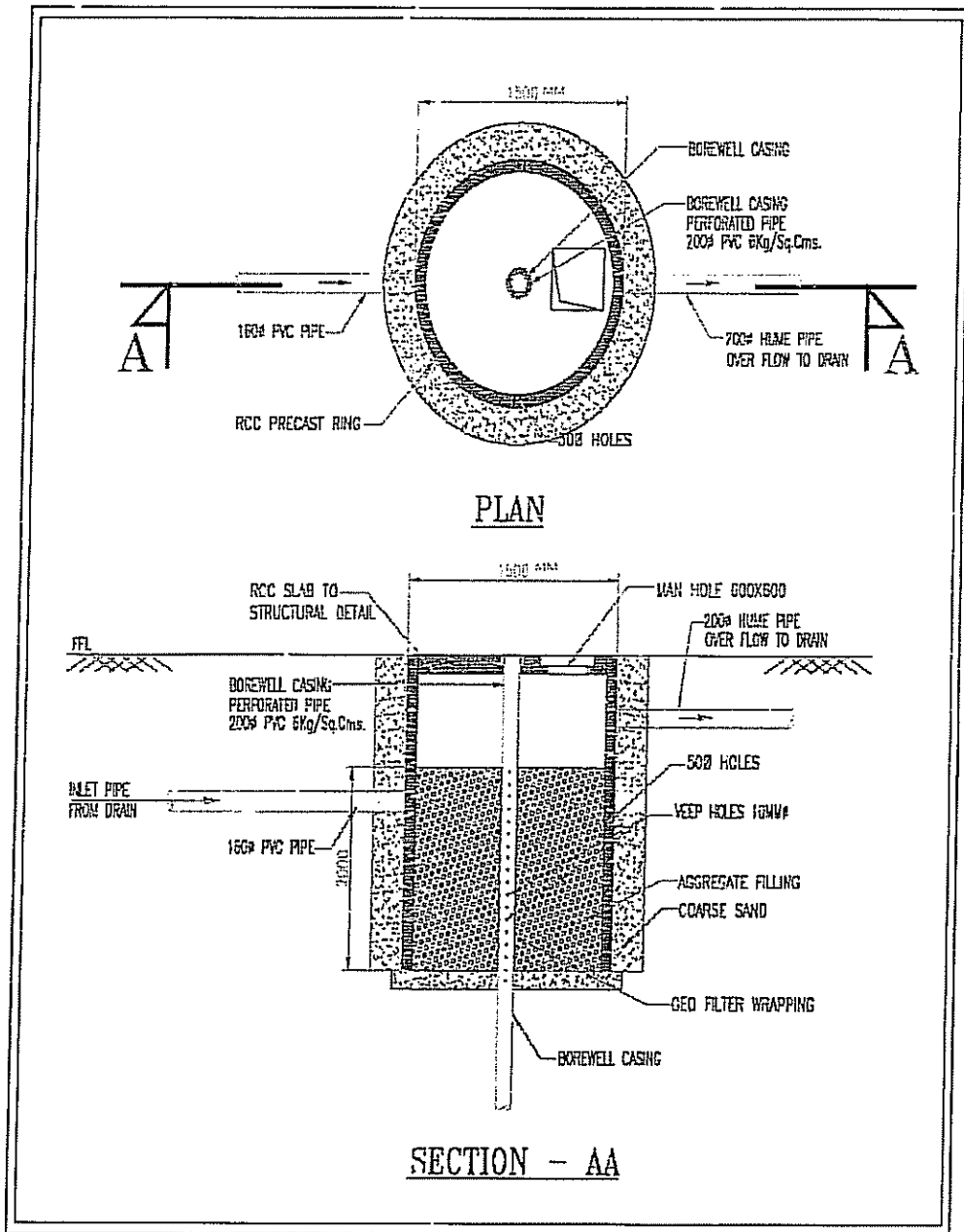
There will be generation of surface run-off from the proposed plant facility during monsoon season. The run-off from the paved surfaces of the proposed facility will be routed through a carefully designed storm water drainage network and collected in storm water collection ponds and excess rainwater will be discharged into re charging bore wells constructed near the collection ponds.

For augmenting the ground water resources in the proposed plant a number of rainwater harvesting bore wells will be created after storm water collection ponds, and excess rain water will be diverted to these recharging wells. These structures will facilitate percolation of water into the ground, thus augmenting the groundwater sources. This will result in increase in groundwater table.

To facilitate collection and storage of rainwater/reduction in water consumption and also to harvest the surplus water, following measures will be adopted:

- The storm water treatment facility will be located at an appropriate location on the site keeping in view the plant layout, contours and collection points;
- The storm water from paved areas will be treated for the removal of oil & grease and sediments and routed to collection ponds and surplus water to ground water harvesting structures.
- The storm water from the unpaved area will also be routed to collection ponds/ ground water harvesting structures;
- In brief, the storm water in rainy season will be stored to the maximum extent and utilized for plant purposes and surplus water will be utilized to improve the ground water table.

We shall also examine a possibility of creating water bodies in depression areas within study area, so that it can become permanent water source. These check dams can be filled during monsoon season and later to be used during lean season.



TYPICAL PLAN AND SECTION OF DEEP WELL RECHARGE PITS

Point: 7

Issues/ Concerns raised by Sh. Baliram Singh :

The Para wise response / reply to all the issues/ concerns raised by Sh Baliram Singh is attached along with all supporting data/ documents.

The desired document in Hindi as well English are enclosed as **Annexure 6**.

Point: 8 Public Hearing

A. Actual response made and action taken for implementation based on minutes of Public Hearing

The response to the issues raised during Public Hearing including Time bound Action Plan is enclosed as **Annexure 7**

B. Formulation of an Action Plan to integrate locals as part of Development process of the region.

Development Process and Action Plan in details is attached as **Annexure 8** for ready reference.

C. Scheme to be proposed for preventive Health Care and obtain records Endemic diseases

Epidemics proactive Preventive care:

Vulnerability to Epidemics

- Acute hunger weakens the body's immunity, as a result of which people succumb to infections. To understand epidemics, we must put hunger and deprivation back in the picture, and look beyond the ambit of health services alone.
- One finds that epidemics have a social pattern. They occur in predominantly tribal areas, marked by multiple deprivations. The nutritional and immunization status of the host population determines to a large extent its susceptibility to communicable disease. Children with poor nutrition are more likely to get infected.

- Preparedness measures taken before a disaster can greatly increase the ability to control & prevent epidemics.

Some measures that our CSR team can organize/conduct include:

- Training health & outreach staff in the identification & management of specific diseases considered to be a threat
- Creating local stocks of supplies and equipment for diagnosis, treatment and environmental health measures in case of disease outbreaks
- Strengthening health surveillance systems and practicing protocols for managing information on certain diseases
- Raising awareness among the population and the need for early referral to a health facility.

Disease specific measures.

- To minimise the risk of diarrhoeal diseases due to open defecation, promote the use of low cost toilets in the villages.
- Identification of malaria prone villages.
- Distribution of medicated mosquito nets in villages.
- Awareness campaigns through folk plays & wall writing.
- Awareness programmes for the early detection of the disease.
- Preventive Interventions – Primary healthcare for prevention of illness.
- Clinical Outreach Programmes – Mobile medical facilities and medicine distribution.
- Immunisation programmes – For prevention of diseases.
- Curative services – Promoting awareness and offering cure for ailments.



Point: 9

Land Details

The total land requirement for the proposed project has been optimized to about 875 acres (354.11 ha). This includes the proposed power plant, ash pond, railway siding, colony and other plant facilities. Out of the total proposed project area 875 acres includes 97.13 acres (11.1 %) of government land and 777.88 acres (88.9%) of private land.

We have obtained the permission from the Commissioner , Vindhachal Division , Mirzapur to purchase revenue land from the land owners under section 154 (2) of UPZALR act., vide letter dated 17th Oct 2012 , Copy attached as Annex- 9A . The detail of private land purchased from land owners , as per revenue records is provided. The Certificate dated 10th September 2012, issued by the revenue official is attached as Annex- 9 B . The DM, Mirzapur has forwarded our application to Govt. of UP, Lucknow for transfer of Govt. Land for the project vide letter dated 5th September 2012 .

Point: 10

Submission of Conservation Plan to Chief life Warden :

We have conducted Biodiversity study and prepared a Wild Life Conservation & Management Plan by a reputed organization , namely M/s Green Future Foundation and submitted to State Forest Department . This Plan was prepared in consultation with concerned DFO . This has been forwarded to office of the DG Forest & Wildlife for their approval. A copy of the same is submitted to your record **as Annexure 10.**

