FINAL REPORT

Environmental Impact Assessment & Environmental Management Plan

FOR

Proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh.

{Under item 1(d) of Schedule of EIA Notification dated 14th September'2006, and amendments}
Category A, *1(d) - Thermal Power Plants)*



PROJECT PROPONENT

Mirzapur Thermal Energy (UP) Private Limited
Adani Corporate House, Shantigram,
S.G Highway, Near Vaishnodevi Circle,
Ahmedabad – 382421, Gujarat.

ENVIRONMENTAL CONSULTANT

Gaurang Environmental Solutions Pvt. Ltd.
#102, SNG, Shree Ratna Apartment,
Peetal Factory, Jhotwara Road, Bani Park, Jaipur-302016
NABET Accreditation: NABET/EIA/23-26/RA 0338
Report No. GESPL_663/ 2024-25/ DEIA/301; Rev. No. 01

July' 2025

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FOR

Proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh

Cat 'A' Under S.No. 1 (d) *Thermal Power Plant* of the Schedule of EIA Notification 2006 and amendments

Location: - Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh

Total Plant Area: - 365.19 Ha.

Report No.	:	663/ 2024-25/ DEIA/301	
Details of ToR	:	J-13012/12/2011-IA. II (T) dated 29 /07/2024	
Environmental Monitoring laboratory engaged	:	**Newcon Consultants & Laboratories, Uttar Pradesh**	
		NABL Certificate Number & Validity	Certificate No.: TC-12621; Validity period: 17.11.2023 to 16.11.2025
		CPCB Recognition letter & validity	CPCB recognition letter dated 09.07.2024 valid upto 16.11.2025.
Baseline study period	:	October to December'2024	
Project cost	:	Rs. 18,300 Crores	

PROJECT PRONENT	ENVIRONMENTAL CONSULTANT
Mirzapur Thermal Energy (UP) Private Limited, Adani Corporate House, Shantigram, Near Vaishno Devi Circle, Khodiyar, Ahmedabad, Gujarat	**Gaurang Environmental Solutions Pvt. Ltd.** #102, SNG, Shree Ratna Apartment, Peetal Factory, Jhotwara Road, Bani Park, Jaipur-302016 **NABET Accreditation**: NABET/EIA/23-26/RA 0338 Validity 07.12.2026 **Report No. GESPL_663/ 2024-25/ DEIA/301; Rev. No. 01**

July'2025

INDEMNIFICATION

Utmost care has been taken in preparation of this Final EIA Report vis a vis Proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh by **Mirzapur Thermal Energy (UP) Private Limited.** The data incorporated in the report is generated through information received from project proponent in form of the details received through e-mails, telephonic discussions, meetings (in person/virtual mode) primary data collection and information derived from secondary sources. Due care has been taken to represent facts and figures and sources acknowledged. The purpose of this document is to facilitate environmental appraisal of the proposal and as such the exercise has been scientifically carried out. The quality assurance for the data received from the laboratory as well as from the experts/ data obtained from outsourcing has been done and then incorporated in this report. The Consultant stands indemnified against any consequences arising out of any inadvertent omissions.

REVISION HISTORY

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LIST OF ABBREVIATIONS

AAQ	:	Ambient Air Quality
AAQM	:	Ambient Air Quality Monitoring
AMSL	:	Above Mean Sea Level
APCD	:	Air Pollution Control Device
MTEPL	:	Mirzapur Thermal Energy (UP) Private Limited
BIS	:	Bureau of Indian Standards
UPPCB	:	Uttar Pradesh Pollution Control Board
COD	:	Commercial Operations Date
CPCB	:	Central Pollution Control Board
CTO	:	Consent to Operate
DMP	:	Disaster Management Plan
DM water	:	Demineralized Water
EAC	:	Expert Appraisal Committee
EC	:	Environmental Clearance
E	:	East
EIA	:	Environmental Impact Assessment
EMC	:	Environment Management Cell
EMP	:	Environmental Management Plan
ESE	:	East of South East
ENE	:	East of North East
EPA	:	Environmental Protection Act
ERDAS	:	Earth Resources Data Analysis System
ESP	:	Electro Static Precipitator
FPS	:	Fine Particulate Sampler
FCC	:	False Color Composite
GESPL	:	Gaurang Environmental Solution Pvt. Ltd.
Govt.	:	Government
GLC	:	Ground Level Concentration
GOI	:	Government of India
GPS	:	Global Positioning System
GSDP	:	Gross State Domestic Product
Ha	:	Hectare
HAP	:	Hazardous Air Pollutants
HSD	:	High Speed Diesel
IMD	:	India Meteorological Department
IRO	:	Integrated Regional Office
IS	:	Indian Standards
IUCN	:	International Union for Conservation of Nature
KLD	:	Kilo Litre Per Day

LOI	:	Letter of Intent
LU/LC	:	Land Use / Land Cover
MCM	:	Million Cubic Meter
MEE	:	Multi Effect Evaporator
MSIHC	:	Manufacture, Storage and Import of Hazardous Chemical
MoEF&CC	:	Ministry of Environment, Forest & Climate Change
MSL	:	Mean Sea Level
MT	:	Metric Tonnes
MTPA	:	Metric Tonnes Per Annum
MW	:	Mega Watt
N	:	North
NAAQS	:	National Ambient Air Quality Standards
NABET	:	National Accreditation Board for Education & Training
NABL	:	National Accreditation Board for Testing and Calibration Laboratories
NCLT	:	National Company Law Tribunal
NDCT	:	Natural Draft Cooling Tower
NE	:	North East
NH	:	National Highway
NNE	:	North of North East
NGO	:	Non-Governmental Organization
NNW	:	North of North West
NRSA	:	National Remote Sensing Agency
NRSC	:	National Remote Sensing Centre
NW	:	North West
OHS	:	Occupational Health and Safety
OSHA	:	Occupational Safety and Health Administration
PCCF	:	Principal Chief Conservator of Forest
pH	:	Potential of Hydrogen
PHCS	:	Public Health Centers
PM	:	Particulate Matter
PNG	:	Piped Natural Gas
PPE	:	Personal Protective Equipment
QCI	:	Quality Council of India
RF	:	Reserve Forest
RO	:	Reverse Osmosis
RSPM	:	Respirable Suspended Particulate Matter
SC	:	Scheduled Caste
SE	:	South East
SEAC	:	State Level Expert Appraisal Committee
SHE	:	Safety, Health & Environment
SOI	:	Survey of India
SPA	:	Severally Polluted Area

SPCB	:	State Pollution Control Board
SPM	:	Suspended Particulate Matter
SSW	:	South of South West
ST	:	Scheduled Tribe
STP	:	Sewage Treatment Plant
SW	:	South West
TDS	:	Total Dissolved Solids
ToR	:	Terms of Reference
TPA	:	Tonnes Per Annum
TPD	:	Tonnes Per Day
TPP	:	Thermal Power Plant
UNFC	:	United Nations Framework Classification
USCTPP	:	Ultra Super Critical Thermal Power Plant
USEPA	:	United States Environmental Protection Agency
VOC	:	Volatile Organic Carbon
WRD	:	Water Resources Department
W	:	West
WNW	:	West of North West
WSW	:	West of South West
ZLD	:	Zero Liquid Discharge
µg/m3	:	Micro gram per meter cube
µm	:	Micro Meter
cu. m	:	Cubic meter
dB	:	Decibel
gm/sec	:	Gram per second
gm/cc	:	Grams per cubic centimeter
hr/day	:	Hour per day
kg	:	Kilogram
Kg/hr	:	Kilogram per hour
Kg/ha	:	Kilogram per hectare
km	:	Kilometer
m	:	Meter
mg/l	:	Milligram per Liter
mm	:	Millimeter
Sq.km	:	Square Kilometer
t/hr	:	Tonnes per hour
SPA	:	Severally Polluted Area

****

DISCLOSURE OF CONSULTANTS ENGAGED

Part A: Declaration by ACO and Experts contributing to the EIA Report for **Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh by Mirzapur Thermal Energy (UP) Private Limited.**

1, hereby, certify that I was a part of the EIA team in the following capacity that developed the above EIA.

EIA coordinator (EC)	
Sector & Category	Thermal Power Plant 1(d) Cat. A
Name	Dr. Ratnakumar Mudliar
Signature	18/06/2025
Period of involvement	April- 2024 till date
Contact information	Gaurang Environmental Solutions Pvt. Ltd. #102, SNG Shri Ratna Apartment, Near Tambi Petrol Pump, Peetal factory, Jhotwara road, Jaipur-302016 e-mail: info@gauranggroup.com
Team Member	Mallikarjuna M Guttula
Signature	17/06/2025

Functional area experts:

S. No.	Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and date	TM
1	AP*	Pooja Yadav	**Period:** April 2024 to till date **Task handled:** • Identifying activities related to air emissions and their impacts due to the proposed expansion project. • Assisting in designing the monitoring station network for collecting baseline ambient air quality data of the study	18/06/2025	Vimal Yadav (TM) 16/06/25

			area Interpreting and collating baseline ambient air quality data of the study area through primary data collection and comparing it with existing baseline levels of the area • Identifying potential sources of air pollution due to project activities • Quantifying impacts • Suggesting suitable APCM • Developing EMP for the project in consultation with the PP • Preparing post-project monitoring schedule		
2	WP*	Dr. Ratnakumar Mudliar	**Period:** April 2024 to till date • Designing water balance and developing schemes for cascading use (recycling, reusing) of water • Identifying probable impacts of effluent/wastewater discharges into the receiving environment/water bodies, if any and suggesting method of efficient management of the same.	18/06/25	Vimal Yadav (TM) 18/06/25
3	SHW*	Pooja Yadav	**Period:** April 2024 to till date • Approaches for segregating and collecting Municipal Solid Waste (MSW). • Management of non-hazardous industrial solid wastes. • Management of Fly ash • Techniques for handling and disposing of high-volume non-hazardous solid wastes. • Recognition and management of hazardous wastes. • Methods for the storage and proper disposal of hazardous wastes.	18/06/2025	Ginni Barotia (FAE-B category) 17/06/2025
4	SE*	Gajendra Singh Rathore	**Period:** April 2024 to till date • Conducting baseline socio-economic surveys • Conducting social needs assessment studies • Preparing need-based CER plans and	17/6/2025	Puran Singh Gurjar (TM) 17/06/25

			its effective implementation plan		
5	EB*	Srikantan Nair	**Period:** April 2024 to till date • Surveying flora and fauna in the study area • Identifying ecologically important areas around the project location • Identifying threatened species in the project area • Assessing the impact of the proposed expansion on flora and fauna • Recommending mitigation measures and a greenbelt development plan • Preparing a wildlife conservation plan	07/04/2025	Dr. Mahendra Singh (TM) 16/06/25
6	HG*	Mukesh Suroliya	**Period:** April 2024 to till date • Conducting field surveys to assess the regional and local geology of the area	17/06/2025	Shivam Joshi (FAA) 17/06/25
7	GEO*	Mukesh Suroliya	**Period:** April 2024 to till date • Analyzing surface hydrological data • Computing groundwater recharge, flow rate, and direction • Calculating and suggesting locations for RWH tanks	17/06/2025	Shivam Joshi (FAA) 17/06/25
8	SC*	Dr. Ratnakumar Mudliar	**Period:** April 2024 to till date • Assessing soil fertility/ productivity & nutrient availability • Controlling soil degradation and promoting soil conservation • Evaluating the effect of waste handling on soil	18/06/25	PoojaYadav (TM) 16/06/2025
9	AQ*	Jayesh Makwana	**Period:** April 2024 to till date • Analysing micro-meteorological data for use in air quality modelling • Collecting and using secondary meteorological data (e.g., cloud cover, inversion data, mixing heights) for air quality modelling • Applying relevant air quality models to predict pollutant dispersion • Plotting isopleths of GLCs representing incremental pollution levels on suitable maps showing both the sources of	07/04/25	Mallikarjuna M Guttula (FAE-B category) 17/06/25

			pollution and environmentally sensitive receptors		
10	NV*	S. Chandrasekhar Babu	**Period:** April 2024 to till date • Identifying probable noise impacts • Assessing the impact of noise from project activities on fauna in ecologically sensitive areas • Suggesting control measures for noise from project activities	16/06/25	Mallikarjuna M Guttula (FAE-B category) MALLIK 17/06/25
11	LU*	Mamta Pandey	**Period:** April 2024 to till date • Studying changes in LULC and the extent of impact • Interpreting and preparing LULC maps	16/06/25	Vinod Verma (FAE-B category) 17-06-25
12	RH*	Dr Sanjay Palnitkar	**Period:** April 2024 to till date • Enumerating and selecting incidents for hazard identification, primarily focusing on Loss of Containment (LOC) of materials • Identifying and characterizing failures within the operational framework • Recognizing isolatable sections to streamline risk management • Supporting the execution of consequence analysis • Assisting in identifying hazards related to flammable materials, including damage criteria and consequential effects • Compiling a list of consequences resulting from exposure to heat radiation • Providing details on explosion scenarios • Collaborating in conducting a comprehensive risk assessment	16/06/25	Ginni Barotia (FAE-B category) Ginni Barotia 17/06/2025

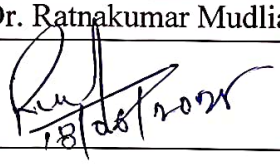
Part B: Declaration by Head of the ACO / authorized person

I, Vipul Khandelwal, hereby, confirm that the above-mentioned experts prepared the EIA report for the Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh.by **Mirzapur Thermal Energy (UP) Private Limited** and EIA Coordinator (EC) is fully aware of the content. The consultant organization shall be fully accountable for any mis-leading information. It is also certified that EIA Report has been analysed by the system for plagiarism check using Turnitin software in accordance with good scientific practice. No unethical practices have been carried out and external data / text has not been used without proper acknowledgement, while preparing this EIA report.

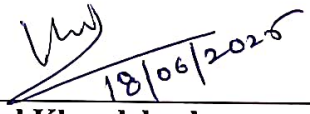
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Signature with date:	

Date and Sign of Head of ACO / authorised person:

Signature	
Name:	**Vipul Khandelwal**
Designation:	**Director**
Name of the EIA consultant organization	**Gaurang Environmental Solutions Pvt. Ltd.**

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		NABET	MoEFCC	
1.	Mining of minerals including Opencast/ underground mining	1	1 (a)(i)	A
2.	Onshore and Offshore oil and gas exploration, development & productions	2	1 (b)	A
3.	Thermal power plants	4	1 (d)	A
4.	Mineral beneficiation	7	2 (b)	A
5.	Metallurgical industries	8	3 (a)	A
6.	Cement plants	9	3 (b)	A
7.	Asbestos milling and asbestos based products	12	4 (c)	A
8.	Leather/skin/hide processing industry	15	4 (f)	B
9.	Chemical Fertilizers	16	5 (a)	A
10.	Synthetic organic chemicals industry	21	5 (f)	A
11.	Distilleries	22	5 (g)	A
12.	Isolated storage & handling of hazardous chemicals	28	-	B
13.	Airports	29	7 (a)	A
14.	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes	31	7 (c)	A
15.	Common hazardous waste treatment, storage and disposal facilities	32	7 (d)	A
16.	Bio-medical waste treatment facilities	32A	7 (d a)	B
17.	Ports, harbours, break waters and dredging	33	7 (e)	A
18.	Common Effluent Treatment Plants (CETPs)	36	7 (h)	B
19.	Common municipal solid waste management facility (CMSWMF)	37	7 (i)	B
20.	Building and construction projects	38	8 (a)	B
21.	Townships and Area development projects	39	8 (b)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in RAAC minutes dated June 21, 2024 posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no QCI/NABET/ENV/ACO/24/3314 dated July 16, 2024. The accreditation needs to be renewed before the expiry date by Gaurang Environmental Solutions Pvt. Ltd. following due process of assessment.

Issue Date
July 16, 2024

Valid up to
December 07, 2026

Mr. Ajay Kumar Jha
Sr. Director, NABET

Certificate No.
NABET/EIA/23-26/RA 0338

Prof (Dr) Varinder S Kanwar
CEO-NABET

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Compliance of Terms of Reference

Compliance of Terms of Reference (ToR) prescribed by MoEF&CC, New Delhi vide TOR Identification No: TO24A0601UP5665287N dated 29.07.2024. Copy of ToR letter enclosed as **Annexure – I.**

S. No.	Terms of Reference	Compliance status
Specific Terms of Reference for (Thermal Power Plants)		
1. [A]	**Environmental Management & Biodiversity Conservation**	
1.1	A Cumulative Environmental Impact Assessment study of all the existing and proposed projects in the 15-km radius of the proposed project shall be conducted and the same shall be included the in EIA/EMP report. Details of industrial units present in 15 Km radius of the power plant shall be submitted.	There are no major industrial units within 15 kms radius of the project site. Some stone quarries are scattered in the study area. Thus, the impact assessment has been done considering emissions from the proposed project as well as the ancillary activities such as transportation given in Chapter IV of Final EIA-EMP report. Details on Cumulative Environmental Impact Assessment study are given in Chapter 13 of EIA-EMP report.
1.2	Radioactivity studies along with coal analysis to be provided (sulphur, ash percentage and heavy metals including Pb, Cr, As and Hg). Details of auxiliary fuel, if any including its quantity, quality, storage, etc. should also be given.	The Radioactivity analysis for the Coal samples were carried outby Department of Atomic Energy, GoI, Mumbai. Report enclosed as **Annexure XI.** Coal will be used as primary fuel @ 6.4 million MTPA. LDO & HSD/HFO will be used as secondary fuel @ 1500 KL per annum. Detail of LDO/HSD and Coal analysis is given in Chapter 2 of Final EIA-EMP report
1.3	A comparative chart shall be prepared with changes observed from the previous baseline study and present baseline study.	Comparison of previous baseline with Current Baseline study is given in Table No. 7.13 to Table No. 7.16 of Section 3.8 of Chapter 7
1.4	PP should submit the detailed plan in tabular format (year-wise for the life of the project) for concurrent afforestation and green belt development in and around the project site. The PP should submit the number of saplings to be planted, names of native species, area to be covered under afforestation & green belt, location of plantation, target for survival rate and	Greenbelt on plant periphery and plantation within plant premises is proposed in 121.13 Hectare (33.16 %) [0.62 ha. – included for greenbelt development] of total plant area after exploring all the vacant spaces. It is proposed to plant 3,02,825 nos. of native species. Minimum width of greenbelt along the boundary of the project will be maintained considering 80% survival rate. The details of greenbelt development along with budget allocation are discussed in **Chapter 4** of Final EIA-EMP report

S. No.	Terms of Reference	Compliance status
	budget earmarked for the afforestation & green belt development. In addition to this, PP should show on a surface plan (5-year interval for life of project) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided. In addition to this, plantation in the safety zone at project boundary the plantation should be planned in such a way that it should be completed within 2 years only.	with action plan for year-wise and location wise greenbelt development & plantation along with Plant layout.
1.5	Action plan for development of Three tier plantation programme (33% of total project cover area) along the periphery of the project boundary shall be provided. Plan shall be duly approved by the local forest department.	Action plan for development of 3-tier plantation along project periphery is detailed in section 4.3.7.1 and Figure 4.6 in Chapter 4 of Final EIA-EMP report. Greenbelt plan has been approved by DFO, Mirzapur vide letter no. 4228/Mirzapur/ 15 dated 30.05.2025.
1.6	A detailed plan need to be submitted for undertaking extensive green plantation within 10 km radiusof the plant focusing on water reservoir, school, hospital and other institutional area and same need to be incorporated in EIA/EMP report.	Extensive/Dense plantation/greenbelt will be provided around water reservoir, roads etc. and the detailed greenbelt development plan is incorporated in Chapter 4 of Final EIA-EMP Report. Tree plantation in nearby school, hospital and other institutional area will be carried out under joint effort of MTE(UP)PL, forest department & other government agency and the local community under CSR/CER activity.

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1.7	Detailed action plan shall be prepared for maintenance of air pollution control equipment for proposed and existing units and shall be incorporated in EIA/EMP report.	MTEUPPL, will implement the periodic maintenance (Daily, Weekly, Monthly, Quarterly & Annually) of Air Pollution Control equipment's like ESP,SCR, Bag filters, etc. for its efficient operations. Details are furnished in chapter IV & X of EIA report.
1.8	Details of Ash management of 5-year plan for 100 % ash utilization for proposed project shall be submitted. MoU signed for ash utilization with companies shall be submitted.	MTE(UP)PL commits to utilize 100% Ash from commissioning of the plant and will follow fly ash utilization as per MoEF&CC Notification dated 31.12.2021 and its subsequent amendments. MoU with cement industries (ACC & Ambuja Cement) for utilization of fly ash is provided in final EIA-EMP Report. Ash Management Plan for existing & proposed TPP for 5- year wise is enclosed as **Annexure VI & XII.**
1.9	Details of Ash handling system along with the supplementary coal handling system shall be submitted.	The Dry Ash Handling System involves the extraction of ash, primarily Fly Ash, from electrostatic precipitators in dry form. Collected ash in ESP hoppers is then conveyed to dry ash storage silos for industrial use, ensuring efficient and versatile disposal. From the fly ash silos, fly ash shall be transported in dry form through road for possible utilization. Dry ash will be transported to 2 nos. main storage silos of RCC construction having combined capacity of 16 hrs storage, common for two (02) units. Each main fly ash silo shall be equipped with two outlets for loading of ash in conditioned form into open bulkers/truck and two outlets for dry unloading in to closed tankers/trucks/bulkers for utilization and two outlets for future use. Supplementary coal handling systems can include features that help reduce dust and bulk material loss. This includes water spraying system, wind screen, dust collectors, bag filters etc. Details of ash handling system & coal handling system are provided at Chapter 2 of the Final EIA-EMP report
1.10	Proper protection measures like HDPE lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body (minimum 60	Ash Pond/Dyke will be provided with adequate HDPE/LDPE liners and disposal through High/Medium Concentration Slurry system with Ash water recovery system. Greenbelt/Plantation will be developed in the bund area and around it.

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	meters) etc. shall be planned to reduce the possibility of mixing leachate with any freshwater body for under-construction ash pond. A high-density Slurry disposal plan shall be prepared. The design of the same should as per CEA/CPCB guidelines.	Details of the ash disposal system & high/medium-density Slurry disposal plan are given in Chapter 2 of Final EIA-EMP report.
1.11	Pond and ground water quality (10 locations within 2 km radius of the plant boundary) shall be studied and report be submitted along with EIA/EMP. Action plan for Ground water monitoring stations on all hotspots like schools/hospitals within 2 km radius of the plant boundary be submitted. Baseline Study for Heavy metals in Groundwater, Surface water and soil to be carried out and incorporated in EIA/EMP report. This is in addition to the regular baseline study of the study area.	Baseline monitoring locations have been selected considering available ground water and surface water sources in the study area. 5 no of ground water locations & 4 no of surface water locations are around 2 km radius of project boundary & 14 no of ground water & 3 no of surface water monitoring locations are within 2 to 10 km radius of project site. The baseline monitoring reports are enclosed as **Annexure XIII.** The baseline study for Ground water, Surface water and soil including heavy metals have been conducted. Details are given in Chapter III of the Final EIA-EMP report Environmental monitoring plan has been detailed at Chapter-6 of the Final EIA-EMP report.
1.12	Details pertaining to water source, treatment and discharge should be provided.	The Water requirement for the proposed expansion is optimized to 28 MCM/Year sourced from River Ganga to Upper Khajuri Dam and further to plant site through pipeline of about 32.6 km. Water allocation from WRD Uttar Pradesh vide letter no. 3613/11-27-C.0-4-174/11 dated 09.10.2011 has already been obtained Wastewater is proposed to be utilized within plant to achieve Zero Liquid Discharge (ZLD). Domestic wastewater will be treated through latest MBBR Technology and treated water will be utilized for greenbelt and plantation purpose. In USCTPP, there is no boiler blowdown. Neutralization treatment will be provided for DM water reject. • The plant is proposed on ZLD principle. • ETP is proposed for effluent streams from plant and STP is proposed for domestic sewage.

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		• The treated wastewater will be utilised for plant consumptive requirements and for green belt development.
1.13	Zero Liquid Discharge plan shall be submitted.	The plant will operate on the Zero Liquid Discharge (ZLD) principle, emphasizing water conservation and same will be maintained. River water/ is drawn through intake pumps to the plant reservoir via pipeline. For cooling purposes, Induced Draft Cooling Towers will be installed for each unit. Water will be utilized for various purposes, including cooling of the steam condenser and auxiliary systems, meeting heat cycle make-up requirements, complying with environmental guidelines and Selective Catalyst Reduction (SCR) systems, and serving miscellaneous services such as firefighting, A/C, dust suppression, and potable use. Used water will be treated in STPs, ETPs and water treatment plant. The ZLD approach ensures no liquid discharge and comprehensive water management. Detailed ZLD plan is mentioned in Chapter 4 of Final EIA-EMP report
1.14	PP shall submit action plan for using treated Sewage/ Domestic wastewater for its operations.	Domestic sewage will be treated in STP and treated water will be used in green belt development & horticulture. The plant is based on Zero Liquid Discharge (ZLD) concept. Action plan for using treated sewage/domestic wastewater for its operations have been given in Chapter 4 of Final EIA-EMP report
1.15	Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report.	Environmental Cost Benefit Analysis for the project has been given in Chapter 9 of Final EIA/EMP Report
1.16	An action plan shall be prepared for Water shed development within a 10 km radius of the plant boundary in consultation with a reputed government institution and incorporated in the EIA/EMP report. This should include recharge of ground water in the surrounding area of the plant.	An action plan for Water shed development within 10 km radius of the project boundary is prepared as part of hydrogeological study vetted by National Institute of Technology, Delhi The project site falls in the first order streams of the watershed with medium to low drainage density. The streams are flowing towards the north and Northeast direction. Watershed Management Strategies include the following: • Maintain and enhance groundwater recharge through artificial recharge methods.

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		• Control soil erosion and improve water retention using check dams and contour bunding at suitable location probably near Hanuman Gadhi Mandir, Dadri Khurd village with detailed survey and study • Promote vegetative cover and reduce impervious surfaces to increase infiltration. • Regular monitoring of groundwater levels and quality to evaluate the changes, if any.
1.17	PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total material handled) and steps to be taken for reduction of the same. The year-wise target for reduction in the specific diesel consumption needs to be submitted. PP shall also explore the possibility of using e-vehicles/LNG/CNG-based machinery and trucks for the operation and transportation of Coal and ash.	Specific diesel consumption is @1 ml per unit (kWh) which is optimized by using micro-oil-guns. Diesel used in trucks and vehicles for transportation of coal and ash will be reduced as coal will be transported through rail within plant premises. E-vehicles/ CNG based vehicles is being/ will be used within the plant.
1.18	PP shall submit a plan for diversion of nallha/water body if any involved in the project. PP shall also obtain the permission for such diversion from the concerned authority.	An ephemeral path is adjacent to project site towards West direction which will not be disturbed and the same will be protected.
1.19	PP shall obtain a letter from concerned forest department clearly mentioning the extent of forest land involved within and outside (other activities related to plant) plant area.	The Project Area has been surveyed by the Land Revenue Department, Mirzapur and as verified, the Khasra/Survey numbers does not fall under the forest. No forest land is involved within Project /plant Area. NOC regarding non-involvement of forest land has been issued by Forest Office Mirzapur vide letter no. 4229/Mirzapur/15 dated 30.05.2025 MTEUPPL has proposed an area of 8.3581 Ha of Forest Land Outside the Project Area for water pipeline (5.8162 Ha) and approach road (2.5419 Ha) for which Forest Clearance Application is submitted vide proposal no. FP/UP/THE/14236/2015 which is already under process and

S. No.	Terms of Reference	Compliance status
		Stage-1 clearance is awaited.
1.20	While preparing the EIA/EMP report, PP shall explore the possibility of optimizing forest land requirement to the extent possible and submit a detailed note on the same at the time of EC presentation. In case of any increase in forest land PP shall obtain the amendment in ToR.	There is no forest land involved in project site. The ancillary facilities involved with project include water pipeline, approach and rail route for coal transportation. Alternative route analysis has been done for the same to optimize involvement of Forest land & the selected proposed route has the least Forest area (i.e., 8.3581 ha.) outside the Project boundary involvement which is barest minimum and unavoidable and is lesser in comparison to Alternate Route 2 & 3. Alternative route analysis is given in Chapter 5 of Final EIA-EMP report.
1.21	List of Schedule-1 species needs to be authenticated by the concerned forest department.	No Schedule-I species were recorded in Core Zone. List of Schedule – I have been duly approved by forest department vide letter no. 4226/Mirzapur/15 dated 30.05.2025.
1.22	PP shall submit the firm coal linkage, quality of coal and propose mitigative measures in the EIA/EMP report after referring to the OMs issued by MoEF&CC in this regard.	For the proposed project of 2x800 MW Power Project, the annual fuel requirement is estimated at 6.4 million MTPA at 85% plant load factor with Coal GCV of 3700-4300 k Cal/kg. Coal will be transported through Rail from Commercial Mines to the Project. Coal Mines of NCL / SECL / CCL under Part B (iv) of Shakti Policy 2017 and e-auction has been considered. Details are given in Chapter 4 of Final EIA-EMP report.
2. [B]	**Disaster Management**	
2.1	A Disaster Management Plan shall be prepared and incorporated in the EIA/EMP report.	A comprehensive Disaster Management Plan has been developed, encompassing both on-site and off-site emergency strategies, addressing both natural and man-made disasters. The plan outlines detailed safety measures to be adhered to, delineates the roles and responsibilities of the staff, and establishes a clear reporting mechanism. Details are given in Chapter VII of Final EIA-EMP report.
3. [D]	**Miscellaneous**	
3.1	Plot the wind rose diagram using the typical meteorological year (TMY) data for the period considered for the study. The monitoring units shall be deployed in the field based on the coverage area ratio and direction of the wind. A mathematical	Wind rose plotted for TMY is given in Chapter 3 of EIA-EMP report. This is a project specific Mathematical model development would require a large data set. The same is proposed to be done once the project becomes operational and data is accumulated. For the purpose of present study, air quality modeling has been

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	model shall be developed for the local site rather than using the standard model available in software for both air & water quality modelling.	done using AERMOD Version 9.5 dispersion model for different stability state Gaussian plume dispersion, designed for multiple point sources for short term and developed by United States Environmental Protection Agency [USEPA] has been used for simulations. The input data and isopleths depicting the GLC levels are provided in Chapter 4 of Final EIA-EMP report
3.2	PP shall align its activities to one/few of the Sustainable Development Goals (SDG) and start working on the mission of net zero by 2050. PPs shall update the same to the EAC.	MTE(UP)PL recognizes the importance of aligning its operations with global sustainability initiatives, particularly the SDGs outlined by the United Nations, and is committed to supporting India's pledge toward achieving net-zero emissions by 2050. The following measures highlight the alignment of the proposed Ultra Super Critical (USC) Thermal Power Plant project with relevant SDGs and the roadmap for progressing toward the net-zero mission: 1. Alignment with Sustainable Development Goals (SDGs) The USC thermal power plant project aligns with the following SDGs: SDG 7: Affordable and Clean Energy o The adoption of USC technology significantly improves thermal efficiency, thereby reducing fuel consumption and greenhouse gas emissions compared to conventional power plants. SDG 9: Industry, Innovation, and Infrastructure o Deployment of advanced emission control systems such as Precipitators (ESP) to minimize environmental impact. o Implementation of real-time emission monitoring systems (CEMS) & CAAQMS to ensure regulatory compliance and maintain transparency. SDG 13: Climate Action o Reduction in CO_2 emissions per unit of energy generated by adopting ultra-supercritical technology.

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		○ Active participation in afforestation projects and carbon offset programs to contribute to climate mitigation. SDG 6: Clean Water and Sanitation ○ Incorporating zero liquid discharge (ZLD) systems to ensure efficient water usage and recycling within the plant operations. SDG 12: Responsible Consumption and Production ○ Fly ash utilization in cement and construction industries to ensure waste-to-resource conversion. ○ Maximizing efficiency in coal usage through advanced coal handling and combustion techniques. 2. Net Zero by 2070: Roadmap and Actions To align with the mission of achieving net-zero emissions by 2070, Adani Power's USC thermal power plant will adopt the following measures: • Energy Efficiency and Emission Reductions ○ Maintain plant efficiency above 42%, leveraging USC technology to minimize CO_2 emissions per unit of energy produced. ○ Ensure compliance with stringent emission norms through state-of-the-art pollution control systems (e.g., SCR for NOx). • Carbon Offsetting and Sequestration ○ Partner with local governments and NGOs for large-scale afforestation projects to offset residual emissions. ○ Greenbelt development and promote biodiversity conservation in areas surrounding the plant site. • Stakeholder Engagement and Reporting ○ Develop and regularly update a detailed roadmap for net-zero emissions, including interim milestones.

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		○ Engage with the regulatory authority and stakeholders by submitting periodic updates on progress toward SDG alignment and net-zero commitments. Leverage digital tools and AI for transparent monitoring, reporting, and verification of emission data and sustainability metrics. *3. **Key Actions Already Undertaken*** • Installation of USC boilers, which improve efficiency and reduce CO_2 emissions compared to subcritical plants. • Deployment of cutting-edge pollution control equipment (e.g., SCR, ESP) to achieve emissions well within prescribed norms. • Implementation of **zero liquid discharge (ZLD)** to ensure water conservation and waste management. • Utilization of fly ash for cement and brick manufacturing to achieve 100% utilization targets. ***4. Commitments and Future Reporting*** MTE(UP)PL is committed to: • Periodically updating the regulatory authority & stakeholders with progress reports on SDG alignment and the net-zero roadmap. • Undertaking third-party audits to validate emission reductions and sustainability efforts. • Engaging with international climate action programs to align with global best practices in decarbonization. This comprehensive strategy reflects MTE(UP)PL's commitment to sustainable growth while supporting India's and the world's journey toward a low-carbon future
3.3	PP shall submit the EIA/EMP report after the plagiarism check using	Plagiarism check using authenticated plagiarism software is enclosed in Section A.

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	authenticated plagiarism software.	
3.4	Detailed description of all the court cases including all directions given by the apex and currents status of them shall submit.	Details of court cases with current status is enclosed as **Annexure XIV.**
3.5	PP should provide in the EIA Report details of all the statutory clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after grant of EC.	Details of statutory clearances, permissions, NOC, consents etc. applicable for the project are given in table no. 1.5 of Chapter 1 of Final EIA-EMP report.
3.6	The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.	The photographs depicting monitoring stations & sampling locations bearing the date, time, latitude & longitude along with the original test reports and certificates (NABL accreditation & MOEF&CC certificate) of the environmental monitoring laboratory are enclosed as **Annexure XIII.**
3.7	PP should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this PP should mention the number and designation of persons to be engaged for the implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.	**Construction:** Permanent:275 Contractual: 7000 / **Operation phase:** Permanent: 250 Contractual:2600 The comprehensive handling of environmental considerations during the construction and operation phases of the thermal power station will be entrusted to a dedicated and fully equipped Environmental Management Division (EMD) comprising of suitable equipped manpower. The estimated budget for implementation of Environmental Management Plan (EMP): Rs. **3012.39 Cr.** Recurring cost: **31.12 Cr.**
3.8	PP should submit the year-wise, activity-wise and time-bound budget earmarked for EMP, occupational health surveillance, and activities proposed to address the issues raised during the Public Hearing. The capital and recurring	A budget of Rs. 46.5 crore (as per Ministry's OM dated 01.05.2018) is allocated for CER activities, and efforts is made to address concerns raised in the public consultation in the final EIA report, ensuring responsible corporate practices. The budgetary allocation based on socio-economic survey of the study area is given in Chapter VIII of this Draft EIA & is

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	expenditures to be incurred need to be submitted.	subject to revisions based on recommendations/suggestions received from stakeholders during public consultation and recommendations/directions of the Hon'ble EAC during appraisal of environmental clearance. The final budgetary allocation is submitted with Final EIA/EMP report
3.9	Aerial view video of the project site and transportation route proposed for this project shall be recorded through drone and be submitted.	Aerial view video will be provided during EC presentation.
3.10	PP while preparing the EIA/EMP Report and conducting Public consultation shall take into account, the deficiency pointed out by the Hon'ble NGT Judgment 21.12.2016.	The application for Amendment in EC for making up for /rectifying the defects and deficiencies pointed out in the NGT judgement was submitted on 17.06.2017. • The proposal was earlier considered in the EAC meetings held on 24.07.2017 and 22.02.2019. • The EAC in its meeting held on 22.02.2019 & letter vide no.J-13012/12/2011-IA.II(T)dated:20.12.2019 recommended for EC amendment Subject to Stage-I FC.
4. [C]	**Socio-economic Study**	
4.1	The Public Health Delivery Plan including the provisions for drinking water supply for the local population shall be in the EIA/EMP Report. The status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the needs of the labour force and local populace.	Facilities such as infrastructure, sanitation, fuel, restrooms, medical facilities, and safety measures, will be provided for the construction workforce and casual workers, including truck drivers, during both the construction and operation phases. The drinking water facility are being provided to nearby villages on requirement under CSR activities. The final budgetary allocation is submitted in Chapter VII of Final EIA/EMP report. The status of the nearest existing medical facilities in the study area is given in Chapter 1 of Final EIA-EMP report.
4.2	Public consultation (Public Hearing and Written submission) shall be conducted as per the provisions of EIA Notification, 2006 (as amended) and OMs issued in this regard by MoEF&CC.	Public consultation (Public Hearing and Written submission) was conducted as per the provisions of EIA Notification, 2006 (as amended) and OMs issued in this regard by MoEF&CC on 11.04.2025 at Madihan, Mirzapur.
	As per the Ministry's O.M. dated	The public hearing for proposed project was conducted on

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4.3	30.09.2020, to address the concern raised during the Public Hearing, the Project Proponent is required to submit the detailed activities proposed with year-wise budgetary provision (Capital and recurring) for at least 10 years. Activities proposed shall be part of EMP. Tentative no. of project-affected families (if any) shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared. The recommendation Socio-economic study may also be considered while planning the activities & budget. In addition to this issues raised during previous PH shall also be taken into account.	11.04.2025 at Higher Secondary School, Near Madihan Bazaar, Madihan District-Mirzapur (U.P). The Action plan along with budgetary allocation (year-wise) to address concerns raised during Public Hearing & Socio-economic need based assessment is prepared as per the OM dated 30.09.2020 and furnished in Chapter 7 of EIA-EMP Report. No Rehabilitation & Resettlement is required.
4.4	Demographic details in 10 km area shall be submitted.	Demographic details of 10 km study area based on primary field survey and secondary data are given in Chapter 3 of EIA-EMP report.
1	**Statutory Compliance**	
1.1	The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference.	Noted. The project name is as under: *Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh***.** The same shall be in consonance with the name submitted to concerned Government Departments.
1.2	Vision document specifying prospective long term plan of the project shall be formulated and submitted.	Vision document specifying prospective long term plan is enclosed as **Annexure II.**
1.3	Latest compliance report duly certified by the Regional Office of MoEF&CC for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted.	Not applicable, as it is a proposed project**.**
2.	**Details of The Project And Site**	

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2.1	The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted.	Not applicable, the project is site specific as previously EC has been awarded.
2.2	Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed.	The executive summary of the project, including pertinent information and recent project site photographs, is provided in Chapter 2 of Final EIA-EMP report A tabular format is used in the Chapter VIII of final EIA-EMP report to address issues raised during the Public Hearing and written representations with time-bound Action Plan and budgetary allocations.
2.3	Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be submitted.	A roof top solar PV and solar streetlights of 2 MW is proposed within plant premises for harnessing solar power.
2.4	The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them.	The Google map depicting the proposed site (plant boundary), including location of ash pond and the 10 km topographical map is enclosed as **Annexure XV.** The IRS satellite map of the area is given in Chapter 3 in figure 3.3. of EIA/EMP report The elevation level of the plant site is 169 m - 214 m. HFL letter from WRD is enclosed as **Annexure XVI.**
2.5	Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure,	Plant layout specifying the land use break up as indicted is enclosed as **Annexure X.**

<table>
<tr><th>S. No.</th><th>Terms of Reference</th><th>Compliance status</th></tr>
<tr><td></td><td>roads etc. shall be provided.</td><td>The total land area of Mirzapur TPP is 365.19 Ha. The proposed land utilization breakup is as under:
<table>
<tr><th>S. No.</th><th>Particular</th><th>Area (in hectares)</th></tr>
<tr><td>1</td><td>TPP Site</td><td>85.80</td></tr>
<tr><td>2</td><td>Raw water Reservoir</td><td>33.18</td></tr>
<tr><td>3</td><td>Railway Siding & Others</td><td>64.14</td></tr>
<tr><td>4</td><td>Ash Pond</td><td>49.37</td></tr>
<tr><td>5</td><td>Township</td><td>11.57</td></tr>
<tr><td>6</td><td>Green Belt</td><td>121.13</td></tr>
<tr><td colspan="2">Total</td><td>365.19</td></tr>
<tr><td colspan="3">Others (Outside Plant Boundary)</td></tr>
<tr><td>8</td><td>Pipeline & Approach</td><td>8.3581 [FP/UP/THE/14236/2015] - REC meeting held on 3rd June’2024.</td></tr>
</table></td></tr>
<tr><td>2.6</td><td>Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided.</td><td></td></tr>
<tr><td>2.7</td><td>Present land use (including land class/kism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided.</td><td>Land is in possession of MTE(UP)PL except 31.38 Ha (Govt Land) is under transfer and mutation. Land documents are enclosed as Annexure IV.
Details of pending litigations are enclosed as Annexure XIV.</td></tr>
<tr><td>2.8</td><td>If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant documents.</td><td>No, the project does not involve forest land.
However, MTEUPPL has proposed an area of 8.3581 Ha of Forest Land which is outside the Project Area for water pipeline (5.8162 Ha) and approach road (2.5419 Ha) for which Forest Clearance Application is submitted vide proposal no. FP/UP/THE/14236/2015 which is already under process and Stage-1 clearance is awaited.</td></tr>
</table>

S. No.	Terms of Reference	Compliance status
2.9	The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.	The land is already in possession of MTEUPPL except 31.38 Ha (Govt Land) under transfer and mutation. Hence, no land acquisition and/or R&R scheme is applicable.
2.10	Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.	Satellite imagery and authenticated toposheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area are enclose as **Annexure XV.**
2.11	Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted.	As per Survey of India project site is falls under G44W9 (63L/9) and projects site is flat thus, not require any filling or levelling.
3.	**Ecology Biodiversity And Environment**	
3.1	A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted.	The project does not involve acquisition of any grazing land. The lands use classification of the study area is given in Chapter III of Final EIA-EMP report.
3.2	Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of the	There is no notified National Park, Wildlife Sanctuary, Elephant/Tiger Reserve, or migratory routes/WL corridor exists within 10 km of the study area.

S. No.	Terms of Reference	Compliance status
	project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him.	There are no National Park, Sanctuary, Elephant/Tiger Reserve/ Wildlife corridor etc., present within 10 KM radius of proposed site. NOC regarding the distance certification issued by DFO, Mirzapur vide letter no. 4227/Mirzapur/15 dated 30.05.2025
3.3	A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted.	The project site is not located on potentially mineable mineral deposit.
3.4	The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water balance diagram. Details of water balance calculated shall take into account reuse and re- circulation of effluents.	Measures taken to optimize water requirement: ▪ Water requirement for the proposed expansion will be less than 2.5 m3/MWh as per MoEFCC guidelines. ▪ The water requirement is 28.00 MCM (about 3200 m3/hr) which will be sourced from Ganga River through Upper Khajuri Dam and further to plant. ▪ The Plant is designed for zero Liquid Discharge (ZLD) ▪ Dry Ash Handling System, air cooled condenser, COC of Cooling Tower will be developed for optimizing the water requirement as per CEA guidelines. Similarly, treated sewage water will be reused for horticulture. ▪ Feasibility for installing of air-cooling condenser (ACC) has been evaluated and observed that the efficiency of the plant will reduce as heat rate will be high which will lead to higher coal consumption. Also, auxiliary power consumption will be higher. Addition to above, installing ACC will further increase the CAPEX and OPEX for the project which will make it techno economically non-viable.
3.5	Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area.	An ephemeral path is adjacent to project site towards West direction which will not be disturbed and the same will be protected.

S. No.	Terms of Reference	Compliance status
	Details of proposed diversion shall be furnished duly approved by the concerned Department of the State.	
3.6	It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways.	The MTE(UP)PL ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. HFL letter from WRD is enclosed as **Annexure XVI.** The railway track is at a distance of 13.0 km from the project site. NH 35 is at a distance of 10.0 km. towards NNE from the project site.
3.7	Hydro-geological study of the area shall be carried out through an institute / organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted.	No extraction of groundwater, only surface water will be used for proposed project. The hydrogeological study is carried out through M/s. Akshar Geo Services (an ISO 9001:2015 certified organization) vetted by NIT, Delhi. Specific mitigation measures are spelt out and time bound Action Plan for its implementation is given in Section 7.11 of Chapter 7 of Final EIA Report.
3.8	Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc. shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea.	The plant is based on Zero Liquid Discharge (ZLD) concept. Wastewater generated will be treated in ETP & STP to conform the effluent standards and will be recycled for in plant use and Ash handling within the plant. Hence no impact on natural water bodies is anticipated. Hydrogeological study with impact study on ecology of the river due to of the proposed withdrawal of water has been carried out through M/s. Akshar Geo Services (an ISO 9001:2015 certified organization) vetted by NIT, Delhi.
3.9	Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and	The Water requirement for the proposed expansion is optimized to 28 MCM/Year which will be sourced from Ganga river to Upper Khajuri Dam and further to plant site through dedicated pipeline of about 32.6 km. Copy of permission from WRD is enclosed as **Annexure V.** No groundwater source will be tapped for the proposed thermal power plant.

S. No.	Terms of Reference	Compliance status
	commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.	Hydrogeological study with source of water and its sustainability even in lean season along with details of ecological impacts arising out of withdrawal of water has been carried out through M/s. Akshar Geo Services (an ISO 9001:2015 certified organization) vetted by NIT, Delhi.
3.10	Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished. In addition, wherever ground water is drawn, PP shall submit detailed plan of Water charging activity to be undertaken.	No groundwater source will be tapped for the proposed thermal power plant. Detailed plan for rainwater harvesting is given in Chapter IV of Final EIA-EMP report.
3.11	Feasibility of near zero discharge concept shall be critically examined and its details submitted.	The proposed project is based on ZLD principle. Details are given in Chapter II & IV of the EIA/EMP report.
3.12	Optimization of Cycles of Concentration (COC) along with other water conservation measures inthe project shall be specified.	The estimated total raw water requirement stands at 28 MCM/annum., factoring in 1.0% for heat cycle makeup, approximately 1.7% for cooling towers with a COC of 5, and other consumptive needs such as potable water, process water, and service water. To minimize raw water consumption, water will be repurposed in the Ash Handling System. Details are given in Chapter II of the Final EIA-EMP report.
3.13	Plan for recirculation of ash pond water and its implementation shall be submitted.	Ash Water Recovery System (AWRS) will be provided for recirculation of ash pond water. Settling and Surge Tank shall be provided for recirculation of water (i.e. BA hopper overflow water, decanted water from Hydrobins) for use in the Ash Handling system. Details are given in Chapter II of Final EIA-EMP report.
3.14	Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored	The plan for post EC water quality monitoring has been formulated and given in Chapter VI of Final EIA-EMP report. Provision has been taken for long-term monitoring of ground water table using Piezometer during operation phase.

S. No.	Terms of Reference	Compliance status
	also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area.	
3.15	Hazards Characterization: Past incidents of hazard events within 10 km radius of project area with detailed analysis of causes and probability of reoccurrence	No hazard has been reported in study area in the past 10 years.
4.	**Environmental Baseline Study And Mitigation Measures**	
4.1	One complete season (critical season) site specific meteorological and AAQ data (except monsoon season) as per latest MoEF&CC Notification shall be collected along with past three year's meteorological data for that particular season for wind speed analysis and the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM_{10}, $PM_{2.5}$, SO_2, NOx, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration the upwind direction, pre-dominant downwind direction, other dominant directions, habitation and sensitive receptors. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur.	The Baseline data collection has been done during post-monsoon season (Oct-Dec' 2024). Environmental monitoring for primary data was carried out by NABL and MoEF&CC approved laboratory M/s Newcon Consultants and Laboratories. The AAQ monitoring had been carried out at 11 stations including the project site. The parameters monitored include PM_{10}, $PM_{2.5}$, SO_2, NOx, CO. The monitoring stations were finalized taking into consideration the upwind direction, pre-dominant downwind direction, other dominant directions, habitation and sensitive receptors. The results of the monitored data are given in Chapter III of the Final EIA-EMP report.
4.2	In case of expansion project, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as	The condition is not applicable, as this is a proposed project.

S. No.	Terms of Reference	Compliance status
	identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs).	
4.3	A list of industries existing and proposed in the study area shall be furnished.	There are no major industries present within study area other than small stone quarry.
4.4	Cumulative impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail. Details of the Model used and the input data used for modelling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should also be shown on the location map. The cumulative study should also include impacts on water, soil and socio-economics.	The MTE(UP)PL Thermal power plant coming up in Mirzapur, Uttar Pradesh has mostly rural surroundings. There are no major industries in the study area. Some stone quarries are scattered in the study area, however, carrying out cumulative assessment considering these is limiting due to non-availability of data sets. The input data and isopleths depicting the GLC levels are provided in Chapter IV of the Final EIA-EMP report.
4.5	Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.	The Radioactivity analysis for the Coal samples were carried outby Department of Atomic Energy, GoI, Mumbai. Report enclosed as **Annexure XI.** Coal analysis is given in Chapter 2 of Final EIA-EMP report
4.6	Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality,storage etc should also be furnished.	For the proposed project of 2x800MW, the annual fuel (coal) requirement is estimated at 6.4 million MTPA at 85% PLF with Design Coal GCV of 3200 – 4300 k Cal/kg. The Coal will be sourced from Coal Mines of NCL / SECL / CCL under Part B (iv) of Shakti Policy 2017 and e-auction through rail till plant & through piped conveyor within plant premises. LDO & HSD will be used as secondary fuel @ 15000 KL per annum. The auxiliary fuel for the envisioned Power Project, specifically LDO/HSD, is scheduled to be conveyed to the power plant using road in tankers and stored in vertical
4.7	Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of	

S. No.	Terms of Reference	Compliance status
	the existing units to the said Notification shall also be submitted	cylindrical steel tanks. The transfer of HSD/LDO to the boilers is intended to be facilitated directly from the existing storage tanks through pipeline. Each tank will be equipped with a radar-type level transmitter to provide indications in the Central Control Room. Details are given in Chapter II of the Final EIA-EMP report.
4.8	Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.	
4.9	For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted.	The Coal will be sourced from Coal Mines of NCL / SECL / CCL under Part B (iv) of Shakti Policy 2017 and e-auction through rail till plant & through piped conveyor within plant premises. Use of Imported coal is not proposed in the project.
4.10	Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.	Facilities such as infrastructure, sanitation, fuel, restrooms, medical facilities, and safety measures, will be provided for the construction workforce and casual workers, including truck drivers, during both the construction and operation phases.
5.	**Environmental Management Plan**	
5.1	EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.	Adequate budget of Rs. 3012.39 Cr for implementation of EMP for the proposed expansion is provided. The item wise breakup of the same is given in Chapter X of the Final EIA-EMP report.
5.2	A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be prepared. It should take into account the maximum inventory of storage at site at any point of	A comprehensive Disaster Management Plan (DMP) has been developed, incorporating a thorough risk assessment study that specifically addresses potential fire and explosion risks associated with fuel storage and utilization. The plan meticulously accounts for the maximum inventory of storage on-site at any given time, with risk contours clearly illustrated

S. No.	Terms of Reference	Compliance status
	time. The risk contours should be plotted on the plant layout map accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Provision for mock drills shall be suitably incorporated to check the efficiency of the plans drawn. clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Provision for mock drills shall be suitably incorporated to check the efficiency of the plans drawn.	on the plant layout map, outlining potential impacts on proposed activities in the event of an accident. Furthermore, the plan outlines proposed safeguard measures, including preventive measures against fire hazards. The integration of mock drills will be conducted to assess and enhance the effectiveness of the formulated emergency response plans. Details given in Chapter VII of the Final EIA-EMP report.
5.3	The DMP so formulated shall include measures against likely Fires / Tsunami / Cyclones / Storm Surges / Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely.	The Disaster Management Plan (DMP) comprehensively covers measures addressing potential incidents such as Fires, Tsunamis, Cyclones, Storm Surges, Earthquakes, among others, as applicable to the project site. The DMP encompasses both On-site and Off-site plans, providing detailed strategies for managing likely disasters.
5.4	Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash along with	The Ash Handling System for each unit entails the collection and disposal of bottom and fly ash with a focus on maximum utilization. Bottom ash is gathered wet, with efforts for full utilization; unutilized ash is directed to the ash pond. Fly ash is efficiently removed using vacuum and pressurized conveying systems, transported to storage silos, and disposed via High/Medium Concentration Slurry Disposal

S. No.	Terms of Reference	Compliance status
	monitoring mechanism.	(HCSD/MCSD) in emergencies. The Ash Water System, common for two units, includes tanks and pumps, promoting water recirculation. Ash will be utilized for Cement Industries, Road Construction, filling of low lying area, manufacturing of Bricks, aggregate replacement in concrete, etc. as per Fly Ash Notification, 31.12.2021 and amendments. MoA with cement industries (for utilization of fly ash) is enclosed as **Annexure VI.**
6.	**Green Belt Development**	
6.1	Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary not less than 2000 tree per ha with survival rate of more than 85% shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO_2 and other gaseous pollutants and hence a stratified green belt should be developed.	Greenbelt on plant periphery and plantation within plant premises is proposed in 121.13 Hectare (33.16 %) [0.62 ha. – included for greenbelt development] of total plant area after exploring all the vacant spaces. It is proposed to plant 3,02,825 nos. of native species. Minimum width of greenbelt along the boundary of the project: 50-100 m. considering 80% survival rate. The detailed greenbelt plan is given in Chapter IV of the Final EIA-EMP report.
6.2	Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months.	Greenbelt & plantation plan in study area to act as carbon sink to be developed under Social EMP plan is submitted with Final EIA-EMP Report. A separate budget Rs. 46.5 crore towards CER activities (as per Ministry's OM dated 01.05.2018) is allocated for Social EMP (CER) activities, and efforts will be made to address concerns raised in the public consultation in the final EIA-EMP report ensuring responsible corporate practices. Time bound action plan along with financial allocation is submitted in the final EIA-EMP report.
7.	**Socio-economic Activities**	
7.1	Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed	Socio-economic study and need based assessment study of the study area comprising of 10 km from the plant site has been

S. No.	Terms of Reference	Compliance status
	institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities.	conducted by Gov. Reputed Institute (IISWBM, Kolkata). Details are given in the EIA-EMP report. MTE(UP)PL will prioritise locals for employment based on qualification & eligibility and the details for identification of employable youth and employment oriented technical/vocational/training program will be included in the detailed action plan under Social EMP is included in Final EIA-EMP report based on recommendations/suggestions of stakeholders during public consultation.
7.2	Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project.	
7.3	If the area has tribal population, it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.	No tribal population present in the study area.
7.4	A detailed CER plan along with activities wise break up of financial commitment shall be prepared in terms of the provisions OM No. 22-65/2017-IA.III dated 30.09.2020. CER component shall be identified considering need based assessment study and Public Hearing issues. Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified.	A budget of Rs. 46.5 crore (as per Ministry's OM dated 01.05.2018) is allocated for CER activities, and efforts is made to address concerns raised in the public consultation in the final EIA-EMP report ensuring responsible corporate practices. The budgetary allocation based on socio-economic survey of the study area given is given in Chapter VIII of EIA-EMP report incorporating recommendations/suggestions received from stakeholders in public consultation and recommendations/directions of the Hon'ble EAC during appraisal of environmental clearance. The final budgetary allocation is submitted in Final EIA/EMP report.
7.5	While formulating CER schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the	MTE(UP)PL CER Activity aims at bettering the Environment around the operated area as well as socio economic and cultural status of local people. The key Highlight of some initiatives & activities is going to undertake in nearby villages are as follow: • Sustainable Livelihood options & Woman Empowerment • Educational Initiatives • Community Health Initiatives • Community Rural Infrastructure development • Sports & Culture Development • General Management & Administration

S. No.	Terms of Reference	Compliance status
	scheme from time to time and dovetail the same with any Govt. scheme(s). CER details done in the past should be clearly spelt out in caseof expansion projects.	
7.6	R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependent on land falling in the project, as well as, population who were dependent on land not owned by them.	R&R is not applicable.
7.7	Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared.	The Epidemiological Study on Occupational Health & Endemic Diseases has been conducted by Indian Institute of Social Welfare & Business Management (University of Calcutta) and incorporated in the report on Social Impact Assessment, Need Assessment Survey & CSR Action Plan.
7.8	Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conducive environment shall be carried out and precautionary measures like use of personal equipment etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to	The details of Occupational health and safety measures for the workers are given in the Chapter VII in Final EIA-EMP report.

S. No.	Terms of Reference	Compliance status
	three years shall be conducted with an excellent follow up plan of action wherever required.	
8.	**Corporate Environment Policy**	
8.1	Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.	Yes. The company has a well laid Environment Policy approved by Company's Chairman. Copy of the same is enclosed as **Annexure XVII.**
8.2	Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.	
8.3	What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given.	MTEUPPL has a well-defined hierarchical system in place. Details of Environmental Management Division/Cell (EMD) is given in Chapter X of the EIA-EMP report. The EMD is proposed to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions & for compliance management system. The EMD will be staffed with a proficient team encompassing environmental engineers, chemists, horticulturists, and well-trained personnel responsible for the operation and maintenance of pollution control equipment.
8.4	Does the company has compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.	
9.	**Miscellaneous**	
9.1	All the above details should be adequately brought out in the EIA report and in the presentationto the Committee.	Noted.
9.2	Details of litigation pending or otherwise with respect to project in any Court,	Noted & details of court cases are enclosed as **Annexure XIV.**

S. No.	Terms of Reference	Compliance status
	Tribunal etc. shallinvariably be furnished.	
9.3	In case any dismantling of old plants are envisaged, the planned land use & land reclamation of dismantled area to be furnished.	No dismantling of plants is envisaged
10.	**Additional Tor For Coastal Based Thermal Power Plants Projects (Tpps)**	
10.1	Low lying areas fulfilling the definition wetland as per Ramsar Convention shall be identified and clearly demarcated w.r.t the proposed site.	No applicable. The MTEUPPL is not Coastal based Thermal Power Plant.
10.2	If the site includes or is located close to marshy areas and backwaters, these areas must be excluded from the site and the project boundary should be away from the CRZ line. Authenticated CRZ map from any of the authorized agencies shall be submitted.	No applicable. The MTEUPPL is not Coastal based Thermal Power Plant.
10.3	The soil levelling should be minimum with no or minimal disturbance to the natural drainage of the area. If the minor canals (if any) have to be diverted, the design for diversion should be such that the diverted canals not only drains the plant area but also collect the volume of flood water from the surrounding areas and discharge into marshy areas/major canals that enter into creek. Major canals should not be altered but their embankments should be strengthened and desilted.	No applicable. The MTEUPPL is not Coastal based Thermal Power Plant.
10.4	Additional soil required for levelling of the sites should as far as possible be generated within the site itself in such a manner that the natural drainage system of the area is protected and improved.	No applicable.

S. No.	Terms of Reference	Compliance status
10.5	Marshy areas which hold large quantities of flood water to be identified and shall not be disturbed.	No applicable.
10.6	No waste should be discharged into Creek, Canal systems, Backwaters, Marshy areas and seas without appropriate treatment. Wherever feasible, the outfall should be first treated in a Guard Pond and then only discharged into deep sea (10 to 15 m depth). Similarly, the Intake should be from deep sea to avoid aggregation of fish and in no case shall be from the estuarine zone. The brine that comes out from Desalinization Plants (if any) should not be discharged into sea without adequate dilution.	Not applicable. The plant is based on ZLD. Hence, No wastewater is/ will be discharged from the project boundary. The solid waste will be handled adequately following the latest Rules and regulations as described in Chapter IV of the Final EIA-EMP report.
10.7	Mangrove conservation and regeneration plan shall be formulated and Action Plan with details oftime bound implementation shall be specified, if mangroves are present in Study Area.	Not applicable.
10.8	A common Green Endowment Fund should be created by the project proponents out of EMP budgets. The interest earned out of it should be used for the development and management of green cover of the area.	Not applicable.
10.9	Impact on fisheries at various socio economic level shall be assessed.	Not applicable.
10.10	An endowment Fishermen Welfare Fund should be created out of CER grants not only to enhance their quality of life by creation of facilities for Fish Landing Platforms / Fishing Harbour / cold storage, but also to provide relief in case of emergency situations such as	Not applicable.

S. No.	Terms of Reference	Compliance status
	missing of fishermen on duty due to rough seas, tropical cyclones and storms etc.	
10.11	Tsunami Emergency Management Plan shall be prepared wherever applicable and Plan submitted prior to the commencement of construction work.	Emergency Management Plan has been prepared for both natural as well as manmade disasters. Details are given in Chapter VII of the Final EIA-EMP report.
10.12	There should not be any contamination of soil, ground and surface waters (canals & village pond) with sea water in and around the project sites. In other words necessary preventive measures for spillage from pipelines, such as lining of Guard Pond used for the treatment of outfall before discharging into the sea and surface RCC channels along the pipelines of outfall and intake should be adopted. **This is just because the areas around the projects boundaries could be fertile agricultural land used for paddy cultivation.**	Not applicable.

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EXECUTIVE SUMMARY

1.1 INTRODUCTION

Adani Power Limited (APL), a part of the diversified Adani Group, is the largest private thermal power producer in India. We have a power generation capacity of 18,110 MW comprising thermal power plants in Gujarat, Maharashtra, Karnataka, Rajasthan, Chhattisgarh, Madhya Pradesh, Jharkhand and a 40 MW solar power project in Gujarat.

M/s Mirzapur Thermal Energy (UP) Private Limited has proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh.

The proposal for obtaining Terms of Reference (ToR) was submitted to the Ministry of Environment, Forest & Climate Change (MoEF&CC) vide proposal no IA/UP/THE/467671/2024 dated 08/05/2024 and consequently, the Proposal was accepted & considered in its 10th Expert Appraisal Committee (Thermal Projects), MoEF&CC meeting held on 10th June '2024. The project was granted with Terms of Reference (ToR) vide File No: J-13012/12/2011-IA. II (T) dated 29 /07/2024 by the MoEF&CC, New Delhi. Copy of ToR Letter for proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) by M/s Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL).

1.2 DESCRIPTION OF THE PROJECT

The salient features of the project are given below: -

Table 1.1: Salient features of the project

Features		Details
Project Sector & Category	:	1(d), Thermal Power Plants & Category "A"
Plant Capacity	:	1600 MW (2x800) MW
Land Area (in Ha.)	:	365.19 Ha.

Greenbelt Details (in Ha.)	:	121.13 Ha. (33.16 %)
Technology	:	**Ultra Super-Critical**
Coal Requirement in (Million MTPA)	:	6.4 Milllion TPA
Source of Fuel	:	Coal Mines of NCL / SECL / CCL and e-auction.
Coal Transportation	:	Rail
Project Cost		Rs. 18300 Crores
Water Requirement	:	28 MCM per annum
Water Intake Point	:	The water will be drawn from River Ganga to Upper Khajuri Dam and further to plant site through dedicated pipeline of about 32.6 km.
Nearest Railway Station	:	Jhingura Railway Station at 13.6 Km in NNW.
Nearest Airport	:	Lal Bahadur Shastri international Airport, Varanasi at 53 km in NNE
Seismological Information	:	Seismic Zone – III as per IS 1893: 2002

Table 1.2: Details of Environmental Setting

S. No.	Particulars	Details
1.	Name of the Project	Proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh.
2.	Promoter	Mirzapur Thermal Energy (UP) Private Limited
3.	Location	Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh.
4.	Area	365.19 Ha.
5.	Latitude & Longitude	

S. No.	Latitude	Longitude	S.No.	Latitude	Longitude
1	24°59'43.10"N	82°41'1.32"E	23	24°59'48.80"N	82°40'4.67"E
2	24°59'15.67"N	82°40'48.65"E	24	24°59'53.60"N	82°40'2.03"E
3	24°59'16.22"N	82°40'32.70"E	25	24°59'56.49"N	82°40'9.78"E
4	24°59'0.36"N	82°40'31.30"E	26	25° 0'1.35"N	82°40'14.57"E
5	24°58'59.94"N	82°40'21.69"E	27	25° 0'6.56"N	82°40'17.38"E
6	24°58'43.86"N	82°40'21.29"E	28	25° 0'4.58"N	82°40'23.19"E
7	24°58'44.48"N	82°40'0.15"E	29	25° 0'9.45"N	82°40'25.50"E
8	24°58'34.88"N	82°39'59.91"E	30	25° 0'10.07"N	82°40'24.11"E
9	24°58'34.59"N	82°40'10.54"E	31	25° 0'14.85"N	82°40'26.43"E
10	24°58'27.30"N	82°40'8.78"E	32	25° 0'14.09"N	82°40'28.29"E
11	24°58'14.57"N	82°39'55.42"E	33	25° 0'15.05"N	82°40'28.98"E
12	24°58'6.36"N	82°39'44.21"E	34	25° 0'9.57"N	82°40'42.06"E
13	24°58'23.71"N	82°39'48.52"E	35	25° 0'10.76"N	82°40'42.96"E

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>14</td><td>24°58'25.44"N</td><td>82°39'50.05"E</td><td>36</td><td>25° 0'4.33"N</td><td>82°40'49.13"E</td></tr>
<tr><td>15</td><td>24°58'33.97"N</td><td>82°39'46.94"E</td><td>37</td><td>25° 0'0.20"N</td><td>82°40'46.22"E</td></tr>
<tr><td>16</td><td>24°58'37.62"N</td><td>82°39'47.94"E</td><td>38</td><td>24°59'58.98"N</td><td>82°40'51.13"E</td></tr>
<tr><td>17</td><td>24°58'39.68"N</td><td>82°39'45.63"E</td><td>39</td><td>24°59'57.20"N</td><td>82°40'50.02"E</td></tr>
<tr><td>18</td><td>24°58'48.52"N</td><td>82°39'44.25"E</td><td>40</td><td>24°59'54.74"N</td><td>82°40'55.39"E</td></tr>
<tr><td>19</td><td>24°59'0.89"N</td><td>82°39'49.86"E</td><td>41</td><td>24°59'49.00"N</td><td>82°40'51.94"E</td></tr>
<tr><td>20</td><td>24°59'12.52"N</td><td>82°39'57.77"E</td><td>42</td><td>24°59'45.52"N</td><td>82°40'55.23"E</td></tr>
<tr><td>21</td><td>24°59'36.31"N</td><td>82°39'57.84"E</td><td>43</td><td>24°59'43.90"N</td><td>82°40'53.55"E</td></tr>
<tr><td>22</td><td>24°59'42.80"N</td><td>82°39'55.48"E</td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>6.</td><td>Toposheet No.</td><td>• Core Zone: G44W9 (63L/9)
• Buffer Zone: G4408 (63K/8), G440 12 (63K/12), G440 16 (63K/16), G44W 5 (63L/5), G44W 13 (63L/13) , G44W 6 (63L/6), G44W 10 (63L/10), G44W 14 (63L/14)</td></tr>
<tr><td>7.</td><td>Elevation (MSL)</td><td>Minimum: 169 m AMSL
Maximum: 214 m AMSL
Average: 193 m AMSL</td></tr>
<tr><td>8.</td><td>Nearest Habitation</td><td>
<table>
<tr><th>S. No.</th><th>Habitation</th><th>Distance (Km) & Direction</th></tr>
<tr><td>1.</td><td>Garhawa</td><td>2.0 Km towards NE</td></tr>
<tr><td>2.</td><td>Ukhdand</td><td>2.1 Km towards NNW</td></tr>
<tr><td>3.</td><td>Darhiram</td><td>2.6 Km towards NE</td></tr>
<tr><td>4.</td><td>Umaria</td><td>2.1 Km towards N</td></tr>
</table>
*Source: -All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.
</td></tr>
<tr><td>9.</td><td>Nearest Major Town</td><td>There is no densely populated habitation that exists near the proposed site. Mirzapur town is located at ~18 km in the NW direction.</td></tr>
<tr><td>10.</td><td>Nearest Highway</td><td>
<table>
<tr><th>S. No.</th><th>Highway</th><th>Distance (Km) & Direction with respect to Project</th></tr>
<tr><td>1.</td><td>S.H.- 5</td><td>1.0 km towards WSW</td></tr>
<tr><td>2.</td><td>N.H.- 35</td><td>10 km towards NNE</td></tr>
</table>
*Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.
</td></tr>
<tr><td>11.</td><td>Nearest Railway Station</td><td>• Jhingura - Train Station, Imambara, Uttar Pradesh at 13.6 km towards NNW
• Mirzapur Railway Station at 18 kms from the site in North West direction</td></tr>
<tr><td>12.</td><td>Nearest Airport</td><td>Lal Bahadur Shastri International Airport, Varanasi is at 53 km in NNE direction</td></tr>
<tr><td>13.</td><td>Nearest Tourist Places</td><td>None within 10Km radius</td></tr>
<tr><td>14.</td><td>Defense Installations</td><td>None within 10 Km radius.</td></tr>
<tr><td>15.</td><td>Archaeological Sites (State Protected Monuments)</td><td>None within 10 Km radius.</td></tr>
<tr><td>16.</td><td>Eco-Sensitive Zones/Area</td><td>None within 10 Km radius</td></tr>
</table>

17.	Inter-state Boundary	None within 10 Km radius
18.	Reserved/ Protected Forest	

S. No.	Particulars	Distance (km)	Direction
	RF/PF		
1	Mirzapur RF	Adjoining	SE
2	Danti RF	Adjoining	N
3	R.F. (Lodhpur)	4.0	NE
4	Patehra RF	5.6	SW
5	Sarson R.F.	5.6	SE
6	Dhanuhaw Pahar	5.8	ESE
7	Chacdlewa khurd R.F.	6.8	NE
8	Danti R.F.	6.9	NW
9	Karaunda R.F.	6.9	WSW
10	Malua R.F.	7.5	SW
11	Purainiyan R.F.	7.0	SE
12	Golhanpur R.F.	7.0	E
13	R.F. (Atraura)	8.1	N
14	Matihani R.F.	9.0	ESE
15	Patehar R.F.	9.2	WSW
16	Barkachhar R.F.	9.8	NW

Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.

19. Nearest Streams/ Rivers/ Water Bodies

S. No	Particulars	Distance (km)	Direction
1	Unnamed Ephemeral Path	Adjacent to the site	W
2	Jogldari Nala	1.9	SE
3	Jamthwa Nadi	2.2	WSW
4	Pahiti Nadi	3.6	NNE
5	Kuardari Nadi	6.0	W
6	Amjhar Nala	6.4	WSW
7	Upper Khajuri Dam	6	W
8	Dhenkwan Dam	6.2	E
9	Imiliya Bandhwa	9.82	E

Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.

20. Nearest Education and Medical Facilities.

As given below: -

Name	Distance & Direction
Health care facilities	
CHC, Marihan,Mirzapur - Government Hospital, Uttar Pradesh	4.6 km towards SSE
*Source: - Google Earth	
Education facilities:	
Ordial Institute Campus - Private educational institution, SH 5, Danti,	1.35 Km towards SSW
Rajkiya Ashram Paddhati Balika Vidhyalaya, Danti,	2.4 Km towards S
Rajkiya Ashram Paddhati Balika Vidhyalaya – School, Danti,	2.4 km towards South
Prathmik Vidyalaya Shiksha Khurd, Gaura Raja, Mahoharpur	5.7 km towards NE

		Prathmik Vidyalaya Umariya Ayodhya Prasad – School, Ayodhya Prasad, Umariya, Malpur,	2.8 km towards NNE
		Prathmik Vidyalaya, Bairhava - Rexa Kalan	4.7 km towards ENE
		Government Primary School, Baghaila, Baghaila, Hasara	7.4 km towards SSW
		Prathmik Vidyalaya, Jaraha, Mahdauri,	5.6 Km towards NE
		Rajeev Gandhi South Campus, Banaras Hindu University, Barkachha	9.3 km towards NNW
21.	Places of Worship	As given below: -	
		Particulars	**Distance & Direction**
		Hanuman Gadi Mandir, Dadri Khurd, Umariya	0.01 km towards West
		Hanuman Ji Mandir - , Mirzapur, Danti	2.2 km towards WNW
		Shive Shankair Mandir- Birohiya,	2.65 km towards North
		Mahadev Mandir -, Ukhdand, Birohiya	2.4 km towards North
22.	Seismic Zone	Seismic Zone – III as per IS 1893: 2002	

1.2.1 Process & Methodology

The proposed project of 2 x 800 MW capacity power plant is mooted to deploy the state-of-art technology and accordingly two units of 800 MW are being considered with ultra-supercritical steam parameters to attain high cycle efficiency

MAIN TECHNICAL FEATURES OF THE PROPOSAL

Power Generating Unit	:	Two units of 800 MW turbine generator sets fed by steam from coal fired P.F. boiler operating at Ultra Super-critical range.
Cooling System	:	Closed recirculating condenser cooling system with Induced Draft Cooling Tower (IDCT).
Coal Handling System	:	Coal handling facility, which comprises receipt of coal through Rail, unloading into wagon tipplers, conveying, crushing and stacking by stacker-cum-reclaimer in the coal yard and finally feeding to the bunkers through conveyor via transfer tower.
Ash Disposal System	:	The Fly Ash will be collected in dry form in fly-ash silos before transportation through rail wagons / closed trucks to Cement Plants in nearby area for further utilization. 100% of the Fly ash generated will be utilized in Cement Industries as per Fly Ash Notification, 31.12.2021 & bottom ash utilization in reclamation of abandoned mines, manufacturing of bricks, road construction, and aggregate

		replacement in concrete, etc. Un-utilized Botttom ash is being / will be stored in ash dyke using high/ medium concentration slurry disposal system. MoU with Cement industries (ACC & Ambuja Cement) for utilization of fly ash is enclosed as Annexure – VI
Ash water recovery system	:	Ash water recovery system shall be common for two units & will consists of ash water tank and pump house for recirculation for Ash Handling system.
Selective Catalytic Reduction (SCR) system	:	To control NOx emission, Ultra-supercritical boilers having advanced low NOx generation system will be installed. In addition, Selective Catalytic Reduction (SCR) system will be installed.

1.2.2 Ash Handling System

For each unit, Bottom ash will be collected in wet form; while fly ash will be collected in dry form to facilitate utilization. Fly ash and bottom ash shall be disposed via High Concentration Slurry disposal (HCSD) system to Ash dyke in case of exigencies; Ash extraction system is unitized basis and ash disposal systems will be common for Two (02) units. Provision for truck disposal of both bottom and fly ash is provided.

For the design of the Ash Handling System, the following data has been considered for each Unit. Necessary design margin shall be considered while selecting the equipment capacity.

Considering 85 % PLF		
Coal Consumption @85% PLF	**UoM**	**Proposed**
	MTPA	**6.4**
	MT Per Annum	**6400000**
	Ton Per Day (TPD)	**19394**
	TPH for two units	**730**
	TPH/unit	**365**

Ash Generation (TPD)	7757.6
Fly Ash (80%)	6207
Bottom Ash (20%)	1550.6
Total Ash Generation	2560008

Total Ash Generation	2.56 MTPA

1.3 DESCRIPTION OF THE ENVIRONMENT

The baseline environmental quality of air, water, soil, noise, socio-economic status, and ecology has been assessed during the period of October to December 2024 in the study area of project site.

1.3.1 Baseline data

Ambient air quality:

Eleven ambient air quality monitoring stations were selected in and around the project site. The results of the monitored data indicate that the ambient air quality were well within the prescribed limits by CPCB.

- PM10: The maximum value for PM10 was observed at the Near Rajiv Gandhi South Campus Banaras Hindus as 69 µg/m3 and minimum value for PM10 was observed at Project site as 48 µg/m3.
- PM2.5: The maximum value for PM2.5 observed at the Darhiram as 41 µg/m3 and minimum value for PM2.5 at Project Site as 22 µg/m3.
- SO2: The maximum value for SO2 observed at the Darhiram (AAQ2) as 10.5 µg/m3 and minimum value for SO2 at Ordial Institute Campus as 4.7 µg/m3.
- NOx: The maximum value for NOx observed at Project Site as 11.8 µg/m3 and minimum value for NOx at Dhekwah as 3.7 µg/m3.
- CO: The maximum value for CO observed at the Darhiram as 0.454 mg/m3 and minimum value for CO at Darhiram as 0.054 mg/m3.

Water quality:

The baseline water quality status in the region is established by analyzing samples at nineteen locations consisting of 19 ground water samples and seven surface water samples. It was found that both ground water and surface water quality is well within prescribed limits.

Results

Ground Water

Parameters	:	Results
PH	:	6.69 to 7.79
TDS	:	288 mg/l – 390 mg/l
Total Hardness	:	98 mg/l –178 mg/l
Total Alkalinity	:	62–120 mg/ l

Surface Water

Parameters	:	Results
PH	:	7.26 – 7.46
DO	:	4.9 mg/l – 7.3 mg/l
BOD	:	1 mg/l -8 mg/l
COD	:	3 mg/l – 23 mg/l.

Noise levels:

The observed noise levels adhere to CPCB standards, indicating acceptable noise pollution levels in the monitored locations.

Daytime Noise Level Leq(day)

Day time (Leqday) noise level is observed within the prescribed limit of 55 dB(A) except Ordial Institute Campus and Near Rajiv Gandhi South Campus Banaras Hindus.

Night time noise level Leq(night)

Night time (Leq night) noise level is observed within the prescribed limit of 45 dB(A) except Ordial Institute Campus and Near Rajiv Gandhi South Campus Banaras Hindus

Soil Quality:

Samples collected from identified locations indicate that the soil is slightly alkaline with pH ranging from 7.38 to 7.71. The organic matter in the soil ranged from 10.52% to 0.70%. The texture of soil observed in the study area is mostly sandy loam.

Parameters	:	Results
PH	:	7.81 – 8.12 (Slightly alkaline)

Organic Carbon	:	0.80% - 0.89%
NPK	:	10.3 to 11.3 kg/hec 11.4 to 13.5 kg/hec 58 to 162 kg/hec

Biological environment:

Core Zone: Flora:

Table 1.3: List of flora in the core zone

S.No.	Scientific Name	Common/Vernacular Name	Family
1.	*Madhuca indica*	Mahua	Sapotaceae
2.	*Ficus bengalensis*	Bargad	Moraceae
3.	*Acacia leucophloea*	Reonja	Mimosaceae
4.	*Ziziphus jujuba*	Bada ber	Rhamnaceae
5.	*Butea monosperma*	Palash	Fabaceae
6.	*Albizia lebbeck*	Siris	Fabaceae
7.	*Prosopis cineraria*	Khejri	Fabaceae
8.	*Acacia nilotica*	Desi babool	Fabaceae

Buffer zone:

Flora:

Buffer zone of the project area has been reported 113 tree species, 49 shrubs, 44 herbs,26 Grasses & 28 climbers' species.

Three cereals species, ten pulses and oil species, eight fruit species and twenty vegetable species were found in buffer zone during field survey.

Fauna:

Mammalian species 24, herpetofauna 18, 18 Herpetofauna, 7 amphibians were observed in the 15 km buffer study area of the project.

Socio-Economic Environment:

Total population

In the study area, there are 21,228 households. The total population falling in the project area is 1,30,441 in 10 km radius. The total male population consists of 52.29 % and female population accounts to be 47.71 % of the total population. The sex ratio of the 10.0 km study area is 912 females over thousand males. There are approx. 5 to 6 members in a family. The 0-6 population comprises of 16.22% of the total population of the study area. The sex ratio of 0-6 population is 914 females over thousand males. Fig. 3.30 shows the sex ratio of total population.

Literacy

Persons aged ten years and above, who can both read and write with understanding in any language, are considered literate. In the study area, the literate people are 67,295 which is 51.59 % of the total population. The male literates are 60.65 % of the total male population, and female literates are 41.87 % of the total female population. In the study area, the illiterate people are 63,146 which is 48.40 % of the total population. The male illiterates are 39.54 % of the total male population, and female illiterates are 58.12 % of the total female population. Fig. 3.3 literates & illiterates within 10.0 km of the study area

Working population

The work participation in the study area is 50,541 which account to be 38.74 % of the total population. The male work participation is 47.67 % with respect to male population and female work participation accounts to be 28.95 % with respect to female population in the study area. Fig. 3.3 shows the Total work participation population over the total population.

1.4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The summary of anticipated adverse environmental impacts due to the proposed project and mitigation measures are given below.

Table 1.4: Identification of Impacts & its Mitigation Measures for Construction Phase

S. No.	Aspects	Impact identified	Mitigation Measures
A	**Land Environment**		
1.	•Excavated soil when stored in open surface in loose will lead in increase in air borne dust. •Possibility of soil erosion	• Respiratory diseases • Decreased visibility. • Loss of fertility of land due to erosion • Higher run-off rate due to soil erosion resulting in increased sedimentation in water ways.	• Soil will be excavated in phased manner adopting cut and fill techniques. • Total cut will be backfilled within site & used for plantation. Temporary stabilization of the top soil will be carried out to prevent the fertility loss
2	Change in land cover from vacant / open land to paved / built up land.	Decrease in aesthetics of the area	Planned development with green belt & plantation 121.13 Hectare (33.16 %) of total land) will improve the aesthetics of the area.
B	**Air Environment**		
1	• Excavation for foundations and backfilling for site levelling & grading. • Civil works and plant erection / fabrication • Road laying • Vehicular movement for transportation of construction material & manpower to site • Running of DG set and operation of on-site construction machinery / equipment	Increased concentration of fugitive dust, SO_2, NOx, PM, CO and unburnt hydrocarbons in ambient air leading to: • respiratory illnesses, • reduced visibility, • Acidification of surface water affecting marine biodiversity and acidification of soil reducing soil micronutrients • Damage to trees as NO_X is a phytotoxin in elevated concentration. Sped up weathering of monuments /buildings /metal & concrete structures	• Phase wise construction of project components. • Unloading of construction material and stockpiling of the same at the earmarked site would be provided with water sprinkling to arrest fugitive dust emission. • Wind barrier screen would be provided around stockpiles to reduce the wind speed and consequently, reduce the fugitive dust emission. • Ensuring vehicles with valid PUC certificates are used. • Regular & preventive maintenance of construction vehicles & machinery • Water sprinkling shall be carried out at the construction sites at regular intervals • No use of asbestos fibre; and

			• Construction site shall be barricaded and dust screens shall be placed • HSD to be used as fuel for DG Sets
2	• Vehicular movement; • Civil works such as trenching, foundation casting, steel fabrication work, mechanical works • Construction equipment operation like cranes, generators, pumps, compressors, rock drills, pneumatic tools, saws, vibrators etc.	• Constant loud noise can adversely affect human & animal health • Physical impact on health: tinnitus or deafness, Respiratory agitation, high blood pressure, headaches • Psychological impact: stress, fatigue, depression, anxiety and hysteria. • Behavioural disorder: aggressiveness & irritability • Memory and concentration: affects people's ability to focus, which can lead to low performance over time	• Provision of silencers on noise generating machinery; • Major Construction/installation work will be carried out works during day hours only. • Ensuring use of PPEs like ear muffs/ear plugs by workers. • Regular & preventive maintenance of Vehicles and construction machinery. • Ensuring that DG sets are provided with acoustic enclosures and exhaust mufflers and provision of silencers on noise generating machinery; • Moveable noise barriers will be considered • Greenbelt development & plantation to be undertaken from the construction stage itself.
C	**Water Environment**		
1	• Abstraction of ground water to fulfil Domestic water demand for workers • Water demand during civil works. • Discharge of untreated sewage generated from labour camp on land, surface water bodies. • Land clearance (the silt and soil can erode and increase sediment load	• Decrease in ground water level due injudicious abstraction of water. • Risk of contamination of ground or surface water due to discharge of waste water resulting in odour nuisance and water borne diseases in animals and humans and phytotoxicity in plants / crops • Increased sediment load can affect aquatic	• Excavation during dry season only and proper management of excavated soil through stabilized and covered stockpiling of excavated earth to be used for plantation. • 100% excavated earth will be backfilled within project premises for site levelling and grading. • The stockpiles of construction material will be protected with toe wall of adequate height along with garland drain & sedimentation traps to prevent

	in waterways), open storage of construction material, excavated earth construction waste can increase sediment load in water ways due to run-off from construction site, excavated soil pile etc. from project premises • Storage of hazardous waste like used oil, discarded containers etc. in open on unpaved area resulting in spillage and leaching to sub-soil, water table / aquifer. • Improper collection & storage of MSW, plastic waste etc. generated from labour camp	biodiversity by making the waterway turbid and restricting the amount of sunlight entering the waterway in surface water bodies and water ways. • Risk of contamination of soil, ground water, surface water bodies, toxic substance accumulation by crops / plants, rendering ground water unfit for human / animal consumption and adversely impacting on human and animal health. • Contaminated ground water is extremely difficult to treat. • Odour nuisance from open storage of MSW, increase in disease vectors affecting human and animal health.	uncontrolled discharge of runoffs during monsoon and reuse the collected waste water for construction purpose after primary settling. • Provision of storm water drains with oil & grease traps and sedimentation traps as per contour & drainage pattern. • Storm water diversion channels to divert storm run-off from flowing over the construction areas. • Removal & proper disposal of all the debris from site, as soon as construction is over. • Domestic sewage generated will be disposed off to well-designed soak pits. • Storage of hazardous chemical & hazardous waste in covered room with impervious flooring. • Wash offs containing these chemicals will be drained into impervious trays / barrels for disposal as hazardous wastes. • Water consumption during construction phase will be met through the surface water from Upper Khajuri Dam.
D. Ecology			
	Impact on Fauna	Loss of Tree Species Disruption of Forest Structure Alteration of Plant Communities Decreased Biodiversity	Reforestation and Afforestation Selective Logging and Sustainable Harvesting Restoration of Degraded Areas

		Increased Invasive Species Soil Degradation	
	Impact on Fauna	Loss of Habitat Disruption of Food Sources Loss of Biodiversity	Habitat Conservation Reforestation and Habitat Restoration Species Monitoring and Research
E	**Demography & Socio-economics**	The social impact during the construction stage is expected to be positive. Local residents are likely to find employment opportunities, as the construction work is labor-intensive. Contractors may prefer hiring local individuals for secondary employment based on their skills and experience. The influx of labor during construction is anticipated to boost economic activities in the surrounding areas. Additionally, the procurement of construction materials locally, such as stone chips and sand, could lead to the generation of local trading opportunities for a limited period.	Positive impacts
F	**Local Infrastructure**	The increased influx of labor during construction	Adequate facilities, including shelters and provisions for drinking water and sanitation,

		may strain existing drinking water facilities, health services, and sewerage systems. There is also a potential risk of conflicts between the labor force and residents, leading to social unrest.	will be provided for laborers hired from outside.

Description of environmental impacts and mitigation measures during operational phase are given below.

1.4.1 Air Environment

PM from boilers will be controlled by the installation of ESP Dust suppression and bag filters for the coal handling systems will control PM emissions. De-NOx systems shall be provided to effectively control NOx emission level. Ash silos will be provided for collection of fly ash in dry form for further transportation to utilities.

Mitigation measures

To control PM from TPP Stacks, Electrostatic Precipitator (ESP) is proposed. To control NOx emission, De NOx system of SCR / NSCR type with low NOx burner is proposed. With these controls, Hg emission is expected to be brought below the emission limits as measured in various other TPPs in India.

Necessary dust suppression arrangement and bag filters will be used in railway siding and coal handling plant. The top surface of coal wagons will be adequately sprinkled to reduce fugitive emissions during transportation. Belt conveyors will be covered to minimize the fugitive dust emissions. Auxiliary fuel transportation will be occasional; hence its impact will be for a limited time period. The fly ash silos will be provided with bag filters to control emission. Regular housekeeping will be done at plant roads, platforms, and storage area.

1.4.2 Water Environment

Total wastewater from the project will be recycled, focusing on effluents from WT plant, coal pile area runoff, and plant drains. Domestic sewage will be treated in the STP will be utilized in greenbelt/ plantation. Total Annual Recharge to Ground Water Regime of the area through rainwater harvesting structure would be **12,15,939.15 m^3/ annum**. No groundwater extraction, ensuring minimal impact on water resources.

The water requirement of 28 MCM/Year for makeup to the closed cycle re-circulation system of condenser cooling will be drawn from River Ganga to Upper Khajuri Dam and further to plant site through dedicated pipeline of about 32.6 km in length. Water allocation vide letter no. 3613/11-27-C.0-4-174/11 dated 09.10.2011 has already been obtained from WRD Uttar Pradesh. Mirzapur TPP has optimized the water requirement to 28 MCM /annum. It is proposed to utilise the power plant wastewater for plant reuse to achieve the Zero Liquid Discharge (ZLD). It is envisaged to utilize cooling water blow down for ash handling purposes and treated wastewater will be used for plantation and gardening activities.

1.4.3 Noise Environment

- Noise reduction measures include insulation, damping pads, and acoustic enclosures.
- Regular equipment maintenance and safety gear for workers will be provided.
- Noise levels will comply with regulations, not exceeding 75 dB (A) at 1 m distance.
- Extensive oiling, lubrication, and preventive maintenance will minimize noise generation.
- Earplugs will be provided in areas where noise levels may exceed permissible limits.
- Supervisors will ensure machinery conditions and silencers are maintained.
- Adequate greenbelt will be developed within the project premises and around the plant boundary.

1.4.4 Socio-Economic Environment

The company will take various steps for social & environmental development for the villagers in more then one ways. The details of the various activities undertakto be taken by the company's CSR activities are described in detail in Chapter 8 of "Project Benefits" of the report. The company will continue to work for development of the society in future also. The additional economic opportunities for local population will create a long term positive impact in the society. Project also does not involve discharge of any pollutant and follows zero discharge, thus the environment will not be negatively impacted. All due care will also be taken to manage the odour as per present practices and the same will be improved to match the best industry practices.

1.4.5 Solid & Hazardous Waste

- Fly ash and bottom ash will be main solid waste to be generated from the plant. The details of the ash generated from the proposed power plant are given in Table 4.16. 100% utilization of fly ash as per MoEF&CC Fly ash utilisation notification.
- The bottom ash will be collected in wet form and fly ash in dry form. Fly ash will be collected in dry form to facilitate utilization.
- Ash Dyke is proposed in 49.37 Ha, which is less than **0.1 Ha./MW** (i.e 160 Ha. for 1600 MW) allowed as per Fly Ash Notification dated 31.12.2021.
- Unutilized Fly ash and bottom ash shall be disposed via High/Medium Concentration Slurry disposal (HCSD/MCSD) system to Ash dyke in case of exigencies.
- Bottom ash generated shall be supplied to the Road Mix Concrete (RMC) / brick producers / filling of low lying area / filling of mine voids as per the statutory guidelines thereby eliminating the need for separate area shall be explored.

Table 11.5: Ash generation from the Proposed Plant

S. No.	Description	Ash quantity in Million TPA	Management & disposal
1.	Fly ash	2.06	Collection in dry form, pneumatic transfer to closed silos & sent to cement manufacturing, Construction work (RMC plant, Roads, Highways), Brick Manufacturing, etc.
2.	Bottom ash	0.5	Collection in wet form & Road Mix Concrete (RMC) / brick producers / filling of low lying area / filling of mine voids
Unutilized Fly ash and bottom ash shall be disposed via High/Medium Concentration Slurry disposal (HCSD/MCSD) system to Ash dyke in case of exigencies.			

IMPACT

- Improper storage, handling and disposal of solid & hazardous waste leads to contamination of soil, ground water and surface water.
- Contamination may also be caused by spillage of hazardous waste, run-off from hazardous waste storage area etc.
- Plants may take up contaminants from soil and accumulate toxic substances ultimately adversely affecting human / animal health due to ingestion.

Hazardous Waste

- Hazardous waste will be handled, stored & disposed off in line with Hazardous & Other waster (management & transboundary movement) Rules 2016, amended till date.
- Separate covered storage area with impervious flooring and catch drains connecting to WTP will be provided with Hazardous waste storage area.
- E-Waste (~2.0 TPA), Battery waste (~3 TPA), Bio-medical waste (0.02 TPA) will be handled, stored & disposed of as per applicable rules & guidelines.
- Used batteries will be will be given back to the supplier under buy back agreement with supplier.

- Bio-medical waste generated from medical unit will be handed over to nearest CBWTF &/or hospital having BMW disposal agreement with CBWTF.

Municipal Solid waste generation & management

Improper disposal of MSW may cause contamination of soil, ground water and surface water over time. It may lead to odour nuisance as well as increased disease vectors in the area.

Table 11.6: Municipal Solid waste generation & disposal

Particulars	Population	Basis	Quantity of waste generated (in kg/day)
Workers	275	@0.3 kg/day	82.5
Landscaping	299.3 acre	@0.2kg/acre/day	59.86
STP sludge (dry)	--	--	50
Total			**Approx. 192**

- MSW generated to the tune of ~192 Kg/Day will be collected, segregated at source itself using color coded bin collection system placed strategically in the plant premises.

The organic component of MSW will be segregated and composted in Organic waste converters proposed at site. The remaining waste will be handed over to authorized vendors for recycle/reuse & disposal.

1.5 ANALYSIS OF ALTERNATE SITE & TECHNOLOGY

The proposed project involves a coal based Ultra Super Critical Technology Thermal Power Project (USCTPP) of 1600 (2x800) MW in Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh. Land area requirement for the proposed project is

about 365.19 Ha. The land is already in possession with Mirzapur Thermal Energy (UP) Private Limited except 31.38 Ha (Govt Land) is under transfer and mutation.

Leveraging the established infrastructure, logistics, water sources, and proximity to coal mines, the project capitalizes on the available resources. All necessary facilities for the proposed project will be developed within the same location.
Ultra Super Critical thermal power plants combine high efficiency, reduced emissions, and operational flexibility, making them a compelling choice for large-scale power generation projects aiming for both economic and environmental sustainability.

1.6 ENVIRONMENTAL MONITORING PROGRAMME

Environmental Management Division

Monitoring is as important as that of control of pollution since the efficiency of control measures can only be determined by monitoring. The following routine monitoring program will be implemented under the post-project monitoring as per CECB/CPCB guidelines. The major environmental considerations involved in the construction and operation of the thermal power station will be taken up by a full-fledged multi-disciplinary Environmental Management Division (EMD) with key functions of environmental, safety and occupational health for management of the entire plant and surrounding environment.

It is predicted that socio-economic impact due to the proposed project will positively increase the employment opportunities for local inhabitants. There are no resettlement and rehabilitation issues involved in this project. The project infrastructure will be of use to the people of the area. The contribution to the revenue of the State Govt. will be put in public welfare and augmented growth. The entire project area is devoid of any endangered flora and fauna. Thus, the proposed project is not likely to affect the environment or

adjacent staff etc. This EMD will take up additional responsibility of environmental functions related to proposed mega power plant.

Operation Head would represent the Project's Company's interest in the operation & maintenance of the power station and would oversee the functioning of O&M Cell Company.

Green Belt: -

The greenbelt will have 3-tier plantation as per the CPCB guidelines.

EMP costing

The heads for EMP are: Electrostatic Precipitator, Chimney, Cooling Tower including civil works, Ash Handling including ash water recirculation, Ash disposal civil work, Dust extraction & suppression system, DM Plant Waste Treatment System, Sewerage collection, treatment & disposal, Green Belt & landscaping, SCR, Rainwater harvesting, Solar power harnessing, Enhancing Environmental Laboratory & Environmental Monitoring, CEMS, CAAQMS, CEQMS monitoring system & Main gate display board and Wind Breaking Wall, Dry Fog System & RCC Flooring in Coal Storage Area.

A cost provision of Rs. 3012.39 Cr. has been earmarked towards environmental measures.

1.7 ADDITIONAL STUDIES

Risk Assessment, Hazard Analysis: Risk associated with process and raw materials (LDO/HSD) was anticipated and proper mitigation measures provided.

Hazard due to toxic release of Chlorine and Aqueous Ammonia has been assessed with the help of ALOHA software and the threat zone marked on google earth.

Within the plant: Personnel working in the plant during the operational phase.

Outside the plant: There are no major habitation within 1.0 km of project site.

However, by implementing all the possible risk mitigation measures the same could be minimized

Disaster Management Plan: On Site & Offsite Emergency Plan with level I, II and III emergency has been prepared and detailed in chapter 7 of this EIA/ EMP report.

1.8 PROJECT BENEFITS

Adani Foundation is the CSR arm of Adani Group of companies implementing CSR projects and activities at different locations in India. A separate budget Rs. 46.5 crore towards CER activities is allocated for CER activities, and efforts will be made to address concerns raised after the public consultation during the final EIA ensuring responsible corporate practices.

1.9 CONCLUSIONS

It is predicted that socio-economic impact due to the proposed project will positively increase the employment opportunities for local inhabitants. The proposed project will be within the existing plant premises. There are no resettlement and rehabilitation issues involved in this project. The project infrastructure will be of use to the people of the area. The contribution to the revenue of the State Govt. will be put in public welfare and augmented growth. The entire project area is devoid of any endangered flora and fauna. Thus, the proposed project is not likely to affect the environment or adjacent ecosystem adversely.

****

CHAPTER - I
INTRODUCTION

1.1 PURPOSE OF THE REPORT

Gaurang Environmental Solutions Pvt. Ltd. has been assigned the job to carry out Environmental Impact Assessment (EIA) studies and preparation of EIA report with suitable EMP for Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh by Mirzapur Thermal Energy (UP) Private Limited [MTE(UP)PL].

The project falls under Category 'A' of item 1(d) - Thermal Power Plants of the Schedule to the Environment Impact Assessment (EIA) Notification, 2006 and its subsequent amendments & therefore requires prior environmental clearance from MoEF&CC, New Delhi.

The proposal for obtaining Terms of Reference (ToR) was submitted to the Ministry of Environment, Forest & Climate Change (MoEF&CC) vide proposal no IA/UP/THE/467671/2024 dated 08.05.2024 and consequently, the Proposal was accepted & considered in its 10th Expert Appraisal Committee (Thermal Projects), MoEF&CC meeting held on 10th June '2024. The project was granted with Terms of Reference (ToR) vide File No: J-13012/12/2011-IA. II (T) dated 29.07.2024 by the MoEF&CC, New Delhi. Copy of ToR Letter for proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) by M/s Mirzapur Thermal Energy (UP) Private Limited [MTE(UP)PL] is enclosed as **Annexure I.**

The objective of this Environment Impact Assessment (EIA) report is:

- To comply with Terms of Reference (ToR) prescribed by the MoEF&CC, New Delhi**.**
- To identify, predict and evaluate the environmental, economical & social impact due to the proposed project activities.
- To provide information on the environmental consequences for decision making and;
- To promote environmentally sound and sustainable development through the identification of appropriate alternatives and mitigation measures.

Baseline data generation for one season (Post -Monsoon Season) was carried out during October 2024 to December 2024 by **Newcon Consultants & Laboratories, Uttar Pradesh** {NABL Certificate Number & Validity - Certificate No.: TC-12621; Validity period: 17.11.2023 to 16.11.2025 and CPCB recognition letter dated 09.07.2024 valid upto 16.11.2025) along with field surveys were conducted and potential environmental impacts of the project activities were identified, assessed and their mitigation measures are documented in this EIA/EMP report.

1.2 IDENTIFICATION OF PROJECT & PROJECT PROPONENT

1.2.1 IDENTIFICATION OF THE PROJECT

- The present proposal is for 2x800 MW Coal based Ultra Super Critical Thermal Power Plant.
- Looking at the market demand and project techno-economic viability, the unit now intends to proposal is for 2x800 MW Coal based Ultra Super Critical Thermal Power Plant.
- The total plot area of the project is 365.19 Ha.
- The estimated project cost for proposed project is Rs. 18,300 Crores.
- Previously, M/s. Welspun Energy UP Pvt. Ltd. (WEUPPL) proposed to set up 2x660 MW Super Critical Coal based thermal power plant at Village Dadri Khurd, Tehsil Mirzapur, Uttar Pradesh.
- The Ministry of Environment, Forest & Climate Change (MoEF&CC) had granted Environmental Clearance for 1320 (2x660) MW vide F. No: J-13012/12/2011-IA II(T) dated 21.08.2014. Subsequently, UPPCB has also granted Consent to Establish (CTE) dated 13.01.2015.
- Hon'ble NGT, Principal Bench, Delhi in their judgement dated 21.12.2016 order to set aside the Environmental Clearance (EC). However, in judgement dated 01.05.2017 a clarification was issued, that "*the Project Proponent is at liberty to approach the MoEF&CC or any other competent authority for processing of the application for grant*

of EC upon making up for /rectifying the defects and deficiencies pointed out in the judgement".

- Accordingly, application submitted for making up for /rectifying the defects and deficiencies pointed out in the NGT judgement was submitted on 17.06.2017.
- The proposal was earlier considered in the EAC meetings held on 24.07.2017 and 22.02.2019.
- The EAC in its meeting held on 22.02.2019 & letter vide no. J-13012/ 12/2011-IA. II(T) dated: 20.12.2019 recommended for EC amendment Subject to Stage-I FC. In the Further development to this, a Joint inspection by DFO (Forest Office) & SDM (Revenue) was carried out on 03.04.2024 and inspection report states that the area under reference is Non-Forest Land. Land Documents is enclosed as **Annexure – XIX**.
- In the meantime, the name of the company changed to Mirzapur Thermal Energy UP Pvt. Ltd. vide MoEF&CC letter dated 16.09.2019.
- Pre-Construction activities & planning has been completed. Construction Work of TPP has not started yet. However, securing the site has been completed.
- Now the proposal has changed from 2x660 MW to **2x800 MW** and almost 10 years have lapsed, **a new reference (*De Novo*) is being made through this application.**

Chronology of the earlier environmental clearance for the existing capacity is given in **Table 1. 5** of this Chapter.

1.2.2 IDENTIFICATION OF THE PROJECT PROPONENT

The Adani Group is one of India's leading business conglomerates with combined revenues of USD 15 Billion and with business interests spanning across Power Generation (Thermal and Renewable), Power Transmission and Distribution, Port Development & Operations, Development of Industrial Clusters & Special Economic Zones, Shipping & Logistics, City Gas Distribution, Solar Manufacturing, Real Estate, Coal Trading & Mining, Roads, Power Trading and Edible Oil Refining & Agro based infrastructure development, Defence, Aerospace & Airports. The group has demonstrated capabilities in

conceptualization and implementation of large projects and excellent records of establishing benchmarks in the industry. The group has a rich and extensive experience of working with government agencies and development of large infrastructure projects.

In the Energy Sector, particularly thermal power generation group Company Adani Power Limited holds the distinction of being India's largest private sector power producer with an installed operating coal-based capacity of 18,110 MW, A flagship company of the diversified Adani Group, APL has operating thermal power plants across 8 states of India i.e. in Gujarat, Maharashtra, Rajasthan, Karnataka, Tamil Nadu, Chhattisgarh, Jharkhand, and Madhya Pradesh.

Mirzapur Thermal Energy (UP) Pvt Ltd [MTE(UP)PL] subsidiary of APL has proposed setting up a coal based Thermal Power Project (TPP) in Dadri Khurd of Mirzapur district of Uttar Pradesh. MTE(UP)PL proposes to set up a two-unit station of 800 MW each based on Ultra Super Critical technology, to have an overall capacity of 1600 MW.

Mr. R N Shukla, Head Environment & Forest, has been assigned as the Authorised Signatory for the project appraisal.

1.3 BRIEF DESCRIPTION OF NATURE, SIZE, LOCATION OF THE PROJECT AND ITS IMPORTANCE TO THE COUNTRY REGION

1.3.1 NATURE OF THE PROJECT

The project is for 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant. The land required for the proposed power station of 1600 MW capacity is about 365.19 Ha.

1.3.1.1 Screening Category

As per the EIA notification of 2006 and its subsequent amendments, the Government of India directed that on or from the dates of its publication, the required construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule to the said notification entailing the capacity addition with change in

process and or technology shall be undertaken in any part of India only after prior environmental clearance from the Central Government or as the case may be, by the State

Central Government under sub-section (3) of section 3 of the said Act in accordance with the procedure specified therein. Thermal power plant projects are divided into two categories as mentioned in **Table 1.1: Screening of Category 1(d) Projects**.

Table 1.1: Screening of Category 1(d) Projects

Project or Activity		Category with threshold limit		Conditions if any
		A	B	
1 (d)	Thermal Power Plants	**≥ 500 MW (coal/ lignite/ naphtha & gas based);** ≥ 50 MW (all other fuels except biomass); ≥ 20 MW (using municipal solid non-hazardous waste, as fuel)	≥ 50 MW to < 500 MW (coal/ lignite/ naphtha & gas based); < 50 MW and ≥ 5 MW (all other fuels except biomass and municipal solid non-hazardous waste); < 20 MW > 15MW (using municipal solid non-hazardous waste, as fuel); ≥ 15 MW plants based on biomass fuel.	General Condition shall apply **Note:** Thermal Power plants up to 15 MW based on biomass or non-hazardous municipal solid waste using auxiliary fuel such as coal, lignite / petroleum products up to 15% are exempt. Thermal power plants using waste heat boilers without any auxiliary fuel are exempt."

In line with the specifications mentioned in **Table 1.1**, the project falls under Category 'A' of **item 1(d) - Thermal Power Plants** of the Schedule to the Environment Impact Assessment (EIA) Notification, 2006 and its subsequent amendments & therefore requires prior environmental clearance from MoEF&CC, New Delhi.

1.3.2 SIZE OF THE PROJECT

Brief description of the size of project is detailed in the table below.

Table 1.2: Salient Features of Project

S. No.	Particular	Details
1.	Nature of the Project	Proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh.
2.	Size of Project	Coal based 1600 (2x800) MW
3.	Project sector &	: 1(d), Thermal Power Plants & Category "A"

S. No.	Particular	Details		
	category			
4.	Plant capacity	:	1600 (2x800) MW	
5.	Land requirement	:	365.19 Ha.	
6.	Greenbelt & Plantation	:	121.13 Ha (33.16 %) [0.62 ha. – included for greenbelt development]	
7.	Technology	:	Ultra Super-Critical	
8.	Coal requirement in (Million MTPA)	:	About 6.4 Million MTPA [85 % PLF]	
9.	Source of fuel	:	Coal mines of NCL/SECL/CCL under Part B (IV) of Shakti Policy 2017 and e-auction	
10.	Coal transportation	:	Through Rail	
11.	Project Cost	:	Rs. 18,300 Crores	
12.	Water requirement & status of permission	:	28 MCM/year	
			Water allocation vide letter no. 3613/11-27-C.0-4-174/11 dated 09.10.2011 has already been obtained from WRD Uttar Pradesh.	
13.	Water intake point	:	The water will be drawn from River Ganga to Upper Khajuri Dam and further to plant site through pipeline of about 32.6 km in length.	
14.	Manpower requirement	:	Construction phase: Permanent:275 Contractual: 7000	Operation phase: Permanent: 250 Contractual: 2600

1.3.3 LOCATION OF THE PROJECT

The Thermal Power Plant is located at Dadri Khurd village in Mirzapur Sadar tehsil, Mirzapur district in Uttar Pradesh.

Table 1.3: Location details

S. No.	Particulars	Details
1.	Project Address	Dadri Khurd village in Mirzapur Sadar tehsil, Mirzapur district in Uttar Pradesh.

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>2.</td><td>Geographical Coordinates</td><td>
<table>
<tr><th>S.No.</th><th>Latitude</th><th>Longitude</th><th>S.No.</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1</td><td>24°59'43.10"N</td><td>82°41'1.32"E</td><td>23</td><td>24°59'48.80"N</td><td>82°40'4.67"E</td></tr>
<tr><td>2</td><td>24°59'15.67"N</td><td>82°40'48.65"E</td><td>24</td><td>24°59'53.60"N</td><td>82°40'2.03"E</td></tr>
<tr><td>3</td><td>24°59'16.22"N</td><td>82°40'32.70"E</td><td>25</td><td>24°59'56.49"N</td><td>82°40'9.78"E</td></tr>
<tr><td>4</td><td>24°59'0.36"N</td><td>82°40'31.30"E</td><td>26</td><td>25° 0'1.35"N</td><td>82°40'14.57"E</td></tr>
<tr><td>5</td><td>24°58'59.94"N</td><td>82°40'21.69"E</td><td>27</td><td>25° 0'6.56"N</td><td>82°40'17.38"E</td></tr>
<tr><td>6</td><td>24°58'43.86"N</td><td>82°40'21.29"E</td><td>28</td><td>25° 0'4.58"N</td><td>82°40'23.19"E</td></tr>
<tr><td>7</td><td>24°58'44.48"N</td><td>82°40'0.15"E</td><td>29</td><td>25° 0'9.45"N</td><td>82°40'25.50"E</td></tr>
<tr><td>8</td><td>24°58'34.88"N</td><td>82°39'59.91"E</td><td>30</td><td>25° 0'10.07"N</td><td>82°40'24.11"E</td></tr>
<tr><td>9</td><td>24°58'34.59"N</td><td>82°40'10.54"E</td><td>31</td><td>25° 0'14.85"N</td><td>82°40'26.43"E</td></tr>
<tr><td>10</td><td>24°58'27.30"N</td><td>82°40'8.78"E</td><td>32</td><td>25° 0'14.09"N</td><td>82°40'28.29"E</td></tr>
<tr><td>11</td><td>24°58'14.57"N</td><td>82°39'55.42"E</td><td>33</td><td>25° 0'15.05"N</td><td>82°40'28.98"E</td></tr>
<tr><td>12</td><td>24°58'6.36"N</td><td>82°39'44.21"E</td><td>34</td><td>25° 0'9.57"N</td><td>82°40'42.06"E</td></tr>
<tr><td>13</td><td>24°58'23.71"N</td><td>82°39'48.52"E</td><td>35</td><td>25° 0'10.76"N</td><td>82°40'42.96"E</td></tr>
<tr><td>14</td><td>24°58'25.44"N</td><td>82°39'50.05"E</td><td>36</td><td>25° 0'4.33"N</td><td>82°40'49.13"E</td></tr>
<tr><td>15</td><td>24°58'33.97"N</td><td>82°39'46.94"E</td><td>37</td><td>25° 0'0.20"N</td><td>82°40'46.22"E</td></tr>
<tr><td>16</td><td>24°58'37.62"N</td><td>82°39'47.94"E</td><td>38</td><td>24°59'58.98"N</td><td>82°40'51.13"E</td></tr>
<tr><td>17</td><td>24°58'39.68"N</td><td>82°39'45.63"E</td><td>39</td><td>24°59'57.20"N</td><td>82°40'50.02"E</td></tr>
<tr><td>18</td><td>24°58'48.52"N</td><td>82°39'44.25"E</td><td>40</td><td>24°59'54.74"N</td><td>82°40'55.39"E</td></tr>
<tr><td>19</td><td>24°59'0.89"N</td><td>82°39'49.86"E</td><td>41</td><td>24°59'49.00"N</td><td>82°40'51.94"E</td></tr>
<tr><td>20</td><td>24°59'12.52"N</td><td>82°39'57.77"E</td><td>42</td><td>24°59'45.52"N</td><td>82°40'55.23"E</td></tr>
<tr><td>21</td><td>24°59'36.31"N</td><td>82°39'57.84"E</td><td>43</td><td>24°59'43.90"N</td><td>82°40'53.55"E</td></tr>
<tr><td>22</td><td>24°59'42.80"N</td><td>82°39'55.48"E</td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>3.</td><td>SOI Toposheet</td><td>Core Zone: G44W9 (63L/9)
Buffer Zone: G4408 (63K/8), G440 12 (63K/12), G440 16 (63K/16), G44W 5 (63L/5), G44W 13 (63L/13) , G44W 6 (63L/6), G44W 10 (63L/10), G44W 14 (63L/14)</td></tr>
<tr><td>4.</td><td>Site elevation</td><td>Minimum: 169 m AMSL
Maximum: 214 m AMSL
Average: 193 m AMSL</td></tr>
</table>

1.3.3.1 Photographs Showing Project Site





Photograph showing Project site



Photograph showing location within project site wherein ash dyke is proposed

Figure 1.1:Photographs showing proposed project site

1.3.3.2 Site Connectivity and Environmental Settings

Table 1.4: Details of Environmental Settings & site connectivity

<table>
<tr><th>S. No.</th><th>Areas</th><th colspan="2">Name/ Identity</th><th>Aerial distance & Direction</th></tr>
<tr><td>1.</td><td>Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value.</td><td colspan="3">There are no protected areas under international conventions in study area for their landscape, cultural or other related value. There are 16 no. of RF/PF within 10 km of the project site.</td></tr>
<tr><td>2.</td><td>Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests.</td><td colspan="3">The following forests, water bodies & threatened flora and fauna species are present within 15 km radius of the project:
<table>
<tr><th>S. No.</th><th>Particulars</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td></td><td>RF/PF</td><td></td><td></td></tr>
<tr><td>1</td><td>Mirzapur RF</td><td>Adjoining</td><td>SE</td></tr>
<tr><td>2</td><td>Danti RF</td><td>Adjoining</td><td>N</td></tr>
<tr><td>3</td><td>R.F. (Lodhpur)</td><td>4.0</td><td>NE</td></tr>
<tr><td>4</td><td>Patehra RF</td><td>5.6</td><td>SW</td></tr>
<tr><td>5</td><td>Sarson R.F.</td><td>5.6</td><td>SE</td></tr>
<tr><td>6</td><td>Dhanuhaw Pahar</td><td>5.8</td><td>ESE</td></tr>
<tr><td>7</td><td>Chacdlewakhurd R.F.</td><td>6.8</td><td>NE</td></tr>
<tr><td>8</td><td>Danti R.F.</td><td>6.9</td><td>NW</td></tr>
<tr><td>9</td><td>Karaunda R.F.</td><td>6.9</td><td>WSW</td></tr>
<tr><td>10</td><td>Malua R.F.</td><td>7.5</td><td>SW</td></tr>
<tr><td>11</td><td>Purainiyan R.F.</td><td>7.0</td><td>SE</td></tr>
<tr><td>12</td><td>Golhanpur R.F.</td><td>7.0</td><td>E</td></tr>
<tr><td>13</td><td>R.F. (Atraura)</td><td>8.1</td><td>N</td></tr>
<tr><td>14</td><td>Matihani R.F.</td><td>9.0</td><td>ESE</td></tr>
<tr><td>15</td><td>Patehar R.F.</td><td>9.2</td><td>WSW</td></tr>
<tr><td>16</td><td>Barkachhar R.F.</td><td>9.8</td><td>NW</td></tr>
</table></td></tr>
</table>

3.	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration.	None in 10 km radius	There is no notified National Park, Wildlife Sanctuary, Elephant/Tiger Reserve, or migratory routes/WL corridor exists within 10 km of the study area. No Schedule-I Species are observed/reported in the project site. 22 Schedule-I species of fauna were observed /reported in the study area for which description in Chapter 3 and 4 has been given.

4. Inland, coastal, marine or underground waters.

S.No	Particulars	Distance (km)	Direction
1	Unnamed Ephemeral path	Adjacent to the site	W
2	Jogldari Nala	1.9	SE
3	Jamthwa Nadi	2.2	WSW
4	Pahiti Nadi	3.6	NNE
5	Kuardari Nadi	6.0	W
6	Amjhar Nala	6.4	WSW
7	Upper Khajuri Dam	6	W
8	Dhenkwan Dam	6.2	E
9	Imiliya Bandhwa	9.82	E

**Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.*

5. State, National boundaries

None within 10 km radius

6. Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas

Name	Distance & direction
S.H.- 5 (Mirzapur –Robertsganj Road)	1.0 km towards WSW
N.H.- 35	10 km towards NNE

**Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.*

7. Defence installations

None in 10 km radius

8. Densely populated or built-up area / Major Town

There is no densely populated habitation that exists near the proposed site. Mirzapur town is located at around 18km in the NW direction.

9. Nearest habitation

S. No.	Habitation	Distance (Km) & Direction
1.	Garhawa	2.0 Km towards NE
2.	Ukhdand	2.1 Km towards NNW
3.	Darhiram	2.6 Km towards NE
4.	Umaria	2.1 Km towards N

**Source: -All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.*

10. Areas occupied by sensitive man-made land uses *(hospitals,*

Name	Distance & Direction
Health care facilities	

	schools, places of worship, community facilities)	CHC Marihan, Mirzapur - Government Hospital.	4.6 km towards SSE
		Places of worship:	
		Hanuman Gadi Mandir, Dadri Khurd, Umariya	0.01 km towards West
		Hanuman Ji Mandir - , Mirzapur, Danti	2.2 km towards WNW
		Shive Shankair Mandir- Birohiya,	2.65 km towards North
		Mahadev Mandir -, Ukhdand, Birohiya	2.4 km towards North
		Education facilities:	
		Ordial Institute Campus - Private educational institution, SH 5, Danti,	1.35 Km towards SSW
		Rajkiya Ashram Paddhati Balika Vidhyalaya, Danti,	2.4 Km towards S
		Prathmik Vidyalaya Shiksha Khurd, Gaura Raja, Mahoharpur	5.7 km towards NE
		Prathmik Vidyalaya, Umariya, Ayodhya Prasad, Malpur,	2.8 km towards NNE
		Prathmik Vidyalaya, Bairhava - Rexa Kalan	4.7 km towards ENE
		Government Primary School, Baghaila, Hasara	7.4 km towards SSW
		Prathmik Vidyalaya, Jaraha, Mahdauri,	5.6 Km towards NE
		Rajeev Gandhi South Campus, Banaras Hindu University, Barkachha	9.3 km towards NNW
		**Source: - Google Earth*	
11.	Areas containing important, high quality or scarce resources.	The project site falls in Pahari block which is categorized as 'safe' w.r.t ground water potential.	
12.	Areas already subjected to pollution or environmental damage.	No CPA, SPA, declared by CPCB, SPCB in 10 km radius of project site.	
13.	Areas susceptible to natural hazard which could cause the project to present environmental problems.	The project site falls in in Zone III (moderate damage risk-zone) as per BIS seismic zoning map of the country. No incidents to Natural hazard have been reported in the project site &/or nearby area. Suitable safeguards as per DMP will be taken. IS: 1893 (Part-1)-2016 & IS: 4326-2013 will be taken into consideration in structure design.	

Site Connectivity

(aerial distance as per google earth imagery from project boundary and direction from centre of project)

S. No.	Description	Details
1.	Nearest Highway / Major Road	**S. No.** | **Highway** | **Distance (Km) & Direction with**

		<table><tr><th></th><th></th><th>respect to Project Site</th></tr><tr><td>1.</td><td>S.H.- 5</td><td>1.0 km towards WSW</td></tr><tr><td>2.</td><td>N.H.- 35</td><td>10 km towards NNE</td></tr></table> **Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.*
2.	Nearest Railway Station	• Jhingura Railway Station, Imambara, Uttar Pradesh at 13.6 km towards NNW • Mirzapur Railway Station at 18 kms from the site in Northwest direction
3.	Nearest Airport	• Lal Bahadur Shastri International Airport, Varanasi is 53 km in NNE direction

1.4 PROJECT IMPORTANCE TO COUNTRY/ REGION

India's power generation capacity boasts a diverse array of sources, with coal dominating the landscape. Over the last decade, driven by sustained economic growth and industrialization, India's electricity demand has consistently grown at a rate exceeding 4.4% year-on-year. Despite a per capita electricity consumption increase of around 5% annually, reaching approximately 1,208 kWh/person in FY 20, this figure remains notably lower than the global average of about 2,700 kWh/person.

As living standards rise and electronic appliances become more prevalent, even in rural areas, there is an anticipated surge in per capita consumption and overall power demand. However, the end consumers, encompassing households, farmers, commercial establishments and industries, continue to grapple with the challenges of frequent power cuts—both scheduled and unscheduled—across many parts of the country.

1.4.1 REGIONAL IMPORTANCE OF THE PROJECT

The proposed Thermal Power Plant in Uttar Pradesh holds significant regional importance by addressing the surging power demand in the state. With Uttar Pradesh facing a growing need for electricity, the proposed project is poised to play a crucial role in enhancing the state's power generation capabilities. By catering to the needs of households and contributing to the Gross State Domestic Product (GSDP), the project becomes a vital component of Uttar Pradesh's energy infrastructure. It not only ensures a reliable power

supply for the region but also supports economic growth, thereby strengthening the overall energy landscape in Uttar Pradesh.

1.5 SCOPE OF THE STUDY – DETAILS OF REGULATORY SCOPING CARRIED OUT (AS PER TERMS OF REFERENCE)

EIA studies for the proposed project have been carried out as per Terms of Reference (ToR) prescribed by MoEF&CC, New Delhi vide File No: J-13012/12/2011-IA.II (T) dated 29/07/2024 . (Copy of ToR letter enclosed as **Annexure - I**). The regulatory scoping of the project as per the ToR has been covered and detailed in "Point-wise reply of ToR" is given at S. No. C as per Index of this EIA Report.

Radial distance of 10 Km from project site boundary has been considered as study area. Project area is taken as core zone and 10 Km area from project site boundary is taken as buffer zone for the purpose of this EIA report. Toposheet showing project site & 10 Km radius study area is given as **Figure 1.2** below.

Baseline data generation for one season (non-monsoon) was carried out during Post-Monsoon Season (October 2024 to December 2024) by NABL accredited & CPCB recognized environmental monitoring laboratory **Newcon Consultants & Laboratories, Uttar Pradesh** {NABL Certificate Number & Validity - Certificate No.: TC-12621; Validity period: 17.11.2023 to 16.11.2025 and CPCB recognition letter dated 09.07.2024 valid upto 16.11.2025). Public hearing of the proposed project was conducted on 11.04.2025 at Upper Primary School, Madihaan Market, Madihaan Tehsil and District – Mirzapur as per the provisions of EIA Notification, 2006 (as amended) and O.M.s issued in this regard by MoEF&CC in consultation with UPPCB. Minutes of the Public hearing along with English translation are enclosed as **Annexure VIII** and time bound action plan with budgetary allocation to address issues raised /recommendations made during public hearing is given in **Table 7.2 & 7.3, Chapter 7** in this EIA Report.

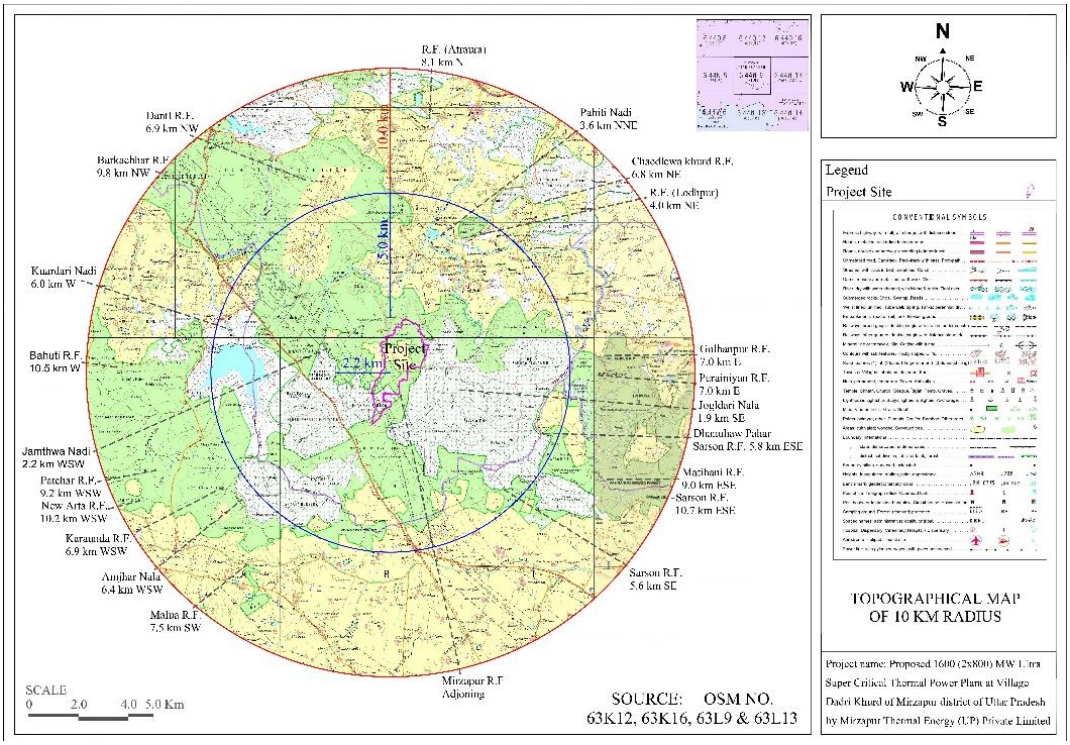


Figure 1.2*:* 10 km radius toposheet showing project site and study area

Legible copy enclosed as Annexure XV.

The scope of EIA Study Report includes,

- Literature review and collection of data relevant to the study area;
- Collection of data related to the project related activities;
- Establish the baseline environmental aspects in and around the proposed Integrated project;
- Collate secondary data including socio-economic data from published literature / government publications;
- Identify various pollution loads due to proposed activities;
- Predict incremental levels of pollutants in the study area due to the proposed operations;
- Evaluate the predicted impacts on various environmental attributes in the study area by using scientifically developed and widely accepted environmental impact assessment methodologies;

- Preparation of cost effective and appropriate Environmental Management Plan (EMP) encompassing strategies for minimization of potential adverse impacts on various environmental components along with budgetary provisions for implementation of pollution control measures;
- To delineate measures for human health and safety during operational of proposed project; and
- Delineation of post-study Environmental quality monitoring programme

1.5.1 STRUCTURE OF EIA REPORT

This EIA/EMP report includes total thirteen chapters as per Appendix-III of the EIA Notification, 2006 and the ToR issued to the project, the same are briefed as under:

- **Chapter 1: Introduction:** Provides a background to the project, identification of the project and project proponent, brief description of the project, details of the project proponent, scope of the study and structure of this report.
- **Chapter 2: Project description:** Provides details of project, infrastructure required, technology and process description with process flow diagram, information on the needs and desirability of the project and sources of pollution with pollution control measures.
- **Chapter 3: Description of the Environment:** Provides description of the receiving Environment details, baseline conditions identified for the project within 10 km radius from the project site.
- **Chapter 4: Anticipated Environmental Impact and Mitigation Measures**: describe the anticipated impacts identified during the EIA process during the various project phases.
- **Chapter 5: Analysis of alternatives**: provides the different technology alternatives which were considered for the project.
- **Chapter 6: Environment Monitoring program:** provides the monitoring schedule and implementation plan during the operation phase of the project.

- **Chapter 7: Additional Studies:** has the information about risk and hazard assessment and details of disaster management plan along with traffic study details.
- **Chapter 8: Project benefits:** associated with the proposed project are discussed in this chapter.
- **Chapter 9: Environmental Cost Benefit Analysis:** provides about organizational framework for identifying, quantifying, and comparing the costs and benefits (measured in monitory values) of a proposed policy action.
- **Chapter 10: EMP:** details of the administrative aspects of ensuring that mitigative measures are implemented and their effectiveness monitored.
- **Chapter 11: Summary & Conclusion**
- **Chapter 12: Disclosure of Consultants engaged**
- **Chapter 13: Cumulative Assessment Study:** In this chapter, the industries within a 15 km radius are identified and a Cumulative Study is done for the industries, existing and proposed project, to check whether the proposed project can be allowed over and above the existing industries

1.6 DETAILS OF REGULATORY COMPLIANCES

Details of regulatory compliances (limited to Environment, safety and/or required by MoEFCC/ EAC) with respect to the project are as under:

Table 1. 5: Regulatory compliances

S. No.	Regulatory compliance	Applicable Rules/ Regulations/ Acts	Compliance Status	Remarks
1.	Land Documents	--	365.19 Hectare land including 333.19 industrial land, 32.0-hectare government land.	The land is in possession of company except 31.38 Ha (Govt Land) is under transfer and mutation & is barren. Copy of Land Documents is enclosed as **Annexure – IV.** NOC regarding non-involvement of forest land has been issued by Forest Office, Mirzapur vide letter no.4229/Mirzapur/15 dated

				30.05.2025.
2.	Water Allocation	--	Allocation of water from WRD, Uttar Pradesh has been obtained vide letter no. 3613/11-27-C.0-4-174/11 dated 09.10.2011.	**Annexure – V.**

1.7 APPLICABLE RULES/REGULATION/ACTS

The applicable Environmental Rules/Act/Regulation are applicable upon the project: -

- EIA Notification, 2006 & subsequent amendments
- Environment (Protection) Act, 1986 & subsequent amendments till date
- The Water (Prevention and Control of Pollution) Act, 1974 & subsequent amendments
- The Air (Prevention and Control of Pollution) Act, 1981 & subsequent amendments
- Fly ash notification, 2021& subsequent amendments till date
- The Noise Pollution (Regulation and Control) Rules, 2000 & subsequent amendments
- The Biological Diversity Act, 2002 & subsequent amendments
- Construction and Demolition Waste Management Rules, 2016 & subsequent amendments
- Solid Waste Management Rules, 2016 & subsequent amendments till date
- Hazardous and Other Waste (Management and Trans boundary Movement) Rules, 2016 & subsequent amendments till date
- E-Waste (Management) Rules, 2016 & subsequent amendments till date
- Bio-Medical Waste Management Rules, 2016 & subsequent amendments till date
- The Petroleum Act, 1934 and amendments there under
- The Factories Act, 1948
- Indian Boiler Act, 1923 and its amendments till date, Indian Boiler Regulations 1950 and their amendments
- The Wildlife Protection Act, 1972 & subsequent amendments till date
- Motor Vehicles Act, 1988 and the amendments

- Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 (MSIHC Rules) & subsequent amendments
- Public Liability Insurance Act, 1991 and amendments till date

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CHAPTER - II

PROJECT DESCRIPTION

This chapter provides description of those aspects of the project (based on project feasibility study), that are likely to cause environmental effects.

2.1 TYPE OF PROJECT

Mirzapur Thermal Energy (UP) Private Limited has proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh.

The proposal for obtaining Terms of Reference (ToR) was submitted to the Ministry of Environment, Forest & Climate Change (MoEF&CC) vide proposal no IA/UP/THE/467671/2024 dated 08/05/2024 and consequently, the proposal was accepted & considered in its 10th Expert Appraisal Committee (Thermal Projects), MoEF&CC meeting held on 10th June '2024. The project was granted with Terms of Reference (ToR) vide File No: J-13012/12/2011-IA. II (T) dated 29.07.2024 by the MoEF&CC, New Delhi. Copy of ToR Letter for proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) by M/s Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL).

The proposed 2x800 MW coal-based Power Project in Mirzapur District, Uttar Pradesh, is proposed by utilizing domestic coal and advanced technology. The design includes two 800 MW units with Ultra-Supercritical Steam parameters, ensuring high efficiency. The Water requirement for the proposed project is optimized as 28 MCM/Year sourced from Ganga River to Upper Khajuri Dam and further to plant site through pipeline of about 32.6 km in length. The unitized concept, spare capacities and tailored reservoir size aim for continuous plant operation.

The proposed 2x800 MW Power Project adopts Ultra-Super Critical steam parameters for improved combustion efficiency, highlighting the evolution in technology despite

challenges like the use of higher alloy steels in heat transfer surfaces. The total project cost for proposed project is Rs. 18,300 Crores.

2.2 NEED FOR THE PROJECT

The proposed project is essential to bridge the gap between increasing electricity demand and the existing power generation capacities in Uttar Pradesh. It not only addresses the immediate need for additional capacity but also anticipates and prepares for future requirements, ensuring a reliable and sustainable power supply for the region.

The need for the proposed project is evident from various aspects of the current power landscape.

India's power sector has grown into a massive 416 GW system over the years and India is now the world's third largest electricity producer, only behind China & US.

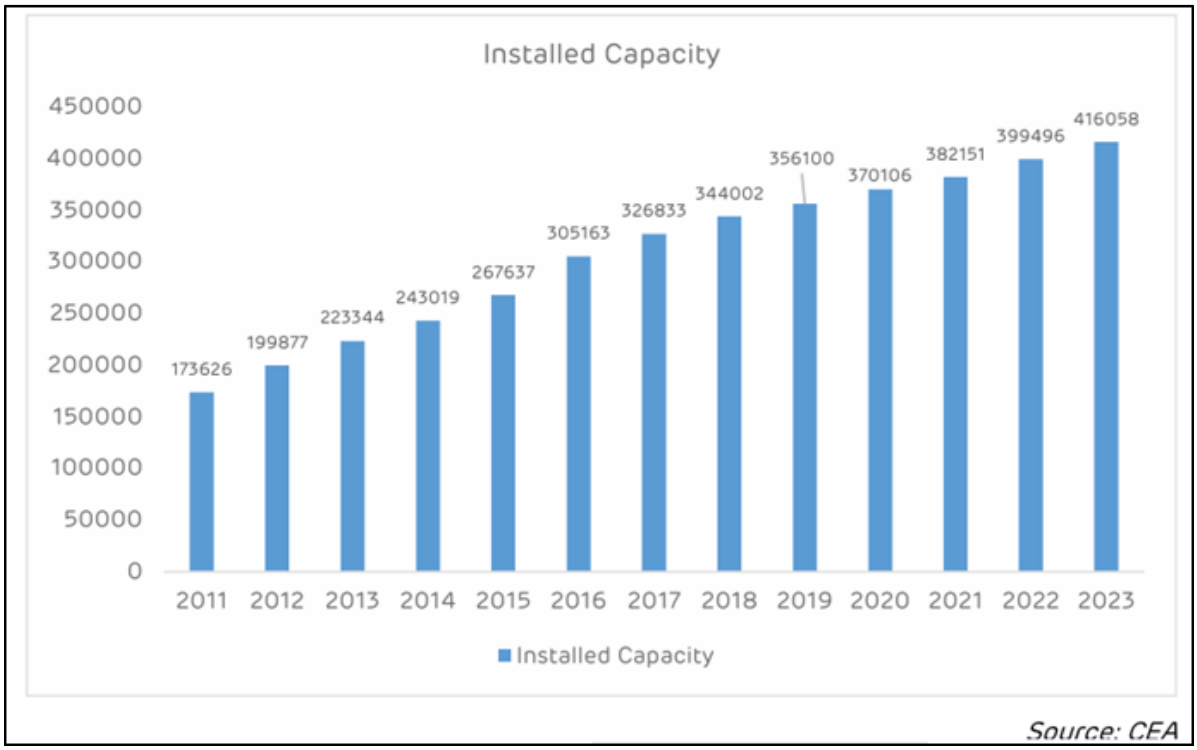


Figure 2. 1: India's Installed Power Capacity

India's power generating capacity represents a healthy mix of different types of generation sources, with coal accounting for a majority of the same.

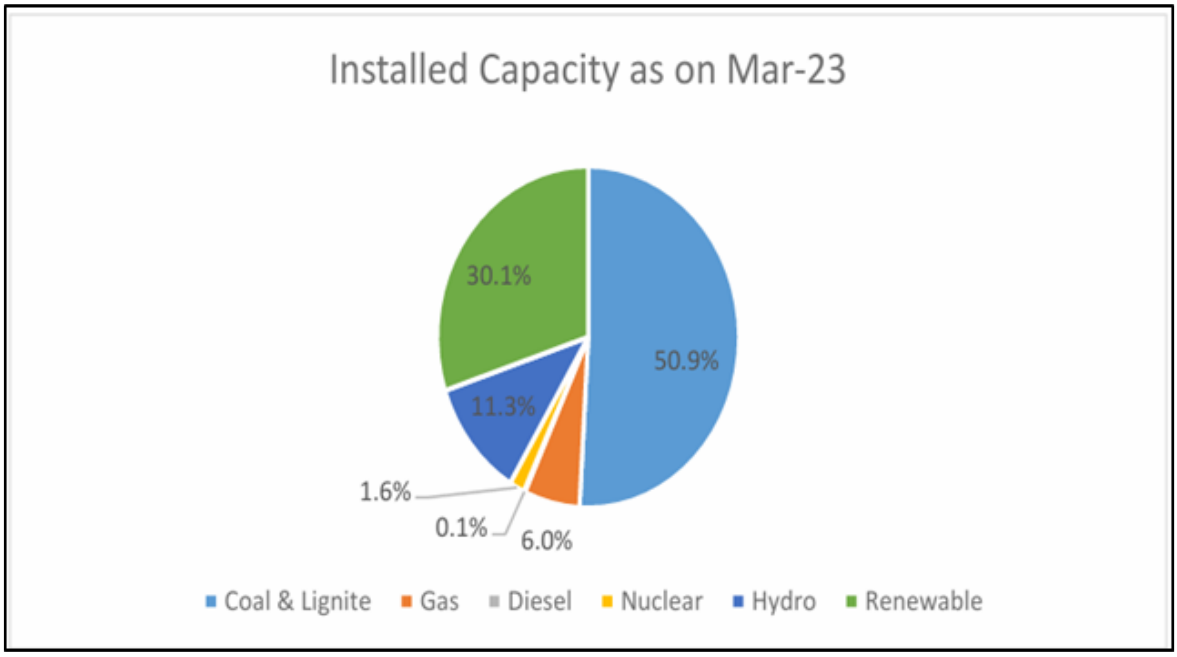


Figure 2. 2: India's installed capacity Power generation capacity as on March 2023

With sustained economic growth and industrialization over the past decade, India's electricity demand has also grown consistently, averaging at over 4.8% Y-O-Y.

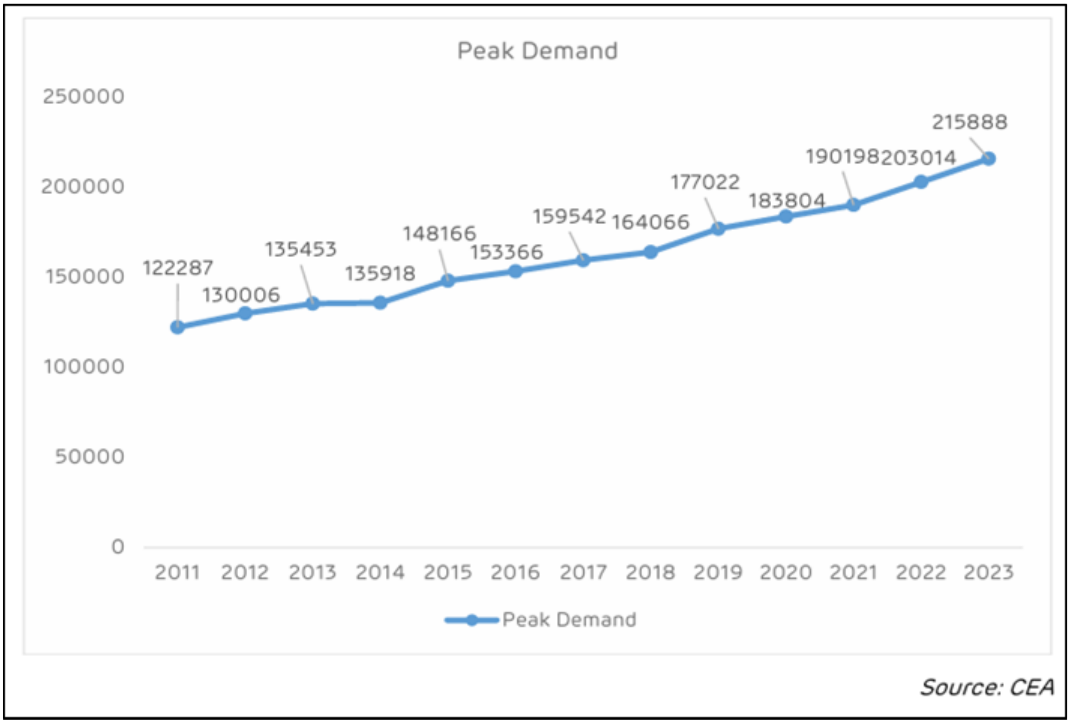


Figure 2. 3: India's electricity demand in the past decade

Between the year 2005 and 2022, per capita electricity consumption doubled from 631 Unit to 1255 Unit in India, making it the third largest electricity market in the world. With improving standards of living, and increasing electronic appliance penetration even across rural areas, the per capita consumption and consequently overall power demand is likely to grow significantly.

2.3 LOCATION OF THE PROJECT (MAP SHOWING GENERAL LOCATION, SPECIFIC LOCATION, PROJECT BOUNDARY & PROJECT SITE LAYOUT)

2.3.1 GENERAL LOCATION

The project is located at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh. The project area is a part of the SOI OSM No G44W9 (63L/9) and has an average elevation of 193 AMSL. The general road location map is given as **Figure 2.4**. The

geographical coordinates of the project site are given in **Table 1.3** of **Chapter 1** of this EIA report.

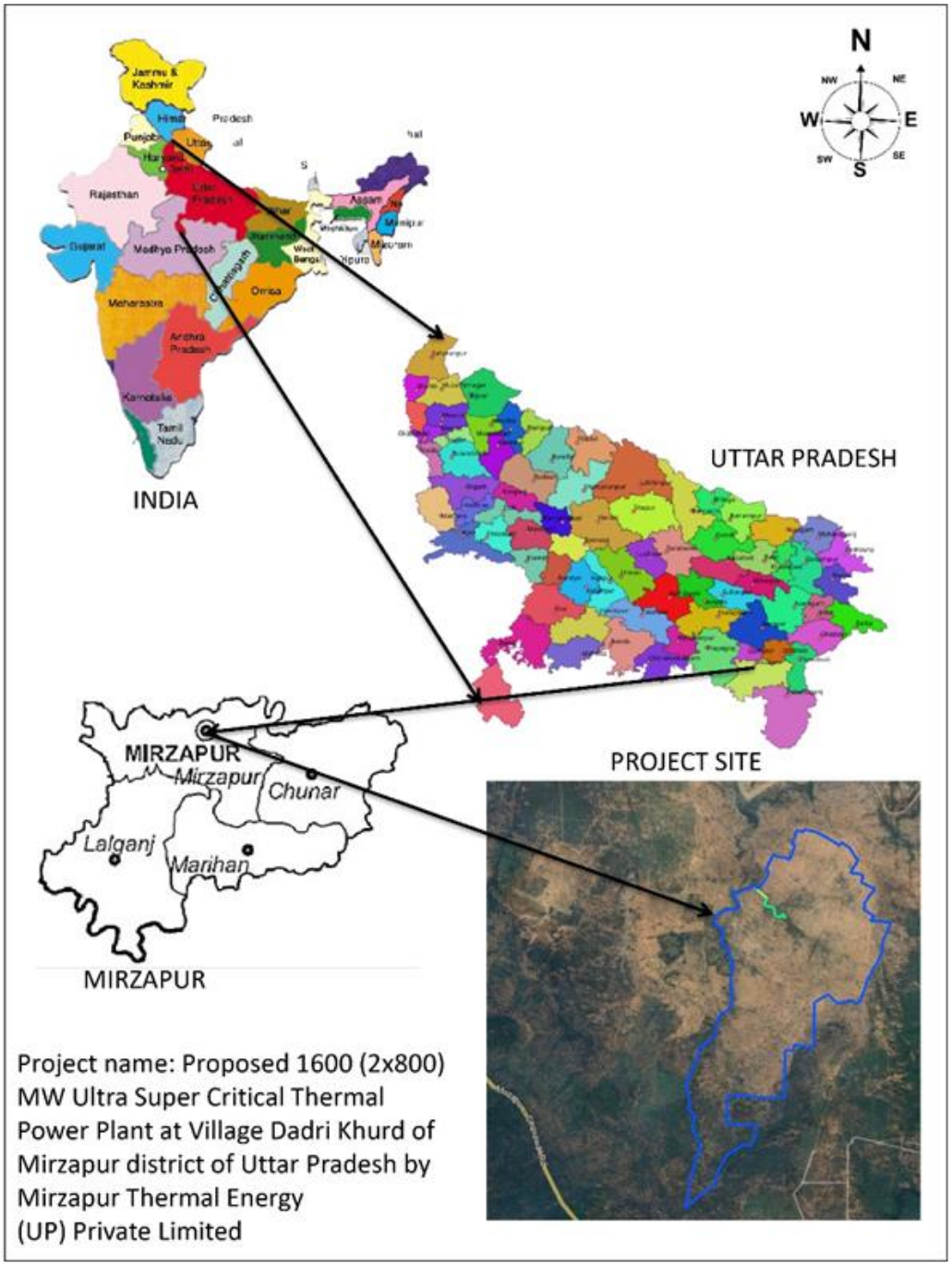
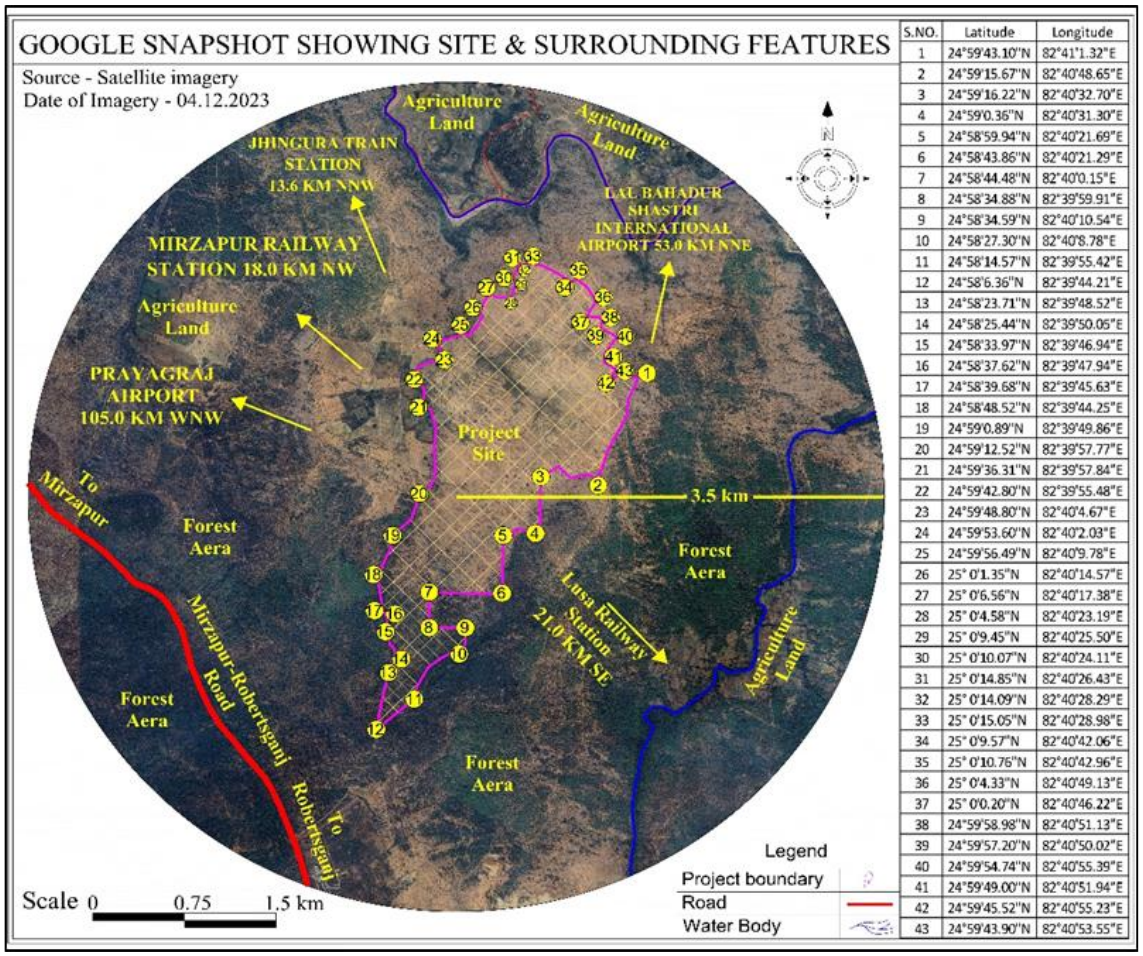


Figure 2. 4: General location map

2.3.2 SPECIFIC LOCATION

The map showing specific location of the plant site on Google Earth downloaded image along with geographical coordinates is given in **Figure 2.5.**



S.NO.	Latitude	Longitude
1	24°59'43.10"N	82°41'1.32"E
2	24°59'15.67"N	82°40'48.65"E
3	24°59'16.22"N	82°40'32.70"E
4	24°59'0.36"N	82°40'31.30"E
5	24°58'59.94"N	82°40'21.69"E
6	24°58'43.86"N	82°40'21.29"E
7	24°58'44.48"N	82°40'0.15"E
8	24°58'34.88"N	82°39'59.91"E
9	24°58'34.59"N	82°40'10.54"E
10	24°58'27.30"N	82°40'8.78"E
11	24°58'14.57"N	82°39'55.42"E
12	24°58'6.36"N	82°39'44.21"E
13	24°58'23.71"N	82°39'48.52"E
14	24°58'25.44"N	82°39'50.05"E
15	24°58'33.97"N	82°39'46.94"E
16	24°58'37.62"N	82°39'47.94"E
17	24°58'39.68"N	82°39'45.63"E
18	24°58'48.52"N	82°39'44.25"E
19	24°59'0.89"N	82°39'49.86"E
20	24°59'12.52"N	82°39'57.77"E
21	24°59'36.31"N	82°39'57.84"E
22	24°59'42.80"N	82°39'55.48"E
23	24°59'48.80"N	82°40'4.67"E
24	24°59'53.60"N	82°40'2.03"E
25	24°59'56.49"N	82°40'9.78"E
26	25° 0'1.35"N	82°40'14.57"E
27	25° 0'6.56"N	82°40'17.38"E
28	25° 0'4.58"N	82°40'23.19"E
29	25° 0'9.45"N	82°40'25.50"E
30	25° 0'10.07"N	82°40'24.11"E
31	25° 0'14.85"N	82°40'26.43"E
32	25° 0'14.09"N	82°40'28.29"E
33	25° 0'15.05"N	82°40'28.98"E
34	25° 0'9.57"N	82°40'42.06"E
35	25° 0'10.76"N	82°40'42.96"E
36	25° 0'4.33"N	82°40'49.13"E
37	25° 0'0.20"N	82°40'46.22"E
38	24°59'58.98"N	82°40'51.13"E
39	24°59'57.20"N	82°40'50.02"E
40	24°59'54.74"N	82°40'55.39"E
41	24°59'49.00"N	82°40'51.94"E
42	24°59'45.52"N	82°40'55.23"E
43	24°59'43.90"N	82°40'53.55"E

Figure 2. 5: Google Earth Image of Project Site boundary (Coordinates) & surroundigs

The site falls in Geological Survey of India of Toposheet No. G44W9 (63L/9). Site photographs are given in **section 1.3.3.1 of Chapter 1** of this report and project site boundary marked on 10 km radius toposheet is given as **Figure 1.2 in Chapter 1** of this EIA report.

Table 2. 1: Site Connectivity

S. No.	Particulars	Details
1.	Nearest Railway Station	• Jhingura Railway Station at 13.6 Km in NNW. • Mirzapur Railway station at 18 Km in NW
2.	Nearest Highway	• SH 5 at 1 Km in WSW direction.

S. No.	Particulars	Details
		• NH 35 at 10 Km in NNE direction.
3.	Nearest Airport	• Lal Bahadur Shastri international Airport, Varanasi at 53 km in NNE

Surrounding features, site coordinates and boundary of project site on Google earth imagery is given in **Figure 2.5**. Plant Layout is given as **Figure 2.6.**

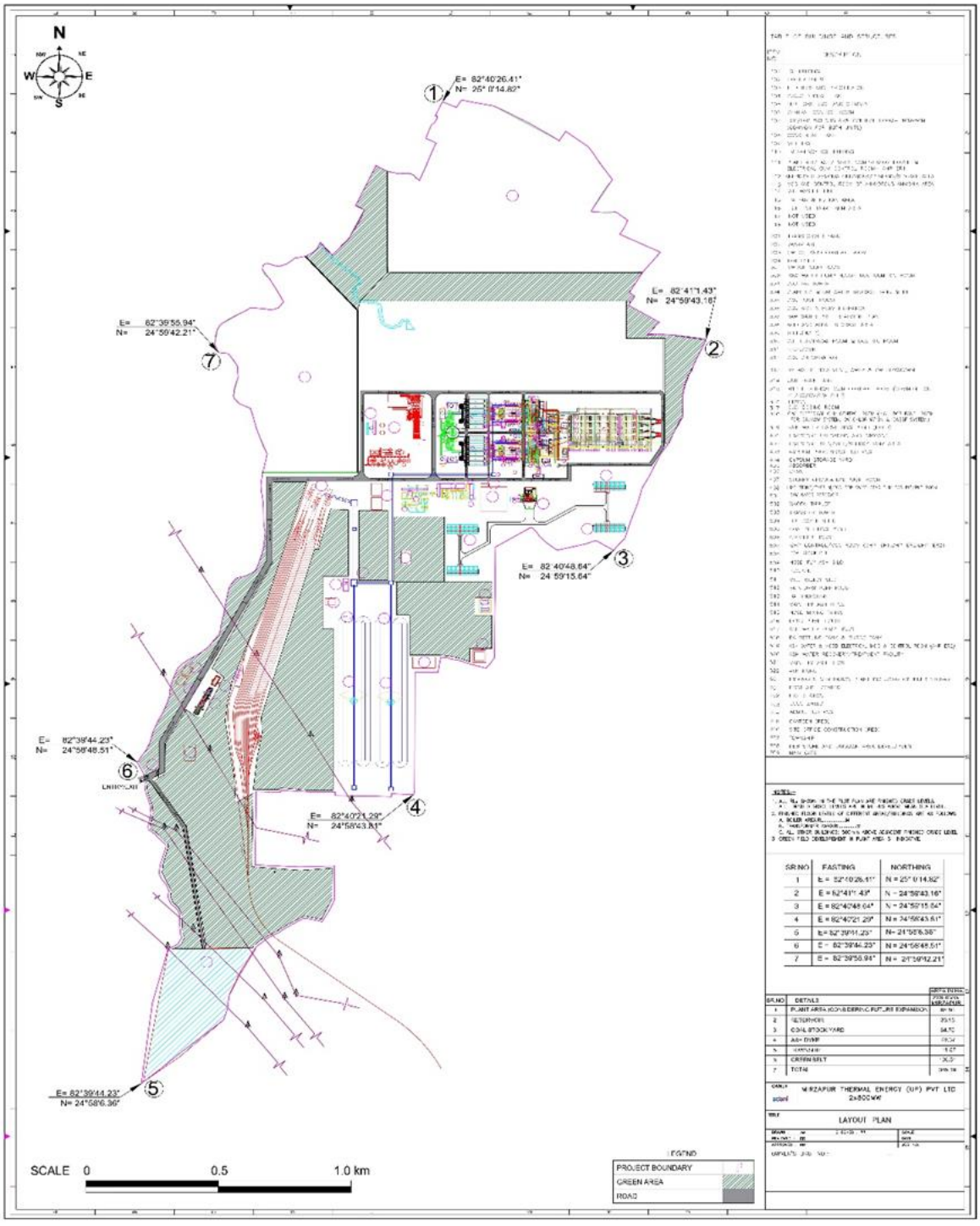


Figure 2. 6: Plant layout showing proposed project components

Legible Plant layout is enclosed as Annexure to this EIA report.

2.4 SIZE OR MAGNITUDE OF OPERATION

2.4.1 MAGNITUDE OF PROPOSED PROJECT

Mirzapur Thermal Energy (UP) Private Limited intends to implement a coal-based 2x800 MW capacity Power Project firing domestic Indian coal sourced from nearby mines. The proposal is mooted to deploy the state-of-the-art technology and accordingly two units of 800 MW i.e., 2x800 MW are being considered with ultra-supercritical steam parameters to attain high cycle efficiency.

Fuel Requirement, Source & Transportation:

i. For the proposed project 2x800 MW Power Project, the maximum daily coal requirement (@TMCR) would be about 19,394 TPD and annual fuel requirement is estimated at 6.4 million MTPA at 85% plant load factor with Design Coal GCV of 3700 – 4300 k Cal/kg.

Table 2. 2: Details of Fuel for the proposed project

Fuel	QTY (Million MTPA)	Source	Mode of Transport	Distance
Coal	6.4 (85% PLF)	Coal Mines of NCL / SECL / CCL under Part B (IV) of Shakti Policy 2017 and e-auction.	Through Rail	Approx. 200 km

Coal from Coal Mines of NCL / SECL / CCL & e-auction is considered as the primary fuel for the proposed plant. The mine blocks to be used will have adequate mineable reserve to cater to the requirement of the Complex for the life of the plant. It is planned to convey coal from the mine to the Plant site through Rail.

Coal will be received in sizes of (-) 300 mm after primary screening, crushing and sizing at mine end. The gross calorific value of design coal will be about 3700 - 4300 KCal/kg with Sulphur content around 0.5% (max.). Domestic Coal will have an ash content of about 40%. For the presently proposed power Project of 1600 MW, the maximum daily coal requirement @TMCR would be about 19,394 TPD and annual fuel requirement is estimated about 6.4 Million MTPA at 85% PLF.

Table 2. 3: Preliminary Coal Analysis

Preliminary Coal Analysis	2x800 MW Mirzapur Thermal Energy TPP		
Coal Specifications	**Design**	**Best**	**Worst**
TM	15	12	17
ASH	34.0	29.0	40.0
VM	22.86	24.04	19.0
FC	28.14	34.69	22.0
GCV	3700	4300	3200
Sulphur	0.45	0.40	0.50
FC/VM Ratio	1.23	1.45	1.16

COAL CONSUMPTION

Coal will be transported through Rail from Commercial Mines to the Project. Coal Mines of NCL / SECL / CCL under Part B (IV) of Shakti Policy 2017 and e-auction have been considered.

Table 2. 4: Coal requirement for proposed 2x800 MW

Particulars	Unit	Coal Requirement
		Design Coal
GCV of Coal (Design/Worst)	kCal/Kg	3700 - 4300
PLF	%	85
Hourly Coal Requirement per unit	TPH	365
Daily Coal Requirement per unit	TPD	19,394
Annual Coal Requirement per unit	Million MTPA	3.2
Annual Coal Requirement for two units	Million MTPA	6.4

ii. Auxiliary Fuel:

Auxiliary liquid fuels, viz. LDO / HSD would be required for start-up and flame stabilization at lower load. LDO / HSD is proposed to be cold start-up, warm up, startup/commissioning activities till stabilization at lower load (up to 30% BMCR).

The fuel oil system will be provided for boiler start up; and for flame stabilization during low load operation with or without coal firing. Light Diesel Oil (LDO)/ High Speed Diesel (HSD) oil will be used for boiler start up and for load operation & flame

stabilization (30% of BMCR), as necessary. The requirement of fuel oil @ 1 ml per unit (kWh) generation has been estimated to be about 15000 KL per annum considering 85% PLF. Transportation of fuel oils has been considered by road to the plant site in tankers from nearby source. Micro/Minor oil gun ignition system will be explored to reduce specific oil consumption during cold start up.

iii. Fuel Transportation

Coal from nearby coal mines of NCL/SECL/CCL and e-auction is considered as the primary fuel for the proposed plant. The mine blocks to be used will have adequate mineable reserve to cater to the requirement of the complex for the life of the plant. It is planned to convey coal from the mine to the Plant site through railway. The secondary fuel for the proposed Power Project i.e. LDO/HSD shall be sourced from the refineries located nearer to the Project. As the quantity and frequency shall not be significant and distance is short, it is suggested that the required quantity shall be transported by road.

iv. Power Evacuation:

Power Generated by the station will be stepped up to 400 kV level through Generator Transformers. A 400 kV Switchyard has been envisaged at the Power Plant. Power evacuation to the grid will be at 400 kV from the Power Plant switchyard to nearby 400 kV UPPTCL/UPPCL grid substation.

2.5 PROPOSED SCHEDULE FOR APPROVAL & IMPLEMENTATION

The first Unit of the proposed project will be scheduled to be commissioned in 54 months from "Zero date" and subsequent unit at an interval of 6 months after obtaining all statutory clearances. Zero date is considered as the date of obtaining Financial Closure.

2.6 PROJECT DESCRIPTION

2.6.1 INTRODUCTION

Mirzapur Thermal Energy (UP) Private Limited proposes a 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh**.** Utilizing domestic coal and advanced technology. The design includes two 800 MW units with Ultra-Supercritical Steam parameters, ensuring high efficiency. The Water requirement for the proposed project is optimized as 28 MCM/Year sourced from Ganga River to Upper Khajuri Dam and further to plant site through pipeline of about 32.6 km in length. The unitized concept, spare capacities, and tailored reservoir size aim for continuous plant operation.

The proposed 2x800 MW Power Project adopts ultra-supercritical steam parameters for improved combustion efficiency, highlighting the evolution in technology despite challenges like the use of higher alloy steels in heat transfer surfaces.

Table 2. 5: Electricity Generation Technology & Fuel of Proposed TPP of MTE(UP)PL

Particulars	Proposed
Electricity Generation	1600 MW (2x800) MW
Technology & Unit	Ultra Super-Critical Thermal Power Plant
Fuel	Coal

2.6.2 LAND

The land of 365.19 Ha envisaged above for the Power Plant considers installation of 2x800 MW capacity Ultra Super Critical coal based thermal power plant including its water pre-treatment facility, induced draft cooling towers, fuel oil system, 400 kV switchyard, ash handling facility, coal handling system, green verge to satisfy UPPCB/MoEF&CC norms, raw water reservoir, fabrication yard, coal storage area, in-plant roads, etc. The layout of the plant and facilities for the proposed 2x800 MW Coal based Thermal Power Plant (TPP) at Dadri Khurd village, Mirzapur Sadar tehsil, Mirzapur district, Uttar Pradesh, has been largely dictated by its location, contour, shape, rail and road access, water source, windrose pattern, land use pattern of adjoining areas and the direction of power evacuation.

The green belt is anticipated to cover an extensive area of 121.13 ha i.e. >33% of total project area, contributing to environmental sustainability and landscaping around the plant. The

other facilities outside the plant boundary include 8.3581 ha. for miscellaneous facilities, encompassing Pipeline & Approach Road.

Table 2. 6: Land Use Break Up

S. No.	Details	Area (in hectares)
1	Plant area	85.80
2	Reservoir	33.18
3	Coal Stock Yard	64.14
4	Ash Dyke	49.37
5	Township	11.57
6	Green Belt	121.13 [0.62 Ha. Included]
	Total	**365.19**
Others (Outside Plant Boundary)		
7	Pipeline & Approach	8.3581 [Proposal no. FP/UP/THE/14236/2015, Under progress] *8.3581 Ha of Forest Land is Outside the Plant Boundary for which Forest Clearance Application was filed in 2015 and is already under process and Stage-1 clearance is awaited.*

2.7 TECHNOLOGY & PROCESS DESCRIPTION

The proposed project of 2x800 MW capacity power plant is mooted to deploy the state-of-art technology and accordingly two units of 800 MW are being considered with ultra-supercritical steam parameters to attain high cycle efficiency.

Main Technical Features of the Proposal

Power Generating Unit	:	Two units of 800 MW turbine generator sets fed by steam from coal fired P.F. boiler operating at Ultra Super-critical range.
Cooling System	:	Closed recirculating condenser cooling system with Induced Draft Cooling Tower (IDCT).

Coal Handling System	:	Coal handling facility, which comprises receipt of coal through Rail, unloading into wagon tipplers, conveying, crushing and stacking by stacker-cum-reclaimer in the coal yard and finally feeding to the bunkers through conveyor via transfer tower.
Ash Disposal System	:	The Fly Ash will be collected in dry form in fly-ash silos before transportation through rail wagons / closed trucks to adjacent Cement Plants. Efforts will be made for 100% utilization of the Fly ash in Cement Industries, Mines Voids/low lying area, Stone quarry, manufacturing of bricks, road construction, and aggregate replacement in concrete, etc as per Fly Ash Notification, 2021 and subsequent amendments. Un-utilized Bottom ash is being / will be stored in ash dyke using high/ medium concentration slurry disposal system (HCSD/MCSD). MoU with Cement industries (ACC & Ambuja Cement) for utilization of fly ash is enclosed as Annexure – VI.
Ash water recovery system	:	Ash water recovery system shall be common for two units & will consist of ash water tank and pump house for recirculation for use in the Ash Handling system.
NO_X & SO_2 Control	:	To control NOx emission, Ultra-supercritical boilers having advanced low NOx generation system will be installed. In addition, Selective Catalytic Reduction (SCR) system will be installed. For SO_2, MOEFCC Notification dated 11.07.2025 shall be followed.

2.7.1 POWER GENERATING EQUIPMENT

MTE(UP)PL intends to implement a coal based 1,600 MW capacity Power Project firing domestic Indian coal sourced from nearby mines. The Project would be located at Dadri Khurd village, Mirzapur Sadar tehsil, Mirzapur district, Uttar Pradesh. The proposal is mooted to deploy the state-of-the-art technology and accordingly two units of 800 MW are being considered with ultra-supercritical steam parameters to attain high cycle efficiency. Water would be sourced from Ganga River, Water from Ganga River shall be pumped to the

Upper Khajuri dam and further to plant raw water reservoir by means of Intake Water Pumps. River Ganga is located approx. 23 km upstream of Upper Khajuri Dam and the Upper located Khajuri Dam is approx.7 km from the plant.

The basic plant design would consider unitised concept as far as possible. Judicious provisions would be considered for reasonable spare capacities in various systems and system components and inter-changeability of equipment/system. State-of-the-art technology has been considered for design of the proposed station. Based on ambient parameters, operational aspect, evaporation loss and site-specific data, the size and capacity of reservoir is suitably considered to ensure continuous plant operation.

Basic design parameters for equipment and systems are as follows: -

ii) Ambient dry bulb: 39.2 ºC maximum, 13.2 ºC minimum.

iii) Maximum relative humidity: 85%

iv) Average relative humidity: 65%

v) Design wet bulb temp.: 27.1 deg C.

vi) Total annual rainfall: 1355.3 mm

vii) Seismic zone: Zone-III as per IS-1893

viii) Mean Wind Speed: 7.3 km/hr.

ix) Altitude: About 180 M above mean sea level

SELECTION OF TECHNOLOGY

The Project is being planned as a base load station. However, based on potential of increased utilization of renewable power, the plant will have provisions to operate in flexible mode, as per fluctuations in the supply of renewable component in the grid.

From the view point of available state-of-the-art technologies, three alternate proposals attract attention for planning the thermal power station under consideration. For electric power generation deploying Rankine Cycle, applications of sub-critical, supercritical and ultra-supercritical steam parameters are in vogue. Sub-critical steam cycle operate well

below the steam/water critical pressure of 221.2 bar. However, plant thermal efficiency as well as improved environmental performance can be attained by increasing the operating pressure and temperature of steam. The technology deploying supercritical steam parameters in once-through mode was initiated in early 50's but was not pursued in USA due to poor plant availability. However, the technology was pursued in Europe and Japan to avail the intrinsic benefit available in terms of lower specific fuel consumption. With improvement in metallurgy of heat exchange surfaces by newer alloying elements, the technology has attained desired level of success with high availability of plant in the 90's. With extensive research in the field, the technology has now achieved acceptance both in developed and developing countries and is the current dominant technology for large scale utility power generation offering improved thermal efficiency.

In supercritical / ultra-supercritical (pressure & temperature at critical point are 22.1 MPa & 374.2 ^{0}C, respectively) boiler, as heat is applied to water, temperature rises but water does not boil. With addition of further heat, water molecules gradually get agitated, inter molecular space increases uniformly and fluid becomes less dense. Transition from dense phase water with compact molecular arrangement to wide spaced random arrangement of vapour is uniform. No internal bubbles are formed. Enthalpy changes uniformly and all other physical properties change uniformly from liquid to vapour stage with gradual rise in temperature.

Unlike sub-critical boiler each tube in a supercritical and ultra-supercritical boilers receives same quantity of heat input since all tubes pass through all heat zones minimizing variation in enthalpy.

Steam generator consists of a number of parallel circuits connected by inlet and outlet headers. Pressurised water enters the circuit at one end and leaves as superheated steam at other end. Supercritical and ultra-supercritical boilers are essentially "once-through type".

Once-through boilers have been designed in both two-pass and tower type design. Since flow is once-through, furnace wall tube temperature tends to increase at low load. Assisted circulation mode is superimposed to overcome this problem.

The volume of the evaporator system of re-circulate boiler is much smaller compared to a natural circulation boiler. This leads to smaller amount of water in the evaporator. Due to smaller inventory of stored water and steam, theoretical rate of response of supercritical and ultra-supercritical units are much faster than drum type unit. In comparison to the sub-critical unit, the supercritical and ultra-supercritical units have low thermal inertia resulting in a shorter start-up time, faster rates of load change and shorter time of forced cooling operation during emergency shutdown. Pressure changes could be achieved more easily and a true sliding pressure operation mode with reasonable load change capabilities becomes possible. In supercritical and ultra-supercritical units, main steam temperature is controlled by water-fuel ratio control with back up spray attemperator. As a result, rated steam outlet temperature could be achieved at all loads with all types of fuel. With ultra-supercritical parameters, there is an improvement of cycle efficiency attributable to elevated pressure and temperatures. However, for smaller units the improvement in heat rate is marginal. Using ultra-supercritical parameters is more advantageous for larger units where thermal efficiency improvement is more pronounced. An approximate efficiency gain of 3 - 5% points compared to conventional supercritical technology can be obtained by selecting ultra-supercritical steam parameters. The below figure depicts the progression of plant efficiency gain commensurate with technology upgrades.

Many plants with ultra-supercritical parameters are in operation in China, Europe and US. Some USC plants are under execution in India. With the increasing penetration of renewable energy generation technologies, there have been lot of questions of how the system operator will be able to balance the grid to ensure that the consumers receive uninterrupted, quality power supply without any voltage or frequency variations, and the electrical equipment connected are not damaged due to wide swings in voltage and frequency. Hydroelectric power and gas based power have been internationally considered to be best for playing this balancing or complimenting role. However, India has limited hydro power, and it is going to be difficult to develop more of hydro resources due to the issues related to forest destruction, wildlife and massive scale rehabilitation and resettlement. So, coal fired power plants will remain an important component of India's power mix for significant time to come, and plants based on super-critical or ultra-supercritical technology, which have faster

ramp up and ramp down times will be the most suitable for meeting the unique needs of the Indian electricity network.

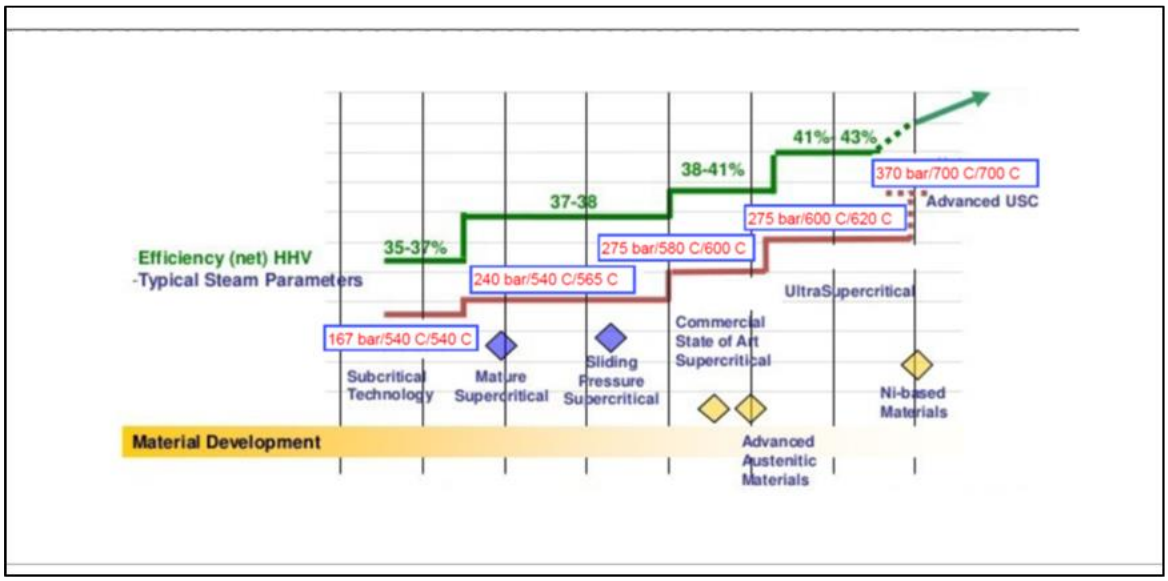


Figure 2. 7: Selection of technology

In addition to faster response times, ultra-supercritical technology, increase in overall plant thermal efficiency results in reduction of fuel consumption per unit of electricity generated, which in turn also reduces CO_2 emissions in coal fired power plant. Ultra-supercritical units also emit less SOx and NOx. Improvement in thermal efficiency also causes substantial reduction in emission of suspended particulate matter to the environment. Last but not the least good efficiency is associated with lower fuel costs.

Single or double reheat is selected for the STG, the reheater final steam temperature may be selected adequately high (about 600 / 610 ^{0}C at Turbine inlet) to avoid wet vapour in the later stage of the turbine and attaining a high cycle efficiency.

In general, water is considered as a good solvent and steam as poor one. This generalization becomes increasingly less valid as operating pressure increases. As densities of two phases in equilibrium approach each other so do their solvent characteristic. Common impurities, like silica, sodium chloride, sodium sulphate, calcium sulphate, etc., remain soluble in water and their solubility in sub-critical steam is less. But above critical pressure solubility of these substances become higher in steam phase and since there is no phase separation, impurities get carried to steam phase. Hence, supercritical / ultra-supercritical units needs extremely

pure feed water, resulting in the best possible feed water treatment. The make-up water and condensate must be purified also since marginal blowdown is available to remove impurities. Thus, condensate polishing unit is a must in the condensate circuit for supercritical units.

For identical size, although once-through boilers avoid thick-walled components like drum and replace it with small diameter separator vessel, the installation costs of supercritical / ultra-supercritical plants are 3 to 5% higher than sub-critical plants. Due to high pressure and high temperature, superheater and reheater require costly alloy steel, so also HP/IP turbine section, which require higher Chromium, Molybdenum, Vanadium and Nickel content to retain tensile strength of the material at a higher temperature. All these added together raises the installation costs. The wall-thickness of HP turbine section needs special consideration. While the wall-thickness should be high enough to with stand elevated pressure and temperature, the thickness has to be as low as possible to avoid massive material in order to increase the thermal flexibility and fast load changes. The wall thickness of the tubes and headers of once-through boiler needs to be designed to match the planned pressure level.

Globally, supercritical and ultra-supercritical plants are in operation. As per available information, their availability and maintenance costs are comparable to sub-critical plants, if not better. The benefits of ultra-supercritical technology, may be summarised as:

- Improved thermal efficiency attainable
- Reduced fuel cost
- Reduction of carbon-di-oxide emission compared to typical sub-critical units. This may attract incentive permitted as per governing CDM norms.
- Very good part load efficiency.
- Very low emissions of NOx, SO_2 and PM achievable using modern flue gas clean-up equipment.
- Initial investment requirement marginally higher than super critical technology and less than other clean coal technology. This, however, depends on the unit size considered.

It is needless to mention that significant research and development work in the field are being carried out to optimize on:

- Cycle layout and heat rate
- Requirement of auxiliaries
- Environmental impact
- Initial cost
- Plant availability.

In Indian context, the following features need special attention compared to the technologies available in other Countries:

- Dependence on imported materials for heat transfer surfaces and the turbine parts handling high temperature steam will offset the cost advantages normally available in advanced countries.
- Indian coal has high ash content, which is also abrasive in nature. This aspect may be given due attention during furnace design.
- Suitable training of O&M staff and indigenous vendors would be necessary.
- Superior water treatment along with 100% condensate polishing being essential requirement needs to be ensured.

An evaluation of steam cycle performance shows that a cycle efficiency in excess of 42% is attainable in ultra-supercritical applications compared to 38 – 40% attainable with super-critical steam parameters. At a more specific level, improvements are possible and are being attained through:

- Increase in main and reheat steam temperatures, main steam pressure including transition to ultra-supercritical conditions.
- Changes of cycle configuration, namely, increasing number of reheat stages, feed heaters with associated increase in final feed water temperature. For example utilizing topping de super heater (dry heater) over and above normal regenerative feed heating arrangement and utilizing LP drip pump with feed forward arrangement.

- Changes in the boundary conditions of the cycle, namely, flow and temperature of flue gas at the outlet, condenser pressure etc.
- Improvements in steam turbine efficiency through optimized flow paths & last stage blade design improvements
- Reduction in auxiliary power consumption.
- Improvement in the performance of the individual plant components, which in turn, has an effect on the other areas listed above (coal combustion, turbine efficiency, pump efficiency, condenser performance etc.).

For the proposed Power Project, a two-unit configuration of 800 MW each has been planned with overall capacity of 1600 MW with ultra-supercritical steam parameters by the Project proponent. The choice of ultra-supercritical steam parameters in once-through boiler is prima facie guided by the improvement in combustion efficiency as listed above. The choice is, however, beset with use of higher alloy steels in the heat transfer surfaces.

For the present study, the details of power cycle equipment for 800 MW ultra-supercritical units are given below:

Table 2. 7: Details of power cycle equipment

Equipment	Details
Boiler	Re-circulation
Turbine	1HP+1 IP+ 2LP
Generator (MVA)	940
LP Heaters	Four (4) to Five (5) Nos.
HP Heaters	Three (3) Nos. + one (1) dry heater
Deaerator	One (1) No.
Condensate Extraction Pumps	3 x 50%
Boiler Feed Pump	2x50% TD + 1x30% MD
Vacuum Pumps	4 x 50%
Condensate Polishing Units	4 x 33.3%
HP Bypass Valves	Two (2) Nos.
LP Bypass Valves	Two (2) to Four (4) Nos.
Recirculation Pumps	Two (2) Nos.

The steam parameters and basic inputs are given here under: -

800 MW Ultra Supercritical	:	M.S. – 270 Bar(a), 600 °C, 2195 TPH R.H. – 600 / 610 °C
Feed Water Temp.	:	194.8°C (BFP Outlet)
Condensate Flow	:	1435 TPH

The above values are computed based on technical parameters mentioned in published document and is subject to changes as per manufacturer's design conditions. Approximate improvement in plant thermal efficiency on weighted average basis as indicated for 800 MW ultra-supercritical sets over conventional super-critical 800 MW machine is approximately 3 - 5% points. From the above, it may be inferred that for a typical 800 MW unit, the advantages in terms of improvement in heat rate is marginally eased out by high investment requirement. But with the improvement in cycle efficiency, lower fuel costs and incentive for CDM available and the environmental benefit attainable, the choice tilts in favour of the ultra-supercritical unit. The marginally high capital investment requirement for ultra-supercritical boiler and turbine generator sets is attributable to high priced quality alloy steel involved. In recent past and current scenario, with considerable R&D efforts and sustained selection & usage of superior quality and high creep strength alloy steel for boiler tubes (T91/ T92/ Super 304H / HR3C) as well as thick-walled steam headers (P92) in multiple operating super & ultra super critical projects world-wide, the techno-economic viability of superior materials is proven. With the above in view, for the proposed 2x800 MW Project of MTEUPPL at Mirzapur deployment of ultra-supercritical steam parameters is favoured.

Turbine Generator Unit

Steam Turbine Plant:

The turbine component and its auxiliaries will be designed and selected to meet the stringent requirements in respect of superior thermal performance, excellent product reliability and operational flexibility.

The turbine manufacturer will have turbine designed based on modular design approach that divides the turbine into three main parts:

- High-pressure (HP) section,
- Intermediate-pressure (IP) section and
- Low-pressure (LP) section

Turbine

The proposed turbine will have one HP, one IP and two double-flow low-pressure casings. All components will be selected based on long-proven records and standardized modules. The turbines will be of the tandem compound design. The individual shafts of the cylinders and the generator rotor shaft will be coupled rigidly together, and all the shafts will be machined from single forgings. The turbo-generator set would be designed for a maximum throttle steam flow at turbine Valve Wide Open (VWO) condition of 105% of Turbine Maximum Continuous Rating (MCR) flow.

HP Turbine

The HP turbine will be designed with single flow. This will have a double-shell casing consisting of inner casing carrier and barrel-type outer casing. Main steam to the HP turbine will be supplied through two combined stop and control valves. The exhaust branch will be located below the turbine.

IP Turbine

The IP-turbine will be designed with single or double flow based on OEM design. This will have a double-shelled casing with horizontally split inner and outer casing. Reheat steam will be admitted through two combined stop and control valves of the turbine. The valves will be arranged on either side of IP casing. The exhaust branches will be on the top of the casing. The steam flows to the LP Turbine through a crossover pipe

LP Turbine

The LP-turbine will comprise horizontally split multi shell casing. The outer casing will consists of two end walls, a bracing system, the top half and the side walls. The inner casing

will be double shell axially split supported by support arms that are bolted to it and that rests on the bracket supports of the bearing pedestals. The bearing pedestals will be mounted on the foundation. They will carry the shaft seal casings, which shall be joined to the outer casing by means of expansion joints.

Valves

The HP-Turbine will be fitted with two combined stop and control valves and one overload control valve for main steam admission. Two combined stop and control valves will be installed at the IP-Turbine for hot reheat steam admission.

Each combined valve consists of a stop valve and a control valve that will be mounted on a common body. Every stop valve and control valve will be equipped with an electro-hydraulic-actuator. The main steam valves will be directly mounted on the HP-turbine. A quick acting HP and IP bypass station would be provided as a part of the turbine package.

Gland Steam Sealing System

A fully automatic gland sealing steam supply system will be provided for the TG Set and the turbine drives of BFPs. HP & IP turbine shaft glands will be sealed to prevent escape of steam into the atmosphere and the LP turbine glands will be sealed for preventing leakage of atmospheric air into the turbine. Steam will be used for sealing these spring backed labyrinth glands.

During start-up and low loads (say 40% load), seal steam will be supplied to the turbine glands from the auxiliary steam header or cold reheat line through a seal steam-regulating valve. During normal operation (above 40% load), the HP and IP turbines will be of self-sealing type and under that condition the auxiliary/CRH steam source will be cut off and the leak-off steam from HP and IP glands will be used for sealing the LP glands. The excess leak-off steam shall be led to the condenser. A gland steam condenser will be provided to condense and return to the cycle, all gland leaks off steam including that from BFP turbines. A desuper-heating type bypass will be provided during outage of gland steam condenser. 2x100% capacity vapour exhausters will be provided to remove non-condensable gases from the gland steam condenser. The exhaust gases will be led over the TG hall roof level.

Shaft Glands

All shaft glands will be of the axial-flow labyrinth type. The glands on the LP turbine will be mounted in gland casings that will be bolted to the bearing pedestals.

Lube Oil System

The oil system will supply oil for lubrication and cooling of turbine and generator bearings, and to the hydraulic shaft turning gear during start-up and shutdown. This system will be provided with AC & DC powered oil pumps. To improve lubrication of the bearings during start-up and shutdown, a jacking oil system will be installed which also supplies motive oil to the hydraulic turning gear with hydrometric gear motor.

A separate, self-contained high-pressure fluid system with dedicated pumps will be provided for valve actuation. The system will specifically include the following:

- The main oil pump will be centrifugal/gear type. The turbine shaft will directly drive it. It will have sufficient capacity to handle lube oil requirement of the bearings and emergency seal oil requirements.
- 2 x 100% AC Aux. Oil pumps for start-up, slowdown of TG unit and as standby to MOP for automatic operation. These pumps will be in service during start up till the main oil pump takes over the supply.
- 1 x 100% DC emergency oil pump for meeting lube oil requirements of bearings during emergency with automatic starting on low lube oil pressure preset value.
- One (1x100%) each AC & DC motor jacking oil pumps will be provided to lift the rotor at the bearing during turning gear operation.

Each unit will be provided with an oil tank of sufficient capacity for oil changes. 2x100% duty vapour extraction fans. The 2x100% capacity oil coolers will be provided for oil cooling.

A lube oil purification unit will be permanently installed for each unit for the total oil charge on a continuous basis.

Turbine Control Fluid System

For the governing and control system of the turbine a complete self- contained control fluid system will be provided. Fire resistant fluid will be employed to eliminate fire hazards. The system will comprise:

- A control fluid reservoir of adequate capacity to ensure fluid supply.
- 2x100% AC motor driven pumps to pump the fire resistant fluid from the reservoir.
- 2x100% capacity control fluid coolers designed for service with DM water.

A control fluid purifying unit will be provided for the turbo-set for purifying at least 2% of the total fluid charge in the system per hour on a continuous bypass basis. 2 x 100% capacity AC motor driven purification pumps to circulate oil through purification system will be provided. Necessary filters, strainers, piping, fittings, valves and instruments shall be provided.

Governing/Regulation Systems

The turbine will have throttle or nozzle-controlled type governing. The steam turbine generator unit will be equipped with an electro-hydraulic governing system backed up by 100% mechanical-hydraulic or electro-hydraulic control system. The governing system will be highly reliable and operationally safe and it will be capable of controlling with stability, the speed of the turbine at all power outputs between zero and the specified maximum power output when the unit is operating isolated, or the energy input to the steam turbine when the unit is operating in parallel with other units in the grid. The turbine governing system will be designed for high accuracy, speed and sensitivity or response. The governing system will limit the over speed of the turbine on loss of full load to value less than 8% of the rated speed.

Turbine Drain System

To avoid thermal stress and possible deformation of the turbine casing, the condensate produced by the condensing steam during warm up of the turbine will be discharged into a standpipe of the condenser.

HP – LP Bypass Station

60% (BMCR) HP and LP Turbine bypass station will be provided to act not only as a protection to the turbine during pressure rise resulting from sudden load throw-off but also to enable operation of the unit at loads lower than the control load. Further HP/LP bypass will permit quick, repeated hot starts of the unit on its tripping.

The LP bypass station will be connected to the hot reheat line and discharges the steam into the condenser. The hot reheat steam will be de-superheated by means of condensate injection. The bypass system shall be in operation when the steam turbine is not able to receive the entire steam quantity, e.g. during start-up or in case of a load rejection. The HP and LP bypass stations will be capable of meeting the following requirements:

- Quick start-up of the steam generator from cold, warms & hot conditions.
- Parallel operation of the bypass with turbine under large load throw-off.
- House load operation followed by large load throw-off.

To keep the steam generator in operation so as to avoid a trip out the steam generator following full load rejection.

Condensing Plant:

Condensing Equipment & Accessories

The function of the condenser is to condense the steam exhausted from the LP cylinders and to produce and maintain as high a vacuum as possible in order to increase the enthalpy drop, which can be utilised in the turbine.

Design Features

The condenser will be a single-flow box-type surface condenser with water boxes on each end. The steam space will be of rectangular cross-section to achieve optimum utilization of the enclosed volume for the necessary condensing surface. The condenser will be located below the LP turbine and form an integral part of it.

The steam dome, shell and hot well are steel fabrications, like the water boxes. The condenser will be fixed supported on the foundation beneath.

The double-flow LP turbine outer casing will be connected to the condenser through the steam dome. The steam dome will be welded to the exhaust casing of the turbine with the result that the LP turbine cylinder and the condenser form a unit.

The direction of circulation water flow will be at right angle with the turbine axis and in one pass. The condenser tube bundles, on which the exhaust steam from the turbine condenses, will consist of straight tubes with smooth surfaces and running right angle with the turbine axis in the steam space of the condenser. The condenser tubes rest in tube support plates at regular intervals along their length to prevent impermissible tube vibration when the condenser is in service. Tube sheets on the circulating water inlet and outlet sides will act as partitions separating the steam space from the cooling water side. Both ends of the tubes, through which circulating water flows, are roller-expanded into the tube sheets. On the cooling waterside the water boxes will be provided with a coating to prevent contact corrosion.

The condenser tubes will be divided into tube bundles designed to promote uniform flow. The following general aspects of possible improvements will be considered:

i) Lowest possible condenser inlet pressure influenced by the pressure drop between the LP-turbine diffuser and condenser tubes, the heat transfer coefficient of the tubes and the activation of the entire heat-exchange surface

ii) Smallest possible condenser heat losses.

iii)Minimized oxygen content in the condensate

Air Extraction

The unit will comprise of 4x50% vacuum pumps along with all accessories and instrumentation for condenser air evacuation. The vacuum pumps and accessories will be used to create vacuum by removing air and non-condensable gases from steam condenser during plant operation. Vacuum pumps will be of single/two- stage liquid ring type with both stages (if two-stage pump is selected) mounted on a common shaft. Vacuum pumps will be sized as per latest HEI requirements.

Condensate Extraction Pumps

Each unit will have 3x50% capacity motor driven condensate extraction pumps (two operating and one standby). The condensate pumps will be vertical canister type, multistage centrifugal diffuser design with a double suction first stage designed for condensate extraction service having low suction head requirement. The pumps will be capable of handling the condensate from the condenser together with feed heater drains when the machine is operating at maximum unit output with HP Heaters out with 1% make-up and discharging this quantity through the LP heaters to the deaerator. The pump will have adequate margins on capacity and head to cater for most adverse conditions of operation such as:

- HP & LP bypass in operation.
- HP heaters out of service and unit operating at its maximum load during an under frequency operation.

Regenerative Feed Heating Cycle

Regenerative feed heating plant will be designed for all operating conditions including transients like sudden load throw-off, HP-LP bypass in operation, one or two heaters going out of service etc. The condensate from the condenser will be pumped by the condensate extraction pumps through the train of LP heaters to the deaerator. In deaerator, the condensate will be heated to saturation temperature and fed to the boiler feed pump, which increases the feed water pressure to suit the steam generator requirements. Finally the feed water is fed to the boiler through a feed regulating station.

HP & LP Heaters

Regenerative feed heating cycle will consist of LP heaters and HP heaters. The number of LP & HP heaters will be based on the optimisation of feed heating cycle.

Feed water will be heated by uncontrolled turbine extraction steam from turbine inter-stage tap-offs and cold reheat line in feed water heaters. The deaerator will normally be operated under variable pressure on extraction steam from IP-Turbine. Each feed water heater will

be capable of handling the drains from the preceding heater under operating conditions of the unit.

The equipment will be designed in accordance with latest applicable standard/codes of Heat Exchanger Institute ASME, IBR etc. The feed water heaters will be of U-tube with welded stainless steel tubes in LP Heaters and seamless carbon steel tubes in HP Heaters, surface type and horizontal with integral condensing and drain cooling zones. The HP heaters will also have de-superheating zone.

Deaerator

Horizontal spray cum tray type deaerator with a storage tank or stork type deaerator will be provided. The deaerator will be capable of de-aerating the dissolved oxygen and carbon dioxide in condensate & HP Heater drains. The minimum capacity of the deaerator will be 6 minutes between normal operating level and low level with a filling factor of 0.66. The deaerator will be normally operating by taking extraction steam from IP turbine except during low load operation and start up when the steam is drawn from the auxiliary steam header.

Boiler Feed Pumps

The unit will comprise of 2x50% turbine driven and 1x30% motor driven boiler feed pump per unit with the booster pumps mounted on the common shaft. Each pump will be designed to give parameters to suit the steam generator requirements. Motor driven feed pump will be used for start-up of unit and will also act as standby BFP. Turbine driven boiler feed pumps will be located on operating floor and the motor driven pump will be located on ground floor. The feed pump will be able to handle feed water of pH 8.5 to 9.5 and of temperature up to 200 ^{0}C (tentative).

The boiler feed pumps will be of horizontal, centrifugal type with single shaft design. The boiler feed pumps outer casing will be of barrel type with end removal. The inner pump assembly comprising of shaft, impellers, stage casings will be capable of being removed and replaced as a unit without disturbing the feed piping. Each feed pump will be provided with ON-OFF/modulating type re-circulation control valve to protect the pump under low flow condition. The boiler feed water system will be designed to operate primarily in an automatic

mode over the range of system design loads. The arrangement will provide automatic start-up one of the standby motor driven feed pump under conditions like tripping of the running TDBFPs and/or discharge header pressure low etc.

Throttling the drive turbine steam inlet control valve in case of turbine driven pumps whereas hydraulic coupling will be utilised to achieve speed control of motor driven pumps for control of the feed flow. Provisions will be made for warm up to standby pump, if required.

Lube Oil Purification System

A suitably sized centrifuge type or coalesce type turbine oil purification plant will be provided as an auxiliary of the proposed turbo-generator set to condition the turbine oil continuously to remove the water and other impurities. In addition, a common turbine oil storage unit comprising one clean oil tank, one dirty oil tank, one purifier unit with necessary pumps, vent fans etc. will be kept. This would also receive the refill of turbine oil from outside. The purification plant will be complete with oil purifiers, storage tanks, filters, necessary pumping sets and vent fans.

Condensing Equipment & Accessories

The supply would be complete with single flow, horizontal, surface type, clarified water-cooled condenser. The condenser unit would be transverse mounted and would condense exhaust steam by circulation of cooling water (inlet temperature 33 °C max.) in a re-circulating cooling water system using wet type cooling tower. Condenser outlet water temperature may be maintained within 42 °C. Clarified river water would be the cooling medium in the condenser and other auxiliary coolers. Stainless steel heat exchanger tubes, with rolled steel tube sheet, baffle plates, etc. are envisaged to ensure all steel construction. Cathodic protection with Zn or Al sacrificial anode would be provided, if required. The condenser would be designed as per HEI code or equivalent. The heat load of the condenser will correspond to the turbine operating condition with VWO having 105% MCR steam flow, 1% make-up, 90% tube cleanliness factor and a maximum cooling water inlet temperature of 33 °C to maintain rated condenser pressure. The condenser should also be capable of accepting full HP-LP bypass steam flow safely without undue pressure rise,

vibration, noise or other detrimental effects. Oxygen content of condensate leaving condenser hot well will not exceed 0.015 cc per litre over the entire load range.

The condenser would be provided with 2x100% or 4 x 50% capacity vacuum pumps to remove non-condensable gases and maintain vacuum in the condenser at the desired level during normal operation. The condenser would be spring mounted with rigid connection to the turbine exhaust. Alternatively, condenser may be on solid footing with corrosion resistant flexible metallic bellow connection with the turbine exhaust.

Condensate Extraction Pumps:

The condensate/feed water cycle would also comprise 3x50% capacity motor-driven, vertical condensate extraction pumps of CAN-type construction. Connection between condenser and each pump will be through a block valve and removable strainer. The pumps will discharge through check valve and motor operated stop valves into a common discharge header. Connection for condensate supply to the following major services will be tapped off from this condensate discharge header.

a. LP bypass de-superheating spray

b. Turbine exhaust hood spray

c. Gland sealing system de-superheating

Condensate will then pass through the gland steam condenser before being passed through the low pressure feed water heaters.

Steam Generators

Ultra-Super Critical Pressure ("USCP") power plant is envisaged with a view to capture better plant efficiency; minimizing basic fuel coal consumption and most important criteria being the drastic reduction of emission quantities of SO_2, NO_x, and particulate matters etc. as per MOEF&CC norms.

The USCP technology has been presently accepted in India and is adopted by NTPC for their 660MW Khargone plant and Adani in their 800MW Godda thermal power plant & Under construction Raipur thermal power plant.

Boiler Configuration and Technical Features:

1. Furnace Type
2. Two pass / tower type

Furnace configuration is derived from each plant manufacturer's specialty. Two-pass type is mainly adopted in Japan and tower type is typical in Europe.

No significant difference is observed in the applicability to kind of coal. It is because boiler design can be adjusted in accordance with coal characteristics.

Spiral (plain/bare tube) Wall and Vertical (rifled/ribbed tube) Wall Type. The principal concern with a variable-pressure/sliding pressure super / ultra-super critical pressure design is the requirement for once-through operation. The mass flow in the furnace-wall tubes must be sufficiently high to avoid overheating or departure from nucleate boiling (DNB) while generating steam at sub-critical pressures and to avoid excessive metal temperatures and uneven steam outlet temperatures when operating at super / ultra-supercritical pressure at higher boiler loads.

To accomplish these objectives, the spiral-wall design is used for the unit. The principle of the spiral- or helical-wall furnace is to increase the mass flow per tube by reducing the number of tubes needed to envelope the furnace without increasing the spacing between the tubes. This is done by arranging the tubes at an angle and spiralling them around the furnace. For instance, the number of tubes required to cover the furnace wall can be reduced to one half by putting the tubes at a 30-degree angle. The center line spacing or pitch (P) is made the same as on a vertical wall to prevent fin overheating. Additionally, by spiralling around the furnace, every tube is part of all the walls, which means that each tube acts as a heat integrator around the four walls of the combustion chamber.

The spiral-wall concept thus addresses two major challenges of the full variable pressure supercritical / ultra-supercritical pressure boiler.

1. Achieving the required mass flow to avoid overheating and excessive metal temperature by reducing the number of tube circuits.
2. Minimizing difference in tube-to-tube heat absorption by exposing each tube to all four-furnace walls.

Spiral-wall furnaces have been in operation in Europe and Japan for many years and have given satisfactory performance.

As an alternative to the spiral-wall design for larger-size steam generators, a certain manufacturer offers a tangentially fired unit with vertical walls consisting of rifled tubes for ease of fabrication, erection, and maintenance. A stable fireball is formed in the centre of the furnace with tangential firing, with essentially equal distribution of the lateral heat absorption on all furnace walls. Unbalances are minimized and lateral heat absorption patterns are predictable over the entire load range.

Rifled tubing is used in the furnace walls to avoid overheating or DNB at sub critical pressures.

1. UP type / Benson type

UP type is applied to constant pressure once through boiler and Benson type is applied to variable pressure once through boiler. Variable pressure Benson type boiler is suitable to improve plant efficiency at partial load and flexible operability.

2. Start-up System

In the case of UP type (constant pressure) boiler, it is necessary to keep the super critical pressure at boiler and the minimum water flow rate at water wall from the early stage of unit starting in order to prevent the water wall from tube burning-out, while the turbine needs low pressure superheated steam at starting. For these purposes, UP type boiler usually has flash tank drainage start up system and uses de-pressurized steam from flash tank for starting turbine. This start up system requires so-called ramping operation which means switching operation from starting system to main system during load increasing operation, because this start up system capacity is only around 10% of turbine TMCR. This ramping operation is so complicated operation under the large differential pressure that some valves are required with enough durability.

On the other hand, Benson type boiler can start from under the low pressure condition because Benson type boiler has availability of variable pressure operation owing to spiral structure of water wall tube (or rifled tube used for vertical water wall), and circulation

system with Boiler Circulation Pump (BCP) can be applied to this type of boiler. This system can shorten the start-up time and heat loss during start up period.

3. Minimum Load with Dry Range/Control Range

Changing point (Benson Point) or dry/wet condition is about 30% TMCR load. Minimum control range is set at 50% TMCR load with consideration of undershoot during load reducing, turn-down of pulverizers, ignition stability, etc. There is no difference is spiral water wall and vertical tube water wall in minimum load requirement.

4. Material Selection

The materials for the range of steam temperature to the level of 600/610 °C are already proven. There is no difficulty in technical aspects in material selection.

On the other hand, the applicable materials shall be selected considering the combination of applied temperature and pressure levels.

Table below shows the typical material selection in boiler pressure parts. This material application just shows the general concept and each manufacturer has his criteria considering his design concept.

Table 2. 8: typical material selection in boiler pressure parts

Temperature Range Component	**270-280 Kg/Cm^{2}g** **600 ^{0}C / 610 ^{0}C**
Super heater tubes	SA213-T12/T22/T91 / T92 / Super 304H
Reheater tubes	SA213-T12/T22/T91/ T92/ Super 304H / HR3C
Main steam pipes, headers, valve bodies	P92
High temperature re heater pipes	P92

** Material shall be as per ISO/ ASME Sec 1 and shall conform to current Indian Boiler Regulations.*

Emissions

Coal consumption is reduced with efficiency improvement led by upgrading of steam conditions. Consequently, emission of CO_2, NO_x and SO_2 is reduced.

i) CO_2 emissions

Ultra-Supercritical plants reduces CO_2 emission compared to supercritical plant.

ii) Twin flue Chimney of 275m is proposed as per MoEF&CC directions..

NOx emissions

Use of suitable De-NOx technology will be adopted to restrict the NOx emission as per MoEF&CC norms.

iii) Particulate Emissions

MoEF&CC guidelines for particulate emission is less than 30 mg/Nm^3 under guarantee point condition at TMCR load firing range of coal with one field of ESP out of service.
The steam generator will be designed to achieve the maximum continuous rate (BMCR) with an appropriate control margin to achieve rated power output over entire design life.

Boiler Auxiliaries:

1. **Draft System:** The draft system comprises of two (2) sets of FD fans each set rated for 60% of BMCR capacity. The FD fans will be axial type, blade pitch/inlet guide vane control arrangement offering a favorable efficiency for regulation purpose. Two (2) Induced Draft (ID) Fans each rated at 60% of BMCR flow will be axial with blade pitch / inlet vane control type. The equipment will be complete with lube oil, hydraulic regulations and all other accessories required for continuous operation and all equipment would be suitable for outdoor installation.
2. **Primary Air System Type:** With cold primary air system, it is possible to reduce the capacity of Primary Air Fans (PAF) compared with hot primary air system. Cold primary air system is adopted in all cases.
3. **Pulverized Fuel Preparation System:** For firing high ash content abrasive coal pulverizes of slow speed large capacity bowl mills or ball and race mills will be provided having low auxiliary power consumption; and relatively high life expectancy of grinding parts and armour plating. The mills size and numbers will be selected such that on an average one mill remains standby while one of the mills is under maintenance.

   Considering the grinding fineness required, it is suggested equipping the mill with rotating classifiers having speed adjustment to control grinding fineness. The firing system will employ latest the 'state-of-the-art' burners and permit load variation from 40

to 100% BMCR without use of support fuel. The ratio of fuel and air flow will be controlled. Due to sufficient burner wall distance and the burner swirl direction, operation with low excess air is possible without the risk of wall damage.

4. **Start-up Fuel System:** The fuel oil system will be provided for boiler start up; and for flame stabilization during low load operation with or without coal firing. Light Diesel Oil (LDO) / High Speed Diesel (HSD) oil will be used for boiler start up and for low load operation & flame stabilization (30% of BMCR), as necessary. Micro/Minor oil gun ignition system will be explored to reduce specific oil consumption during cold start up.

5. **Electrostatic Precipitators**

   It is proposed to install high efficiency electrostatic precipitators having an efficiency that will limit the outlet emission to 30 mg/Nm^3 with one field out of order while the boiler is operating at its BMCR, firing worst coal having maximum ash content.

   The electrostatic precipitators will have four (4) or more parallel gas streams, isolated from each other on the electrical as well as gas side and will be provided with gas tight dampers at inlets and outlets of each stream, so as to allow maintenance to be carried out safely on the faulty stream, while the unit is working. Electrostatic precipitator will be provided with microprocessor based programmable type rapper control system and ESP management system to ensure the safe and optimum operation of ESP. ESP transformer rectifier sets will use high fire point oil as the cooling medium. The dust collection hoppers at all strategic locations will have a minimum storage capacity of eight (8) hours. The hoppers will have heating arrangements to prevent ash sticking to the sloping sides and down pipes. Level indicators to indicate and trip the ESP in case of high ash levels in the ash hoppers, which will jeopardize the safety of ESP otherwise.

6. **NO_X Control System**

   NOx emission control technologies are grouped as combustion control and post combustion process. Combustion controls reduce the level of NOx emissions by altering or modifying the firing conditions under which combustion is achieved.

   Low NOx Burners (LNB) operate on the principle of fuel and air staging during fuel injection, which results in fuel-lean and fuel-rich combustion zones in the furnace. The

fuel lean zone enveloping the fuel rich zone further reduces NOx formation as it has low combustion temperature and also helps in complete combustion and prevent CO generation.

By adopting various combustion control techniques along with advanced Low NOx burners, the base NOx level at the outlet of boiler can be lowered to 300-400 mg/Nm^3. Suitable post combustion control technology if required separately will be adopted in the proposed plant to meet the NOx emission limit as per MoEF&CC norms.

Post Combustion Control Technology:

Selective Non-Catalytic Reduction (SNCR) technology is generally used when desired de-NOx efficiency is limited and in the range of 30-40%.

Selective Catalytic Reduction System (SCR)

Selective Catalytic Reduction System (SCR) technology is used when desired de-NOx efficiency is high in the range of 50-80%. This technology uses special catalys which stimulates the NOx capture from flue gas within the optimized temperature range (320-400˚C).

Aqueous / Anhydrous ammonia is generally injected into hot flue gas between economizer and APH where flue gas temperature is in the range 340–400˚C through an injection grid. The flue gas is mixed with reagent and passes through catalyst surface where NOx is converted into N_2 and water.

Ammonia unloading and storage system will be common whereas ammonia forwarding, evaporation & injection system will be unitized.

2.7.2 AUXILIARY SYSTEMS

Introduction

The philosophy of design of the auxiliary system would be pre-dominantly guided by the site features, technology, basic design parameters, infrastructure and ambient conditions. Adequate redundancy shall be adopted to ensure high availability of the plant.

All the systems and system components would be designed for simplicity of operation and ease of maintenance so as to call for minimum manual labour and low degree of supervision. Redundancies in systems and sub-systems would be considered taking into account the operating experience of similar capacity units being operated elsewhere.

Plant Water System

River Ganga is considered to be the source of water for the station. Water from River Ganga will be pumped to Upper Khajuri Dam and from Upper Khajuri Dam it will be further pumped to the raw water reservoir within the plant. The maximum consumptive water requirement of the proposed 2x800 MW station is estimated at around 3200 m3/hr considering disposal of Bottom Ash and Fly Ash in High/Medium Concentration Slurry Disposal (HCSD/MCSD) mode. The requirement of plant water will be met by drawl of water through intake structure with pump house to be constructed near River Ganga and at Upper Khajuri Dam.

A recirculating cooling water system using wet type evaporative cooling tower would be deployed for the proposed Project. It would be used for the condenser and auxiliary equipment cooling in a semi-open cooling water circuit. The choice of cooling water system is guided pre-dominantly by the GOI guidelines on use of sweet water for cooling purposes. Natural draft (ND) cooling tower has overall advantage, but considering initial investment and installation timeframe required, Induced Draft (ID) cooling tower is preferred for this Project.

During detailed engineering stage year-round water analysis data will be available for establishing appropriate design basis for finalizing the plant water system. For the purpose of the present study a water balance diagram is presented in

For the proposed 2x800 MW Project the total raw water requirement is estimated on the basis of 1% heat cycle make-up (ultra-supercritical units), make-up to cooling towers usually associated with average daily plant load apportioned on hourly basis and other consumptive requirements like potable water, make-up water requirements for air-conditioning and ventilation etc. It is proposed to utilise cooling tower blow down in ash handling and coal

handling plant dust suppression system to the extent possible and remaining quantity shall be feed to the blow down recycling plant for achieving maximum possible water utilization.

To ensure redundancy to the system, raw water reservoir with seven days (7) days' raw water storage capacity has been considered in the plant water schemes.

The reservoir in the raw water system would also functionally assist in removal of substantial portion of suspended solids and will provide adequate redundancy to the system. Raw water will be clarified to remove suspended solids and colloids in clariflocculators. Two (2) clariflocculator units each having 60% capacity is considered for the CW make and service water system with Lime, alum and other coagulant aids dosing system. Separate Two (2) clariflocculator units each having 60% capacity is considered for the RO-MB (DM Plant) feed water system with Lime, FeCl3 and other coagulant aids dosing system.

Clarified water would, thereafter, be stored in a twin chamber semi-underground RCC reservoir having a capacity of 8-hours of clarified water requirement for the proposed Project. Separate Clarified water storage tank for DM feed is to be provided. Clarified water would be supplied as make-up in the cooling tower basin by gravity.

Clarified water will also cater to the requirement of ventilation plant and requirement of filtration plant.

For pre-treatment plant of the RO-MB system filtration system will be provided after clarifier. In the filtration plant, clarified water would be passed through sand bed filters where adequately sized filter beds with redundancy in number as well as capacity shall be provided. The water quality at the outlet of the filtration units shall be maintained within 10 NTU/10 ppm TSS. Filtered water would be stored in a RCC tank. With storage capacity of 4-hours filter water requirement for the Power Project. Filtered water will be required for potable use and DM plant feed. Filtered water will feed to Ultrafiltration system (UF). UF treated water will be stored in UF water storage tank. UF treated water will feed to RO plant through micron cartridge filter and anti scalant, SMBS chemical dosing. RO-High pressure pump will feed water to RO plant (2X50% capacity) and get RO treated water. RO treated water will be stored in product water storage tank having 2 hrs storage capacity.RO reject water will be used in the coal dust suppression, ASH slurry preparation etc. RO product

water will feed to DM plant (3X50% capacity MB vessel). DM water will be stored in 2 nos of DM water storage tanks.

DM water will be used for heat cycle make-up, chemical feed system, hydrogen generation plant, SCR and as primary coolant in heat exchangers for the auxiliary cooling system of boiler, TG auxiliaries and other common auxiliaries. The heated DM water in closed cooling loop would be subsequently cooled in SET of four 3 plate type heat exchangers, one per unit of (TG, Boiler Aux.) & one common for BOP auxiliaries using clarified water from cooling tower basin through a set of auxiliary cooling water pumps in the secondary circuit.

Demineralisation Plant & Heat Cycle Make-up System:

The basic scheme of Demineralised Water System shall be clarifier-PSF-UF-RO-MB. DM plant equipment sizing shall be with 3% heat cycle make-up to ensure adequate redundancy and start-up requirement. Assuming average 3% make-up for the heat cycle, 2X50% RO and 3X50% MB vessel scheme is considered. Total DM water generation capacity (output) shall be 2x90 cu.m/hr. RO single pass or double pass will be decided during detailed engineering.DM Plant will supply heat cycle make-up, the make-up requirement for primary water circuit of stator cooling system, chemical feed system, air-conditioning system make-up and DM water requirement for the hydrogen generation plant, make up requirement for primary coolant in heat exchanger for the auxiliary cooling system for Boiler, TG and other common auxiliaries.

Filtered water would be pumped to the DM Plant for demineralisation. In the DM Plant, the water would be first filtered through pressure sand filter units & UF units to be installed within the DM Plant building. Filtered water will subsequently be passed through BWRO and mixed bed exchangers and the demineralised water will be stored in DM water storage tanks. Acid and alkali handling, storage and feeding system will be installed for the MB resin regeneration. The DM water produced in the plant would then be taken to two (2) DM water storage tanks, each of 3000 m3 capacity to meet the total requirement including start up and any exigency. DM water from the storage tanks would be transferred to the unit condensate storage tanks by 3x50% capacity DM transfer pumps. Each pump will have capacity to meet the requirement of one unit. The plant would be equipped with 100% unitized condensate polishing unit for ensuring required water quality for operation of once

through steam generator with steam parameter in ultra-supercritical range as mentioned earlier.

Wastewater Treatment System

The wastewater will be led to an ETP where they shall be treated through clarifiers and led to CMB. The treated water shall meet the PCB norms for effluent discharge. Oily wastes shall be treated using oil water separators and the treated effluent led to CMB. Water from CMB shall be used for horticulture. pH corrections shall be made as required for chemical wastes. RO reject shall either be brought to CMB or used for gardening directly.

CW system shall operate at a COC of 5 and the treated water shall be recycled directly in Ash Handling systems. Any excess blow down water shall be treated by installing pre-treatment, ultrafiltration, and reverse osmosis. Product water from recycle plant will be used as a make up to cooling tower and reject water will be used for CHP dust suppression AHP make up.

Following recycle scheme/waste water treatment schemes are adopted:

- CW recycle System
- Plant regeneration waste from Neutralizing Pit
- Boiler.
- Water from Ash water recovery system
- STP Filtrate

Wastewater will be treated in the ETP and treated water will be used for CHP dust suppression and AHP make up.

Mixed Bed unit and Condensate Polishing Units regeneration waste, RO Cleaning chemicals are collected in the neutralizing pit and pumped to the CMB after neutralization.

Boiler Blow down water if applicable (during start up) is received in a boiler blow down tank and pumped to CMB.

Recovered water from Ash dyke shall be circulated back to Ash water sump for makeup to Ash handling system.

Filtrate from STP sludge drying bed will be recirculated back to Sewage collection sump.

Recovered water from filter press and miscellaneous non-chemical/floor washing drains will be collected in a common tank and pumped to the horticulture.

Drains from fuel oil and lube oil storage areas & floor wash from maintenance areas shall be passed through oil water separator for treatment and reuse. Plant is designed based on Zero Liquid Discharge.

Sewage Treatment Plant

The sewerage system shall be designed to provide cleansing conduit for speedy and efficient conveyance of foul water, such as wastewater from closets, urinals, bathrooms and pantries. An independent network of lines to carry the storm water drainage and sewerage shall be provided. Sewers shall be designed for desired minimum and maximum velocities.

The plant area shall be divided into different parts based on layout consideration. The sewerage flow shall be made by gravity. Routing of these shall ensure no interference with underground facilities. Manholes shall be provided at every 30 meter along the length of any pipe, at connection points and at every change of alignment, gradient or diameter of sewer pipeline.

A permanent sewage treatment plant (anaerobic treatment) shall be provided to ensure adequate cleaning of the sewerage discharge of the plant. The treated effluent shall be utilized for the irrigation of the landscaped areas. The treatment plant shall be designed to meet all requirements of applicable local bylaws/pollution standards, as well as the conditions stipulated by the State/Central agencies during the environmental clearance to the Project.

Coal Handling System

Coal from Commercial Coal Mines of NCL/SECL/CCL and e-auction are considered as the primary fuel for the proposed green field project. For the project, crushed coal (-300 mm) will be supplied from the mine end by railway wagons and will be unloaded using two (2)

nos. wagon tipplers with shifter & pusher arrangement. Adequate redundancy has been adopted to ensure uninterrupted operation of the system.

The rated capacity of Coal Handling System both at receiving end and subsequent handling plant is 2 streams of 2000 TPH each (one operating, one standby). The plant is envisaged to run for about 16 hours/day.

Coal in Rail (BOX-N wagons) will be unloaded through wagon tipplers and conveyed to the boiler bunker through crusher house and a number of transfer houses. Provision has been kept for stacking crushed coal in coal stockyard from where coal will be reclaimed as and when the same will be required in coal bunkers.

Coal from mines (-300 mm) will be directly conveyed to the crusher house where four 60% crusher will crush coal to (-25mm) size. The output of the crusher house will either go to the raw coal bunker of each unit or to the coal yard as per requirement.

In the primary route, coal will be directly taken to the powerhouse via crusher house bypassing the coal yard. This arrangement will be operational under normal conditions during daylight hours till the bunkers are full. Excess quantity will thereafter be stacked in the yard.

In the secondary route, the unloaded coal will be taken to the coal yard and stacked by stacker/reclaimer. The stacker/reclaimer capacity will be 2000 TPH. The reversible type stacker-cum-reclaimer will be rail-mounted, self-propelled unit with 41m boom length having adequate slewing and fluffing provision to stack coal upto a height of 10 m and reclaiming the same afterwards. For the proposed station two (2) stacker-cum-reclaimers are planned.

The Coal handling plant includes receiving, stacking and conveying equipment upto the bunkers in coal mill building. Twin stream conveying system (2x100% capacity) is proposed for the system to ensure availability. Bunkers will have a storage capacity of about 12 hours' coal requirement for the boilers. The bunkers will be provided with rod and slide gates, arch breakers, etc. to facilitate operation. Necessary belt weighing at bunker level conveyors, electronic type level indicators, coal sampling units, reversible conveyors, flap gates etc. will be provided in the system as required.

Special precautions will be taken for pollution control by providing dust extraction and dust suppression systems in different transfer points and ventilation system for the tunnels. In addition, roof extraction fans will be provided in key areas like boiler bunker floors. Pressurized ventilation system with unitary air filtration unit will be provided for control room and MCC buildings.

Necessary water distribution network for drinking and service water with pumps, piping, tanks, valves, etc. will be provided for distributing water at all transfer points, control rooms etc.

A control room with microprocessor-based control system is envisaged for operation of the Coal Handling Plant. Except locally controlled equipment like dust extraction/dust suppression/ventilation equipment, sump pumps, water distribution systems etc. all other in-line equipment will have provision of remote control. However, provision of local control will also be provided. All necessary interlocks, control panels, MCCs, mimic diagrams, etc. will be provided in the control room for safe and reliable operation of the Coal Handling Plant.

The major equipment for coal handling system is listed below:

- Wagon Tippler, Shifter & Pusher
- Side Arm Charger
- Apron Feeder
- Belt Conveyors
- Belt feeders
- Stacker cum Reclaimer
- In-line magnetic separators
- Metal detectors
- Cross-belt magnetic separators
- In-line conveyor scales
- Flow divider
- Coal sampling unit
- Flap gates, rod gates, slide gates
- Bunker Level indicators: 3D acoustic type.

- Motorized V-plough tripper
- Bunker Sealing arrangement
- Roof Extractors
- Rack & Pinion Type Elevator
- Electrical & Manual Hoist
- Dry fog dust suppression system
- Plain water dust suppression system
- Dust extraction system
- Compressors, Air Dryers, Air receivers
- Chute liners and chute supporting structures
- V- Plough Discharger
- Belt Vulcanizer

Ash Handling System

For each unit, Bottom ash will be collected in wet form; while fly ash will be collected in dry form to facilitate utilization. Fly ash and bottom ash shall be disposed via High/Medium Concentration Slurry disposal (HCSD/MCSD) system to Ash dyke in case of exigencies; Ash extraction system is unitized basis and ash disposal systems will be common for Two (02) units. Provision for truck disposal of both bottom and fly ash is provided.

For the design of the Ash Handling System, the following data has been considered for each Unit. Necessary design margin shall be considered while selecting the equipment capacity.

Table 2. 9: Ash generation details

	Units	Proposed
Coal Consumption @85% PLF	**Million MTPA**	**6.4**
	MT Per Annum	**6400000**
	Ton Per Day (TPD)	**19394**
	TPH for two units	**730**
	TPH/unit	**365**
Ash Generation		7757.6

Coal Consumption @85% PLF	**Units**	**Proposed**
	Million MTPA	**6.4**
	MT Per Annum	**6400000**
	Ton Per Day (TPD)	**19394**
	TPH for two units	**730**
	TPH/unit	**365**
Fly Ash (80%)		6207
Bottom Ash (20%)		1550.6
Total Ash Generation	**TPA**	2560008
Total Ash Generation	**Million MTPA**	**2.56**

Table 2. 10 Ash utilization details

Year	**Estimated Quantity Generation# (LMT)**	**Utilization (Via different modes as per Fly Ash Notification) (LMT)**	**Utilization %**
First	25.6	25.6	100
Second	25.6	25.6	100
Third	25.6	25.6	100
Fourth	25.6	25.6	100
Fifth	25.6	25.6	100

A. Bottom Ash system

It is envisaged that the bottom ash will be collected in wet. Efforts will be made to utilize 100% bottom ash as per MoEF&CC guidelines. Unutilised bottom ash if any shall be disposed to the ash pond/filling of low lying areas. Ash collected in Bottom ash hopper (B.A + Eco Ash) shall be transported to hydrobins through jet pumps and slurry pumps. Inside the hydro-bins, water shall be removed from the slurry. In case of exigencies the bottom ash from Hydrobins shall be crushed and transferred to ash mixing tank, where fly ash and water shall be mixed with bottom ash and the resultant slurry shall be ultimately disposed to Ash Dyke via HCSD/MCSD Pumps and Pipelines. Provision shall be considered below Hydrobins for loading of ash in semi-wet/conditioned form to trucks for further disposal to Mine voids/stone quarry filling.

BA evacuation from BA hopper shall be done for 1.0 hour (per Unit) for every 4 hours (total 2 hours per Unit per shift of 8 hours). At a time only one Unit BA evacuation shall be done (i.e. Unit-1 BA evacuation followed by Unit-2 BA evacuation). 3 nos. Hydrobins shall be provided common for Two (02) Units.

B. Fly Ash system

The fly ash handling system shall be provided to remove fly ash from ESP hoppers and APH hoppers to transport fly ash to fly ash silos (main fly ash silos / HCSD/MCSD fly ash silo) via pneumatic ash pipe conveying system. From the fly ash silos, fly ash shall be transported in dry form through bulkers truck for possible utilisation. The fly ash conveying system will be sized such that fly ash collected in 8 hours shall be evacuated in 5.5 hours.

For dry ash conveying to storage silos, 6 nos. (4W+2S) compressors shall be provided common for two (02) units. To facilitate easy flow of dry fly ash, 4 nos. (3W+1S) fluidizing blowers with heaters shall be provided common for all 3 nos. fly ash silos; Dry ash will be transported to 2 nos. main storage silos of RCC construction having combined capacity of 16 hrs storage, common for two (02) units. Each main fly ash silo shall be equipped with two outlet for loading of ash in conditioned form in to open truck and two outlets for dry unloading in to closed tankers/trucks for utilization and two outlets for future use.

1 no. HCSD/MCSD fly ash silo of suitable capacity shall be provided to cater to feed the fly ash to HCSD/MCSD system for disposal of fly ash (along with bottom ash) in slurry form to Ash Dyke or in semi-wet form to load the trucks for further transportation to Mine voids, stone quarry filling/possible utilization. HCSD/MCSD fly ash silo shall be equipped with three (03) outlets for feeding fly ash to HCSD/MCSD system, One (1) outlet for loading of ash in conditioned form to open truck, one outlet for loading of ash in dry form to closed truck for utilization and one outlet for future use.

C. Ash Water System

Ash water system shall be common for two units. Ash water system consists of Ash water tank and pump house to house 3 nos. (2W+1S) HCSD LP water pumps, 2 nos. (1W+1S) HP water pumps, 3 nos. (2W+1S) LP water pumps, 2 nos. (1W+1S) Economizer water Pumps, 2 nos. (1W+1S) HP seal water pumps, 3 nos. (2W+1S) LP Seal water pumps and 1 no. HCSD/MCSD emergency water pumps. Settling and Surge Tank shall be provided for recirculation of water (i.e. BA hopper overflow water, decanted water from Hydrobins) for use in the Ash Handling system.

D. Ash Pond

All efforts shall be made to promote utilization of ash to the fullest extent. However, in case of exigencies, unutilized ash will be disposed in to Ash dyke. Ash dyke shall be provided with lining and green belt. Ash dyke envisaged would be raised in stages. A suitable Ash water recovery system shall be provided to recover and re-use the Ash water collected in Ash dyke.

Table 2.11: Ash pond & ash water recovery details

S. No.	Particular	Details
1	Area (Ha)	49.37 Ha
2	Dyke height (m)	15
5	Expected life of ash pond (number of years and months)	Capacity/life of ash dyke calculated for 20 years
6	Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining	HDPE
7	Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	HCSD / MCSD
8	Ratio of ash: water in slurry mix (1:___):	65:35
9	Ash water recycling system (AWRS):	Ash water recovery system shall be common for two units & will consist of ash water tank and pump house for recirculation for use in the Ash Handling system.
11	Details regarding dyke stability study and name of the organization who conducted the study	Ash Dyke stability study will be carried out in line to CPCB guidelines prior to commencement of plant operations.

E. Mill Reject System

Pressure pneumatic conveying system shall be provided for conveying of mill rejects (pyrites) from Coal Mills to Mill reject Silo. 3 Nos. (2W+1S) Conveying Air Compressors shall be provided common for two (2) Units. 1 No. Mill Reject Silo with 16 hours storage capacity shall be provided for each Unit for collection of mill rejects. Mill rejects from Mill reject Silo shall loaded in to tucks for further disposal. Mill reject system shall be designed considering 1% mill rejects in the coal consumption by each Unit.

F. Fuel Oil Handling System

The fuel oil handling systems for the proposed 1600 MW Power Project would include unloading, storage, pressurising of Light Diesel Oil / High speed diesel (LDO/HSD). The same would be required for light up and for load carrying purpose and also for flame stabilization up to 30% BMCR load.

System shall be designed meeting the requirements of Pollution Control/Petroleum/Explosive rules of Central and State Governments.

HSD / LDO will be brought to the plant by rail from nearby depots. The unloading area will have facilities to receive and unload oil from tankers to the headers. Three number (2W + 1S) Horizontal, twin-screw type unloading pumps shall be provided. Pump shall be sized for one (1) hour unloading time. Simplex strainer will be provided at each unloading pump suction.

Three numbers (2W+1S) screw / centrifugal type HSD / LDO pressuring pumps shall be designed to supply the HSD / LDO flow requirement for each boiler simultaneously.

The HSD / LDO pressuring pumps shall be selected at 110% of the actual required design flow to account for the wear over the operating life. Configuration shall have individual pumps for each unit with at least one standby. Duplex strainer shall be provided at forwarding pump suction and discharge common header. Design flow capacity of each fuel oil pump for two boilers: Catering to 30% of the BMCR capacity. HSD / LDO pressuring Pumps Recirculation Control Valves shall be designed to the maximum flow capacity of Full pump discharge flow and minimum flow capacity of 10% of pump discharge flow.

All instrumentation and control facilities including tank level controllers, pressure/temperature gauges, control valves etc. along with a local control panel in the fuel oil pump house will be provided for safe and reliable operation of the system.

The Auxiliary Oil System and its facilities will be designed as per Pollution Control/Petroleum Rules/Explosion Acts/Fire Rules of Govt. of India.

Ventilation & Air-conditioning System

Right environment for operation and maintenance of the plant as well as for proper functioning of the equipment, controls and accessories is an important aspect which has been given due consideration in the proposed Ventilation and Air Conditioning System.

A. Ventilation System:

Adequate ventilation system has been considered for the powerhouse building, Central Control Building, ESP control building, Air Compressor House, Blower room for Ash Silo & Vacuum Fly Ash System, Switch Yard Control Building and other areas like A/C plant room, Switch gear room for Cooling Towers, DM plant building, CW Treatment Building, Chemical House, DG Building, Hydrogen Generation Plant, Elevator Machine rooms and various pump houses like Ash Slurry pump house, Clarified Water pump house, Fuel Oil Unloading and Pressurizing pump house etc. with their associated Electrical rooms, Workshop and Store, Fire Station Building, Kitchen/ Pantry and Toilet areas of Canteen Building, Service building and Administrative Building etc. to achieve the following :-

i) Dust-free comfortable working environment.

ii) Scavenging out structural heat gain and heat load from various equipment, hot pipes, lighting etc.

iii) Dilution of air polluted due to generation of obnoxious & hazardous gaseous/aerosol contaminants like acid/chemical fumes, dusts etc.

Ventilation system proposed for important areas are described below:

a. Powerhouse and Central Control Building

Supply/exhaust ventilation system with evaporative cooling has been recommended for the powerhouse building. Inside temperature shall be 3°C lesser than outside and +3mm WC positive pressure above atmospheric Ambient air would be drawn through air inlet louver,

automatically cleanable water flooded type SS mesh filters, water wetted fill deck and moisture eliminator and will be supplied by means of centrifugal fans to powerhouse through ducting and grilles to achieve proper distribution. The sprayed water over the SS mesh filter will be re-circulated by means of centrifugal pumps, piping, valves and other accessories. Similarly, water dripped over the Fill Deck will also be re-circulated by means of centrifugal pumps, piping, valves and other accessories.

'Exhaust' system consists of axial flow wall/roof-mounted exhaust fans with rain protection cowl/ hood, short ductwork, etc. Part of the supplied air will be exhausted and the rest will ex-filtrate through the various openings in the structure, preventing infiltration of dusty air.

Various non-air-conditioned rooms in the Central Control Building e.g., cable spreader room, switchgear & MCC rooms, SWAS wet panel rooms and Battery Charger rooms etc. will be ventilated by means of the same Evaporative Cooling units for Power House.

Exhaust ventilation system will be provided for the Battery Rooms to evacuate acid fumes and hydrogen. Bifurcated type explosion proof exhaust fans will be employed for this purpose.

Coal tripper floors are proposed to be provided with exhaust system to eliminate building-up of hazardous gases like carbon monoxide, methane etc. Pressurized Ventilation system will be affected for the Elevator Machine rooms by means of wall mounted Fan-Filter units and back draft dampers.

All toilets will be ventilated by providing wall mounted exhaust fans.

b. ESP and AHP Control Buildings

For ventilation of these building (except the control room), Sheet metal type Unitary Air Filtration unit (UAF) of suitable capacity shall be envisaged for each unit of ESP Building non-AC areas. Inside temperature shall be 3°C lesser than out side and +3mm WC positive pressure above atmospheric. A dedicated plant room shall be provided for UAF unit.

,Ambient air will be drawn through unitary air filtration unit comprising fresh air intake louvers, automatically cleanable SS mesh filters (with water spray) and moisture eliminator and supplied to the space by means of centrifugal fans. Water sprayed over the filter will be re-circulated by means of centrifugal pumps.

In addition to filter cleaning, the water spray will have an evaporative cooling effect too. This will produce some cooling effect as an additional advantage.

The supplied air will be exhausted through wall mounted gravity operated dampers (Back Draft Dampers) to maintain an overpressure of +3mm of water column to reduce dust ingress.

c. Other Buildings

Other buildings like Air Compressor House, A/C plant room, DM plant building, CW Treatment Building, Chemical House, DG Building, MCC/ Switch gear room of Switch Yard Control Building, Hydrogen Generation Plant Building, Aeration Blower room for Ash Silo and Blower Room for Vacuum Fly Ash System, Various pump houses, like CW/ACW pump house, Raw Water pump house, Ash Water pump house, Ash Slurry pump house, Clarified Water pump house, Fuel Oil Unloading and Pressurizing pump house etc. with their associated Electrical rooms, Workshop and Store, Kitchen/ Pantry and Toilet areas of Canteen Building , Service building and Administrative Building etc. will be ventilated by means of dry system comprising axial flow fans, dry filter (wherever required), cowls, ducting (wherever required), gravity dampers (wherever required) etc. Inside dry bulb temperature (DBT) is expected to be higher than ambient by about 3 °C.

Air Conditioning System:

Various control rooms in power Project, housing a group of sophisticated and precision control panels and desks call for controlled environment for proper functioning and for personnel comfort.

Some other facilities like Administrative Building, Service Building, Canteen Dining Hall etc will also call for comfortable environment for the occupants.

The following areas are proposed to be air conditioned:-

a. Control room, control equipment room, Shift Charge Engineers' rooms, computer room, Printer room, Record room, UPS room SWAS dry panel room, CPU Control room, Laboratory room, Central Control Building/Turbine Building.
b. Electrostatic precipitator control room
c. AHP Control Room

a. Coal Handling Plant control room
b. DM plant control room, office and Laboratory area
c. CW control room
d. Raw water pump house control room
e. Cooling tower control room
f. ETP/STP control room
g. Compressor control room
h. Stores- Maintenance office room
i. Stack emission monitoring system control room
j. Fuel oil unloading/forwarding pump house control room
k. Electro chlorination control room
l. Office areas, lecture rooms etc. in the service building
m. Switchyard control room
n. Weighbridge Control room
o. Fire Station Control room
p. AC Plant Control room
q. Hydrogen Generation Plant Control room
r. Other Control rooms housing PLC panels
s. Different floors of the Administrative Building
t. Dining Hall of Canteen Building

To cater to the above requirements the following systems are proposed:-

i) A central chilled water plant to cater to the air conditioning requirement for the Central Control Building, ESP control building, VFD room and Service Building, comprising Vapour Absorption Chiller and stand-by Screw Chillers, condenser cooling water circulating pumps, cooling towers, chilled water circulating pumps, cooling water and Chilled water piping with valves, accessories, fittings, supports, insulation as applicable, steam piping with fittings, supports, insulation, PRDS and associated Electrical items etc. has been envisaged. The chilled water produced in this central Chilled water plant will be circulated through the coils of individual air handling units for the respective air

conditioned rooms /areas. This Central Air Conditioning System will be operated and controlled from the AC plant Control room DDC panels and two nos. Workstation PCs.

ii) Individual Water Cooled Precision Air Conditioners (PAC) will be provided for AHP Control room and DM plant Control Room, Office and Laboratory. Condenser Cooling water will be supplied to such PAC units from the Plant ACW system. Such PAC units will be operated and controlled from their built-in Microprocessor based Control console.

iii) Individual Air Cooled Precision Air Conditioners (PAC)/VRF based will be provided for Switch Yard Control Room and CHP Control room. Such PAC/VRF units will be operated and controlled from their built-in Microprocessor based Control console.

iv) Air Cooled Duct-able Split/ Packaged Air Conditioners/VRF system will be provided for Dining Hall of the Canteen Building and Administrative Building. These Air Conditioners will be operated and controlled from their built-in Microprocessor based Control Console/ hand operated Remote Control Panels.

v) Air Cooled Non Duct-able Split Air Conditioners will cater to the AC requirement of Weighbridge Control room, Fire Station Building Control room, Hydrogen Generation Plant Control room, AC plant Control room and other small control rooms housing PLC panels. These Air Conditioners will be operated and controlled from their individual hand operated Remote Control Panels.

Compressed Air System

Six (06) nos. of instrument air & service air compressors is proposed for the 2X800 MW power Project to take care of continuous and intermittent demand. Normally four (4) compressors will continuously run to meet the sustained demand and will also serve on automatic mode and will run to meet the intermittent peak demand. Other two compressors will be kept as operation and maintenance standby. The estimated design capacity (FAD) of each instrument & service air compressors is 60 Nm3/min. (Normal) at 10.0 Kg/Cm^2 (g) design pressure rating. The instrument air & service air compressors shall be oil-free & screw type and shall be provided with all accessories such as suction filters, inter-coolers, after coolers etc. Common four (4) number of air receivers of capacity min.30 Cu.m shall be provided to absorb pressure pulsations and for acting as reserve supply of compressed air

to permit continued operation following failure of the operating compressor until the standby one comes into service.

Six (6) numbers (4 Working+1 Hot Standby+1 Maintenance standby) Heat of Compression (HOC) type regeneration air dryers to match instrument air compressor capacity along with all accessories including control panel, flow meter, online digital dew point meter at the outlet of each dryer, etc.

Plant Air Quality will comply with ISO 8573.1, quality class 2.2.1. For air dryer, Atmospheric dew point shall be -40° C.

One (1) Control valve with manual bypass arrangement provided at the service air distribution header which will close (below a pre-set value) to maintain sufficient pressure at the IA distribution side.

The service air requirement for normal cleaning purposes, atomizing air medium for warm-up guns and ignitors, motive power for burner drive mechanism etc. of air pre-heaters will be met from plant-air compressors.

Service air system will have suitable inter-connection with the instrument air header for augmenting instrument air supply in emergency.

Miscellaneous Auxiliaries

Turbine Oil Purification System:

A suitable centrifuge or other type of turbine oil purification plant will be provided as an auxiliary of the turbo-generator to condition the turbine oil continuously, in order to remove the water and other impurities from the system to maintain the turbine oil at the optimum condition. In addition to the above unit system, a central turbine oil storage unit comprising one clean oil tank, one dirty oil tank, one purifier unit and necessary pumps, vent fans etc. will be kept. This would also receive the refill of turbine oil from outside. The purification plant to be provided with the unit system will be complete with oil purifiers, storage tanks, filters, necessary pumping sets, vent fans etc.

Condensate Polishing System:

The proposed 2 x 800 MW Power Project will be provided with 100% capacity condensate polishing system per unit. Condensate polisher will comprise four (4) demineralisers per unit each operating in parallel. Any three (3) of these units will be capable of treating the full condensate flow at boiler MCR condition. Condensate polishing will ensure elimination of ammonia, silica, sodium or potassium from the condensate before being recycled to the feed water system. Condensate polishers will operate at 100% capacity during normal operation to maintain boiler water chemistry as required by OEM. Three (3) of the exchanger vessels will be working in parallel and the fourth one will remain isolated from the system. The fourth vessel will act as standby and will be brought into operation when regeneration is required or during any emergency period. The polishing unit would be located at the powerhouse building. The operation of the condensate polishing system will be semi-automatic, remote/manual.

The regeneration system will be external. For regeneration, the resins from the exhausted exchanger vessel will be transferred hydraulically to this facility located at DM plant and regenerated resin sent back in the same way.

Chemical Feed System:

For maintaining ultra-supercritical steam parameters water chemistry assumes greatest importance. Oxygenated treatment (OT) program is adopted with 100% condensate polishing plant which has proven essential for once-through system. During start up and low load operation all volatile treatment (AVT) is followed with an oxygen scavenging chemical. Chemical feed system will be provided for feeding neutralizing amine for pH control and oxygen injection during OT (normal conditions) and neutralizing amine and hydrazine for AVT (startup condition). The chemicals are injected in the condensate pump discharge with additional provision in the boiler feed suction line to maintain the chemical concentration in the feed water circuit within permissible limits for trouble-free operation of the plant.

Oxygenation system will consist of high pressure cylinder banks with standby, regulating station and mass flow control valve for injection. The Low Pressure chemical dosing system (amine and hydrazine) of each unit will consist of:-

i) A mixing tank provided with stirrer and a metering tank

ii) Two (2) full capacity, variable volume metering pumps, complete with suction filters and other accessories and fittings as necessary. These LP pumps will inject hydrazine or other chemicals into the condensate pump discharge/boiler feed suction. Normally one pump will be running and the other will be standby.

iii) Necessary piping, valves, fittings and instruments.

In circulating cooling water system shock chlorination would be done to contain algae growth. Continuous chlorination will be required for the potable water system.

Hydrogen Generation Plant:

A hydrogen generation plant is being provided in the proposed Project to meet the requirement of hydrogen gas required for cooling the generator. Hydrogen generation plant capacity of 2 x 8 m^3/hr has been proposed. The plant would be located at a safe distance from other installation as per statutory requirements of the explosive act. Provision shall also be made to collect the by- product oxygen produced in compressed gas cylinders for medical use within the plant medical unit.

Plant Elevators:

One (1) goods-cum-passenger elevator will be installed for each boiler. In addition, one (1) passenger elevators will be installed in powerhouse building & one (1) passenger elevator will be installed in new service building. Besides, an elevator would be provided for the each stack.

Cranes & Hoisting Equipment:

Two EOT cranes of suitable capacity is proposed to be provided in the turbine hall and will be used for maintenance of the TG hall equipment. Temporary gantry crane is proposed for lifting generator stator and heavy equipment.

Conventional and special type of cranes required for maintenance of certain SG and TG equipment such as FD/PA/ID fans, condenser water box, ESP, transformer rectifier sets etc. will be supplied by the respective equipment supplier. For clarified water pump house a crane of suitable capacity (pendant operated) and for circulating water pump house a pendant

operated of suitable capacity electric travelling crane have been considered. Two pendant-operated of suitable capacity of SG/DG EOT cranes are proposed for ash slurry pump house and store building.

Maintenance cranes/handling devices of suitable capacities have been considered for all other pump houses and other places such as coal handling plant transfer points, DM plant, etc. Monorails for lifting heavy motors and other equipment within the powerhouse not covered by EOT crane such as miscellaneous pumps, heat exchangers etc. will also be provided. Suitable rails will be provided, if necessary, on floor for bringing the horizontal feed water heaters under the approach of EOT crane.

2.8 PROJECT REQUIREMENTS

2.8.1 WATER DEMAND & SOURCE

River Ganga is considered to be the source of water for the station. Water from River Ganga will be pumped to Upper Khajuri Dam and from Upper Khajuri Dam it will be further pumped to the raw water reservoir within the plant. The water requirement of the proposed 2x800 MW station is 28 MCM/Year (around 3200 m^3/hr) considering disposal of Bottom Ash and Fly Ash in High/Medium Concentration Slurry Disposal (HCSD/MCSD) mode. The requirement of plant water will be met by drawl of water through intake structure with pump house to be constructed near River Ganga and at Upper Khajuri Dam.

In a conventional fossil fuel-fired Thermal Power Project, water is used to meet the following basic consumptive requirements: -

a. To meet cooling requirement for steam condenser which acts as a heat sink for the thermodynamic cycle and other auxiliary cooling such as, bearing/lube oil coolers, compressors, generator stator, etc.

b. To meet the heat cycle make-up and other process requirements.

c. SCR and suitable De-NOX control system based on requirement as per New MoEF&CC guidelines..

d. For miscellaneous services viz.

- Fire fighting
- General services viz. A/C and ventilation, floor washing etc.
- Sealing and cooling water for equipment of ash handling system
- Dust extraction and dust suppression in coal yard
- Potable use in the Project and housing complex
- Transport media for ash in case of wet disposal of ash (under exigency condition)
- Horticulture

The total water requirement for 1,600 MW Project capacity is 28 MCM/year (about 3200 m^3/hr) considering specific water consumption less than 2.5 m^3/MW as per MoEF&CC.

It is desirable that the water is free from high level of suspended and dissolved solids. The water is to be free of heat pollution at the intake point. The intake location and design have to ensure trouble-free operation throughout the year. The schematic representation of the water balance diagram is enclosed.

Plant water System:

For the proposed 2x800 MW Project the total raw water requirement is estimated based on 1% heat cycle make-up (ultra-supercritical units), make-up to cooling towers usually associated with average daily plant load apportioned on hourly basis and other consumptive requirements like potable water, make-up water requirements for air-conditioning and ventilation etc. It is proposed to utilize cooling tower blow down in ash handling and coal handling plant dust suppression system to the extent possible and remaining quantity shall be feed to the blow down recycling plant for achieving maximum possible water utilization.

The reservoir in the raw water system would also functionally assist in removal of substantial portion of suspended solids and will provide adequate redundancy to the system. Raw water will be clarified to remove suspended solids and colloids in clariflocculators. Two (2) clariflocculator units each having 60% capacity is considered for the CW make and service water system with Lime, alum and other coagulant aids dosing system. Separate Two (2)

clariflocculator units each having 60% capacity is considered for the RO-MB (DM Plant) feed water system with Lime, $FeCl_3$ and other coagulant aids dosing system.

Clarified water would, thereafter, be stored in a twin chamber semi underground RCC reservoir having a capacity of 8-hours of clarified water requirement for the proposed Project. Separate Clarified water storage tank for DM feed is to be provided. Clarified water would be supplied as make-up in the cooling tower basin by gravity.

Clarified water will also cater to the requirement of ventilation plant and requirement of filtration plant.

For pre-treatment plant of the RO-MB system filtration system will be provided after clarifier. In the filtration plant, clarified water would be passed through sand bed filters where adequately sized filter beds with redundancy in number as well as capacity shall be provided. The water quality at the outlet of the filtration units shall be maintained within 10 NTU/10 ppm TSS. Filtered water would be stored in an RCC tank. With storage capacity of 4-hours filter water requirement for the Power Project. Filtered water will be required for potable use and DM plant feed. Filtered water will feed to Ultrafiltration system (UF). UF treated water will be stored in UF water storage tank. UF treated water will feed to RO plant through micron cartridge filter and anti scalant, SMBS chemical dosing. RO-High pressure pump will feed water to RO plant (2X50% capacity) and get RO treated water. RO treated water will be stored in product water storage tank having 2 hrs storage capacity.RO reject water will be used in the coal dust suppression, ASH slurry preparation etc. RO product water will feed to DM plant (3X50% capacity MB vessel). DM water will be stored in 2 nos of DM water storage tanks.

DM water will be used for heat cycle make-up, chemical feed system, hydrogen generation plant, SCR and as primary coolant in heat exchangers for the auxiliary cooling system of boiler, TG auxiliaries and other common auxiliaries. The heated DM water in closed cooling loop would be subsequently cooled in SET of four 3 plate type heat exchangers, one per unit of (TG, Boiler Aux.) & one common for BOP auxiliaries using clarified water from cooling tower basin through a set of auxiliary cooling water pumps in the secondary circuit.

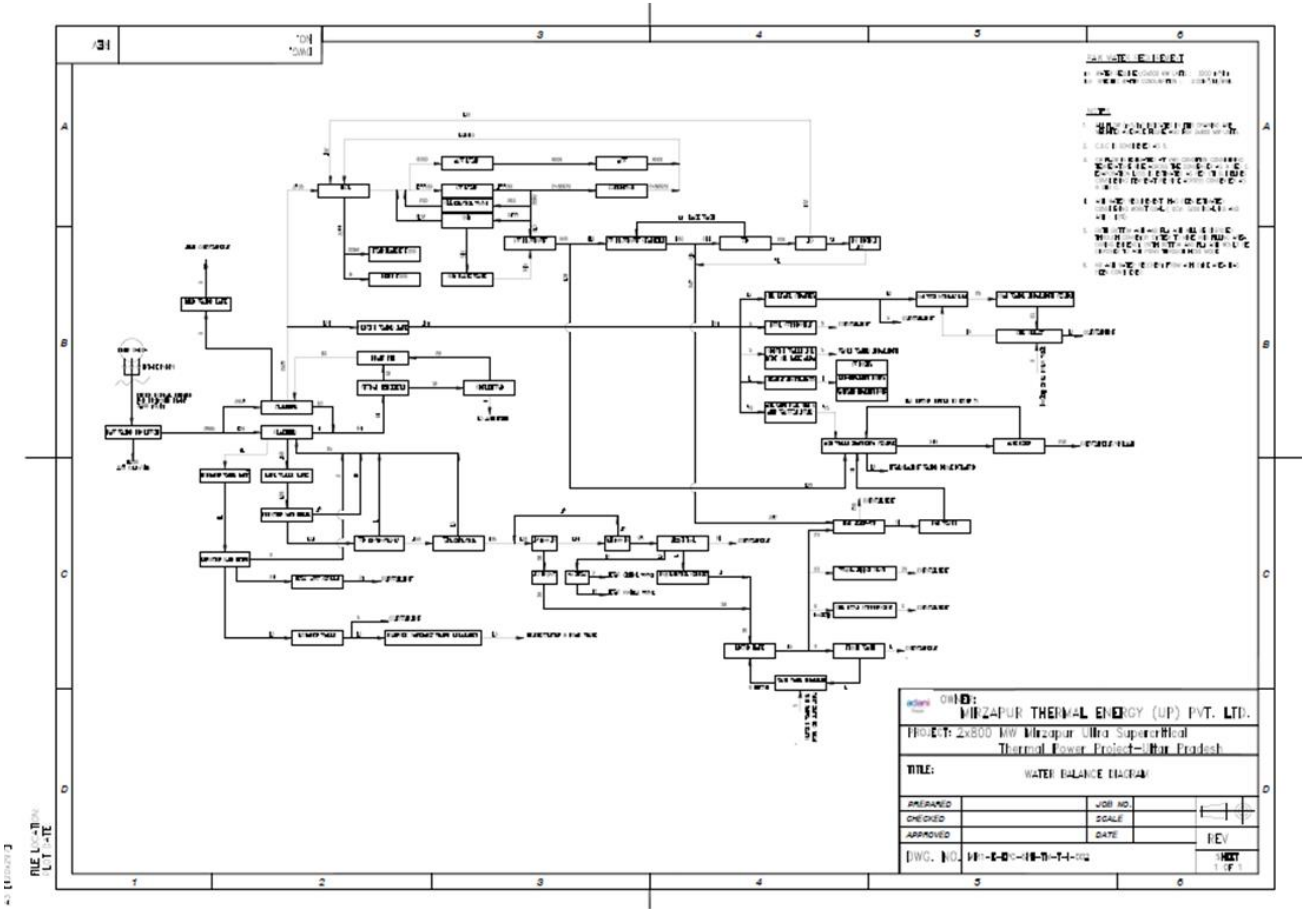


Figure 2. 8: Water Balance Diagram for Proposed Project

*Legible copy enclosed as **Annexure IX.***

2.8.2 MANPOWER DEMAND

During the construction phase 275 will be permanent employment and 7000 no. will be Contractual and during operational phase about 250 no. of permanent employee and 2600 no. of Contractual persons will be employed for the proposed project.

2.8.3 PROJECT COST

The Project Cost for the proposed project is **Rs. 18,300 Crores.**

2.9 DESCRIPTION OF MITIGATION MEASURES INCORPORATED TO COMPLY WITH THE ENVIRONMENTAL STANDARDS

Table 2.12: Mitigation Measures for Pollutants

Pollution	Description of Mitigation Measures
Air Pollution	• Emission standards shall be as per MoEF&CC notification S.O. 3305(E) dated 7.12.2015, & its subsequent amendments. • To control the emission of particulates, High Efficiency electrostatic precipitators (ESPs) will be provided. • To control NOx emission, Ultra-supercritical boilers having advanced low NOx generation system will be installed. In addition, Selective Catalytic Reduction (SCR) system will be installed. • The Hg content in Indian coals is usually low and does not require additional measures to limit Hg emission within the limits prescribed by MoEF&CC. • For the control of fugitive dust emission within and around the coal handling plant, coal dust extraction system with pulse jet bag filter and suppression systems will be provided. • A Twin flue stack with a stack height of 275 m will be provided

Pollution	Description of Mitigation Measures
Water Pollution	• Effluent management scheme will be implemented with the objective of optimization of various water systems so as to reduce intake water requirement. • ZLD will be implemented. • Sewage Treatment facilities will be provided and treated sewage water will be utilized for horticulture purpose. • Effluent will be treated in ETP and treated water will be recyled/reused for Ash handling & dust supression. • The water from the cooling towers will be recirculated. • A state-of-the-art roof top rain water harvesting system will be provided to collect the run -off for ground water recharging. • A state-of-the-art paved and green area rain water harvesting system will be provided to collect the run -off for storing in RWH Reservoirs for recharge the ground water.
Noise Pollution	• Ambient noise inside and outside the plant area will conform to the prescribed noise levels for various land use categories as per OSHA and National Standards for Ambient Noise respectively. • This will be ensured through proper designing of the equipment with adequate acoustics permitting the ambient noise levels without exceeding the specified criteria from the source. • Adequate green area has been/will be developed within the project premises. Suitable greenbelt of sufficient width will be developed all around the plant premises. • Earmuffs and / earplugs have been/will be provided to all the workers deployed at high noise generating sources. Acoustically insulated cubicles will be provided to operators working near high noise generation sources. • Effective preventive maintenance and vibration measurement of all equipment will be done which will help in improvising the plant life and reduce the noise.
Fly Ash Utilization & Management	• Efforts for 100% ash utilization shall be taken up as per Fly Ash Notification, 31st December, 2021 and its amendments. • Ash will be used for Cement Industries, Road Construction, filling abandoned Mines & Stone quarry, Manufacturing of Bricks, aggregate replacement in concrete, etc. as per Fly Ash Notification, 31st December'2021 and amendments. • Wet ash will be handled using HCSD/MCSD systems. • Dry ash will be handled by pneumatic conveying systems and will be supplied to ash brick/ash product manufacturers. • MoU with Cement industries (ACC & Ambuja Cement) for utilization of fly ash is enclosed as Annexure – VI.

Pollution	Description of Mitigation Measures
Waste Management	**Solid Waste:** **Hazardous Waste:** • The spent oil and waste oil will be collected in drums and sent to authorized re-user as per Hazardous & other Waste (Management & Transboundary Movement) rules 2016 & its subsequent amendments. **E-Waste:** • E- Waste will be sent to authorized re-user as per E-waste (Management) Rules, 2022 & its amendments. **Bio-Medical Waste:** • Bio-medical waste shall be disposed off through authorized vendors as per BMW rules 2016 & its subsequent amendments of MoEF&CC & CPCB norms. Non-hazardous/ Solid waste, Battery waste, shall be disposed off to the authorized vendors as per MoEF&CC /CPCB norms.

2.10 ASSESSMENT OF NEW & UNTESTED TECHNOLOGY FOR THE RISK OF TECHNOLOGICAL FAILURE

The technology involved in the proposed is well accepted and prevailing in recent times. There is no such need to go for untested technology for the project.

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CHAPTER - III

DESCRIPTION OF THE ENVIRONMENT

3.1 INTRODUCTION

The anthropogenic activities related to proposed project causes impacts on environmental components in and around the project site. However, the intensity of environmental impacts vary from project to project, depends upon several factors like; Physical, Chemical, other etc., involved in the project, scale / size of the project, type and extent of pollution control measures, project location, surrounding geomorphology etc. To assess environmental impacts from proposed project, it is essential to monitor the environmental quality prevailing in the surrounding area prior to implementation of the proposed project. The environmental status (baseline status) within the study area is used for prediction of anticipated environmental impact assessment study.

The project site is designated as the 'core zone,' while the area within a 10 km radius from the plant premises is identified as the 'buffer zone' for the baseline environmental study.

Relevant information and data, comprising both primary and secondary sources, were gathered within both the core and buffer zones (up to a 10 km distance from the plant boundary) during the post-monsoon season - October to December'2024, adhering to the guidelines for the preparation of Environmental Impact Assessment (EIA) studies.

This study aligns with the Terms of References (ToR) issued by the Ministry of Environment and Forest (MoEF&CC) vide file no-J-13012/12/2011-IA.II (T) dated 29.07.2024, and it follows the guidelines provided by the Central Pollution Control Board (CPCB).

3.2 STUDY AREA

An area of 10 km radius (aerial distance) from the plant boundary is marked as study area. The baseline data is collected for the study area, where the plant site is considered as the core zone and area within 10 km radius of the plant boundary is considered as buffer zone.

The project site is located in the Village Dadri Khurd, Tehsil Mirzapur Sardar, District Mirzapur, Uttar Pradesh.

Toposheet (SOI OSM) showing project site boundary & environmental settings in 10 km radius of project site is given as Figure 1.2 in Chapter 1 of this EIA Report. Google Earth Imagery showing project site boundary & Geographical Co-ordinates of the project area is given as Figure 2.5 in Chapter 2 of this EIA Report

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3.3 BASELINE DATA COLLECTION

Baseline data generation for one season (Post -Monsoon Season) was carried out during **October 2024 to December 2024** by M/s Newcon Consultants & Laboratories, Uttar Pradesh.

Table 3. 1: Details of Environment Monitoring Laboratory

Name of the lab	**M/s Newcon Consultants & Laboratories**
NABL Certificate Number & Validity	Certificate No.: TC-12621; Validity period: 17.11.2023 to 16.11.2025
CPCB Notification & validity	CPCB recognition letter dated 09.07.2024 valid upto 16.11.2025.

The details of the baseline parameters are tabulated as under:

Table 3. 2: Details of baseline parameters

Particulars	**Number of locations**	**Location**	**Type of data**
Climatological study (Micro-meteorological data generation)	1	Project Site	Primary data generation & Secondary data from Climatological data from IMD station Mirzapur.

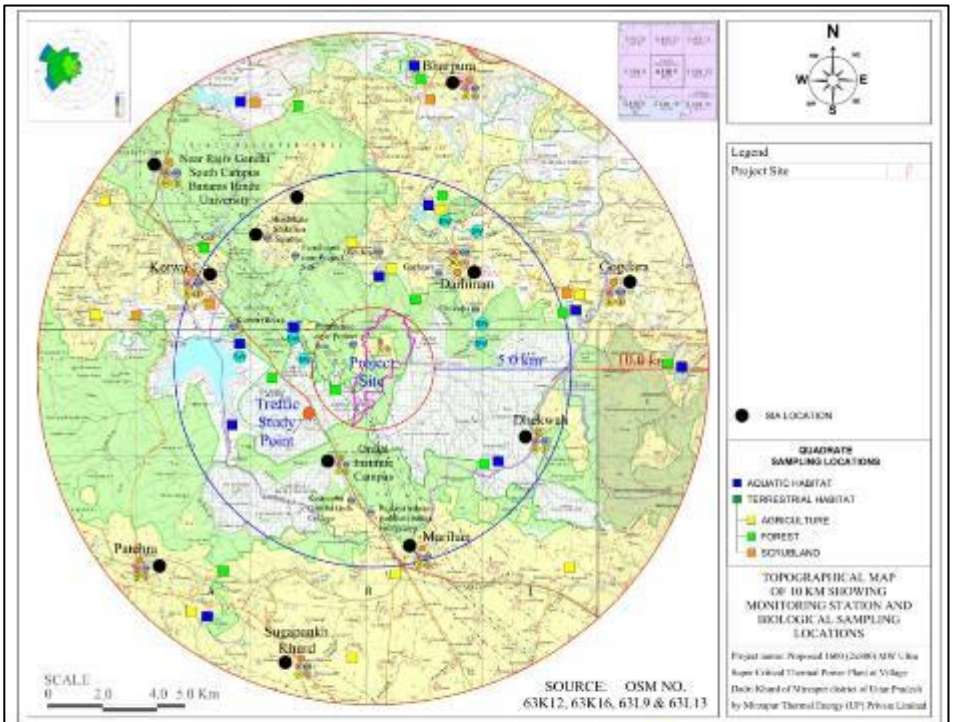
Particulars	Number of locations	Location	Type of data
Ambient air monitoring	11	Project site & study area	Primary data generation
Ground water analysis	19	Project site & study area	Primary data generation
Surface water analysis	07	Surface water bodies of the study area	Primary data generation
Soil analysis	11	Project site & study area	Primary data generation
Noise monitoring	11	Project site & study area	Primary data generation
Ecology & Biodiversity	10 km study area	Study area	Primary data generation (reconnaissance survey) as well as secondary data
Socio-economic environment study	10 km study area	Study area	Primary data generation as well as secondary data
Land use analysis	10 km study area	Study area	Satellite imagery: NRSC & confirmation from SOI OSM & field survey.
Geology & Hydrogeology	10 km study area	Study area	Primary survey as well as secondary sources

3.3.1 LOCATIONS OF MONITORING STATIONS

Eleven monitoring stations including a project site were selected for monitoring of Ambient Air, Soil and Noise analysis. Surface water sampling was carried out at seven locations and ground water sampling was carried out at nineteen locations. The monitoring stations were selected on the basis of surface considerations, demographic influence and metrological conditions based on secondary sources. The details of monitoring locations along are given in table below:

Table 3. 3: Details of monitoring stations

S. No.	Environmental Attribute	Parameters	Number of Locations	Frequency of monitoring
1.	Micro-meteorology	Temperature (deg C), Relative Humidity (%), Wind Speed (m/s), Rain fall (mm)	01 location Project Site	One season
2.	Ambient air quality	PM_{10}, $PM_{2.5}$, SO_2, NOx, CO, Hg	11 locations Site-Once	24 hourly samples Twice a week for 3 months
3.	Ground water	Physical, chemical & biological parameters, As per IS: 10500	19 locations	Once during monitoring period;
4.	Surface water	Physical, chemical & biological parameters, As per IS: 2296	07 Locations	Once during monitoring period;
5.	Ambient Noise Level	Noise levels monitoring dB(A)	11 locations	Once during monitoring period
6.	Soil quality	Physical & chemical parameters	11 locations; once during monitoring period.	Once during monitoring period



Location	Distance (km)	Direction	AQ	Noise	WQ		Soil
					GW	SW	
Project Site	---	---	A	N	----	----	S
Korwa (Up wind)	6.7	WNW	A	N	W	----	S
Maritan (Dn wind)	5.1	SSE	A	N	W	----	S
Dhekwah (Dn wind)	5.3	ESE	A	N	W	----	S
Darhiman (Cross wind)	2.6	NE	A	N	W	----	S
Patehra (Cross wind)	9.1	SW	A	N	W	----	S
Gogdara (Habitation)	7.5	ENE	A	N	W	----	S
Sugapankh Khurd (Habitation)	8.8	SSW	A	N	W	----	S
Bhurpura (Habitation)	7.2	NNE	A	N	W	----	S
Ordial Institute Campus (Sensitive)	1.2	SW	A	N	W	----	S
Near Rajiv Gandhi South Campus Banaras Hindu University	9.0	NW	A	N	W	----	S
Upper Khajor Dam	4.3	W	---		----		
Jamthwa Nadi (Up Stream)	2.2	W	---		----		
Jamthwa Nadi (Dn Stream)	2.5	W	---		----		
Jogidari Nala (Dn Stream)	2.5	E	---		----		
Jogidari Nala (Up Stream)	2.1	E	---		----		
Pahiti Nadi (Up Stream)	3.9	NE	---		----		
Pahiti Nadi (Dn Stream)	3.6	NE	---		----		
Korwa (Bela)	4.7	W	---		W	----	
Shashikala Shikshan Sansthe	5.0	NW	---		W	----	
Ukhdand	2.2	N	---		W	----	
Garhawa	2.0	NE	---		W	----	
Chakalia	2.4	ENE	---		W	----	
Rajkiya ashram paddhati balika vidhyaliya	3.5	S	---		W	----	
Kasturba Gandhi Girls College	2.7	S	---		W	----	
Farmhouse near Project Site	0.4	W	---		W	----	
Farmhouse near Project Site	3.8	NW	---		W	----	
Traffic study point	1.5	W	---			----	

Figure 3.1: Topographical Map showing location of monitoring stations

3.4 LAND USE LAND COVER STUDIES

Studies on land use aspects of eco-system play an important role in identifying susceptible issues and to take appropriate action by concerned subject specialist conducting the EIA studies.

3.4.1 OBJECTIVES

The objective of the present work is to prepare land use and land cover map using hybrid digital classification technique. The land use-land cover map will depict the state of land features and land use of the core and the buffer Zone (10 km Radius). In addition, land use-land cover thematic map will be used in studying the spatial distribution of impacts due to the project and their mitigation.

3.4.2 METHODOLOGY

The details of study area, collection of relevant satellite images, ground-truth observation, and the use of software and analytical tools used in the current study.

3.4.3 SOURCE OF INFORMATION

The data in this work has been collected from the following sources:

Satellite Data and Tools: - In this study, the multispectral satellite imageries of IRS Resource Sat-2A LISS IV sensor and digital elevation data from SRTM were used. In order to analyze the data, Visual Interpretation technique along with unsupervised classification scheme was implemented. Software like QGIS 3.34.6 'Prizren' and Google Earth Pro were used for this analysis.

Topographical maps of the study area: - The Survey of India OSM No. –G44Q12, G44Q16, G44W9 and G44W13 on 1:50,000 scale covering Mirzapur district, were used as reference maps.

Ancillary data: - Information derived from the remotely sensed data can only be verified using field data. Field data is used to improve the information extraction, to calibrate either data or the information, and to assess the accuracy of the derived information. Sources of field data used in the study were of different types such as maps of Survey of India, data

collected from the field sampling, and information derived from statistical data of concerned Revenue Department.

Computer hardware and software: DESKTOP-MACT83B Intel(R) Core (TM) i5-8250U with Google Earth Pro and QGIS 3.34.6 'Prizren' image analysis software were used for performing spatial analyses and creating land use land cover maps.

Spatial observations: The high-resolution data acquired from multispectral satellites such as IRS-P6 (LISS-IV) for evaluating land use patterns and SRTM for elevation provide handsome amount of information about the earth features due to their high spatial and spectral resolution. Some of their important specifications are listed below:

Table 3.4: Satellite Data Specifications

Name of satellite	Sensors	Spatial resolution	Spectral bands	Altitude
1. IRS-ResourceSat-2A	High Resolution Multispectral Sensor (LISS-IV)	5.8 meter	Total: 3 bands B2 - Green: 520-590 nm B3 - Red: 620- 680 nm B4 - NIR: 770-860 nm	817 km
2. SRTM	Imaging Radars	30 to 90 meter	C-band & X-band	233 km

3.4.4 DATA AND METHODOLOGY

Modern geospatial technologies such as satellite Remote Sensing (RS) and Geographical Information System (GIS) were employed in this project. For the present study area, to analyze the Land use and Land cover for the baseline time-frame of October 2024 to December 2024, the latest high resolution multispectral sensor data of IRS-R2 LISS IV was used.

LISS IV data (5.8-meter resolution) were used to cover the whole 10 km of buffer around the project site for Level-III classification. Ministry of Environment, Forests and Climate Change (MoEF&CC), New Delhi classification scheme was implemented for current land use study. Firstly, the required satellite data were acquired from authentic platforms in

GeoTIFF format, which were then imported to QGIS 3.34.6 'Prizren' and processed for further data analysis and map creation. The images were geometrically rectified to the common local UTM coordinate system which is WGS 1984 UTM zone 44N and the area of interest was masked out of the respective images.

Some pre-processing (DIP) techniques were employed to enhance the quality of the image. Visual Interpretation technique was used for the identification of LULC classes in the project area and surroundings within 10 km radius followed by Unsupervised Classification method.

3.4.5 LAND USE AND LAND COVER OF STUDY AREA

Description of Land use: -

- **Built-up** area with 8.96 sq. km (2.16%) includes scattered rural settlements, major roadways and other utilities like schools, hospitals, etc.
- **Agriculture:** The analysis reveals that **agricultural land** covers an area of 151.33 sq. km (36.54%).
- **Forest:** 159.01 sq. km. (38.40%) of the total study area comes under Forest forms the major part of the total study area
- **Wasteland:** Wasteland mostly comes under the Land with or without scrub/Barren rocky/stony waste/sheet rock areas and it covers 79.75 sq. km (19.26%) area.
- **Waterbodies** include streams, natural & manmade ponds and tanks, which are the main source of irrigation in this region. This class covers 14.14 sq. km (3.41%) area.
- **Others** includes mining dumps with 0.91 sq.km (0.22%).

The project site is not located in a densely populated region. State Highway 5 is situated 1 km west-southwest of the project site, and National Highway 35 is 10 km north-northeast of the project site. The region is found to have a moderate connectivity. No railway network and metro line connectivity can be observed in the study area. Mirzapur railway station is the nearest railway line to the project site, and it is situated 18 km northwest from the project area. Approximately 36.54% of the total land is classified as agricultural land. The project site is surrounded by numerous reserved forests.

The core zone of the study covers a total area of 365.19 hectares.

Table 3.5: Land use classification of the area

S.No	Level I Classes	Level II Classes	Level III Classes	Color code	Area (Ha)	Area (%)
1	Built-up	Built-up	Rural		8.96	2.16
2	Agriculture	Crop Land	Irrigated/Unirrigated		151.33	36.54
3	Forest	Deciduous	Deciduous		159.01	38.40
4	Waste land	Land with Scrub or without scrub/ Barren rocky/ stony waste/ sheet rock areas	Land with or without Scrub		79.75	19.26
5	Water bodies	River/Stream/ lake/ Reservoir/ Tank/ Canal	Ephemeral River,Streams Nala,Ponds,Tanks		14.14	3.41
6	Others	Mining Area	Mining Dumps		0.91	0.22
Total					414.10	100 %

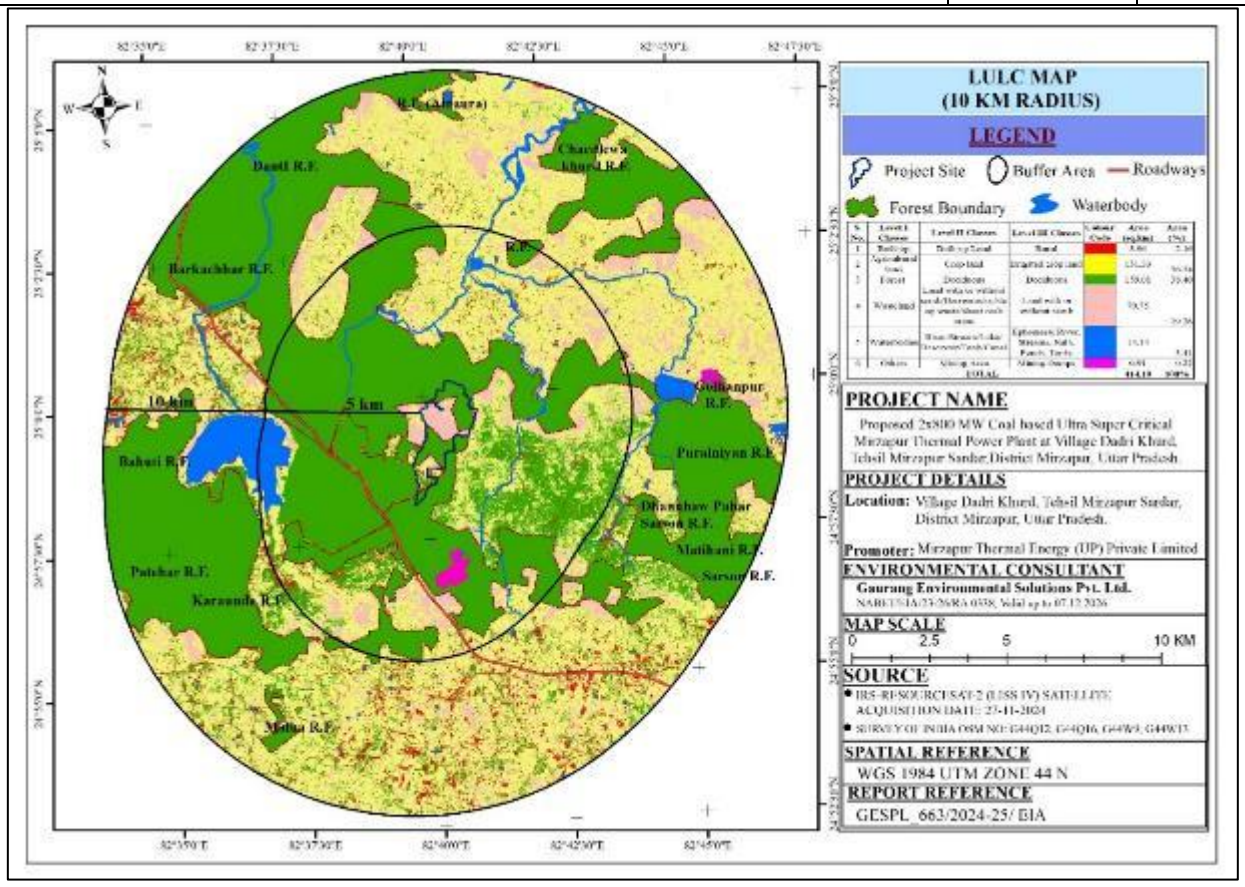


Figure 3.2: Landuse / Land cover Map of Study area

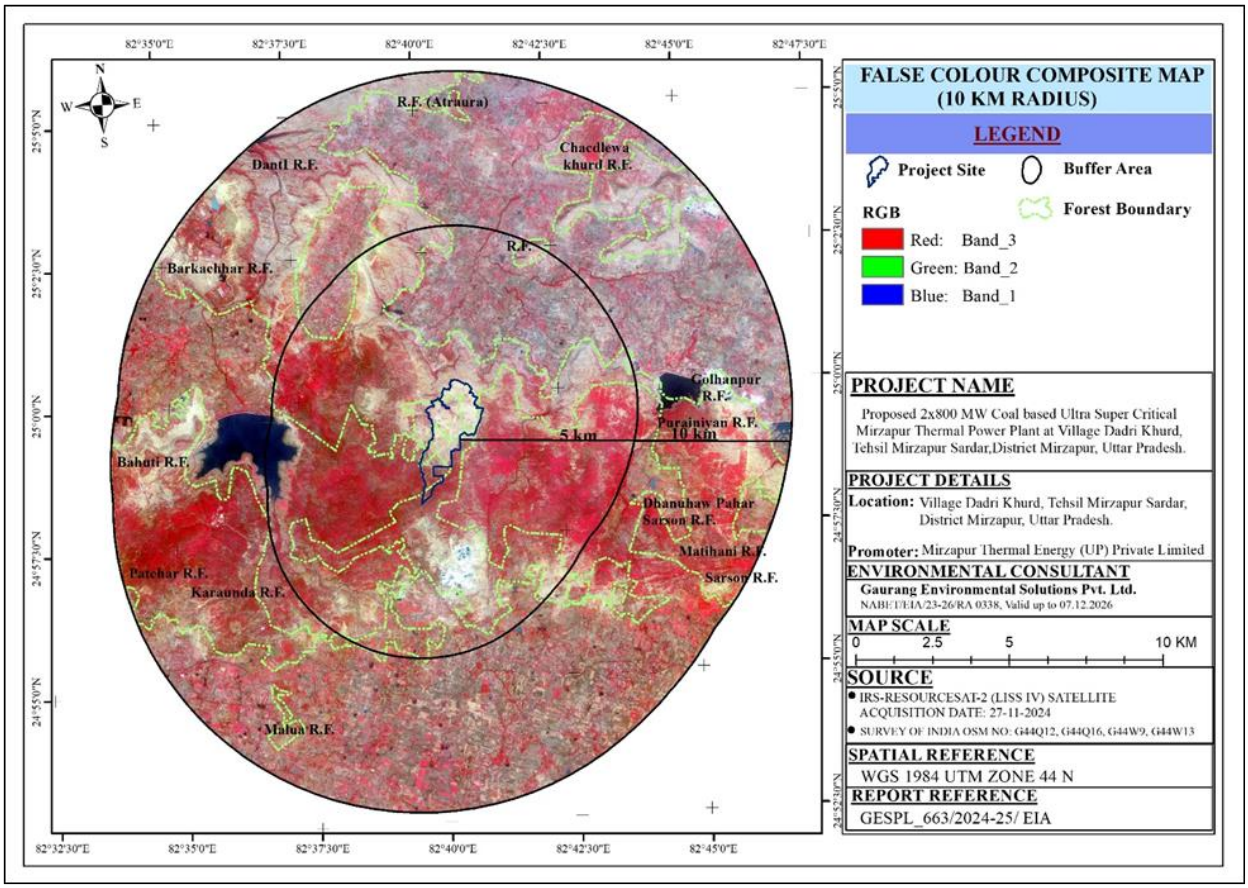


Figure 3.3: False Colour composite map

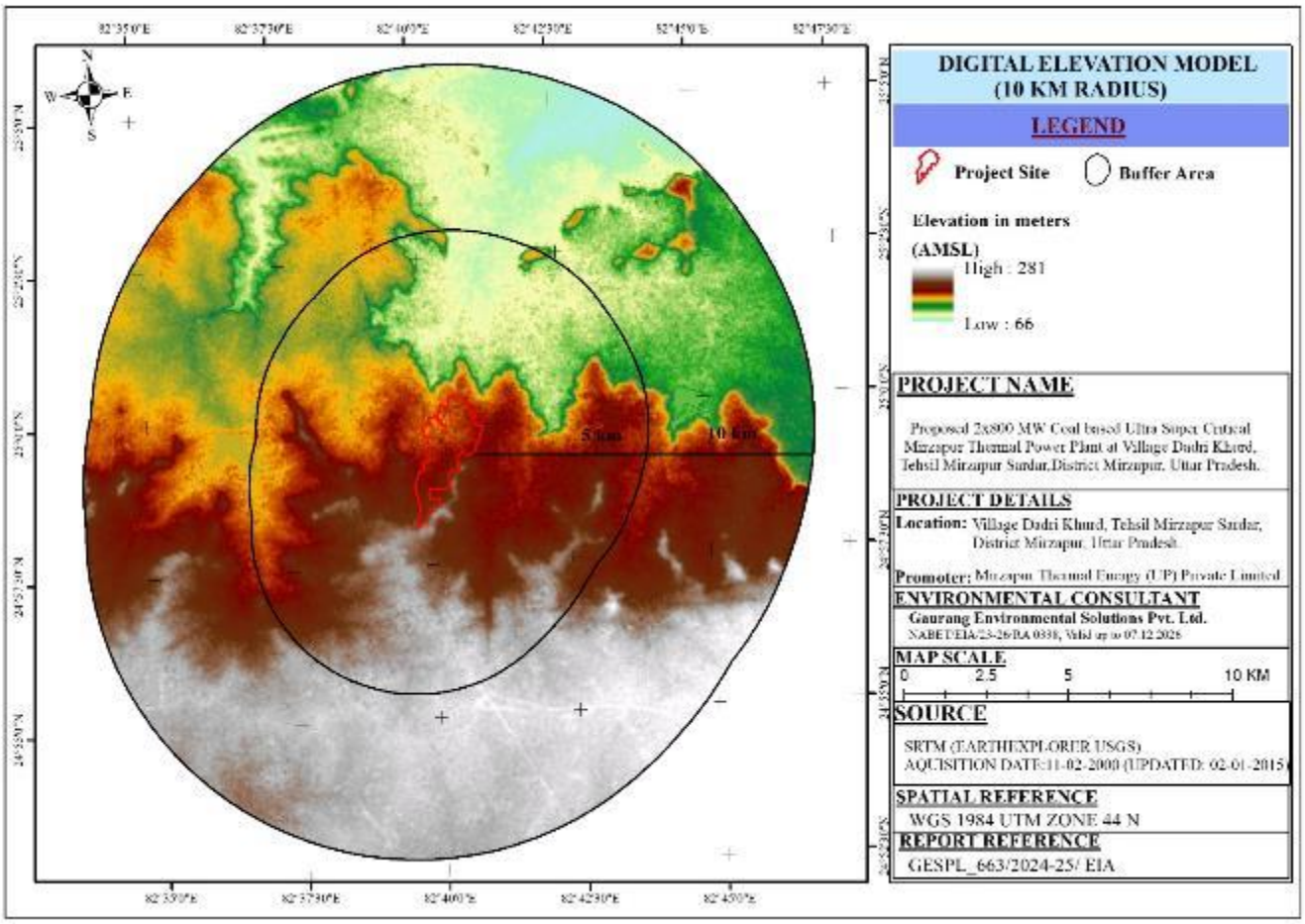


Figure 3.4: Digital Elevation Model Map

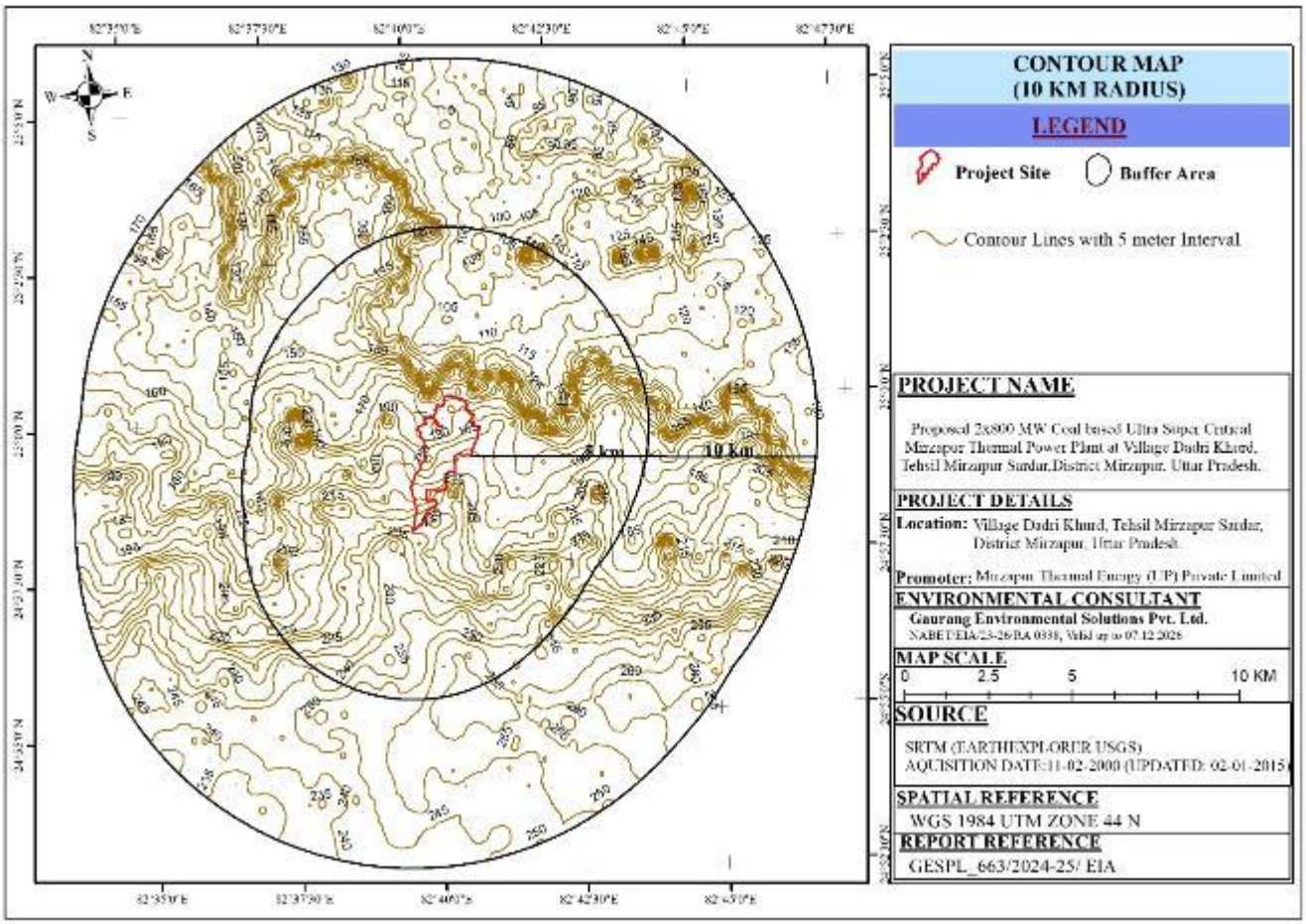


Figure 3.5: Contour Map

3.5 SOIL QUALITY

For studying soil quality of the region, samples were collected to assess the existing soil conditions in and around the project site. The present study on soil quality establishes the baseline characteristics and identifies the incremental concentrations if any, due to the proposed project.

The soil samples were collected from three different depths viz. 30 cm, 60 cm and 90 cm. The samples were then packed in a polythene plastic bag and sealed. The samples from three different depths were homogenized and then were analyzed.

In order to study the impact of the proposed project on agriculture and other activities in the 10 km radius of the project, soil sampling stations have been selected accordingly.

Table 3.6: Soil sampling locations

S. No.	Monitoring Locations	Station Code	Selection criteria	Distance (km)	Direction
1.	Project Site	S1	Core zone	--	--
2.	Kotwa	S2	Up wind	6.7	WNW
3.	Marihan	S3	Down wind	5.1	SSE
4.	Dhekwah	S4	Down wind	5.3	ESE
5.	Darhiram	S5	Cross wind	2.6	NE
6.	Patehra	S6	Cross wind	9.1	SW
7.	Gogdara	S7	Habitation	7.5	ENE
8.	Sugapankh Khurd	S8	Habitation	8.8	SSW
9.	Bharpura	S9	Habitation	7.2	NNE
10.	Ordial Institute Campus	S10	Sensitive location	1.2	SW
11.	Near Rajiv Gandhi South Campus Banras Hindu University	S11	Sensitive location	9.0	NW

3.5.1 BASELINE SOIL STATUS

Eleven samples were collected from the study area including 1 from the project site. The samples were packed in polyethylene bags and assigned a number. The collected samples were air dried at room temperature in the laboratory and lightly crushed with mortar-pastle

and passed through a 2 mm sieve. The soil samples were analyzed for the physio-chemical properties by standard procedure as presented in Table.

Table 3.7: Analytical Technique for Soil Sample

S. No.	Parameters	Analytical Method	Reference
1	Texture	Sieve analysis & Hygro meter	-
2	Moisture Content	Gravimetric	Department of Agriculture & Co-operation, Govt of India Page No. 76-77:2011
3	pH	pH meter	IS 2720- Part 26, 1987 by pH meter
4	Conductivity (1:2)	Conductivity meter	Department of Agriculture & Co-operation, Govt of India Page No. 81-82:2011
5	Organic Matter	Black method	IS2720-(Part 22),1972, Reaffirmed 2001
6	Organic Carbon	Calculation	IS2720-(Part-22),1972, Reaffirmed 2001 (By calculation)
7	Potassium	Flame Photometric	TM-S/13
8	Phosphorus	Spectrophotometric	TM-S/11
9	Nitrogen	Distillation & Titration	TM-S/17
10	Infiltration Rate		TM-S/40
11	Bulk Density	Sand replacement, core cutter	TM-S/34
12	Porosity	-	TM-S/33

Standard Classification of Soil as per Indian Council of Agriculture Research, New Delhi is presented below in **Table 3.8.** The soil quality as analyzed from the collected samples is given in **Table 3.9 a & 3.9 b**.

Table 3.8: Standard Classification of Soil

S. No.	Soil Test	Classification
1.	pH	• <4.5 Extremely acidic, • 4.51- 5.50 Very strongly acidic, • 5.51-6.0 moderately acidic, • 6.01-6.50 slightly acidic, • 6.51-7.30 Neutral, • 7.31-7.80 slightly alkaline, • 7.81-8.50 moderately alkaline, • 8.51-9.0 strongly alkaline

S. No.	Soil Test	Classification
		• 9.01 very strongly alkaline
2.	Salinity/ Electrical conductivity (umho/cm) (1 ppm = 640 umho/cm)	Up to 1.00 Average, 1.01-2.00 harmful to germination, 2.01-3.00 harmful to crops (sensitive to salts)
3.	Organic Carbon	Up to 0.2: very less, 0.21-0.4: less, 0.41-0.5 medium, 0.51-0.8: on an average sufficient, 0.81-1.00: sufficient and >1.0 more than sufficient
4	Nitrogen (kg/ha)	Up to 50 very less; 51-100 less; 101-150 good; 151-300 Better and >300 sufficient
5	Phosphorus (kg/ha)	Up to 15 very less, 16-30 less; 31-50 medium, 51-65 on an average sufficient 66-80 sufficient, >80 more than sufficient
6	Potash (kg/ha)	0 -120 very less; 120-180 less; 181-240 medium; 241-300 average; 301-360 better; >360 more than sufficient

Table 3.9a: Soil Analysis Results

S.No.	Parameter	Unit	Test Method	S1	S2	S3	S4	
1	Texture	-	NCL/STP/SOIL/04	Sand	Sand	Sand	Sand	Sand
2	Sand	%	NCL/STP/SOIL/04	78	74	77	76	76
3	Silt	%	NCL/STP/SOIL/04	12.4	21.4	13.5	18.2	16.7
4	Clay	%	NCL/STP/SOIL/04	9.6	4.6	9.5	5.8	7.3
5	pH	-	IS : 2720 (P-26)	7.81	7.78	7.81	7.90	7.87
6	Electrical Conductivity	µS/cm	IS : 14767	172	176	174	180	184
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.2	2.1	2.4	2.3	2.4
8	Potassium	kg/hect	IS : 11260	156	159	158	161	162
9	Sodium	mg/kg	STP/NCL/SOIL/02	84	89	90	94	92
10	Calcium	mg/kg	STP/NCL/SOIL/03	268	232	242	246	270
11	Phosphorus	kg/hect	ISO : 11262	12.8	12.2	11.9	12.3	12.4
12	Magnesium	mg/kg	STP/NCL/SOIL/10	120	120	130	126	126
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.08	1.2	1.1	1.2	1.1
14	Water Holding Capacity	%	IS : 14765	16.4	17.8	18.2	19.8	18.8
15	Porosity	%	STP/NCL/SOIL/08	26	25	26	28	27
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	42.6	42.4	41.8	43.1	41.9
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.84	0.85	0.88	0.80	0.86
21	Total Kjehdahl Nitrogen	kg/hect	IS : 14684	10.6	10.5	10.3	11.2	11.2

Table 3.9b: Soil Analysis Results

S.No.	Parameter	Unit	Test Method	S6	S7	S8	S9		
1	Texture	-	NCL/STP/SOIL/04	Sand	Sand	Sand	Sand	Sand	Sand
2	Sand	%	NCL/STP/SOIL/04	75	80	78	76	75	78
3	Silt	%	NCL/STP/SOIL/04	18	12.7	16.6	19.8	17.3	12.8
4	Clay	%	NCL/STP/SOIL/04	7	7.3	5.4	4.2	7.7	9.2
5	pH	-	IS : 2720 (P-26)	7.88	8.12	7.93	7.82	7.79	7.91
6	Electrical Conductivity	µS/cm	IS : 14767	178	168	158	151	134	168
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.1	2.2	2.0	2.6	2.3	2.1
8	Potassium	kg/hect	IS : 11260	158	162	88	155	157	162
9	Sodium	mg/kg	STP/NCL/SOIL/02	88	89	67	88	93	96
10	Calcium	mg/kg	STP/NCL/SOIL/03	270	274	212	198	253	268
11	Phosphorus	kg/hect	ISO : 11262	12.3	13.5	11.4	12.4	14.1	12.2
12	Magnesium	mg/kg	STP/NCL/SOIL/10	125	24	120	108	134	132
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.1	1.1	1.2	1.2	1.2	1.2
14	Water Holding Capacity	%	IS : 14765	19.6	19.3	19.2	18.8	18.6	17.9
15	Porosity	%	STP/NCL/SOIL/08	26	28	27	25	27	28
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	42.3	42.6	42.5	42.6	42.7	41.9
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.88	0.80	0.86	0.88	0.87	0.89
21	Total Kjehdahl Nitrogen	kg/hect	IS : 14684	10.4	11.3	10.8	10.6	11.2	10.9

3.5.2 OBSERVATIONS:

- pH: Ranges from 7.81 to 8.12, suitable for most crops.
- Water Holding Capacity16.4% to 19.8%, suggesting good moisture retention.
- Electrical Conductivity: Ranges from 174 to 184 mS/cm, indicating a low to moderate salt concentration.
- Organic Matter: Varies from 0.80% to 0.89%, contributing to soil fertility.
- The concentration of available Total Kjehdahl Nitrogen, Phosphorous and Potassium in the soil samples varies from 10.3 to 11.3 kg/hec; 11.4 to 13.5 kg/hec and 58 to 162 kg/hec respectively.

3.6 CLIMATOLOGY AND MICROMETEOROLOGY

Micrometeorological data helps for appropriate understanding of the baseline micro climatic status of the study area as well as for input into prediction models to evaluate air dispersion phenomenon. Chronological data on meteorological parameters also helps identifying the general errors encountered during generation of micro meteorological data of the region. The year is broadly divided into four seasons as per IMD:

- Winter season : December to February
- Pre-monsoon season : March to May
- Monsoon season : June to September
- Post-monsoon season : October to November

3.6.1 METHODOLOGY

The methodology adopted for monitoring surface observations is as per the standard norms laid down by Bureau of Indian Standards (IS: 8829) and India Meteorological Department (IMD). Automatic micro meteorological station was installed at the project site with continuous data logger for the sampling period.

3.6.2 METEOROLOGICAL DATA

While selecting and finalizing the monitoring stations, secondary source (Envitrans) of wind rose was considered. However, Percentage frequencies of wind in 16 directions have been computed from the recorded data during the study period (October to December 2024) to plot wind rose. **Figure-3.6** represents the summary of the wind pattern and wind rose of the period October to December of last three year season

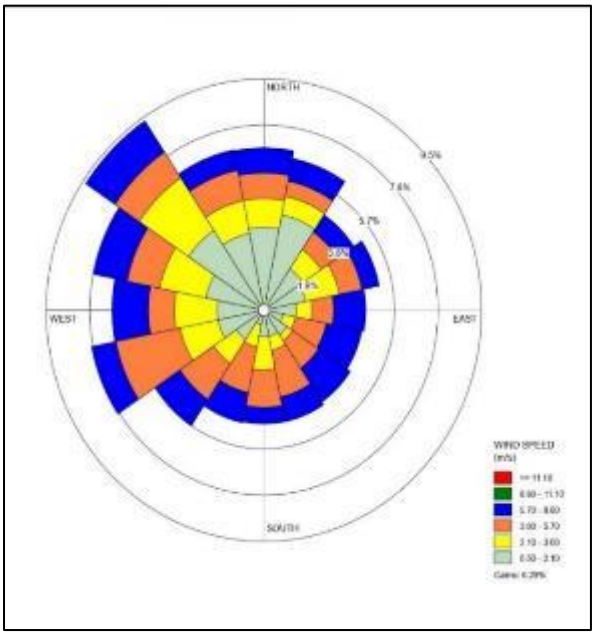


Figure 3.6 (a): Wind Rose

(October -24 – December 24)

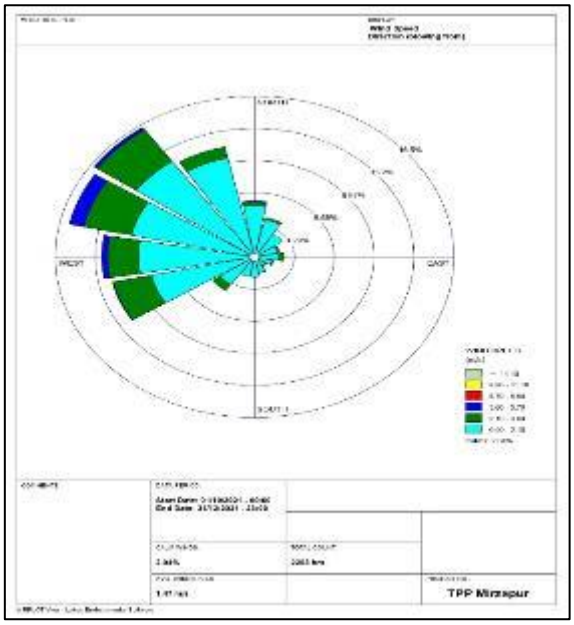


Figure 3.6 (b): Wind Rose

(October -21– December 21)

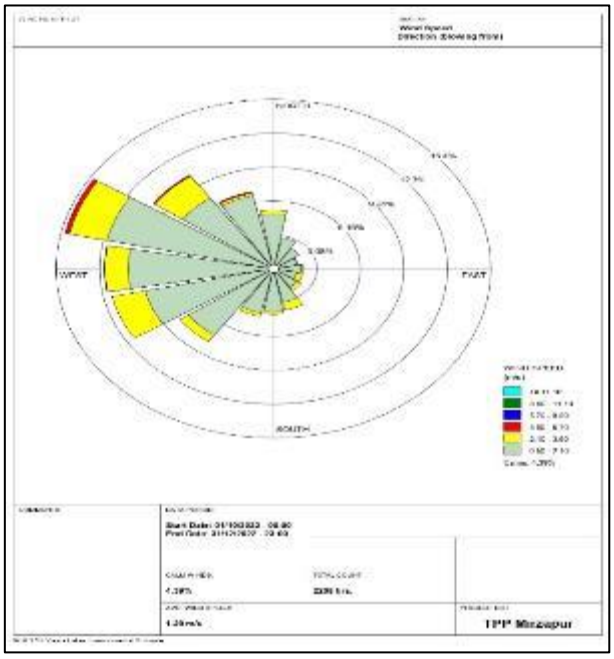


Figure 3.6 (c): Wind Rose

(October -22– December 22)

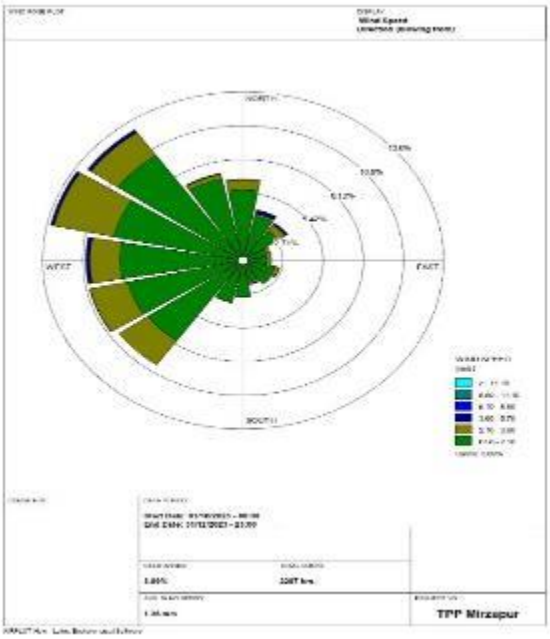


Figure 3.6 (d): Wind Rose

(October -23– December 23)

The recorded micro meteorological data for the study period at project site is presented in Table 3.10.

Table 3.10: Summary of the Meteorological Data (October to Decemeber'2024)

Month	Temperature (deg C)		Relative Humidity (%)		Wind Speed (m/s)		Rainfall (mm)
	Max	Min	Max	Min	Max	Min	
Oct	35.0	16.5	100.0	23.9	7.3	<0.1	23.9
Nov	31.7	11.4	88.4	21.9	7.8	<0.1	<0.1
Dec	28.3	7.3	94.5	22.0	7.3	0.1	0.9

3.7 AIR ENVIRONMENT

The objective of the baseline air monitoring was to evaluate the existing air quality of the area. This will also be useful for comparing and writing EMP for attaining conformity to standards of ambient air quality during the operation of the proposed project.

This chapter describes the selection of sampling locations, methodology adopted for sampling, analytical techniques and frequency of sampling. The results of monitoring carried out for the study period Oct-Dec'2024 is presented in this chapter.

3.7.1 METHODOLOGY ADOPTED FOR AIR QUALITY SURVEY

- **Selection of Sampling Locations**

  The baseline status of the air quality in the study area has been assessed through a scientifically designed ambient air quality monitoring network. Ambient Air Quality Monitoring (AAQM) stations were set up at eleven locations with due consideration to the above-mentioned points.

Table 3.11: Ambient air quality monitoring locations

S. No.	Monitoring Locations	Station Code	Selection criteria	Distance (km)	Direction
1.	Project Site	AAQ1	Core	--	--
2.	Kotwa	AAQ2	Up wind	6.7	WNW
3.	Marihan	AAQ3	Down wind	5.1	SSE
4.	Dhekwah	AAQ4	Down wind	5.3	ESE
5.	Darhiram	AAQ5	Cross wind	2.6	NE
6.	Patehra	AAQ6	Cross wind	9.1	SW
7.	Gogdara	AAQ7	Habitation	7.5	ENE
8.	Sugapankh Khurd	AAQ8	Habitation	8.8	SSW
9.	Bharpura	AAQ9	Habitation	7.2	NNE
10.	Ordial Institute Campus	AAQ10	Sensitive	1.2	SW
11.	Near Rajiv Gandhi South Campus Banaras Hindu University	AAQ11	Sensitive	9.0	NW

3.7.2 FREQUENCY AND PARAMETERS FOR SAMPLING

Ambient air quality monitoring has been carried out with a frequency of two days per week at eleven locations covering one complete season except monsoon (CPCB Guidelines). *Frequency and Parameters for Sampling.* The baseline was monitored for parameters

mentioned below as per latest Gazette Notification of the Central Pollution Control Board (CPCB) on NAAQ standards dated 18th November 2009. The ambient air quality parameters along with their frequency of sampling are given in **Table-3.12.**

Table 3.12: Monitored Parameters and Frequency of Sampling

S. No	Parameters	Sampling Frequency	Protocol
1.	Particulate Matter (PM_{10})	24 hourly sample twice a week for three months	IS: 5182 Part-23: 2006 (Reaffirmed 2017)
2.	Particulate Matter ($PM_{2.5}$)	24 hourly sample twice a week for three months	IS 5182 (Part 24): 2019
3.	Sulphur dioxide (SO_2)	24 hourly sample twice a week for three months	IS: 5182 (Part-2)-2001 (Reaffirmed 2017)
4.	Oxides of Nitrogen (NO_x)	24 hourly sample twice a week for three months	IS: 5182 (Part-6)-2006 (Reaffirmed 2017)

3.7.3 INSTRUMENTS USED FOR SAMPLING

Fine Particulate Samplers (FPS) has been used for $PM_{2.5}$ Sampling. Respirable Dust Samplers (RDS) with gaseous attachment have been used for PM_{10}, SO_2 & NOx, CO & Hg Sampling.

Table 3.13: Ambient Air Monitoring Instruments

Instrument	Make	Model
Fine Particulate Sampler	Envirotech	APM 550
Respirable Dust Sampler	Envirotech	APM 460
Gaseous attachments	Envirotech	APM 411

3.7.4 PRESENTATION OF RESULTS

The analysis results for the study period are presented in detail**.** Various statistical parameters like 98th percentile, average, maximum and minimum values have been computed from the observed raw data for all the AAQ monitoring stations. The summary of these results for all the locations is presented in **Table-3.14.**

Table 3.14 (a): Summary of Ambient Air Quality for all the locations

Sr. No	Stations	PM_{10}				$PM_{2.5}$				NO_2			
		Max	Min	Average value	98th percentile	Max	Min	Average value	98th percentile	Max	Min	Average value	98th percentile
1	**Project Site**	48	40	42.19	48	31	22	26.5	30.04	11.8	4	7.9	11.644
2	Kotwa	62	50	57.8	65	36	23	31.4	36	10.6	3.8	6.7	10.444
3	Marihan	66	47	56.5	65.52	37	34	30.3	36.52	9.9	4.8	5.85	9.792
4	Dhekwah	64	50	57	63.52	36	24	30.08	36	7.4	3.7	4.05	7.326
5	Darhiram	65	47	57	64.54	41	30	35.42	40.54	11.1	4	6.55	10.958
6	Patehra	62	45	59.7	65	36	28	32.5	35.52	8.5	3.9	5.2	8.408
7	Gogdara	65	43	57.6	64.54	39	26	31.5	40.54	7.9	3.9	4.9	7.82
8	Sugapankh	64	48	58.8	63.52	38	23	31	35.52	8.7	4.2	5.95	8.61
9	Bharpura	63	50	57.28	64.52	39	26	31.48	36	9.3	4.1	5.7	9.196
10	Ordial Institute Campus	68	50	57.8	65	38	22	31.4	36	10.7	3.7	7.2	10.56
11	Near Rajiv Gandhi South Campus Banaras Hindus	69	52	58.6	65	35	34	30	34.68	8.9	4.4	5.65	8.81
	Test Method	**IS:5182 (P-23) 2006, RA2017**				**IS:5182(P-24)-2019**				**IS:5182(P-06) 2006 Sec.2, RA 2018**			
	***NAAQS Limits**	**100 µg/m³**				**60 µg/m³**				**80 µg/m³**			

Table 3.14 (b): Summary of Ambient Air Quality for all the locations

Sr. No.	Stations	SO_2				CO			
		Max	Min	Average value	98th percentile	Max	Min	Average value	98th percentile
1	Project Site	7.8	4.8	6.3	7.74	0.19	0.08	0.10	0.17
2	Kotwa	9.8	5.3	7.55	9.71	0.44	0.13	0.26	0.44
3	Marihan	8.9	5.8	7.35	8.838	0.45	0.13	0.28	0.45
4	Dhekwah	10.2	6.4	8.3	10.124	0.26	0.09	0.16	0.26
5	Darhiram	10.5	4.8	7.65	10.386	0.45	0.05	0.16	0.43
6	Patehra	7.9	5.2	6.55	7.846	0.29	0.10	0.17	0.26
7	Gogdara	8.5	4.9	6.7	8.428	0.22	0.11	0.20	0.43
8	Sugapankh	9.1	5.7	7.4	9.032	0.22	0.11	0.17	0.21
9	Bharpura	9.3	6.2	7.75	9.238	0.29	0.14	0.21	0.28
10	Ordial Institute Campus	10.3	4.7	7.5	10.188	0.44	0.13	0.22	0.37
11	Near Rajiv Gandhi South Campus Banaras Hindus	10.2	5.6	7.9	10.108	0.29	0.15	0.21	0.29
	Test Method	IS:5182(P-2) 2001, Sec.1 RA 2018				IS:5182 Part 10			
	***NAAQS Limits**	**80 µg/m^3**				FOR 08 Hrs., = 02 For FOR 01 Hrs = 04 **mg/m^3**			

3.7.4.1 Observations:

- PM_{10}: The maximum value for PM_{10} was observed at the Near Rajiv Gandhi South Campus Banaras Hindus as 69 µg/m3 and minimum value for PM_{10} was observed at Project site as 48 µg/m^3.
- $PM_{2.5}$: The maximum value for $PM_{2.5}$observed at the Darhiram as 41 µg/m3 and minimum value for $PM_{2.5}$ at Project Site as 22 µg/m^3.
- SO_2: The maximum value for SO_2 observed at the Darhiram (AAQ2) as 10.5 µg/m3 and minimum value for SO_2at Ordial Institute Campus as 4.7 µg/m^3.
- NOx: The maximum value for NOx observed at Project Site as 11.8 µg/m3 and minimum value for NOx at Dhekwah as 3.7 µg/m^3.
- CO: The maximum value for CO observed at the Darhiram as 0.454 mg/m^3 and minimum value for CO at Darhiram as 0.054 mg/m^3.

3.7.5 AIR QUALITY INDEX (AQI)

In 2014, CPCB developed uniform air quality index for the Indian cities. The CPCB method utilizes the use of USEPA methodology for determination of the AQI with different breakpoint indices for Indian conditions (CPCB, 2014). The methodology involves the determination of sub-index and then agglomeration of this sub-index for final AQI. The breakpoint concentrations are calculated for different pollutants based on the NAAQS (National Ambient Air Quality Standards) standards and the potential health impacts of the criteria pollutants. The CPCB method of AQI also tells about the pollutant responsible for AQI. The health effects associated with different AQI Categories are given in below.

The sub-index (Ip) for a given pollutant concentration (Cp), as based on 'linear segmented principle' is calculated as:

$$I_p = \left[\left\{\left(\frac{I_{HI} - I_{LO}}{B_{HI} - B_{LO}}\right)\right\} \times (C_P - B_{LO})\right] + I_{LO}$$

B_{HI}= Breakpoint concentration greater or equal to given conc shown in table S4.

B_{LO}= Breakpoint concentration smaller or equal to given conc shown in table S4.

I_{HI} = AQI value corresponding to B_{HI}

I_{LO} = AQI value Corresponding to B_{LO}

Finally;

AQI = Max (*Ip*) (where; p= 1, 2,,n; denotes n pollutants)

Table 3.15: Health Statements for AQI Categories

AQI	Associated Health Impacts	Condition/Color
(0–50)	Minimal Impact.	**Good**
(51–100)	May cause minor breathing discomfort to sensitive people.	**Satisfactory**
(101–200)	May cause breathing discomfort to the people with lung disease such as asthma and discomfort to people with heart disease, children and older adults.	**Moderately polluted**
(201–300)	May cause breathing discomfort to people on prolonged exposure and discomfort to people with heart disease.	**Poor**
(301–400)	Maycauserespiratoryillnesstothepeopleonprolongedexposure.Effectmay bemore pronounced in people with lung and heart diseases.	**Very Poor**
(401-500)	May cause respiratory effects even on healthy people and serious health impacts on people with lung/heart diseases. The health impacts may be experienced even during light physical activity.	**Severe**

Table 3.16: Breakpoints for AQI Scale 0-500

AQI Category (Range)	PM_{10} 24-hr µg/m^3	$PM_{2.5}$ 24-hr µg/m^3	NO_2 24-hr µg/m^3	O_3 8-hr µg/m^3	CO 8-hr (mg/ m^3)	SO_2 24-hr µg/m^3	NH_3 24-hr µg/m^3	Pb 24-hr µg/m^3
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400	0.5 –1.0
Moderately polluted (101-200)	101-250	61-90	81-180	101-168	2.1- 10	81-380	401-800	1.1-2.0
Poor (201-300)	251-350	91-120	181-280	169-208	10-17	381-800	801-1200	2.1-3.0
Very poor (301-400)	351-430	121-250	281-400	209-748	17-34	801-1600	1200-1800	3.1-3.5
Severe (401-500)	430 +	250+	400+	748+	34+	1600+	1800+	3.5+

Source: CPCB 2014

3.7.5.1 Air Quality Index of Study Area

Overall AQI of the study area based upon data collected from selected monitoring locations is as below:

Table 3.16 (a): Air Quality Index of Monitoring Station-1

Project Site (A-1)				
Pollutants	**Avg**	**Concentration in µg/m³ (except for CO)**	**Sub-Index**	**Air Quality Index**
PM_{10}	24-hr avg	48	48	**57 Satisfactory**
$PM_{2.5}$	24-hr avg	31	52	
SO_2	24-hr avg	7.8	10	
NOx	24-hr avg	11.8	15	
CO (mg/m³)	max 8-hr	0.19	10	

Table 3.16 (b): Air Quality Index of Monitoring Station-2

KOTWA (A-2)				
Pollutants	**Avg**	**Concentration in µg/m3 (except for CO)**	**Sub-Index**	**Air Quality Index**
PM_{10}	24-hr avg	62	62	**60 Satisfactory**
$PM_{2.5}$	24-hr avg	36	60	
SO_2	24-hr avg	9.8	12	
NOx	24-hr avg	10.6	13	
CO (mg/m³)	max 8-hr	0.44	22	

Table 3.16 (c): Air Quality Index of Monitoring Station-3

MARIHAN (A-3)				
Pollutants	**Avg**	**Concentration in µg/m³ (except for CO)**	**Sub-Index**	**Air Quality Index**
PM_{10}	24-hr avg	66.00	66	**62 Satisfactory**
$PM_{2.5}$	24-hr avg	37.00	62	
SO_2	24-hr avg	8.9	11	
NO_2	24-hr avg	9.9	12	
CO (mg/m³)	max 8-hr	0.45	23	

Table 3.16 (d): Air Quality Index of Monitoring Station-4

DHEKWAH (A-4)				
Pollutants	**Avg**	**Concentration in µg/m³ (except for CO)**	**Sub-Index**	**Air Quality Index**
PM_{10}	24-hr avg	64.00	64	**60 Satisfactory**
$PM_{2.5}$	24-hr avg	36.00	60	
SO_2	24-hr avg	10.2	13	
NOx	24-hr avg	7.4	9	
CO (mg/m³)	max 8-hr	0.26	13	

Table 3.16 (e): Air Quality Index of Monitoring Station-5

DARHIRAM (A-5)				
Pollutants	**Avg**	**Concentration in µg/m³ (except for CO)**	**Sub-Index**	**Air Quality Index**
PM_{10}	24-hr avg	65.00	65	**68 Satisfactory**
$PM_{2.5}$	24-hr avg	41.00	68	
SO_2	24-hr avg	10.5	13	
NOx	24-hr avg	11.1	14	
CO (mg/m³)	max 8-hr	0.45	23	

Table 3.16 (f): Air Quality Index of Monitoring Station-6

PATEHRA (A-6)				
Pollutants	**Avg**	**Concentration in µg/m³ (except for CO)**	**Sub-Index**	**Air Quality Index**
PM_{10}	24-hr avg	62.00	62	**60 Satisfactory**
$PM_{2.5}$	24-hr avg	36.00	60	
SO_2	24-hr avg	7.9	10	
NO_2	24-hr avg	8.5	11	
CO (mg/m³)	max 8-hr	0.29	15	

Table 3.16 (g):: Air Quality Index of Monitoring Station-7

GOGDARA (A-7)				
Pollutants		**Concentration in µg/m³ (except for CO)**	**Sub-Index**	**Air Quality Index**

PM_{10}	24-hr avg	65.00	**65**	**65 Satisfactory**
$PM_{2.5}$	24-hr avg	39.00	**65**	
SO_2	24-hr avg	8.5	**11**	
NO_2	24-hr avg	7.9	**10**	
CO (mg/m^3)	max 8-hr	0.22	**11**	

Table 3.16 (h): Air Quality Index of Monitoring Station-8

SUGAPANKH **(A-8)**				
Pollutants		**Concentration in µg/m³ (except for CO)**	**Sub-Index**	**Air Quality Index**
PM_{10}	24-hr avg	64.00	64.00	**63 Satisfactory**
$PM_{2.5}$	24-hr avg	38.00	63	
SO_2	24-hr avg	9.1	11	
NO_2	24-hr avg	8.7	11	
CO (mg/m^3)	max 8-hr	0.22	11	

Table 3.16 (i): Air Quality Index of Monitoring Station-9

BHARPURA **(A-9)**				
Pollutants		**Concentration in µg/m³ (except for CO)**	**Sub-Index**	**Air Quality Index**
PM_{10}	24-hr avg	63.00	63	**65 Satisfactory**
$PM_{2.5}$	24-hr avg	39.00	65	
SO_2	24-hr avg	9.3	12	
NOx	24-hr avg	9.3	12	
CO (mg/m^3)	max 8-hr	0.29	15	

Table 3.16 (j):: Air Quality Index of Monitoring Station-10

ORDIAL INSTITUTE CAMOUS **(A-10)**				
Pollutants		**Concentration in µg/m³ (except for CO)**	**Sub-Index**	**Air Quality Index**
PM_{10}	24-hr avg	68.00	68	**63**

$PM_{2.5}$	24-hr avg	38.00	63	**Satisfactory**
SO_2	24-hr avg	10.3	13	
NOx	24-hr avg	10.7	13	
CO (mg/m^3)	max 8-hr	0.44	22	

Table 3.16 (k):: Air Quality Index of Monitoring Station-11

NEAR RAJIV GANDHI SOUTH CAMPUS BANARAS HINDUS **(A-11)**				
Pollutants		**Concentration in µg/m³ (except for CO)**	**Sub-Index**	**Air Quality Index**
PM_{10}	24-hr avg	69.00	69	**58 Satisfactory**
$PM_{2.5}$	24-hr avg	35.00	58	
SO_2	24-hr avg	10.2	13	
NOx	24-hr avg	8.9	11	
CO (mg/m^3)	max 8-hr	0.29	15	

Based on the above observations, the AQI of the project site is found to be **57** and is classified as moder **as** per CPCB.

3.7.6 RESULTS AND CONCLUSIONS:

The results of the monitored data indicate that the ambient air quality of the region in general is conformity with respect to norms of National Ambient Air Quality standards of CPCB, at all locations monitored.

3.8 HYDROGEOLOGY

The water requirements for the proposed project are met through surface water sources, namely Ganga River. The Water requirement for the proposed project is optimized as 28 MCM/Year sourced from Ganga River to Upper Khajuri Dam and from Upper Khajuri Dam to plant site through dedicated pipeline of about 32.6 km in length. According to the CGWB Publication "Dynamic Ground Water Resources of India – 2022," the Marihan block in Mirzapur District is categorized as "Safe" in terms of groundwater availability. The

assignment involved conducting a detailed survey to assess the scope of geology, hydrogeology, and artificial recharge in the area.

3.8.1 OBJECTIVES:

- Conduct a thorough analysis of the physiographic conditions in the study area, utilizing field observations, GPS readings, and satellite imagery.
- Observe and evaluate the hydro-geological conditions prevalent in the area.
- Determine the groundwater flow direction within the study area.
- Assess and formulate the potential for rooftop within the proposed project premises, along with the design of suitable rainwater harvesting systems.
- Evaluate the impact of proposed recharge initiatives on the groundwater regime of the area.

3.8.2 METHODOLOGY:

Physiographic Studies:

Utilizing regional levels identified through spot levels in the latest Google imagery, site visits, GPS surveys, etc., an in-depth study of the physiographic conditions of the area and its surroundings was conducted to ascertain the physiographic gradient.

Hydrogeological Observations:

Observations were made during hydrogeological studies, focusing on geology, aquifer types, surface water bodies, drainage patterns, yields, quality, and relevant hydraulic parameters influencing the groundwater regime.

3.8.3 GEOMORPHOLOGY

The district shows two primary relief features: plains in the northern region and uplands towards the south. Additionally, the central plateau region forms a significant physical division, extending from the Gangetic plain to the Vindhyan plateau. The Ganga River, flowing from west to east in the northern part of the district, is the main drainage system. The general slope of the terrain is from south to north, gradually descending towards the Ganga. The district's geomorphology can be broadly divided into two distinct units:

1. **Residual Hills and Table Lands**: Representing the upland areas and harder rock formations, these features exhibit a table-land topography.
2. **Marginal Alluvial Plain**: Comprising the northern plains, this region consists of alluvial deposits and is influenced by the Ganga and its tributaries.

The topography of the district is significantly influenced and modified by the network of rivers and streams, reflecting a combination of hard rock and alluvial formations.

Geomorphologically, the study area is primarily characterized by a moderately dissected lower plateau. Distinct mesa and butte structures are observed within the region. The northern part of the study area features gullied land structures, along with pediment and Pedi plain formations. In the eastern part**,** anthropogenic terrain is present, indicating human-induced modifications. The southern region exhibits higher elevation due to the presence of a plateau top. The area contains various water bodies, including River, ponds, dams, and waterfalls, which are distributed across the entire study area.

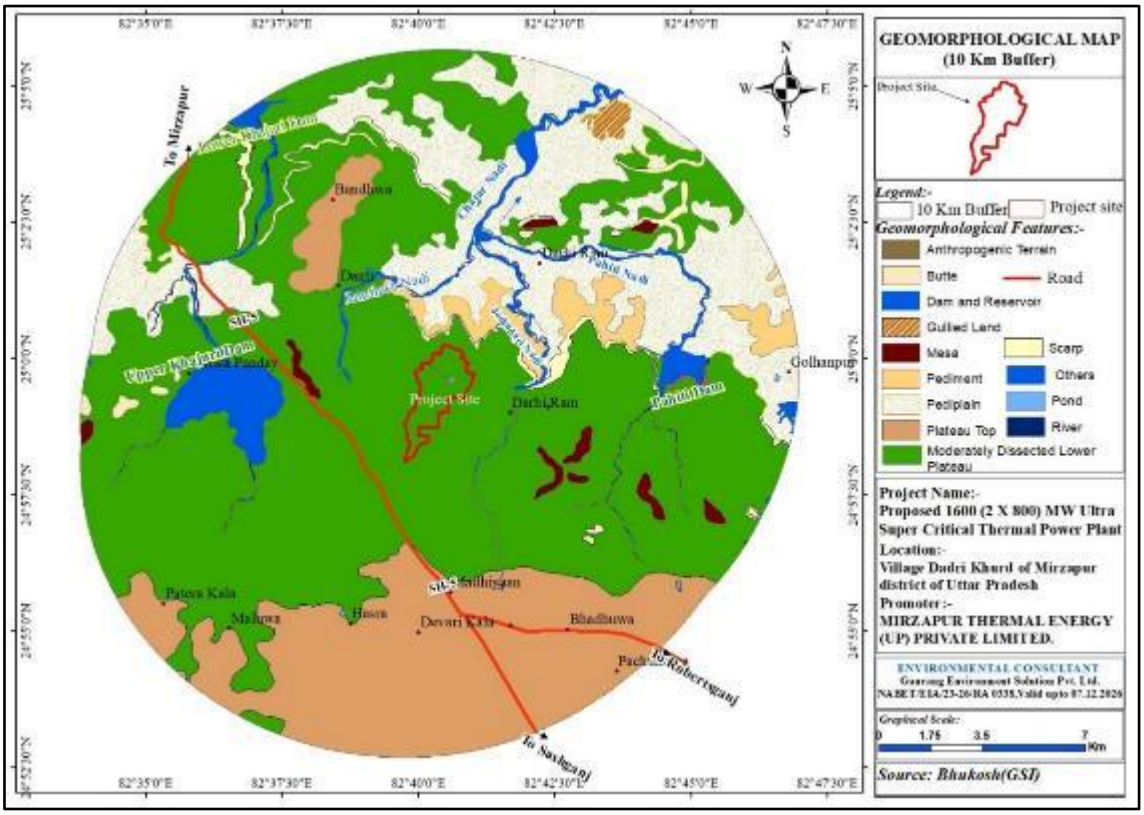


Figure 3.7: Geomorphological map of 10 km buffer zone

Drainage

The Ganga and Belan are the two major rivers flowing through the district. The whole district is covered by the well-developed drainage network. There are several rivers like Harrai Nadi, Chatar Nadi, Gurkhauli Nadi join to the river Ganga in northern part of the district. River Ganga is flowing from Hargarh to Narayanpur. The drainage density is higher in hilly area and lower in marginal alluvial and alluvial area particularly in Northern area. In Southern part of the district trellised drainage pattern is more conspicuous, dendritic drainage pattern is common.

The drainage of the study area (10 km Buffer) reveals a relatively dense drainage network, characterized by numerous streams and rivers crisscrossing the region. The general flow direction is from northwest to southeast. The map identifies stream orders ranging from 1st to 3rd order. The nearest rivers to the project boundary are the Jamthwa Nadi and Jodiadari Nadi, located 2.2 km to the west-southwest (WSW), and the Pahiti Nadi, situated 3.6 km to the north-northeast (NNE). Additionally, several water bodies are present within the study area: the Uppar Khajuri Dam is located in the western part, the Lower Khajuri Dam in the northwest, and the Pahiti Dam in the eastern direction. Various water falls are distributed across the entire study area.

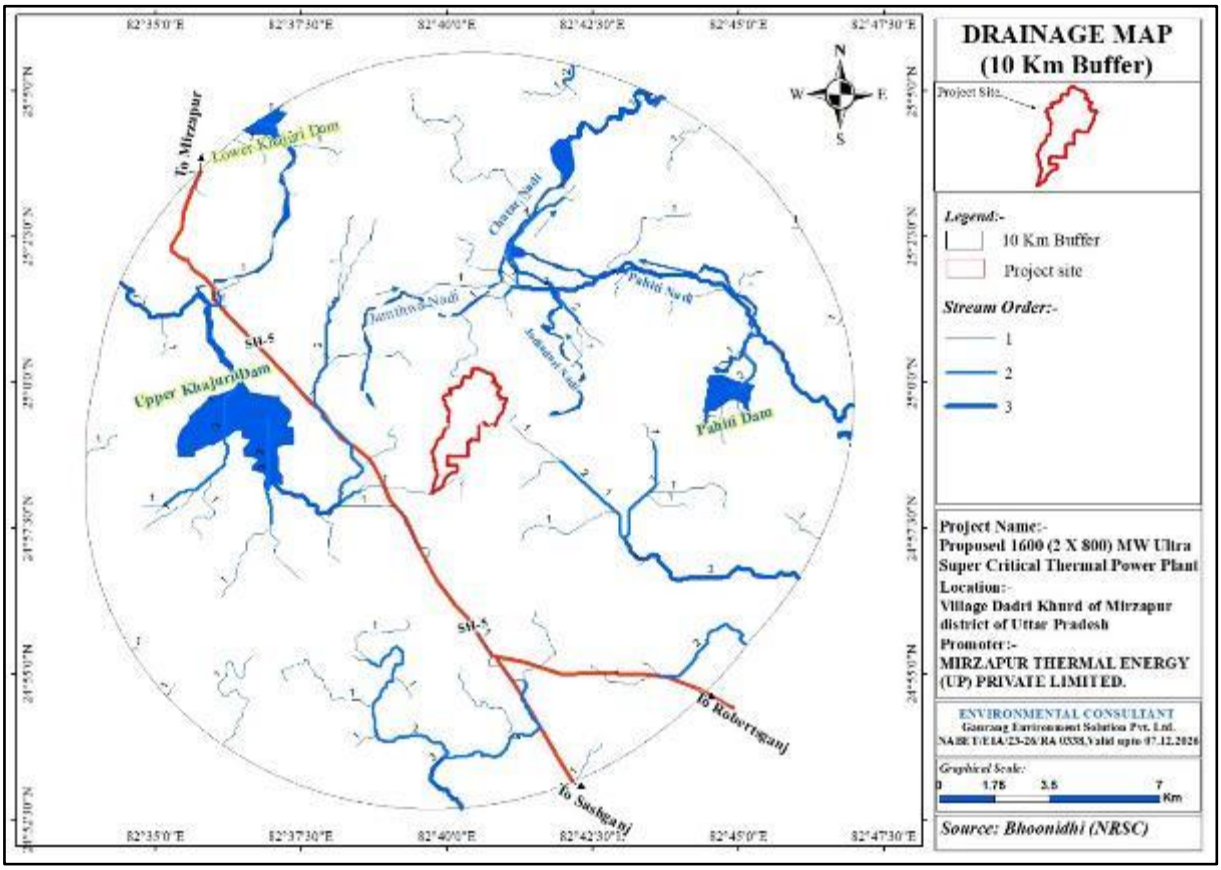


Figure 3.8: Drainage map of 10 km buffer zone

Soil Type

The soil type in the district are Matiyar and Dumat type of soil.

Matiyar soil is characterized by high organic matter content and excellent water retention, making it suitable for diverse crop cultivation, particularly in regions with significant rainfall. ***Dumat*** soil, with its sandy loam texture and good drainage, exhibits moderate water retention capabilities. This soil type is well-suited for agricultural practices, especially for crops such as wheat and barley.

The study area exhibits a diverse range of soil types. Loamy sand, sand, loamy clay, clay, sandy clay, and silty clay are the predominant soil types found within the area. Smaller patches of loam silt and sandy loam are observed in the northern portion of the study area.

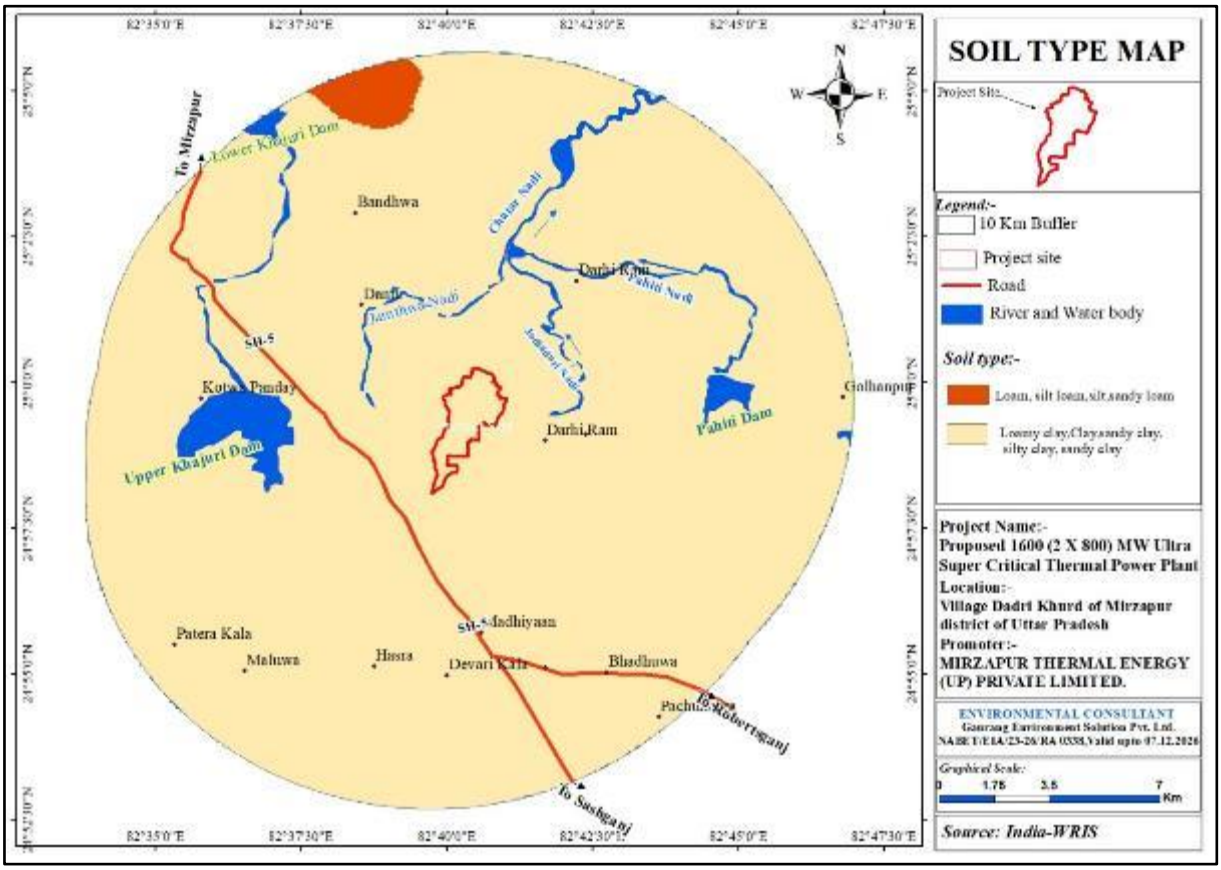


Figure 3.9: Soil texture map of 10 km buffer zone

Regional Geology

Geological framework of the Mirzapur district is occupied by rocks belongs to Vindhyan super group overlain by quaternary alluvium. The general stratigraphic setup of the Mirzapur district is given below:-

Table 3.17: Stratigraphic succession of geological formation

Super group	Group	Sub group	Formation
	Quaternary Alluvium	S	Clay Sand Kankar
Upper Vindhyan	Kaimur		Dhandrol Orthquartzite
		Upper Kaimur	Scrap Sandstone & Conglomerate
			Vijaygarh Shale
		Lower Kaimur	Upper Quartzite Conglomerate & Breccia
			Silicified Shale Lower Quartzite
----------Unconformity----------			
Lower Vindhyan	Semri	Khainhua	Rohtas Limestone,
			Glucomatic Sandstone
			Fan Dolomitic Limestone
			Olive Shale
			Porcellinite
			Kajrahat Limestone,
			Basal Conglomerate
----------Unconformity----------			
	Bijawar		Phyllite & Conglomerate

Geologically Description.

Meso-proterozoic to Holocene ages are exposed in the district. Meso-proterozoic age sedimentary rocks represented by sandstones, shales, arenite, orthoquartzite and conglomerate are overlain by Quaternary alluvium. These sedimentary rocks belong to the Vindhyan Super group and have been classified into Kaimur and Rewa Groups. The Kaimur Group is mainly constituted of purple to pink and white coloured sandstone, sandy shale, Ortho-quartzite and conglomerate. The Rewa Group is constituted by sandstone, shale and quartz arenite. The rocks of the Vindhyan Super group are almost undeformed and have very

gentle dip. The top layer of unconsolidated alluvial sediments are of Middle Pleistocene to Holocene in age. The sediments can be grouped in to Older Alluvium Group and Newer Alluvium Group. The Older Alluvium Group is of Middle to Late Pleistocene age and mainly composed of oxidised silt, clay with kankar and micaceous sand. The Newer Alluvium Group of Holocene age is composed of two formations, the Terrace Alluvium Formation constituted by grey silt, sand and clay and Channel Alluvium Formation constituted by grey micaceous sand, silt and clay.

Geologically, the 10 km study area is predominantly covered by the Kaimur Group of the Vindhyan Super group of rocks. Gravel beds are present in the southwestern portion of the study area. Furthermore, patches of fluvial, Aeolian, and glacial sediments can be observed in the upper northern and southern regions of the study area.

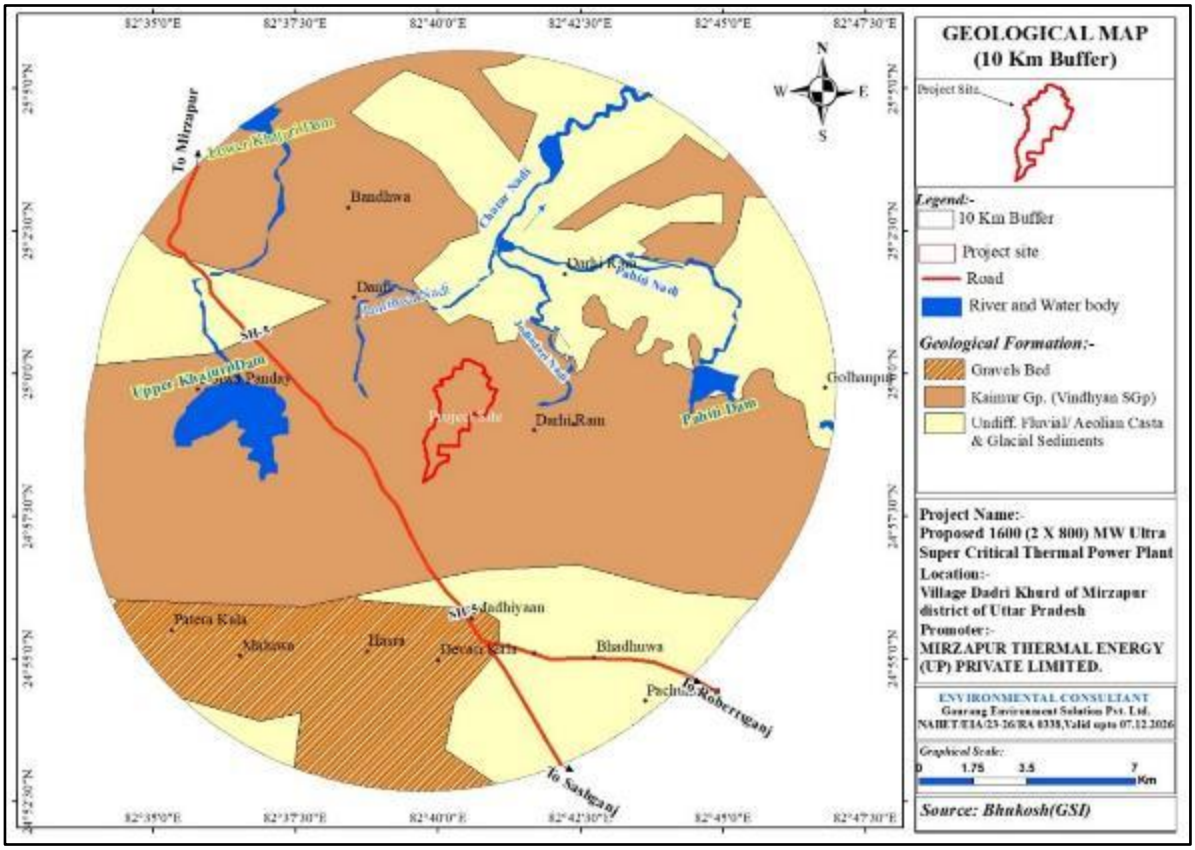


Figure 3.10: Geological map of 10 km buffer zone

3.8.4 NATURAL DISASTER

Seismic Zone

As per Earthquake Hazard Map of Uttar Pradesh, The Study area falls under the *Moderate Damage Risk Zone – III.* The Earthquake Hazard Map of Uttar Pradesh is given in figure no 3.11

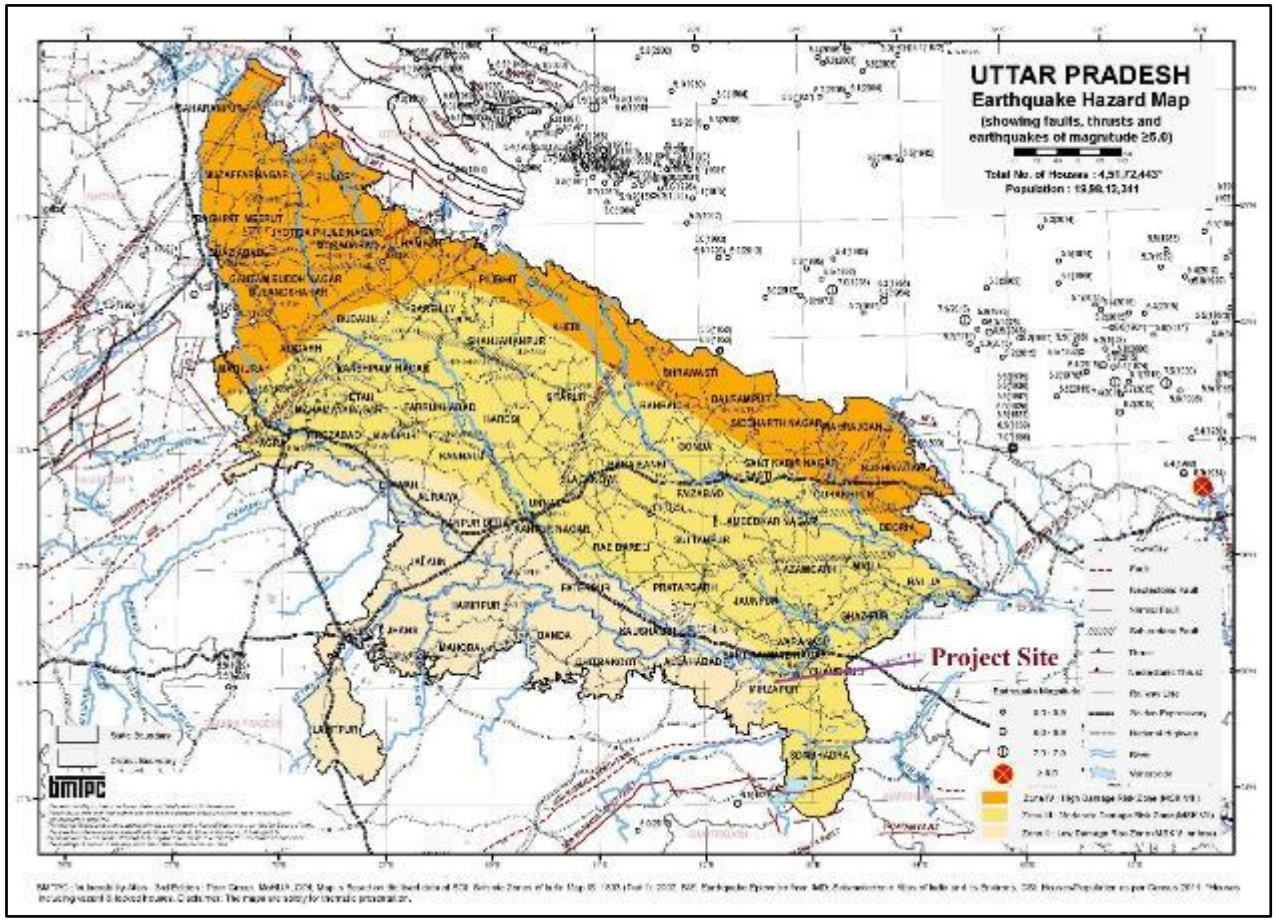


Figure 3.11: Earth Quick Hazard Map of Uttar Pradesh (Source: BMTPC)

Study of landslide

The project site is present at no land slide active zone as per land slide incidence map of India. The landslide incidence map of India is given in figure no. 3.12

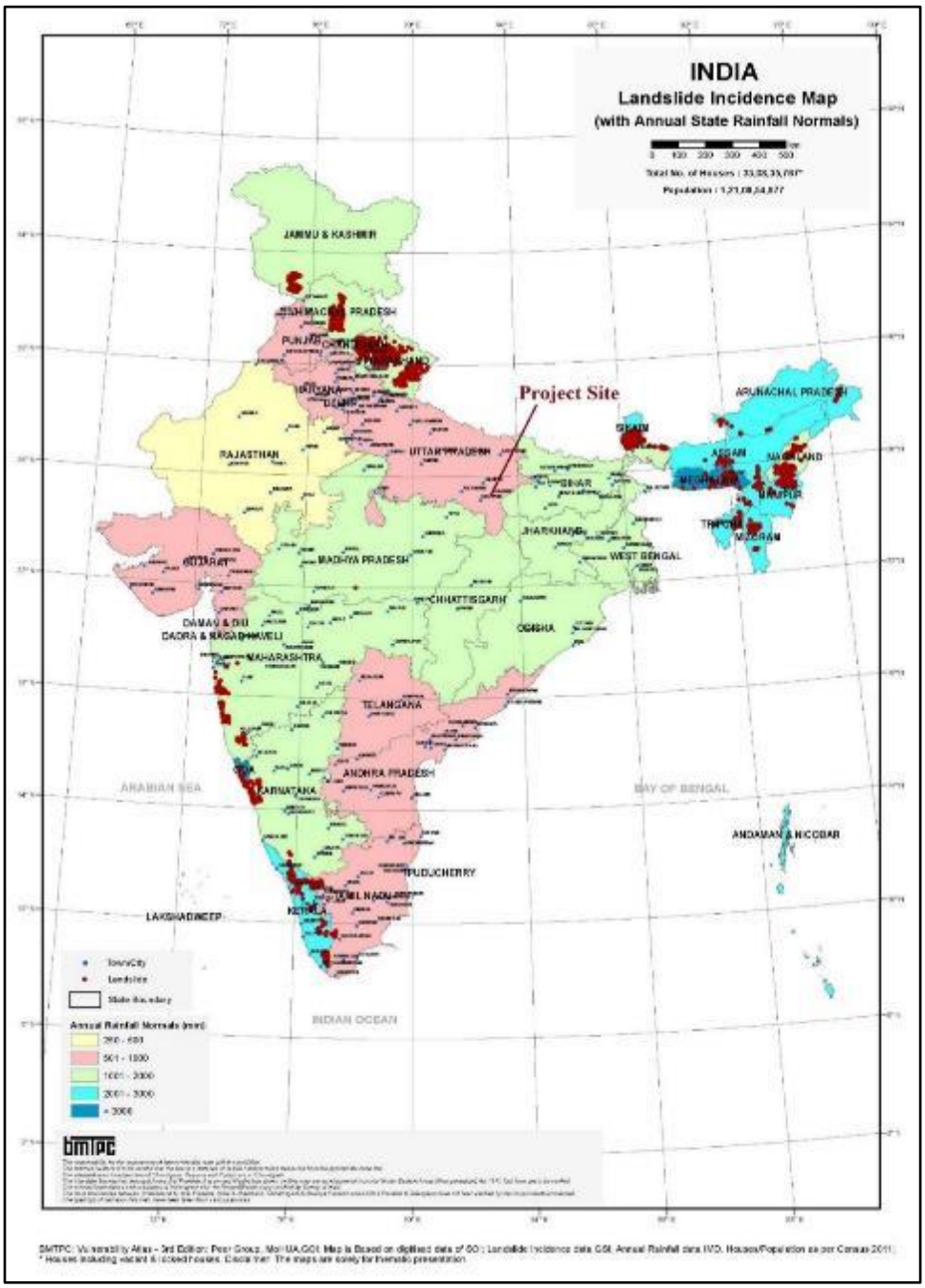


Figure 3.12: Landslide Map of India (Source: BMTPC)

Flood Study

The study area has not belonged to flooding prone zone. The Flood Hazard Map of Uttar Pradesh is given in figure no. 3.13.

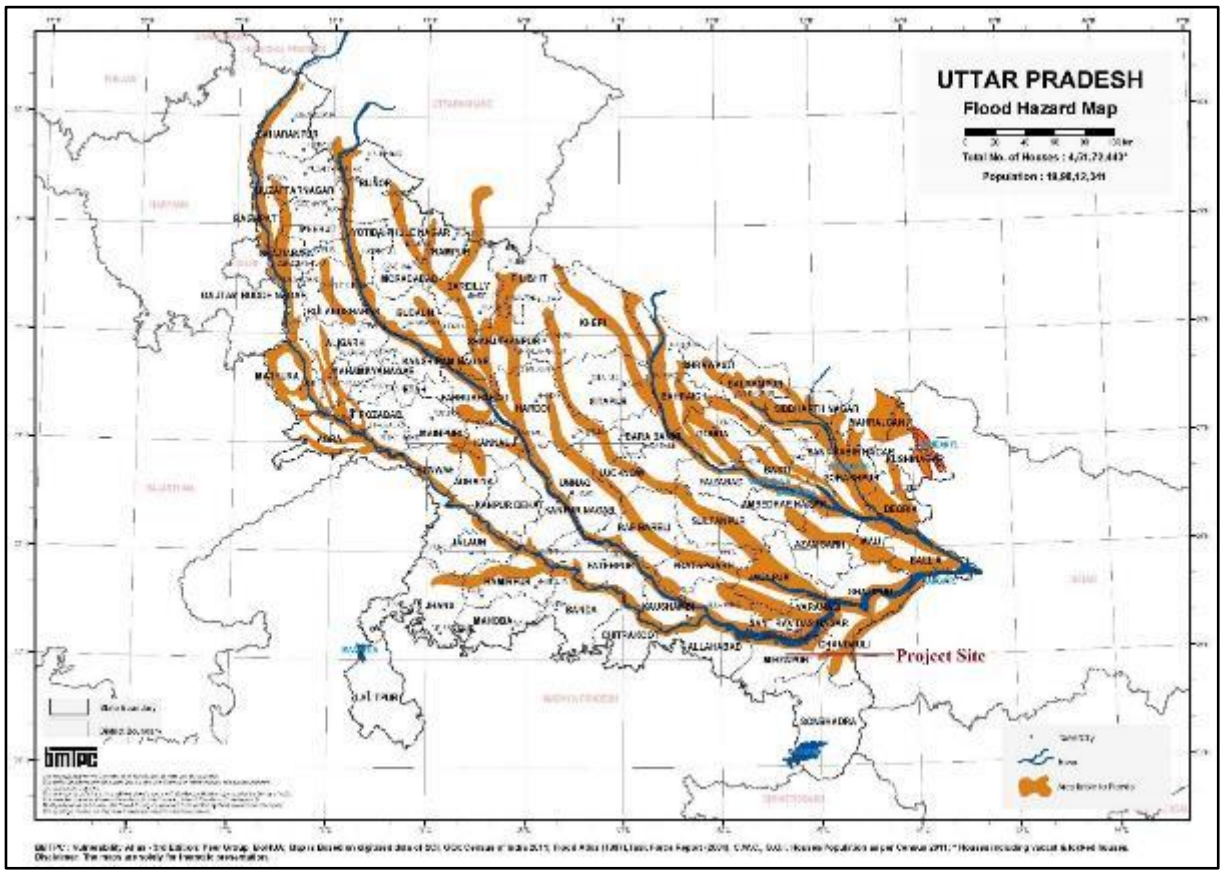


Figure 3.13: Flood map of Uttar Pradesh (Source: BMTPC)

3.8.5 CLIMATE AND RAINFALL

Climate is sub humid and is characterized by hot summer and pleasant monsoon and cold season. About 90% of rainfall takes place from June to September. During monsoon surplus water flows into rivers and streams un-arrested due to hilly topographic features in the Northern part of the district. The normal annual rainfall of the Marihan block is **865** mm (10 years Normal). (*Source GWD, Uttar Pradesh).*

Table 3.18: Rainfall data of Marihan Block

Year	Rainfall (mm)
2014	702.5
2015	680.0
2016	1355.3
2017	577.8
2018	1043.9
2019	1343.4

2020	878.8
2021	1052.8
2022	573.7
2023	433.5
Average	**865**
Source: *https://www.jjm.up.gov.in/groundWater/Rain_fall_Data_ON_Map*	

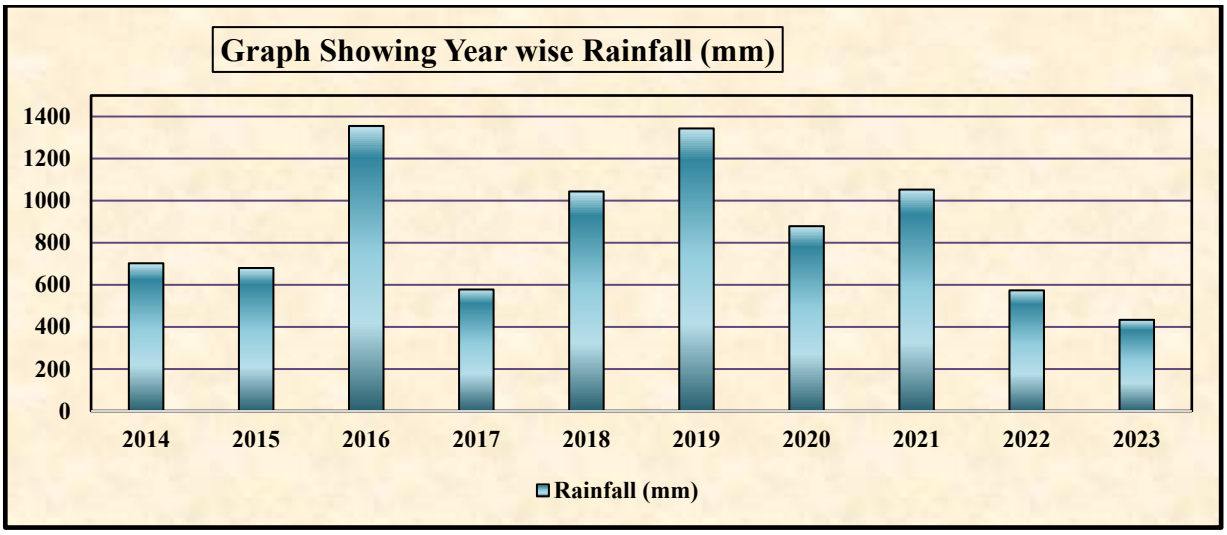


Figure 3.14: Rainfall graph of Marihan station

3.8.6 HYDROGEOLOGY

The primary water-bearing formations in the Marihan block are Quaternary sediments, consisting of older and younger alluvium, along with Vindhyan sandstone. The area exhibits a dual aquifer system influenced by lithological and structural factors:

The Marihan block has a dual aquifer system. The unconfined aquifer (4–45 m bgl) consists of weathered zones with granular thickness of 12–76.20 m, primarily sand and gravel beneath clay and shale, offering limited sustainability. The confined aquifer (117–263 m bgl) is composed of sandstone and quartzite, confined by thick shale beds, with bedrock at 25–156 m. Yields range from 18–1350 lpm in hard rock and 250–3800 lpm in alluvium, while transmissivity varies from 10–54 m^2/day in hard rock to 750–2852 m^2/day in alluvium. This system has moderate potential in hard rock and significant potential in alluvial regions.

Ground Water Level

Study Area –

Pre-Monsoon: On the basis of depth of water level of the study area, the pre monsoonal depth to water level varies from about 5.6 mbgl to 24.01mbgl in study area.

Post-Monsoon: On the basis of depth of water level of the study area, the post monsoonal depth to water level varies from 2.1 mbgl to 21.3 mbgl. The Pre-Monsoon and Post Monsoon Ground Water Level map is given below –

The ground water level of core and buffer zone of pre & post monsoon of study area is given in table no 3.19

Table 3.19(a): Ground water level in Core Zone

S. N	Pre-Monsoonal GWL in mbgl (Core Zone)		Post-Monsoonal GWL in mbgl (Core Zone)	
	From	To	From	To
1	7.1	15	3	10

Table 3.19(b): Ground water level in Buffer Zone

S. N	Pre-Monsoonal GWL in mbgl (Buffer Zone)	Post-Monsoonal GWL in mbgl (Buffer Zone)

	From	To	From	To
1	5.6	24.1	2.1	21.3

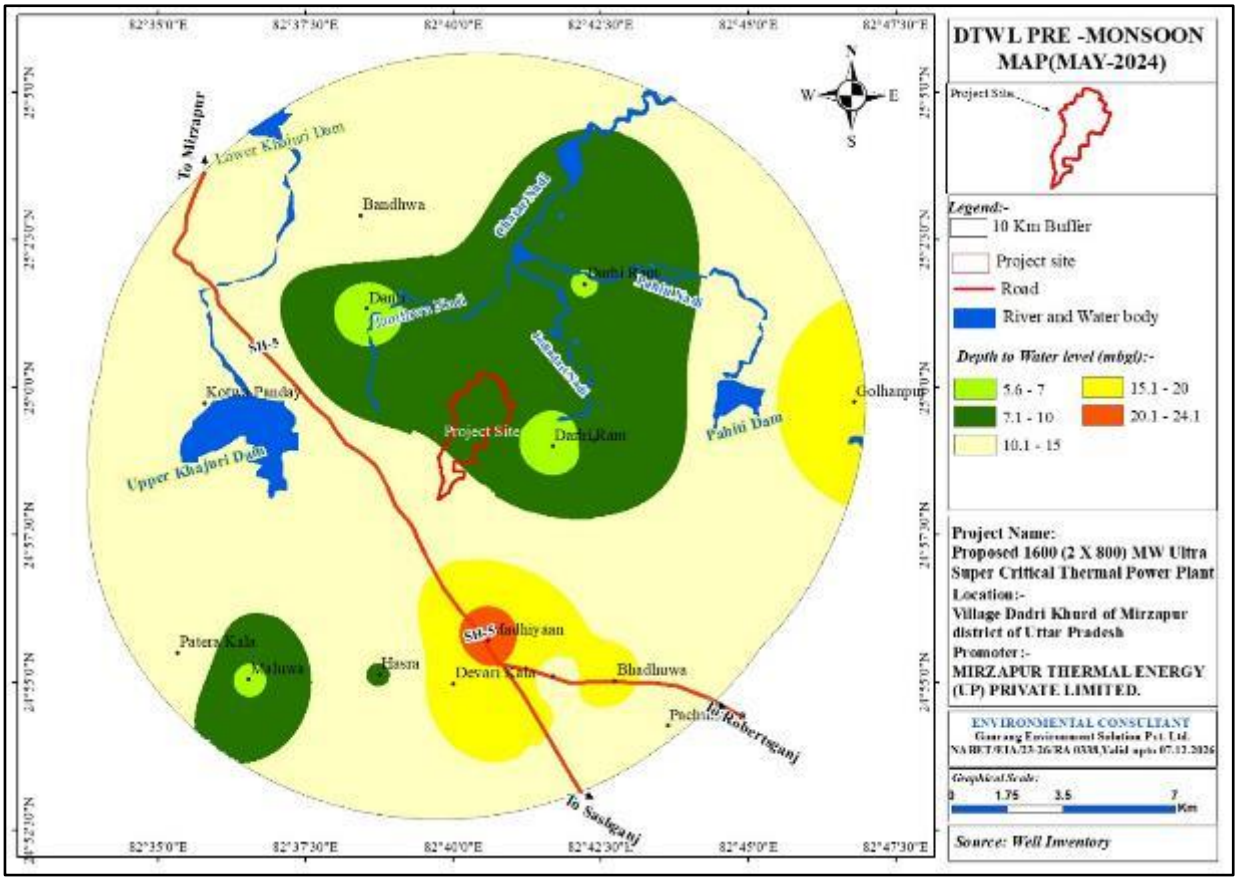


Figure 3.15: Pre-Monsoonal Ground Water Level map of the study area

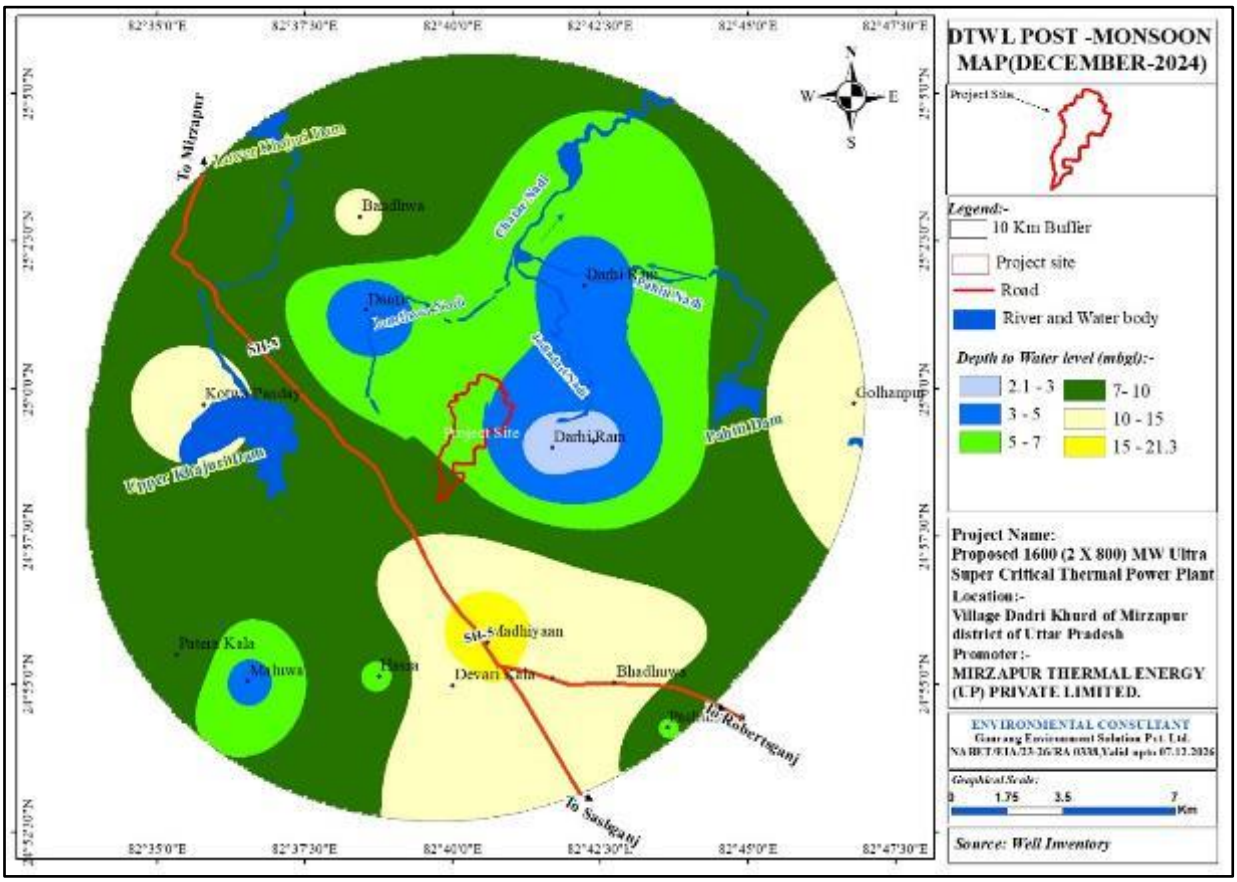


Figure 3.16: Post-Monsoonal Ground Water Level map of the study area

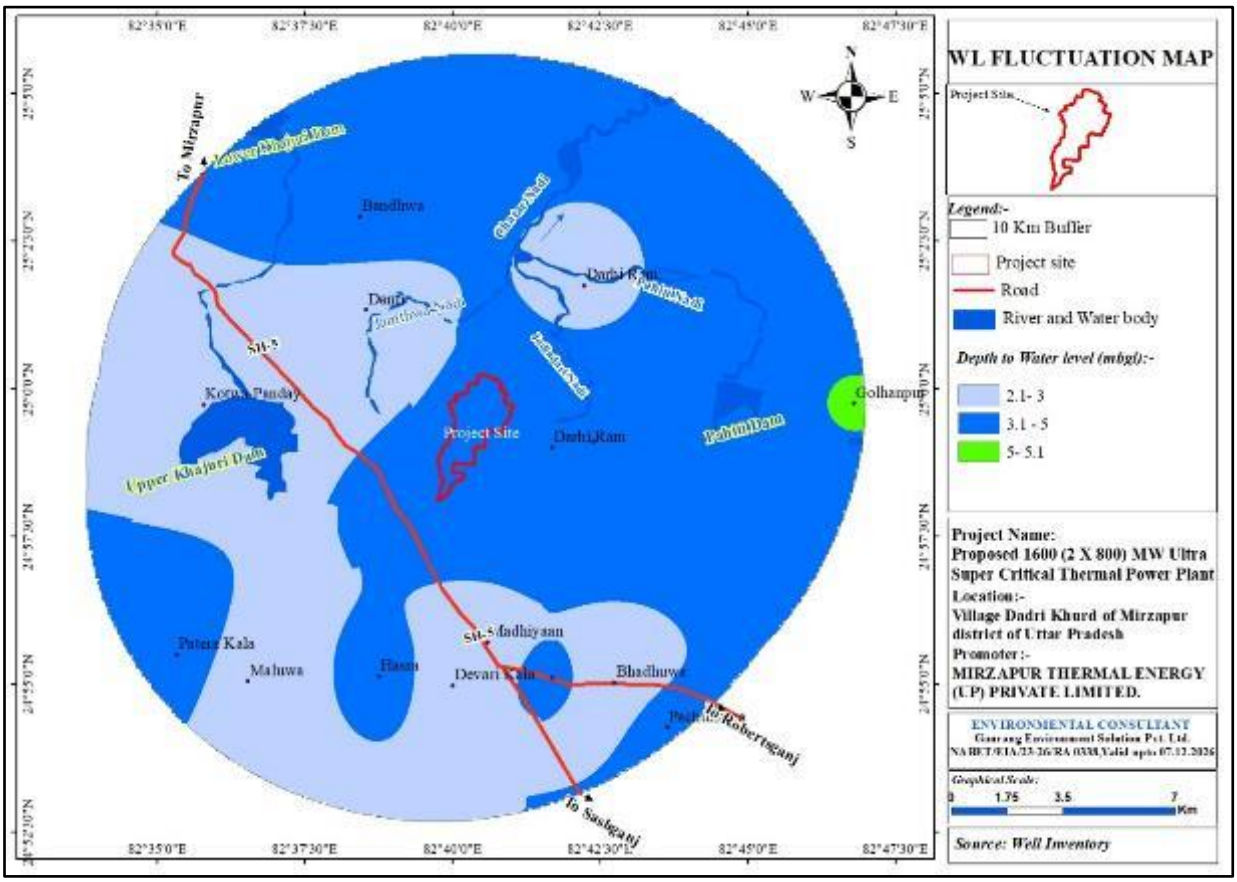


Figure 3.17: Water level Fluctuation map of the study area

Long term water level data Analysis

In order to understand the long-term (10 years) ground water level changes, the UPGWD observation wells located in and around the study area.

Table 3.20: Ground water level in the past decade

Year	Kotwa pandey (25.01886°,82.60987°)		Darhi Ram (24.983424°,82.694620°)	
	Pre	post	Pre	post
2011	7.98	3.53	6.07	1.95
2012	7.78	3.43	5.8	2.5
2013	7.68	2.98	5.65	2.25
2014	7.18	2.8	4.7	3.05
2015	9.43	3.73	5.25	2.75
2016	7	2.63	6.2	1.88
2017	9.53	3.03	4.95	2.15
2018	12.18	5.5	5.45	3.15

Year	Kotwa pandey (25.01886°,82.60987°)		Darhi Ram (24.983424°,82.694620°)	
	Pre	post	Pre	post
2019	5.59	4.39	5.82	2.05
2020	6	3.17	4.2	1.95

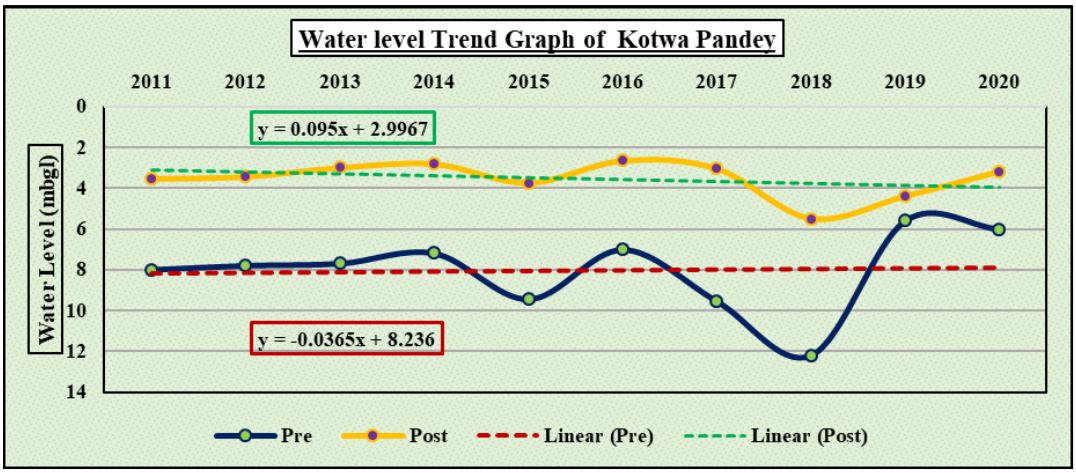


Figure 3.18: Water level Trend Graph of Kotwa Pandey

Post monsoon water level Trend y = -0.0135x + 2.442	m/year	0.036 m Rise
Pre monsoon water level Trend y = -0.0969x + 5.942	m/year	0.198 m Rise

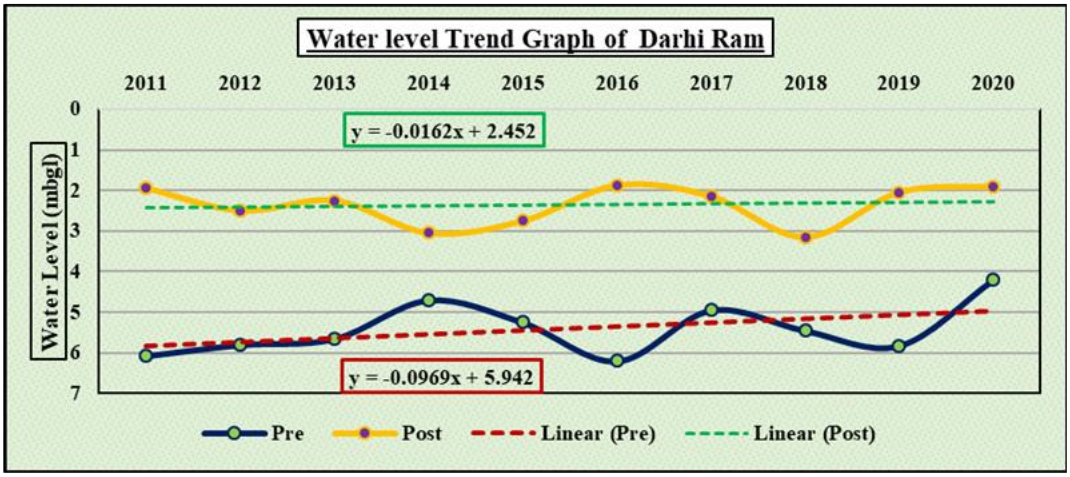


Figure 3.19: Water level Trend Graph of Darhi Ram

Post monsoon water level Trend y = -0.0135x + 2.442	m/year	0.59 m Rise
Pre monsoon water level Trend y = -0.0969x + 5.942	m/year	0.159 m Rise

Status of Ground Water Development & Ground Water Resources

As per the Dynamic Ground Water Resources of Uttar Pradesh, 2023, the total annual ground water recharge of Marihan block is *4810.91* Ham*,* total annual ground water extraction from irrigation, industry, and domestic sectors *2532.19 Ham.* The stage of ground water extraction is *58.48 %.* Block come under "**Safe** category".

Water Conservation, proposed Rainwater harvesting

Rainwater harvesting provides an independent water supply during regional water restrictions and in developed countries is often used to supplement the main supply. It provides water when there is a drought, can help mitigate flooding of low-lying areas, and reduces demand on wells which may enable groundwater levels to be sustained. It also helps in the availability of potable water as rainwater is substantially free of salinity and other salts. Application of rainwater harvesting in urban water system provides a substantial benefit for both water supply and wastewater subsystems by reducing the need for clean water in water distribution system, less generated storm water in sewer system, as well as a reduction in storm water runoff polluting freshwater bodies.

There has been a large body of work focused on the development of Life Cycle Assessment and Life Cycle Costing methodologies to assess the level of environmental impacts and money that can be saved by implementing rainwater harvesting systems.

3.9 GROUND WATER QUALITY:

The purpose of this study is to:

- Assess the water quality characteristics for critical parameters.
- Evaluate the impacts on agricultural productivity, habitat conditions, recreational resources and aesthetics in the vicinity; and
- Predict impact on water quality by this project and related activities.

3.9.1 METHODOLOGY

A reconnaissance survey was undertaken, and monitoring locations were finalized. Chemical and Metals analysis was carried out as per standard Methods for ground water and surface water Analysis published by Bureau of Indian Standards and APHA.

Table 3.21: Analytical Protocol followed for Water Quality Monitoring and Analysis

S. No.	Parameter	Protocol Followed
1.	pH	IS:3025 (Part-11)
2.	Total Hardness (as $CaCO_3$), mg/l	IS:3025 (Part-21)
3.	Iron (as Fe), mg/l	IS:3025 (Part-53)
4.	Chlorides (as Cl), mg/l	IS:3025 (Part-32)
5.	Fluoride (as F), mg/l	IS:3025 (Part-23)
6.	Total Dissolved solids, mg/l	IS:3025 (Part-16)
7.	Magnesium (as Mg), mg/l	IS:3025 (Part-46)
8.	Calcium (as Ca), mg/l	IS:3025 (Part-40
9.	Copper (as Cu), mg/l	IS:3025 (Part-42)
10.	Manganese as Mn, mg/l	IS:3025 (Part-35)
11.	Phenolic Compounds (as C_6H_5OH), mg/l	IS:3025 (Part-43)
12.	Mercury (as Hg), mg/l	IS:3025 (Part-48) Mercury Analyzer
13.	Cadmium (as Cd), mg/l	IS:3025 (Part-41)
14.	Selenium (as Se), mg/l	IS:3025 (Part-56)/ IS 15303
15.	Arsenic (as As), mg/l	IS:3025 (Part-37)
16.	Cyanide (as CN), mg/l	IS:3025 (Part-27)
17.	Lead (as Pb), mg/l	IS:3025 (Part-47)
18.	Zinc (as Zn), mg/l	IS:3025 (Part-49)
19.	Chromium (as Cr^{+6}), mg/l	IS:3025 (Part-52)
20.	Alkalinity (as $CaCO_3$), mg/l	IS:3025 (Part-23)
21.	Aluminium (as Al), mg/l	IS:3025 (Part-55)

3.9.2 WATER SAMPLING LOCATIONS

Ground Water:

Eleven groundwater samples were collected as grab samples and were analyzed for various parameters. The analyzed results were compared with the standards for drinking water as per IS: 10500. The presentation of results is in the following tables.

Table 3.22: Ground water sampling stations

S. No.	Monitoring Locations	Station Code	Selection criteria	Distance (km)	Direction
1.	Project Site	GW1	Based on hydrogeological settings, vulnerability to contamination, land use characteristics	--	--
2.	Kotwa	GW2		6.7	WNW
3.	Marihan	GW3		5.1	SSE
4.	Dhekwah	GW4		5.3	ESE
5.	Darhiram	GW5		2.6	NE
6.	Patehra	GW6		9.1	SW
7.	Gogdara	GW7		7.5	ENE
8.	Sugapankh Khurd	GW8		8.8	SSW
9.	Bharpura	GW9		7.2	NNE
10.	Ordial Institute Campus	GW10		1.2	SW
11.	Near Rajiv Gandhi South Campus Banras Hindu University	GW11		9.0	NW
12.	Kotwa bela	GW12		4.7	W
13.	Shashikala Shikshan Sanstha	GW13		5.0	NW
14.	Ukhdand	GW14		2.2	N
15.	Chakulia	GW15		2.45	ENE
16.	Rajkiya Ashram Paddhati Balika Vidhyalaya	GW16		3.5	S
17.	Kastoorba Gandhi Girls College	GW17		2.7	S
18.	Farmhouse Near Project Site	GW18		0.4	W
19.	Farmhouse Near Project Site	GW19		3.8	NW

Table 3.23(a): Ground Water analysis report

S.No.	Parameter	Unit	Analysis Results					Drinking Water Standards/Limit (IS:10500)	
			Project Site	Kotwa	Marihan	Dhekwah	Darhiram	Desirable Limit	Permissible Limit
			GW 1	GW 2	GW 3	GW 4	GW 5		
1.	Colour	Hazen	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	5	15
2.	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3.	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4.	Turbidity	NTU	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	1	5
5.	pH Value	-	7.48	7.63	7.35	7.68	7.69	6.5-8.5	No Relaxation
6.	Total Dissolved Solids	mg/L	388	374	296	380	357	500	2000
7.	Total Hardness (as $CaCO_3$)	mg/L	160	155	172	152	150	200	600
8.	Calcicum (as Ca)	mg/L	42	36.0	48.0	38.4	36.0	75	200
9.	Magnesium (as Mg)	mg/L	13.4	15.8	12.6	13.6	14.6	30	100
10.	Total Alkalinity (as $CaCO_3$)	mg/L	90	100	120	90	82	200	600
11.	Chloride (as Cl)	mg/L	72	82	54	74	74	250	1000
12.	Nitrate as (NO_3)	mg/L	5.4	2.9	3.8	4.2	3.5	45	No Relaxation
13.	Sulphate (as SO_4)	mg/L	18	14.8	12	16.4	13.3	200	400

S.No.	Parameter	Unit	Analysis Results					Drinking Water Standards/Limit (IS:10500)	
			Project Site	Kotwa	Marihan	Dhekwah	Darhiram	Desirable Limit	Permissible Limit
			GW 1	GW 2	GW 3	GW 4	GW 5		
14.	Sulphide (as H_2S)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.05	No Relaxation
15.	Fluoride (as F)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	1	1.5
16.	Free Residual Chlorine (As Cl_2)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	0.2	1
17.	Chloramines (as Cl_2)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	4	No Relaxation
18.	Phenolic Compound (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	0.001	0.002
19.	Cyanide (as CN)	mg/L	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	0.05	No Relaxation
20.	Anionic Surfacatant (as MBAS)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	0.2	1
21.	Ammonia (As Total Ammonia)	mg/L	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	0.5	No Relaxation
22.	Iron (as Fe)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	1	No Relaxation

S.No.	Parameter	Unit	Analysis Results					Drinking Water Standards/Limit (IS:10500)	
			Project Site	Kotwa	Marihan	Dhekwah	Darhiram	Desirable Limit	Permissible Limit
			GW 1	GW 2	GW 3	GW 4	GW 5		
23.	Zinc (as Zn)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	5	15
24.	Boron (as B)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.5	1
25.	Nickel (as Ni)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.02	No Relaxation
26.	Manganese (as Mn)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	0.3
27.	Lead (as Pb)	mg/L	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	0.01	No Relaxation
28.	Selenium (as Sae)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.01	No Relaxation
29.	Arsenic (as As)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.01	0.1
30.	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.003	No Relaxation

S.No.	Parameter	Unit	Analysis Results					Drinking Water Standards/Limit (IS:10500)	
			Project Site	Kotwa	Marihan	Dhekwah	Darhiram	Desirable Limit	Permissible Limit
			GW 1	GW 2	GW 3	GW 4	GW 5		
31.	Copper (as Cu)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.05	1.5
32.	Molybdenum (as Mo)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.07	No Relaxation
33.	Chromium (as Cr)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.05	No Relaxation
34.	Aluminium (as Al)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.03	0.2
35.	Silver (as Ag)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.1	No Relaxation
36.	Barium (as Ba)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.7	No Relaxation
37.	Mineral Oil	mg/L	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	0.5	No Relaxation
38.	Poly Chlorinated Biphenyls (PCB)	mg/L	BDL (DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	0.0005	No Relaxation

S.No.	Parameter	Unit	Analysis Results					Drinking Water Standards/Limit (IS:10500)	
			Project Site	Kotwa	Marihan	Dhekwah	Darhiram	Desirable Limit	Permissible Limit
			GW 1	GW 2	GW 3	GW 4	GW 5		
39.	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	0.0001	No Relaxation
40.	Bromoform	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	No Relaxatio
41.	Dibromochloromethane	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	No Relaxation
42.	Bromodichloromethane	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.06	No Relaxation
43.	Chloroform	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.2	No Relaxation
44.	*E-Coli*	cfu/100ml	Absent	Absent	Absent	Absent	Absent	Shall not be detectable in any 100 ml	Not Specified
45.	Total Coliform	cfu/100ml	Absent	Absent	Absent	Absent	Absent	Shall not be detectable in any 100 ml	Not Specified

Table 3.23 (b): Ground Water analysis report

S.No.	Parameter	Unit	Analysis Results					Drinking Water Standards/Limit (IS:10500)	
			Patehra	Gogdara	Sugapankh Khurd	Bharpura	Ordial Institute Campus	Desirable Limit	Permissible Limit
			GW 6	GW 7	GW 8	GW 9	GW 10		
1.	Colour	Hazen	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	5	15
2.	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3.	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4.	Turbidity	NTU	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	1	5
5.	pH Value	-	7.39	7.51	7.63	7.32	7.60	6.5-8.5	No Relaxation
6.	Total Dissolved Solids	mg/L	344	356	355	288	327	500	2000
7.	Total Hardness (as $CaCO_3$)	mg/L	130	140	148	98	104	200	600
8.	Calcicum (as Ca)	mg/L	34.0	35.2	36.8	25.6	33.6	75	200
9.	Magnesium (as Mg)	mg/L	10.9	12.6	13.6	8.3	4.9	30	100
10.	Total Alkalinity (as $CaCO_3$)	mg/L	76	75	68	70	90	200	600
11.	Chloride (as Cl)	mg/L	88	68	85	72	76	250	1000
12.	Nitrate as (NO_3)	mg/L	4.3	3.5	4.4	3.3	3.8	45	No Relaxation
13.	Sulphate (as SO_4)	mg/L	14.6	15.8	18.2	15.2	19.2	200	400
14.	Sulphide (as H_2S)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.05	No Relaxation

15.	Fluoride (as F)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	1	1.5
16.	Free Residual Chlorine (As Cl_2)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	0.2	1
17.	Chloramines (as Cl_2)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	4	No Relaxation
18.	Phenolic Compound (as C6H5OH)	mg/L	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	0.001	0.002
19.	Cyanide (as CN)	mg/L	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	0.05	No Relaxation
20.	Anionic Surfacatant (as MBAS)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	0.2	1
21.	Ammonia (As Total Ammonia)	mg/L	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	0.5	No Relaxation
22.	Iron (as Fe)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	1	No Relaxation
23.	Zinc (as Zn)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	5	15
24.	Boron (as B)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.5	1
25.	Nickel (as Ni)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.02	No Relaxation
26.	Manganese (as Mn)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	0.3
27.	Lead (as Pb)	mg/L	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	0.01	No Relaxation

28.	Selenium (as Sae)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.01	No Relaxation
29.	Arsenic (as As)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.01	0.1
30.	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.003	No Relaxation
31.	Copper (as Cu)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.05	1.5
32.	Molybdenum (as Mo)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.07	No Relaxation
33.	Chromium (as Cr)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.05	No Relaxation
34.	Aluminium (as Al)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.03	0.2
35.	Silver (as Ag)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.1	No Relaxation
36.	Barium (as Ba)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.7	No Relaxation
37.	Mineral Oil	mg/L	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	0.5	No Relaxation
38.	Poly Chlorinated Biphenyls (PCB)	mg/L	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	0.0005	No Relaxation
39.	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	0.0001	No Relaxation
40.	Bromoform	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	No Relaxatio

41.	Dibromochloromethane	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	No Relaxation
42.	Bromodichloromethane	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.06	No Relaxation
43.	Chloroform	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.2	No Relaxation
44.	*E-Coli*	cfu/100ml	Absent	Absent	Absent	Absent	Absent	Shall not be detectable in any 100 ml	Not Specified
45.	Total Coliform	cfu/100ml	Absent	Absent	Absent	Absent	Absent	Shall not be detectable in any 100 ml	Not Specified

Table 3.23 (c): Ground Water analysis report

S.No.	Parameter	Unit	Analysis Results					Drinking Water Standards/Limit (IS:10500)	
			Near Rajiv Gandhi South Campus Banras Hindu University	Kotwa (Bela)	Shashikala Shikshan Sanstha	Ukhdand	Chakulia	Desirable Limit	Permissible Limit
			GW 11	GW12	GW 13	GW 14	GW 15		
1	Colour	Hazen	BDL(DL-1.0)	BDL(DL-1.0)	BDL (DL-1.0)	BDL (DL-1.0)	BDL (DL-1.0)	5	15
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	1	5

5	pH Value	-	7.41	7.65	7.61	6.69	7.79	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	293	382	317	318	390	500	2000
7	Total Hardness (as $CaCO_3$)	mg/L	112	161	146	122	178	200	600
8	Calcicum (as Ca)	mg/L	33.6	32.0	38.4	32.8	37.6	75	200
9	Magnesium (as Mg)	mg/L	6.8	14.7	12.1	9.7	20.4	30	100
10	Total Alkalinity (as $CaCO_3$)	mg/L	80	105	74	80	98	200	600
11	Chloride (as Cl)	mg/L	72	86	90	88	88	250	1000
12	Nitrate as (NO_3)	mg/L	2.8	2.7	1.4	1.3	1.7	45	No Relaxation
13	Sulphate (as SO_4)	mg/L	17.2	14.1	13.4	12.8	16.4	200	400
14	Sulphide (as H_2S)	mg/L	BDL(DL-0.01)	BDL (DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	BDL(DL-0.1)	BDL (DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	1	1.5
16	Free Residual Chlorine (As Cl_2)	mg/L	BDL(DL-0.1)	BDL (DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	0.2	1
17	Chloramines (as Cl_2)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	4	No Relaxation
18	Phenolic Compound (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL (DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfacatant (as MBAS)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	0.2	1
21	Ammonia (As Total Ammonia)	mg/L	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	1	No Relaxation

23	Zinc (as Zn)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	5	15
24	Boron (as B)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.5	1
25	Nickel (as Ni)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Sae)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	0.5	No Relaxation

38	Poly Chlorinated Biphenyls (PCB)	mg/L	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	No Relaxatio
41	Dibromochloromethane	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.2	No Relaxation
44	*E-Coli*	CFU/100ml	Absent	Absent	Absent	Absent	Absent	Shall not be detectable in any 100 ml	Not Specified
45	Total Coliform	CFU/100ml	Absent	Absent	Absent	Absent	Absent	Shall not be detectable in any 100 ml	Not Specified

Table 3.23 (d): Ground Water analysis report

S.No.	Parameter	Unit	Result	Result	Result	Result	Drinking Water Standards/Limit (IS:10500)

			Rajkiya Ashram Paddhati Balika Vidhyalaya	Kastoorba Gandhi Girls College	Farmhouse Near Project Site	Farmhouse Near Project Site	Desirable Limit	Permissible Limit
			GW 16	**GW 17**	**GW 18**	**GW 19**		
1	Colour	Hazen	BDL (DL-1.0)	BDL (DL-1.0)	BDL (DL-1.0)	BDL (DL-1.0)	5	15
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	1	5
5	pH Value	-	7.63	7.66	7.64	7.69	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	357	370	308	338	500	2000
7	Total Hardness (as $CaCO_3$)	mg/L	140	152	140	152	200	600
8	Calcicum (as Ca)	mg/L	35.2	40	34.4	35.2	75	200
9	Magnesium (as Mg)	mg/L	12.6	12.6	13.1	15.6	30	100
10	Total Alkalinity (as $CaCO_3$)	mg/L	89	68	88	62	200	600
11	Chloride (as Cl)	mg/L	79	56	68	66	250	1000
12	Nitrate as (NO_3)	mg/L	1.8	1.1	1.2	1.6	45	No Relaxation
13	Sulphate (as SO_4)	mg/L	15.4	8.6	10.5	8.8	200	400
14	Sulphide (as H_2S)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	1	1.5

16	Free Residual Chlorine (As Cl_2)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	0.2	1
17	Chloramines (as Cl_2)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	4	No Relaxation
18	Phenolic Compound (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfacatant (as MBAS)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	0.2	1
21	Ammonia (As Total Ammonia)	mg/L	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	1	No Relaxation
23	Zinc (as Zn)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	5	15
24	Boron (as B)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.5	1
25	Nickel (as Ni)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	BDL(DL-0.005)	0.01	No Relaxation

28	Selenium (as Sae)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	BDL(DL-0.00005)	0.0001	No Relaxation

40	Bromoform	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	No Relaxatio
41	Dibromochloromethane	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	0.2	No Relaxation
44	*E-Coli*	cfu/100ml	Absent	Absent	Absent	Absent	Shall not be detectable in any 100 ml	Not Specified
45	Total Coliform	cfu/100ml	Absent	Absent	Absent	Absent	Shall not be detectable in any 100 ml	Not Specified

Observations:

- The analysis results indicate that pH of the groundwater was found to be in range of 6.69 to 7.79 indicating a neutral to slightly alkaline nature of the groundwater. This is favorable for diverse applications, including drinking water.
- The TDS were found to be in the range of 288 mg/l – 390 mg/l, compliant with the standard for drinking water (below 500 mg/l). This suggests good water quality concerning dissolved solids.
- Other parameters like Total Hardness as $CaCO_3$ (98 mg/l –178 mg/l). The total hardness levels are within the acceptable range for drinking water, ensuring a balanced mineral composition.
- Total Alkalinity (62–120 mg/ l): falls within prescribed limits, contributing to water stability and buffering capacity.
- Calcium as Ca (25.6–48 mg/ l) levels are within permissible limits, indicating a favorable mineral balance.
- Magnesium as Mg (4.9–20.4 mg/ l) levels are within acceptable limits, contributing to overall mineral content.
- Chloride (54 –90 mg/ l) levels are within recommended ranges for pleasant taste in drinking water.
- Sulphate as SO_4 (8.6-19.2 mg/l) levels are within acceptable limits, posing no health concerns.
- Fluoride as F- found are below the detectible limit

3.9.3 RESULT AND CONCLUSION:

Ground water

The groundwater analysis indicates overall suitability for various uses, including drinking. The measured parameters, such as pH, TDS, and various chemical constituents, align with

water quality standards. Consequently, in the absence of an alternative source, groundwater can be considered safe for consumption and domestic applications.

Surface Water:

Seven surface water samples were collected as grab samples and were analyzed for various parameters. The analyzed results were compared with the standards for surface water as per IS: 2296. The presentation of results is in the following tables.

Table 3.24: Surface water sampling stations

S. No.	Monitoring Locations	Station Code	Selection criteria	Distance (km)	Direction
1.	Upper Khajor Dam	SW1	Surface water bodies in the study area	4.3	W
2.	Jamthwa Nadi (Up stream)	SW 2		2.2	W
3.	Jamthwa Nadi (Down stream)	SW 3		2.5	W
4.	Jogaldari Nala (Down stream)	SW 4		2.5	E
5.	Jogaldari Nala (Down stream)	SW 5		2.1	E
6.	Pahiti Nadi(Up stream)	SW 6		3.9	NE
7.	Pahiti Nadi(Down stream)	SW 7		3.6	NE

Table 3.25: Surface Water analysis report

S.No.	Parameter	Unit	S1	S2	S3	S4	S5	S6	S7
1	pH	-	7.67	7.75	7.47	7.38	7.35	7.26	7.46
2	Turbidity	NTU	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)
3	Total Suspended Solids (TSS)	mg/L	8	12	7	9	10	11	8
4	Total Hardness (as $CaCO_3$)	mg/L	128	120	144	116	130	125	135
5	Total Alkalinity (as $CaCO_3$)	mg/L	60	52	85	70	75	62	76
6	Chlorides (as Cl)	mg/L	88	74	92	84	82	84	84
7	Sulphate (as SO_4)	mg/L	7.3	7.9	12.2	9.6	12.3	7.9	9.8
8	Nitrate (as NO_3)	mg/L	1.2	1.5	1.7	2.1	2.2	1.7	1.5
9	Fluoride (as F)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)
10	Biochemical Oxygen Demand (BOD)	mg/L	4	5	8	5	7	4	6
11	Chemical Oxygen Demand (COD)	mg/L	10	16	23	17	21	12	17
12	Phenolic Compounds (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)
13	Lead (as Pb)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)

14	Iron (as Fe)	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)
15	Arsenic (as As)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)
16	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)
17	Total Chromium (as Cr)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)
18	Mercury (as Hg)	mg/L	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)	BDL(DL-0.0005)
19	Copper (as Cu)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)
20	Zinc (as Zn)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)
21	Selenium (as Se)	mg/L	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)
22	Oil & Grease	mg/L	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)
23	Colour	Hazen	20	15	20	10	10	5	10
24	Dissolved Solids	mg/L	330	297	344	283	350	294	318
25	Residual Free Chlorine	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)
26	Boron (as B)	mg/L	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)

27	Calcium (as Ca)	mg/L	33.6	32.0	35.2	28.8	36.8	28.0	30.0
28	Magnesium (as Mg)	mg/L	10.7	9.7	13.6	10.7	9.2	13.4	14.6
29	Dissolved Oxygen	mg/L	7.3	6.0	4.9	5.7	5.2	6.1	5.7
30	Nitrogen	mg/L	BDL(DL-0.5)	BDL(DL-0.5)	BDL(DL-0.5)	BDL(DL-0.5)	BDL(DL-0.5)	BDL(DL-0.5)	BDL(DL-0.5)
31	Ammonia	mg/L	BDL(DL-02)	BDL(DL-02)	BDL(DL-02)	BDL(DL-02)	BDL(DL-02)	BDL(DL-02)	BDL(DL-02)
32	Phosphorus	mg/L	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)
33	*E-Coli*	MPN/100ml	Present	Present	Present	Present	Present	Present	Present
34	Total Coliform	MPN/100ml	Present	Present	Present	Present	Present	Present	Present

3.9.4 OBSERVATIONS:

- pH of the surface water was found to be in range of 7.26 to 7.75, indicating a neutral to slightly alkaline nature of the water.
- BOD was found to be in the range 4 mg/l -8 mg/l. These BOD levels suggest moderate to high organic pollution in the water, indicating the presence of biodegradable organic matter.
- COD was found to be in the range 10 mg/l – 23 mg/l. The COD levels indicate the amount of oxygen required for the oxidation of both organic and inorganic substances, with higher values suggesting increased pollution.
- DO was found to be in the range 4.9 mg/l – 7.3 mg/l, could potentially impact sensitive organisms.
- TSS were found within the desired limit.

3.9.5 RESULT AND CONCLUSION:

The surface water analysis indicates generally acceptable pH and TDS levels. However, concerning signs of pollution are evident with elevated BOD and COD, suggesting the presence of organic pollutants.

Table 3.26: Water Quality Criteria as per CPCB

Designated Best Use	Class of water	Criteria
Drinking water source without conventional treatment but after disinfection	A	• Total Coliform Organism MPN/100ml shall be 50 or less • pH between 6.5 and 8.5 • Dissolved Oxygen 6mg/l or more Biochemical Oxygen Demand 5 days 20°C 2mg/l or less
Outdoor bathing (Organized)	B	• Total Coliform Organism MPN/100ml shall be 500 or less • pH between 6.5 and 8.5 • Dissolved Oxygen 5mg/l or more • Biochemical Oxygen Demand 5 days 20°C 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	• Total Coliform Organism MPN/100ml shall be 5000 or less • pH between 6 to 9 • Dissolved Oxygen 4mg/l or more • Biochemical Oxygen Demand 5 days 20°C 3mg/l or less
Propagation of Wildlife and Fisheries	D	• pH between 6.5 to 8.5 • Dissolved Oxygen 4mg/l or more

		• Free Ammonia (as N) 1.2 mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	E	• pH between 6.0 to 8.5 • Electrical Conductivity at 25°C micro mhos/cm Max.2250 • Sodium absorption Ratio Max. 26 • Boron Max. 2mg/l
	Below-E	• Not Meeting A, B, C, D & E Criteria

As per IS:2296 criteria, the water samples are suitable for drinking with conventional treatment (Class C) & propagation of Wildlife and Fisheries (Class D).

3.10 NOISE ENVIRONMENT

The environmental assessment of noise from the project activity and vehicular traffic can be undertaken by taking into consideration various factors like potential damage to hearing, physiological responses, and annoyance and general community responses.

- Characteristics of noise sources (instantaneous, intermittent or continuous in nature). It can be observed that steady noise is not as annoying as one which is continuously varying in loudness.
- The time of day at which noise occurs, for example high noise levels at night in residential areas are not acceptable because of sleep disturbance; and
- The location of the noise source, with respect to noise sensitive land use, determines the loudness and period of exposure.

The main objective of noise monitoring in the study area is to establish the baseline noise levels and assess the impact of the total noise expected to be generated by the construction and operation of the project activity around it.

Table 3.27: Noise Level as Per CPCB Norms

S. No.	Category of Area	Day time	Night time
		Noise Level Leq. dB (A)	
1.	Industrial area	75	70
2.	Commercial area	65	55

3	Residential area	55	45
4	Silence Zone	50	40

Note:

1. *Day time is reckoned in between 6 a.m. and 10 p.m.*
2. *Night time is reckoned in between 10 p.m. and 6 a.m.*
3. *Silence zones are referred to as areas upto 100 meters around such premises as hospitals, educational institutions and courts. The Silence zones are to be declared by the Competent Authority.*
4. *Use of vehicular horns, loudspeakers and bursting of crackers shall be banned in these zones.*
5. *Mixed categories of areas should be declared as one of the four above-mentioned categories by the Competent Authority and the corresponding standards shall apply.*

3.10.1 IDENTIFICATION OF SAMPLING LOCATIONS

A preliminary reconnaissance survey has been undertaken to identify the major noise generating sources in and around the project site area. Noise level at different noise generating sources has been identified based on the activities in the study area and ambient noise due to traffic. The noise monitoring has been conducted for determination of ambient noise levels at twelve locations in the study area for post monsoon season (Oct-Dec' 2024). The noise levels at each location were recorded for 24 hours. The environment setting of noise monitoring locations is given in table above.

Table 3.28: Ambient Noise monitoring stations

S. No.	Monitoring Locations	Station Code	Selection criteria	Distance (km)	Direction
1.	Project Site	N1	Core	--	--
2.	Kotwa	N2	Residential area	6.7	WNW
3.	Marihan	N3	Residential area	5.1	SSE
4.	Dhekwah	N4	Residential area	5.3	ESE
5.	Darhiram	N5	Residential area	2.6	NE
6.	Patehra	N6	Residential area	9.1	SW
7.	Gogdara	N7	Residential area	7.5	ENE
8.	Sugapankh Khurd	N8	Residential area	8.8	SSW
9.	Bharpura	N9	Residential area	7.2	NNE
10.	Ordial Institu Campus	N10	Sensitive location	1.2	SW

S. No.	Monitoring Locations	Station Code	Selection criteria	Distance (km)	Direction
11.	Near Rajiv Gandhi South Campus Banras Hindu University	N11	Sensitive location	9.0	NW

3.10.2 METHOD OF MONITORING

Sound Pressure Levels (SPL) measurements were recorded at ten locations. The readings were recorded using data logger & integrated representative value for every hour for 24-hrs is completed using software. The day noise levels have been monitored during 6 am to 10 pm and night noise levels during 10 pm to 6 am at all the locations covered in the study area. Noise levels recorded at each station are computed for equivalent noise levels. Equivalent noise level is a single number descriptor for describing time varying noise levels.

Table 3.29: Noise (Sound) Measuring Instrument

Instrument	Make	Model
Noise Level Meter	Lutron	Lutron
Noise Level Meter	Envirotech	SLM-100

Table 3.30: Testing Method to be followed

Parameter	Technical Protocol
Noise Level in dB(A) for continuous 24 hours at 1 hour interval	IS 9989: 1981 (Reaffirmed Year 2014)

3.10.3 PRESENTATION OF RESULTS

The statistical analysis is done to measure noise levels at ten locations in the study area. The statistical analysis results are given in **Table-3.31.** The noise quality results obtained for the study period is given

Table 3.31: Ambient Noise Levels in the Study Area

S. No.	Locations	Day Time Leq. dB(A)	Night Time Leq. dB (A)
1.	Project Site	52.3	43.2
2.	Kotwa	49.2	43.5
3.	Marihan	50.9	42.7
4.	Dhekwah	50.5	43.2
5.	Darhiram	49.5	41.9
6.	Patehra	50.6	40.2
7.	Gogdara	49.4	43.0
8.	Sugapankh Khurd	49.6	41.1
9.	Bharpura	50	42.7
10.	Ordial Institu Campus	50.6	44.0
11.	Near Rajiv Gandhi South Campus Banras Hindu University	51.9	40.5

3.10.4 OBSERVATIONS

The observed noise levels generally adhere to CPCB standards, indicating acceptable noise pollution levels in the monitored locations.

3.11 ECOLOGY & BIODIVERSITY STUDIES

Documentation of biological components in a project area and its immediate surroundings is imperative in the case of any developmental project, to ensure that the ecological setup of the area does not degrade and in effect is improved. For understanding the impact of a project, it is better to prioritize the conservation issues, in terms of flora and fauna, in addition to other base line parameters. Biodiversity study of the project area was carried out to understand the status of predominant floral and faunal groups i.e. trees, shrubs, herbs, grasses, herpetofauna, avifauna and mammals. To collect data and information on specific components of the ecological system and pertinent issues widely used standard scientific methods were adopted. Field surveys were undertaken during Oct-Dec' 2024 to collect relevant data.

a. Objectives of Ecological Studies

The ecological study was carried out with following objectives: To identify the ecosystems as well as accounting for the flora & fauna of the study area which include the project area called core zone and 10 km radius area from the boundaries of core zone designated as buffer zone. Regarding flora and fauna, the following shall be specifically investigated:

i. Flora

- To identify the protected habitats, and forest land falling within the determined study area (core +buffer zone)
- Classification of floral diversity or any threatened, protected or endemic floral species prevailing in the study areas bases on field surveys
- Identification of area protected under international conventions, national or local legislation and those recognized nationally and internationally for their ecological, landscape, cultural or other related value
- To identify the aquatic floral species in and around falling in the study area. (core and buffer zone of the study area)

ii. Fauna

- Preliminary survey and observation to identify the faunal diversity within the study area (core and buffer zone)
- Identification and classification of any species recognized as threatened (in accordance with the IUCN Red list and according to the schedules of the Wildlife (Protection) Act 1972 and subsequent amendments)
- To Identify the areas which are important or sensitive for wildlife and ecological reason including their breeding, nesting, foraging, resting, over wintering area including wildlife migratory corridors/ avian migratory routes, protected areas, wetlands, Grass land.
- Identification and assessment of aquatic diversity and ecological resources in wetlands water body, pond and lakes within the study area.

Core Zone:

The land topography of Core Zone, located in Mirzapur district of Uttar Pradesh, is predominantly undulating, with a mix of flat plains and hilly terrains characteristic of the Vindhyan region. The area features rocky outcrops, gentle slopes, and patches of alluvial soil. Vegetation in the Core Zone consists mainly of tropical dry deciduous forests interspersed with scrublands and grass patches, supporting a variety of native flora such as neem, babool, bargad and mahua. The land characteristics reflect a combination of agricultural and barren lands.

Buffer Zone:

The area encompassing 10 km radius from the boundaries of the project area of TPP, Mirzapur, say 10 km radius of the core zone, has been designated as the buffer zone (BZ) for this study purpose. There are no eco sensitive areas like National Park, Wild Life Sanctuary, Elephant/Tiger Reserve or Wild Life Corridors and and/or breeding or nesting ground and Eco-sensitive Zones or Biosphere Reserves or Ramsar Wetlands either within the Core zone (project site) or within the zone of influence (ZoI) say buffer zone i.e. within 10 km radius of project boundaries.

Hereinafter, wherever CZ is mentioned shall mean Core Zone, BZ is mentioned shall mean Buffer zone and study area (SA) is mentioned shall mean both core zone and buffer zone together.

Stages of biodiversity assessment:

Rapid Survey:

Conducting a rapid survey for ecological and biodiversity study is crucial for gaining insights into the health and diversity of ecosystems. This type of survey typically involves a systematic collection of data on various species, their abundance, and the environmental factors that influence their distribution. Field researchers employ a combination of observational methods, specimen collection, and data recording to assess the overall biodiversity of a given area. These surveys help scientists and conservationists understand the interconnections within ecosystems, identify key species, and monitor changes over time. Rapid surveys are particularly valuable for quickly assessing the status of biodiversity in areas facing immediate threats or undergoing rapid environmental changes. The data collected from such surveys contribute to informed conservation strategies and policy decisions aimed at preserving and restoring ecosystems.

Desktop assessment:

A desktop assessment for an ecological and biodiversity study involves a comprehensive analysis of existing data, published reliable literature, and available resources without direct fieldwork. Researchers utilize previously collected information, satellite imagery, maps, and scientific literature to understand the ecological context of a particular area. This method is valuable for obtaining a preliminary overview of biodiversity patterns, habitat types, and potential threats. Desktop assessments also include reviewing historical data to identify trends and changes in biodiversity over time. While field surveys provide detailed, on-the-ground insights, a desktop assessment offers a cost-effective and time-efficient way to gather baseline information and prioritize areas for further study. This approach is particularly useful when planning larger-scale ecological research or when faced with constraints that limit immediate field access.

Sources of secondary data:

Secondary data sources play a crucial role in ecological and biodiversity studies, providing valuable information collected by forest departments. One major source is academic literature, encompassing peer-reviewed articles, books, research papers and forest department reports. These publications often contain detailed ecological data, species inventories, and research findings. Secondary data of the study area collected from the desk research to determine the land use and land cover (Toposheet, Satellite imagery), vegetation type and floral and faunal species research documentation assemblage in the study area.

Field survey for primary data & assessment:

Methodology adopted for flora studies:

- Survey and Assessment of floral diversity and species is carried out using scientific methods (Tree, Shrub, Herb, Climber and Grass species)
- All the existing floral species in the study area has been surveyed systematically to unveil their Population status and potential threats.
- Geographic Location of the surveyed floral vegetation and species is recorded with the help of G. P. S. Device.

- Quadrate and vegetation sampling method used to count total number of floral species and to capture the frequency of dominant species.

  The present study on the vegetation assessment for the project activity is based on field survey of the area. The plant species were also identified with the help of taxonomists of related field and expert from the nearby institutions. Besides the collection of plant species, information was also collected with vernacular names of plant species made by local inhabitants. In this process the whole study area divided into different sections to get the maximum diversity of plant species. The sampling sites were selected based on land use pattern, topography and floristic composition of the study area. The other relevant data on biodiversity, in the study area have been collected from secondary sources like forest and wildlife departments.

  Floristic studies were conducted to know the presence of any endangered/threatened/endemic plant species in the study area. The data collected in the field was analysed for phyto- sociological parameters such as density, frequency and abundance following standard phyto-sociological methods. IVI and Shannon-Wiener diversity index (Shannon and Wiener, 1963) was calculated for all life forms as follows:

Table 3.32: Estimation of phyto-sociological parameters

Frequency (%) = (No. of quadrats of occurrence of the species X 100) / Total No. of quadrats sampled
Abundance = Total No. of individuals of the species / No. of quadrats of Occurrence
***Density** = Total No. of individuals of the species / Total No. of quadrats sampled
Relative Frequency = (Frequency of the given species X 100) / Sum of all frequencies
Relative Density = (Density of the given species X 100) / Sum of all densities
Relative Abundance = (Abundance of species X 100) / Sum of all abundances
Basal Area = $(GBH)^2$ / 4Π
Dominance = Total Basal Area / Total area sampled
Relative Dominance = (Dominance of given species X 100) / Dominance of all species
Important Value Index (I.V.I.) = Relative Density + Relative Frequency + Relative Dominance
Note: *Density refers to the number of individuals per unit area of a site.

Statistical Analysis

- Shannon-Wiener diversity index (Shannon and Wiener, 1963) was calculated for all life forms following: Shannon- Wiener Information Function: $D = -\Sigma\ pi\ ln\ pi$
- Where: i = an index for the number of species sampled, $p_i = n_i/N$ =percentage of species i in the entire sample (N) of individuals, and ln = natural log. Multiply the percentage (or proportion) of each species in the sample times the natural log of that same value, sum the products across all species, and then multiply by minus 1.

Methodology adopted for faunal studies.

- Documentation of Avian, Reptilian, Insect, Amphibian, Mammal and other faunal diversity.
- Direct and indirect search method is used to document the faunal diversity in the study area. Methods like line transect, animal sign /calls, pug marks excreta are also used for brief study,
- Assessment and analysis of recoded schedule faunal species (IUCN, ZSI)
- Identification of any protected and conservation valuable habitat for the faunal elements in the project site and surrounding areas within 15 km range from the site.
- Collection of secondary data from forest department or any forest range within the study area and interaction and data collection from local community of the study area (core and buffer zone).
- Socio economic survey and direct community survey and interview to confirm the presence of local wildlife in the protected areas around study area.

Table 3.33: Methods used for study of flora & fauna

Taxa	Sampling Methods
Plants	Quadrate sampling and vegetation sampling
Butterflies	Line Transect, Visual encounter survey
Amphibians	Visual encounter survey (search)
Reptiles	Visual encounter survey (search)
Birds	Point count, opportunistic observation
Mammals	Tracks and signs, and visual encounter survey

Fauna

i. Avifauna

Species search and census: Standard methods were followed to survey the avifauna. Point count method was followed for counting the birds. Opportunistic surveys were also carried out with respect to avifaunal checklist. Identification by calls was also made for species which were not directly encountered or were hidden in the vegetation or canopy. Secondary data collected from the literature was also included in the present given list.

ii. Herpetofauna

Amphibians and reptiles recorded during area searches were identified by visual characteristics. Aquatic searches involved examining each type of aquatic habitat.

iii. Mammals

Presence of mammals was documented by using both direct sightings and indirect evidences i.e. animal burrows/holes, scats, pellets, droppings and tracks Opportunistic sightings were also included. Circular Plots were used to search indirect evidences.

Ecosystem diversity of the study area:

Study area having about maximum geographical area under forest cover, which is very rich in biodiversity because of favorable agro-climatic conditions like good rainfall and comparatively less biotic interference. State has dense forest cover with all the three canopies in the forest area.

Table 3.34: Sampling locations

S.No.	Latitude	Longitude	Location Name
1.	24°58'17.04"N	82°39'50.05"E	Project Site sampling 1
2.	24°59'03.85"N	82°40'29.01"E	Near Dadri Khurd
3.	24°58'40.20"N	82°39'51.64"E	Project Site sampling 2
4.	24°58'15.01"N	82°40'12.15"E	Project Site sampling 3
5.	24°59'26.18"N	82°40'06.74"E	Project Site sampling 4
6.	24°59'50.07"N	82°40'24.23"E	Project Site sampling 5
7.	24°59'58.22"N	82°40'44.10"E	Project Site sampling 6

8.	24°59'18.67"N	82°36'25.04"E	Near Upper Khajuri Dam
9.	24°58'28.10"N	82°36'31.04"E	Near Sikhatahi
10.	24°58'19.88"N	82°38'38.50"E	Near Danti
11.	25°00'10.28"N	82°39'15.84"E	Near Dadri Gahira
12.	24°59'28.58"N	82°45'14.15"E	Near Jhari Jharna
13.	24°59'38.73"N	82°'42.11.51"E	Near Jagiya Bari Hills
14.	24°58'28.89"N	82°41'52.62"E	Near Barhi Ram
15.	24°02'34.68"N	82°39'48.18"E	Near Gaura Raja

Status of flora

Table 3.35: Flora of Core Zone

S.No.	Scientific Name	Common/Vernacular Name	Family
1.	*Madhuca indica*	Mahua	Sapotaceae
2.	*Ficus bengalensis*	Bargad	Moraceae
3.	*Acacia leucophloea*	Reonja	Mimosaceae
4.	*Ziziphus jujuba*	Bada ber	Rhamnaceae
5.	*Butea monosperma*	Palash	Fabaceae
6.	*Albizia lebbeck*	Siris	Fabaceae
7.	*Prosopis cineraria*	Khejri	Fabaceae
8.	*Acacia nilotica*	Desi babool	Fabaceae

Table 3.36: List of Shrub species reported in the Existing Core Zone (Cz)

S.No.	Scientific Name	Common/Vernacular Name	Family
1.	*Prosopis juliflora*	Vilayati Babool	Mimosaceae
2.	*Ipomoea carnea*	Besharam	Convolvulaceae
3.	*Ziziphus nummularia*	Jhadi Ber	Rhamnaceae
4.	*Calotropis procera*	Aak	Asclepiadaceae
5.	*Lantana camara*	Raimuniya	Verbenaceae
6.	*Tribulus terrestris*	Gokhru	Zygophyllaceae
7.	*Achyranthes aspera*	Chirchita	Amaranthaceae
8.	*Nyctanthes arbortristis*	Parijat	Oleaceae
9.	*Sida cardifolia*	Bariyarai	Malvaceae
10.	*Abrus precatorious*	Gumachi	Fabaceae

Table 3.37: List of common herb, grasses and climbers' species reported in the existing core zone (cz)

S.No.	Scientific name	Common/ Vernacular Name	Family
1.	*Withania somnifera*	Ashwagandha	Solanaceae
2.	*Ocimum sanctum*	Tulsi	Lamiaceae
3.	*Tridex procumbens*	Musbhari	Asteraceae
4.	*Cynadon dactylon*	Dub	Poaceae
5.	*Evolvulus alsinoides*	Neeli sankhpushpi	Convolvulaceae
6.	*Cannabis sativa*	Bhang	Cannabaceae
7.	*Tribulus terrestris*	Gokhuru	Zygophyllaceae
8.	*Solenum xanthocarpum*	Katai	Solenaceae
9.	*Bambusa vulgaris*	Bansh	Poaceae



Bambusa vulgaris



Butea monosperma





Mahua indica



Acacia leucophloea



Ziziphus jujuba



Ficus benghalensis



Ziziphus nummularia

Flowering in *Bambusa vulgaris*

Figure 3.20: Photographs of observed fauna in the core zone

Flora of Buffer zone

Table 3.38: Trees of buffer zone

S. No.	Scientific Name	Family	Local name/Vernacular Name
1.	*Acacia catechu*	Leguminosae	Khair
2.	*Acacia leucophloea*	Leguminosae	Runjha
3.	*Acacia nilotica*	Leguminosae	Babool
4.	*Acacia auriculiformis*	Fabaceae	Sonjhari
5.	*Adina cordifolia*	Rubiaceae	Haldu
6.	*Aegle marmelos*	Rutaceac	bilwa

7.	*Ailanthus excelsa*	Simaroubaceae	Arul
8.	*Albizia lebbeck*	Leguminosae	Kalasirus
9.	*Albizia procera*	Leguminosae	Safed siris
10.	*Albizzia odoratissima*	Leguminosae	Arvan
11.	*Annona squamosa*	Annonaceae	Sitaphal
12.	*Anogeissus acuminata*	Combretaceae	Panidhawara
13.	*Anogeissus latifolia*	Combertaecae	Dho
14.	*Anogeissus pendula*	Combertaecae	Kardhai
15.	*Anthocephalus kadamba*	Rubiaceae	Kadamb
16.	*Azadirachta indica*	Meliaceae	Neem
17.	*Bauhinia malabarica*	Leguminosae	Aamta
18.	*Bauhinia racemosa*	Leguminosae	Senta
19.	*Bauhinia variegata*	Leguminosae	Kachnaar
20.	*Bombax ceiba*	Shalmeliceae	Samel
21.	*Borassus flabellifer*	Palmae	Tad
22.	*Boswellia serrata*	Burseraceae	Sajar
23.	*Bridelia retusa*	Euphorbiaceac	Akaj
24.	*Bridelia retusa*	Euphorbiaceae	Kasai
25.	*Buchanania lanzan*	Anacardiaceae	Chironji
26.	*Butea monosperma*	Leguminosae	Palas
27.	*Careya arborea*	Myrtaceae	Kumbhi
28.	*Casearia graveolens*	Samydaceae	Gilchi
29.	*Casearia tomentosa*	Samidceae	Chilla
30.	*Cassia Fistula*	Leguminosae	Girmala
31.	*Chloroxylon swietenia*	Miliceae	Bhira
32.	*Cleistanthus collinus*	Euphorbiaceae	Garari
33.	*Cochlospermum religiosum*	Bixaceae	Galgal
34.	*Cordia dichotoma*	Boraginaceae	Lasoda
35.	*Dalbergia latifolia*	Leguminosae	Seesham
36.	*Dalbergia paniculata*	Leguminosae	Fanshi
37.	*Dalbergia sissoo*	Leguminosae	Sishu
38.	*Delonix regia*	Leguminosae	Gulmohar
39.	*Dillenia pentagyna*	Dilleniaceae	Kalla
40.	*Diospyros cordifolia*	Ebenaceae	Bhak- Tendu
41.	*Diospyros melanoxylon*	Ebenaceae	Tendu
42.	*Diospyros montana*	Ebenaceae	Bistendu

43.	*Ehretia laevis*	Boraginaceae	Datranga
44.	*Elaeodendron glaucum*	Celastraceae	Jamrashi
45.	*Emblica officinalis*	Euphorbiaceac	Aavanla
46.	*Eriolaena hookerianna*	Sterculiaceae	Bouti
47.	*Erythrina lndica*	Leguminosae	Pangra
48.	*Erythrina suberosa*	Leguminosae	Pangre
49.	*Eucalyptus spps*	Myrtaceae	Neelgiri
50.	*Euphorbia neriifolia*	Euphorbiaceae	Thuar
51.	*Feronia limonia*	Rubiaceae	Kaitha
52.	*Ficus bengalensis*	Moraceae	Barghad
53.	*Ficus glomerata*	Moraceae	Gular
54.	*Ficus lacor*	Moraceae	Pakar
55.	*Ficus religiosa*	Moraceae	Peepal
56.	*Flacourtia indica*	Bixaceae	Kakai
57.	*Gardenia latifolia*	Rubiaceae	Papdi
58.	*Gardenia lucida*	Rubiaceae	Dikamali
59.	*Gardenia turgida*	Rubiaceae	Safeda
60.	*Garuga pinnata*	Burseraceae	Kaket
61.	*Gmelina arborea*	Lamiaceae	Khamir
62.	*Grewia tiliifolia*	Tiliaceae	Dhaman
63.	*Hardwickia binata*	Leguminosae	Anjan
64.	*Holoptelea integrifolia*	Ulmaceae	Chirol
65.	*Hymenodictyon excelsum*	Rubiaceae	Bhanwarsaal
66.	*Ixora arborea*	Rubiaceae	Lokhandi
67.	*Jacaranda acutifolia*	Bignoniaceae	Nupur
68.	*Jatropha curcas*	Euphorbiaceae	Ratanjhot
69.	*Kydia calycina*	Malvaceae	Baranga
70.	*Lagerstroemia parviflora*	Lythraceae	Seja
71.	*Lannea coromandelica*	Anacardiaceae	Moyan
72.	*Lannea grandis*	Anacardiaceae	Gunja
73.	*Limonia crenulata*	Rutaceac	Binnaas
74.	*Madhuca indica*	Sapotaceae	Mahua
75.	*Mallotus phillippinensis*	Eupherbiaceae	Sinduri
76.	*Mangifera indica*	Anacardiaceae	Aam
77.	*Miliusa tomentosa*	Annonaceae	Kari
78.	*Mitragyna parviflora*	Rubiaceae	Kaim

79.	*Morinda tinctoria*	Rubiaceae	Aal
80.	*Nyctanthes arbortristis*	Oleaceae	Harsingar
81.	*Ougeinia oojeinensis*	Leguminosae	Tinsa
82.	*Phoenix humilis*	Arecaceae	Khajoor
83.	*Phoenix sylvestris*	Palmae	Khajur
84.	*Pithecellobium dulce*	Fabaceae	Jungal jalebi
85.	*Pongamia pinnata*	Leguminosae	Karanj
86.	*Pterocarpus marsupium*	Leguminosae	Beeja
87.	*Randia dumetorum*	Rubiaceae	Manphal
88.	*Randia uliginosa*	Rubiaceae	Kalafetra
89.	*Saccopetalum tomentosum*	Annonaceae	Kari
90.	*Sapindus laurifolius*	Sapindaceae	Reetha
91.	*Schleichera oleosa*	Sapindaceae	Kusum
92.	*Schrebera swietenioides*	Oleaceae	Mokha
93.	*Semecarpus anacardium*	Anacanrdiaceae	Bhelva
94.	*Semecarpus anacardium*	Anacardiaceae	Bhilwa
95.	*Shorea robusta*	Dipterocarpaceae	Sal/Sarai
96.	*Soymida febrifuga*	Leguminosae	Rohan
97.	*Sterculia urens*	Sterculiaceae	Kullu
98.	*Stereospermum suaveolens*	Bignoniaceae	Badapadar
99.	*Strychnos nux-vomica*	Leguminosae	Mastih
100.	*Stryrchnos potatorum*	Leguminosae	Chila
101.	*Syzygium cuminii*	Myrtaceae	Jamun
102.	*Tectona grandis*	Lamiaceae	Sanghwan
103.	*Terma orientalis*	Urticaceae	Jivan
104.	*Terminalia arjuna*	Combertaecae	Arjun
105.	*Terminalia bellirica*	Combertaecae	Baheda
106.	*Terminalia chebula*	Combertaecae	Harra
107.	*Terminalia tomentosa*	Combertaecae	Saja
108.	*Wrightia tinctoria*	Apocynaceae	Dudhi
109.	*Xylia xylocarpa*	Leguminosae	Suria
110.	*Ziziphus jujuba*	Rhamnaceae	Ber
111.	*Zizyphus glaberrima*	Rhamnaceae	Ghotia
112.	*Zizyphus mauritiana*	Rhamnaceae	Ber
113.	*Zizyphus xylopyra*	Rhamnaceae	Ghont

Table 3.39: Shrubs of Buffer zone

S.No.	Scientific Name	Common Name	Family
1.	*Andrographis paniculata*	Bhui Neem	Acanthaceae
2.	*Eranthemum pulchellum*	Bantulsi	Acanthaceae
3.	*Achyranthes aspera*	Chirchira	Amaranthaceae
4.	*Carissa spinarum*	Karonda	Apocynanceae
5.	*Calotropis-gigantea*	Aak	Asclepiadaceae
6.	*Flacourtia indica*	Kakai	Bixaceae
7.	*Capparis decidua*	Ker	Capparaceae
8.	*Gymnospori spinosa*	Baikal	Celastraceae
9.	*Alangium-salvifolium*	Akol	Cornaceae
10.	*Antidesma diandrum*	Khatua	Euphorbiaceae
11.	*Colebrookea oppositifolia*	Kalabans	Labiatae
12.	*Cassia auriculata*	Takhad	Leguminosae
13.	*Cassia tora, Linn*	Panwar	Leguminosae
14.	*Demodium motorium*	Rolei	Leguminosae
15.	*Desmodium ganfeticum*	Chapti	Leguminosae
16.	*Desmodium laxiflorum*	Latkani	Leguminosae
17.	*Flemingia semialata*	Ban Rahar	Leguminosae
18.	*Asparagus racemosus*	Shomoshi	Liliaceae
19.	*Azanza lampas*	Bankapas	Malvaceae
20.	*Embelia robusta*	Baibirang	Myrsinaceae
21.	*Gardenia gummigera*	Dikamali	Rubiaceae
22.	*Gardenia lucida*	Paprel	Rubiaceae
23.	*Gardenia turgida*	Phendra	Rubiaceae
24.	*Dodonaea viscosa*	Kharata	Sapindaceae
25.	*Curcuma angustifolia.*	Tikhur	Seitamineae
26.	*Curcuma longa*	Hardi	Seitamineae
27.	*Gerwia hirsuta*	Gutdukri	Tiliaceae
28.	*Grewia rothii.*	Bansuli	Tiliaceae
29.	*Celerodendron serratum*	Duma	Verbenaceae
30.	*Helicteres isora*	Marorphali	Sterculiaceae
31.	*Hibiscus ficulenus*	Banbhendi	Malvaceae

32.	*Holarrhena antidysentrica*	Dhudh	Apocynaceae
33.	*Indigofera arborea*	Neel	Leguminosae
34.	*Indigofera pulchella*	Girol	Leguminosae
35.	*Justicia adhatoda*	Arusa	Acanthaceae
36.	*Lantana camara*	Raimuniya	Verbenaceae
37.	*Leea marcrophylla*	Hathikan	Vitaceae
38.	*Meghania semialata*	Banrahar	Leguminoseae
39.	*Murraya exotica*	Ban Mirchi	Rutacae
40.	*Nyctanthes arbor-tristis*	Harsigar	Oleaceae
41.	*Petalidium barleriodes*	Indrajata	Acanthaceae
42.	*Peucamum nagpurense*	Bandhania	Umbeliferae
43.	*Phoenix acaulis*	Chhind	Palmae
44.	*Swertia angustifolia*	Chiraita	Acanthaceae
45.	*Vitex negundo.*	Nirgundi	Verbenaceae
46.	*Woodfordia floribunda*	Dhawai	Lythraceae
47.	*Woodfordia fruticosa*	Dhawai	Lytharceae
48.	*Zizyphus mauritiana*	Ber	Rhamnaceae
49.	*Premna integrifolia*	Arni	Lamiaceae

Table 3.40: Herbs of Buffer zone

S. No.	Scientific Name	Family	Local name/Vernacular Name
1.	*Achyranthes aspera*	Amaranthaceae	Chichdi, Chirchita
2.	*Amaranthus tricolor*	Amaranthaceae	Cholai
3.	*Gomphrena celosioides*	Amaranthaceae	Nirwad malli
4.	*Pupalia lappacea*	Amaranthaceae	Nagdamani
5.	*Aristolochia bracteata*	Aristolochiaceae	Kidamar
6.	*Asparagus racemosus*	Asparagaceae	Shatavari
7.	*Acanthospermum hispidum*	Asteraceae	Kanthi
8.	*Ageratum conyzoides*	Asteraceae	Nilam
9.	*Bidens biternata*	Asteraceae	Kuri
10.	*Parthenium hysterophorus*	Asteraceae	Congress grass
11.	*Tridax procumbens*	Asteraceae	Ghamra
12.	*Vernonia cinerea*	Asteraceae	Purple fleabane
13.	*Cannabis sativa*	Cannabaceae	Bhang, Ganja
14.	*Capparis zeylanica*	Capparaceae	Aradanda, Jhyris

15.	*Chenopodium album*	Chenopodiaceae	Bathua
16.	*Argyreia nervosa*	Convolvulaceae	Samander-ka-pat
17.	*Ipomoea sp*	Convolvulaceae	Dudhiakalmi
18.	*Coccinia grandis*	Cucurbitaceae	Kundru, Kanduri
19.	*Cyperus rotundus*	Cyperaceae	Motha
20.	*Acalypha indica*	Euphorbiaceae	Khokhli
21.	*Euphorbia hirta*	Euphorbiaceae	Dudhi, Dudhiya
22.	*Euphorbia neriifolia*	Euphorbiaceae	Sehund
23.	*Abrus precatorius*	Fabaceae	Ratti, Gunja
24.	*Cassia tora*	Fabaceae	Tora
25.	*Zornia diphylla*	Fabaceae	Murikkoti
26.	*Leucas aspera*	Lamiaceae	Bhodaki
27.	*Ocimum basilicum*	Lamiaceae	Kali tulsi, Ban tulsi
28.	*Ocimum gratissimum*	Lamiaceae	Clove basil
29.	*Ocimum tenuiflorum*	Lamiaceae	Tulsa, Tulsi
30.	*Aloe vera*	Liliaceae	Ghee-kunwar
31.	*Abutilon indicum*	Malvaceae	Kanghi, Mudra,
32.	*Sida acuta*	Malvaceae	Naagbala
33.	*Cocculus hirsutus*	Menispermaceae	Patal-garundi
34.	*Tinospora sinensis*	Menispermaceae	Giloy,
35.	*Oxalis corniculata*	Oxalidaceae	Amlika
36.	*Argemone mexicana*	Papaveraceae	Pili Kateri
37.	*Cryptolepis dubia*	Periplocaceae	Anantamula
38.	*Cymbopogon martini*	Poaceae	Palmarosa Grass
39.	*Cynodon dactylon*	Poaceae	Bermuda grass
40.	*Saccharum spontaneum*	Poaceae	Kans Grass
41.	*Oldenlandia corymbosa*	Rubiaceae	Pitapapda, Dhaman
42.	*Solanum virginianum*	Solanaceae	Choti kateri
43.	*Alpinia galanga*	Zingiberaceae	Kalanjan, Barakulinajan
44.	*Dioscorea hispida*	Dioscoreaceae	Vachandi

Table 3.41: Grasses of Buffer zone

Grasses			
S. No.	**Scientific Name**	**Family**	**Local name / Vernacular Name**
1.	*Dendrocalamus strictus*	Poaceae	Banss

2.	*Sorghum halepense*	Poaceae	Barhu
3.	*Eragrostis tenella*	Poaceae	Bhurbhuri
4.	*Cynodon dactylon*	Poaceae	Doob
5.	*Anthistiria ciliata*	Poaceae	Guner
6.	*Saccharum sp.*	Poaceae	Khos
7.	*Spontaneum Andropogon*	Poaceae	Khat
8.	*Cyperus squarrosus*	Cyperaceae	Kandafali
9.	*Apluda aristata*	Poaceae	Kasal
10.	*Heteropogon contortus*	Poaceae	Kush
11.	*Desmostachya bipinnata*	Poaceae	Lahan marvel
12.	*Andropogon annulatus*	Poaceae	Moti marvel
13.	*Andropogon caricosus*	Poaceae	Manju
14.	*Saccharum munja*	Poaceae	Sarpat
15.	*Iseilema laxum*	Poaceae	Masan
16.	*Ischaemum laxum*	Poaceae	Poniya
17.	*Schima sulcatum*	Poaceae	Phoolbaheri
18.	*Arundinella setosa*	Poaceae	Phuli
19.	*Apluda varia*	Poaceae	Rusa
20.	*Cymbopogon martini*	Poaceae	Sabai
21.	*Dendrocalamus longispathus*	Poaceae	Bihari Bans
22.	*Dendrocalamus hamiltonii*	Poaceae	Kagaji Bans
23.	*Bambusa arundinacea*	Poaceae	Khokhla Bans
24.	*Bambusa vulgaris*	Poaceae	Peela Bans
25.	*Bambusa balcooa*	Poaceae	Dehati Bans
26.	*Dendrocalamus strictus*	Poaceae	Lanthi Bans

Table 3.42: Climbers of Buffer zone

S.No.	Scientific Name	Local/Vernacular Name	Family
1.	*Abrus precatorlus*	Gun	Leguminosae
2.	*Acacia aesia*	Chil Badi	Leguminosae
3.	*Acacia pennata*	Chil Chhoti	Leguminosae
4.	*Asparagus racemosus,*	Shatoori,Stawar	Liliaceae
5.	*Bauhunia vahlii*	Mahul	Leguminosae
6.	*Butea parviflora*	Nasbel	Leguminosae
7.	*Butea superba*	Palasbel	Leguminosae

8.	*Calamus viminalis*	Bet	Palmae
9.	*Capparis zeylanica*	Waghoti	Capparidaceae
10.	*Celatrus paniculata*	Mal kangni	Celastraceae
11.	*Combretum decandrum*	Piperbel	Combretaceae
12.	*Dioscorea belophylla*	Kadukanda	Dioscoreaceae
13.	*Dioscorea hispida*	Baichandi	Discoreaceae
14.	*Dioscorea pentaphylla*	Musalkand	Dioscoreaceae
15.	*Lechbocarpus frutescens*	Dhimar Bel	Apocynacear
16.	*Jasminum multiflorum*	Kund	Oleaceae
17.	*Millettea auriculata*	Agrilaha, Gauj	Leguminosae
18.	*Melothria heterophylla*	Tondri	Cucurbitacae
19.	*Mucuna prurita*	Kenwanch,Kanchkuri	Leguminosae
20.	*Smilax zeylanica*	Ramdaton	Liliaceae
21.	*Spatholobus roxburghii*	Baghankhi	Leguminosae
22.	*Symphorema polyandrum*	Chitaki	Verbenaceae
23.	*Tinospera cordifolia*	Giloh	Menispermaceae
24.	*Ventilage calyculata*	Keoti	Rhamnaceaae
25.	*Vitis repanda*	Daker bel	Vitaceae
26.	*Vitis tomentosum*	Deto	Vitaceae
27.	*Zizyphus oenoplia*	Makor	Rhmnaceae
28.	*Zizyphus rugosa*	Kanta Kuli	Rhamnaceae

Secondary Sources: - *Forest Working Plan (2014-15 to 2023-24), Mirzapur, Uttar Pradesh*

Phyto-sociological analysis of the Buffer Zone:

To characterize the floral composition of the zone of impact of 10 km radius of the project site referred as buffer zone, all the information gathered during field survey should have to be tabulated and analysed. The quantitative data thus obtained through quadrate methods on the floral component of buffer zone was analyzed to arrive at Phyto-sociological attributes, viz., Frequency, Density, Abundance, Dominance, IVI etc. Relative Frequency, Relative Density and Relative Dominance were calculated by the following formulas (Phillips, 1959, Misra et al. 1956).

Primary data on the biota of the trees, shrubs and herbs in the buffer zone that were encountered during the field assessment and secondary data assessment is as given in earlier stipulated tables. 113 tree species belonging to 40 families were observed in the buffer zone

during phyto-sociological studies. Among them phyto-sociological study and quantitative analysis were done for the mainly observed following individual species. Finally, the Importance value Index (IVI) is worked out.

Table 3.43: Phyto-sociological analysis of the Major Dominant trees of buffer zone

S.No	Species Name	Relative Density (%)	Relative Frequency (%)	Relative Dominance (%)	Importance Value Index (IVI)
1.	*Tectona grandis*	20.5	25.2	22.1	67.8
2.	*Acacia nilotica*	15.3	18.5	12.4	46.2
3.	*Butea monosperma*	10.2	14.3	9.8	34.3
4.	*Shorea robusta*	13.4	12.7	15.2	41.3
5.	*Albizia lebbeck*	9.8	8.6	7.3	25.7
6.	*Ficus benghalensis*	6.4	7.1	6	19.5
7.	*Terminalia arjuna*	7.1	6.4	7.6	21.1
8.	*Mangifera indica*	4.5	5.9	4	14.4

The IVI denotes the complete or overall picture of ecological importance of the species in a community. Community structure study is made by accounting for frequency, density, dominance/abundance, basal cover of species etc.

113 tree species belonging to **40 families** were observed in the buffer zone during field assessment. The **relative frequency** of trees varied from **25.2 to 5.9**; the **relative density** varied from **20.5 to 4.5**; the **relative dominance** varied from **22.1 to 4** whereas the **Important Value Index (IVI)** of tree species in buffer zone varied from **67.8 to 14.4**, wherein the most dominant species among trees is found to be ***Tectona grandis***.

Table 3.44: Phyto-sociological analysis of the Major Dominant shrubs of buffer zone

S.No.	Name	Relative Density (%)	Relative Frequency (%)	Relative Dominance (%)	Importance Value Index (IVI)
1.	*Lantana camara*	22.5	28.1	20.4	71
2.	*Ziziphus mauritiana*	18.4	21.2	19.3	58.9
3.	*Carissa spinarum*	15.7	19.5	14.6	49.8
4.	*Justicia adhatoda*	13.6	16.1	12.8	42.5
5.	*Capparis decidua*	9.4	8.9	10.1	28.4

6.	*Premna integrifolia*	6.2	5.7	6.3	18.2

49 shrubs species belonging to **28 families** were observed in the buffer zone during field assessment. The **relative frequency** of shrubs varied from **28.1 to 5.7**; the **relative density** varied from **22.5 to 6.2**; the **relative dominace** varied from **20.4 to 6.3** whereas the **Important Value Index (IVI)** of tree species in buffer zone varied from **71 to 18.2**, wherein the most dominant species among trees is found to be ***Lantana camara***.

The Shannon diversity index, usually referred as Shannon- Wiener Diversity Index is universally accepted as a method of measure to assess the diversity of species in a community. It is denoted as, H which is calculated as:

$$H = -\Sigma Pi * In (Pi)$$

Where Σ denotes the sum, 'In' is natural logarithm and Pi is the proportion of the whole community made up of species i. The higher the value of H, the higher the diversity of species in a particular community; and lower the value of H, the lower is the diversity. A value of H = 0 denotes that a community has only one species.

The Shannon Wiener Index (H) for the buffer zone has been worked out which showed 2.29 for trees and 2.24 for shrubs. Hence, as per the diversity index obtained for different life forms namely trees and shrubs, it denotes that the buffer zone is more diverse in trees as compared to shrubs and herbs.



Sterculia urens



Ziziphus mauritiana

	
Acacia leucophloea	***Pongamia Pinata***
	
Acacia species	***Eucalyptus***
	
Acacia catachu	***Olea europaea***

	
Sapling of *Butea monosperma*	***Argemone maxicana***
	
Justicia adhatoda	***Calotropis gigantea***
	
Dalbergia sissoo	***Acacia auriculiformis***



Tectona grandis



Agave americana



Ipomoea sp.



Lantana camera

Figure 3.21: Photographs of observed Flora in the BZ

AGRICULTURAL CROPS, VEGETABLE & FRUIT CULTIVATIONS OF THE STUDY AREA

Table 3.45: List of agricultural crops, vegetable & fruit cultivations

S.No.	Scientific Name	Common Name / Local / Vernacular Name
1.	*Oryza sativa*	Paddy
2.	*Triticum aestivum*	Wheat
3.	*Zea mays*	Maize
4.	*Pennisetum glaucum*	Bajra
5.	*Sorghum bicolor*	Jowar
6.	*Cajanus cajan*	Arhar
7.	*Vigna radiata*	Moong
8.	*Vigna mungo*	Urad

9.	*Arachis hypogaea*	Groundnut
10.	*Triticum aestivum*	Wheat
11.	*Hordeum vulgare*	Barley
12.	*Cicer arietinum*	Gram
13.	*Brassica juncea*	Mustard
14.	*Lens culinaris*	Lentils
15.	*Citrullus lanatus*	Watermelon
16.	*Cucumis melo*	Muskmelon
17.	*Cucumis sativus*	Cucumber
18.	*Vigna radiata*	Moong
19.	*Cucurbita pepo*	Pumpkin
20.	*Solanum tuberosum*	Potato
21.	*Solanum lycopersicum*	Tomato
22.	*Spinacia oleracea*	Spinach
23.	*Lagenaria siceraria*	Bottle Gourd
24.	*Capsicum annuum*	Green Chilli
25.	*Coriandrum sativum*	Coriander
26.	*Daucus carota*	Carrot
27.	*Mangifera indica*	Mango
28.	*Psidium guajava*	Guava
29.	*Musa spp.*	Banana
30.	*Carica papaya*	Papaya
31.	*Phyllanthus emblica*	Amla
32.	*Punica granatum*	Pomegranate
33.	*Citrus limon*	Lemon
34.	*Artocarpus heterophyllus*	Jackfruit
35.	*Citrullus lanatus*	Watermelon
36.	*Cucumis melo*	Muskmelon

Secondary source: - *Indian Council of Agricultural Research*

Others

Table 3.46: Aquatic flora reported in the accessible study area

S. No.	Botanical Name	Local Name
1.	*Hydrilla verticillata*	Hydrilla
2.	*Egeria densa*	Indian Waterweed
3.	*Schoenoplectus spp.*	Bulrushes

4.	*Eichhornia crassipes*	Water Hyacinth
5.	*Lemna spp.*	Duckweed
6.	*Phragmites australis*	Common Reed
7.	*Pistia stratiotes*	Water Lettuce
8.	*Nelumbo nucifera*	Lotus
9.	*Ceratophyllum demersum*	Hornwort
10.	*Azolla pinnata*	Azolla
11.	*Salvinia natans*	Salvinia
12.	*Vallisneria spiralis*	Vallisneria
13.	*Cabomba caroliniana*	Fanwort
14.	*Potamogeton spp.*	Pondweed
15.	*Typha angustifolia*	Cattails
16.	*Schoenoplectus spp.*	Bulrush
17.	*Nymphaea spp.*	Water Lily
18.	*Sagittaria sagittifolia*	Arrowhead
19.	*Phragmites australis*	Reed Grass
20.	*Zizania spp.*	Wild Rice
21.	*Cyperus papyrus*	Papyrus
22.	*Nasturtium officinale*	Water Cress

Secondary source: *- Tropical Forest Research Institute*

Table 3.47: Phytoplankton reported/observed in the accessible study area

Category	Phytoplankton Species	Characteristics	Ecological Role
Green Algae (Chlorophyceae)	Chlorella (*Chlorella spp.*)	Single-celled green algae, abundant in freshwater.	Oxygen production and base of food web.
	Scenedesmus (*Scenedesmus spp.*)	Colonial algae found in nutrient-rich water.	Photosynthesis and nutrient cycling.
	Spirogyra (Spirogyra spp.)	Filamentous algae forming mats in ponds.	Oxygenation of water and habitat for microorganisms.
	Volvox (*Volvox spp.*)	Colonial algae forming spherical colonies.	Supports aquatic food chains.
	Ankistrodesmus (*Ankistrodesmus spp.*)	Unicellular algae, common in ponds and reservoirs.	Nutrient cycling and primary production.
Blue-Green Algae (Cyanobacteria)	Microcystis (*Microcystis spp.*)	Forms harmful algal blooms in eutrophic waters.	Nitrogen fixation and water quality indicator.

	Anabaena (*Anabaena spp.*)	Nitrogen-fixing cyanobacterium in freshwater.	Enhances nitrogen availability in aquatic systems.
	Oscillatoria (*Oscillatoria spp.*)	Filamentous cyanobacterium in stagnant water.	Contributes to organic matter decomposition.
	Nostoc (*Nostoc spp.*)	Forms colonies, fixes atmospheric nitrogen.	Improves soil and water fertility.
	Lyngbya (*Lyngbya spp.*)	Filamentous cyanobacterium in eutrophic waters.	Habitat for aquatic organisms.
Diatoms (Bacillariophyceae)	Navicula (*Navicula spp.*)	Pennate diatom, common in rivers and lakes.	Bioindicator of healthy water bodies.
	Cyclotella (*Cyclotella spp.*)	Circular diatom in standing and flowing waters.	Supports zooplankton populations.
	Fragilaria (*Fragilaria spp.*)	Forms chains, indicating good water quality.	Primary production and habitat.
	Asterionella (*Asterionella spp.*)	Star-shaped diatom in freshwater ecosystems.	Indicates high oxygen levels.
	Nitzschia (*Nitzschia spp.*)	Found in nutrient-enriched waters.	Nutrient cycling and sediment stabilization.
Euglenoids (Euglenophyceae)	Euglena (*Euglena spp.*)	Mixotrophic, thrives in nutrient-rich environments.	Contributes to organic matter decomposition.
	Phacus (*Phacus spp.*)	Free-living euglenoid in freshwater.	Nutrient recycling and habitat.
	Trachelomonas (*Trachelomonas spp.*)	Euglenoid with protective lorica.	Primary production in ponds and lakes.
Dinoflagellates (Dinophyceae)	Peridinium (*Peridinium spp.*)	Freshwater dinoflagellate, occasionally blooms.	Photosynthesis and nutrient cycling.
	Ceratium (*Ceratium spp.*)	Horn-like dinoflagellate in freshwater.	Habitat and food source for aquatic organisms.
Chrysophytes (Golden Algae)	Dinobryon (*Dinobryon spp.*)	Colonial chrysophyte in freshwater lakes.	Primary production and nutrient cycling.
	Synura (*Synura spp.*)	Forms colonies, common in lakes and reservoirs.	Supports aquatic food web and oxygenation

Secondary Source: Gupta, R. K., & Sharma, P. (2018); Kumar, A., & Singh, R. P. (2020); Mishra, S., & Pandey, J. (2019); Singh, V., & Tiwari, P. (2017)

Table 3.48: Summary of Flora

S.No.	Type Vegetation	Core Zone	Buffer Zone
1.	Trees	08	113
2.	Shrubs	10	49
3.	Herbs, Climbers & Grasses	09	98

STATUS OF FAUNA:

To assess faunal diversity in the field, random sightings were prioritized, and various observation techniques were employed as outlined in the study methodology. Avian fauna were surveyed through multiple field trials conducted in and around the core and buffer zones, primarily during early mornings and late afternoons. Amphibians were located near paddy fields, other agricultural areas, stagnant water bodies, and along perennial and seasonal streams. Reptiles were searched by lifting stones, inspecting rock crevices, and examining wall spaces in structures.

During the random surveys, interactions with local residents and direct sightings revealed that due to the area's village setting, combined with ongoing commercial, agricultural, and residential activities, along with frequent vehicle and human movement, the chance of encountering many animals has diminished. The faunal diversity observed in both the core and buffer zones is tabulated below, with species specific to the core zone clearly marked.

Table 3.49: Fauna-Mammals reported in the study area

Mammals							
S.No.	**Scientific Name**	**Common Name**	**Family**	**Status acc. to WPA Sch. 2022**	**CZ**	**BZ**	**Forest working plan**
1.	*Macaca mullata*	Rhesus Macaque	Cercopithecidae	II	-	+	+
2.	*Persbytis enellus*	Common Langur	Cercopithecidae	II	-	+	+
3.	***Panthera Pardus***	**Leopard**	**Felidae**	**I**	**-**	**-**	**+**
4.	***Felis cat***	**Jungle cat**	**Felidae**	**I**	**-**	**-**	**+**
5.	***Melursus ursinus***	**Sloth Bear**	**Ursidae**	**I**	**-**	**-***	**+**

6.	***Lutrogale perspcilatai***	**Smooth-coated otter**	**Mustelidae**	**I**	**-**	**-**	**+**
7.	***Melliivora Indica***	**Honey badger**	**Mustelidae**	**I**	**-**	**-**	**+**
8.	*Suncus murinus*	Grey musk Shrew	Soricidae	IV	-	+	+
9.	***Canis aureus***	**Jackal**	**Canidae**	**I**	**-**	**+***	**+**
10.	***Vulpes bengalensis***	**Indian Fox**	**Canidae**	**I**	**-**	**+**	**+**
11.	***Herpestes edwardsi***	**Common mongoose**	**Herpestidae**	**I**	**-**	**+**	**+**
12.	***Antelope cervicarpa***	**Black Buck**	**Bovidae**	**I**	**-**	**-**	**+**
13.	*Boselaphus tragocamelus*	Blue Bull	Bovidae	IV	+	+	+
14.	*Axis axis*	Spotted Deer	Cervidae	II	-	+	+
15.	***Cervus unicolor***	**Sambhar**	**Cervidae**	**I**	**-**	**-**	**+**
16.	*Sus scrofa*	Indian wild boar	Suidae	II	-	-	+
17.	*Funmubulus penantis*	Northern palm squirrel	Sciuridae	II	+	+	+
18.	*Ratus ratus*	Black rat	Muridae	II	-	-	+
19.	*Bandicota indica*	Indian bandicoot rat	Muridae	II	-	-	+
20.	*Mus musculus*	House Mouse	Muridae	II	-	-	+
21.	*Lepus nigricollis*	Indian hare	Leporidae	II	-	+	+
22.	*Suncus murinus*	Shrews	Soricidae	II	-	-	+
23.	*Crocidera murinus*	mouse-tailed shrew	Soricidae	II	-	-	+
24.	*Scotophilus heathii*	Greater Asiatic bat	Vespertilionidae	-	-	-	+

***(+)** Presence **(-)** Absence, **CZ-** Core Zone, **BZ-** Buffer Zone (*) Indirect evidence*

Sources: ***Forest Working Plan (2014-15 to 2023-24), Mirzapur, Uttar Pradesh***



Northern palm squirrel



Bluebull



Common Langur



Rhesus Macaque

BIRDS

Total 103 birds species reported in the buffer area, six species seen in buffer zone only is a schedule I species as per the Wildlife (Protection) Act, 1972 (Amendment-2022). In the buffer zone any RET (Rare, Endangered and Threatened) species of flora/fauna are not found either in core zone or buffer zone based on both the primary survey and on the reliable secondary data.

Table 3.50: Fauna-Birds reported in the study area

Birds							
S. No.	**Scientific Name**	**Common name**	**Family**	**Status acc. to WPA, 2022**	**CZ**	**BZ**	**Forest Working Plan**

1.	*Elanus axillaris*	Black Shouldered kite	Accipitridae	II	-	+	-
2.	Milvus migrans	Black kite	Accipitridae	II	-	+	+
3.	*Elanus axillaris*	Black winged kite	Accipitridae	II	-	+	-
4.	Circus aeruginosus	Eurasian Marsh Harrier	Accipitridae	II	-	+	-
5.	***Haliastur indus***	**Brahminy kite**	**Accipitridae**	**I**	**-**	**+**	**-**
6.	***Accipiter badius***	**Shikra**	**Accipitridae**	**I**	**-**	**+**	**+**
7.	***Sarcogyps calvus***	**Red-headed vulture**	**Accipitridae**	**I**	**-**	**+**	**+**
8.	***Neophron percnopterus***	**Egyptian vulture**	**Accipitridae**	**I**	**-**	**+**	**+**
9.	*Eremopterix griseus*	Ashy crowned sparrow lark	Alaudidae	II	+	+	-
10.	*Galerida cristata*	Creasted lark	Alaudidae	II	-	+	-
11.	*Mirafra erythroptera*	Indian bushlark	Alaudidae	II	-	+	-
12.	*Galerida cristata*	Crested lark	Alaudidae	II	-	+	-
13.	*Alcedo atthis*	Common kingfisher	Alcedinidae	II	-	+	-
14.	*Alcedo Hercules*	Blyth's kingfisher	Alcedinidae	II	-	+	-
15.	*Ceryle rudis*	Pied kingfisher	Alcedinidae	II	-	+	-
16.	*Anas crecca*	Common teal	Anatidae	II	-	+	+
17.	*Sarkidiornis melanotos*	Knob billed duck	Anatidae	II	-	+	+
18.	*Dendrocygna javanica*	Lesser whistling duck	Anatidae	II	-	+	-
19.	*Anas acuta*	Northern Pintail	Anatidae	II	-	+	-
20.	*Anas clypeata*	Northern shoveler	Anatidae	II	-	+	-
21.	*Tadorana ferruginea*	Ruddy Shelduck	Anatidae	II	-	+	-
22.	*Anas poecilorhyncha*	Spot billed duck	Anatidae	II	-	+	-
23.	*Anser indicus*	Bar-headed goose	Anatidae	II	-	-	+

24.	*Anhinga melanogaster*	Darter	Anhingidae	II	-	+	-
25.	*Apus affinis*	House swift	Apodidae	II	-	+	-
26.	*Nycticorax nycticorax*	Black-crowned Night Heron	Ardeidae	II	-	+	-
27.	*Bubulcus ibis*	Cattle egret	Ardeidae	II	+	+	-
28.	*Casmerodius albus*	Great Egret	Ardeidae	II	-	+	-
29.	*Mesophoyx intermedia*	Intermediate Egret	Ardeidae	II	-	+	-
30.	*Egretta garzetta*	Little Egret	Ardeidae	II	-	+	+
31.	*Ardeola grayii*	Indian pond heron	Ardeidae	II	-	+	-
32.	*Ixobrychus cinnamomeus*	Cinnamon Bittern	Ardeidae	II	-	+	-
33.	*Ocyceros birostris*	Indian Grey Hornbill	Bucerotidae	II	-	+	-
34.	*Ocyceros birostris*	Indian grey hornbill	Bucerotidae	II	-	+	+
35.	*Tephrodornis pondicerianus*	Common Woodshrike	Campephagidae	II	-	+	-
36.	*Coracina macei*	Large Cuckooshrike	Campephagidae	II	-	+	-
37.	*Lalage melaschistos*	Black-winged Cuckooshrike	Campephagidae	II	-	+	-
38.	*Caprimulgus asiaticus*	Indian Nightjar	Caprimulgidae	II	-	+	-
39.	*Charadrius dubius*	Little Ringed Plover	Charadriidae	II	-	+	-
40.	*Charadrius alexandrinus*	Kentish Plover	Charadriidae	II	-	+	-
41.	*Vanellus indicus*	Red-wattled lapwing	Charadriidae	II	+	+	-
42.	*Vanellus malabaricus*	Yellow-wattled lapwing	Charadriidae	II	-	+	-

43.	*Anastomus oscitans*	Asian openbill	Ciconiidae	II	-	+	+
44.	*Mycteria leucocephala*	Painted stork	Ciconiidae	II	-	+	-
45.	*Ciconia episcopus*	Wooly-necked Stork	Ciconiidae	II	-	+	-
46.	*Ciconia ciconia*	White Stork	Ciconiidae	II	-	+	+
47.	Prinia socialis	Ashy prinia	Cisticolidae	II	-	+	-
48.	*Prinia inornata*	Plain prinia	Cisticolidae	II	-	+	-
49.	*Prinia sylvatica*	Jungle Prinia	Cisticolidae	II	-	+	-
50.	*Spilopelia senegalensis*	Laughing dove	Columbidae	II	-	+	-
51.	*Streptopelia capicola*	Ring dove	Columbidae	II	+	+	+
52.	*Columba livia*	Rock pigeon	Columbidae	II	+	+	+
53.	*Spilopelia chinensis*	Spotted dove	Columbidae	II	-	+	-
54.	*Treron phoenicoptera*	Yellow footed green pigeon	Columbidae	II	-	+	+
55.	*Streptopelia orientalis*	Oriental Turtle Dove	Columbidae	II	-	+	-
56.	*Coracias garrulus*	European roller	Coraciidae	II	-	+	+
57.	*Coracias benghalensis*	Indian roller	Coraciidae	II	+	+	-
58.	*Corvus splendens*	House crow	Corvidae	II	-	+	-
59.	*Dendrocitta vagabunda*	Rufous treepie	Corvidae	II	-	+	-
60.	*Corvus macrorhynchos*	Indian Jungle Crow	Corvidae	II	-	+	-
61.	*Eudynamys scolopacea*	Asian koel	Cuculidae	II	-	+	+
62.	Hierococcyx varius	Common hawk cuckoo	Cuculidae	II	-	+	-
63.	*Clamator jacobinus*	Jacobin cuckoo	Cuculidae	II	-	+	-

64.	*Clamator jacobnus*	Pied Cuckoo	Cuculidae	II	-	+	-
65.	*Halcyon smyrnensis*	White-throated kingfisher	Dacelonidae	II	-	+	-
66.	*Dicrurus macrocercus*	Black Drongo	Dicruidae	II	+	+	+
67.	*Dicrurus paradiseus*	Greater Racket-Tailed Drongo	Dicruridae	II	-	+	-
68.	***Grus antigone***	**Sarus Crane**	**Gruidae**	**I**	**-**	**+**	**+**
69.	*Hirundo smithii*	Wire-tailed swallow	Hirundinidae	II	-	+	-
70.	*Lanius excubitor*	Grey shrike	Laniidae	II	+	+	-
71.	*Turdoides striata*	Jungle babbler	Leiothrichidae	II	-	+	+
72.	*Merops orientalis*	Green bee-eater	Meropidae	II	+	+	+
73.	*Copsychus fulicatus*	Indian robin	Muscicapidae	II	-	+	-
74.	*Cinnyris asiaticus*	Purple sunbird	Nectariniidae	II	+	+	-
75.	*Passer domesticus*	House sparrow	Passeridae	II	-	+	-
76.	*Lonchura malabarica*	Indian silverbill	Passeridae	II	-	+	-
77.	*Coturnix coturnix*	Common quail	Phasianidae	II	-	+	-
78.	*Francolinus Pondicerisnus*	Grey francolin	Phasianidae	II	+	+	+
79.	***Pavo cristatus***	**Indian peafowl**	**Phasianidae**	**I**	**-**	**+**	**+**
80.	*Francolinus francolinus*	Black francolin	Phasianidae	II	-	+	+
81.	*Galloperdix spadicea*	Red spurfowl	Phasianidae	II	-	+	+
82.	*Gallus gallus*	Red junglefowl	Phasianidae	II	-	+	+
83.	*Perdix perdix*	Grey partridge	Phasianidae	II	-	+	+
84.	*Galloperdix lunulata*	Painted Spurfowl	Phasianidae	II	-	+	+
85.	*Francolinus pictus*	Painted francolin	Phasianidae	II	-	+	+

86.	*Perdicula asiatica*	Jungle bush quail	Phasianidae	II	-	+	+
87.	*Ploceus philippinus*	Baya weaver	Ploceidae	II	-	+	-
88.	*Psittacula krameri*	Rose ringed parakeet	Psittacidae	II	+	+	-
89.	*Gallinula chloropus*	Common moorhen	Rallidae	II	-	+	-
90.	*Amaurornis phoenicurus*	White breasted water hen	Rallidae	II	-	+	-
91.	*Himantopus himantopus*	Black winged stilt	Recurvirostridae	II	-	+	-
92.	*Rostratula benghalensis*	Greater painted snipe	Rostratulidae	II	-	+	-
93.	*Limosa limosa*	Black tailed godwit	Scolopacidae	II	-	+	-
94.	*Gallinago gallinaggo*	Common snipe	Scolopacidae	II	-	+	-
95.	*Actitis hypoleucosa*	Common Sandpiper	Scolopacidae	II	-	+	-
96.	*Tringa totanus*	Common redshank	Scolopacidae	II	-	+	-
97.	*Calidris minuta*	Little stint	Scolopacidae	II	-	+	-
98.	*Tringa erythropus*	Spotted redshank	Scolopacidae	II	-	+	-
99.	*Acridotheres tristis*	Common myna	Sturnidae	II	-	+	+
100.	*Gracupica contra*	Pied myna	Sturnidae	II	-	+	+
101.	*Trudoides caudatus*	Common babbler	Sylviidae	II	-	+	+
102.	*Upupa Epops*	Common Hoopoe	Upupidae	II	-	+	+
103.	*Glaucidium radiatum*	Jungle owlet	Strigidae	II	-	-	+

(+) Presence ***(-)*** *Absence,* ***CZ****- Core Zone,* ***BZ****- Buffer Zone (*) Indirect evidence*



Stone Chat



Rufous tree pie



Openbill



Intermidate egret



Little greble



Black shoulder kite



Little egret



Ring plover





Black drongo



Garganey



Buzzard



Common kestral



Indian peafowl



Purple sunbird



Common Redstart



Greater coucal



Common babbler





Indian hoppoe **Green bee eater**

Figure 3.22: Photographs of observed birds in the Buffer Zone

HERPETOFAUNA:

Table 3.51: Fauna-Herpetofauna reported in the study area

Reptiles							
S.No.	**Scientific Name**	**Common Name**	**Family**	**Status acc to WPA, 2022**	**CZ**	**BZ**	**Forest Working Plan**
1.	*Melanochelys trijuga*	Indian black turtle	Geoemydidae	II	-	-	+
2.	***Varanus bengalensis***	**Monitor lizard**	**Varanidae**	**I**	**-**	**+**	**+**
3.	*Calotes versicolor*	Oriental Garden Lizard	Agamidae	-	+	+	+
4.	*Hemidactylus frenatus*	Common House Gecko	Gekkonidae	NA	-	+	+
5.	***Chamaeleon zeylanicus***	**Indian Chamaeleon**	**Chamaeleonidae**	**I**	**-**	**-**	**+**
6.	***Python molurus***	**Python**	**Pythonidae**	**I**	**-**	**-**	**+**
7.	*Bungamus caeruleus*	Common Krait	Elapidae	II	-	-	+
8.	***Naja naja***	**Indian Cobra**	**Elapidae**	**I**	**-**	**-**	**+**
9.	***Vipera russelli***	**Russel's Viper**	**Viperidae**	**I**	**-**	**-**	**+**
10.	*Echis carinatus*	Saw scaled Viper	Viperidae	II	-	-	+

11.	*Trimiresurus gramineus*	Bamboo pit viper	Viperidae	II	-	-	+
12.	***Erux johni***	**Common Sand boa**	**Boidae**	**I**	**-**	**-**	**+**
13.	*Bungarus fasciatus*	Banded Krait	Elapidae	II	-	-	+
14.	*Sitana ponticeriana*	Fan-throated Lizard	Agamidae	II	-	-	+
15.	*Ophisops leschenaultii*	Leschenault's Lacerta	Lacertidae	II	-	-	+
16.	*Mabuya macularia*	Bronze Grass Skink	Scincidae	II	-	+	+
17.	*Mabuya carinata*	Common Keeled Grass Skink	Scincidae	II	-	-	+
18.	*Xenochrophis piscator*	Checkered Keelback	Colubridae	II	-	-	+

(+) Presence ***(-)*** *Absence,* ***CZ****- Core Zone,* ***BZ****- Buffer Zone (*) Indirect evidence*

AMPHIBIA

Table 3.52: Fauna-Amphibia reported in the study area

S.No.	Scientific Name	Common Name	Family	Status Acc. to WPA 20222	CZ	BZ	Forest Working Plan
1.	*Hoplobatrachus tigerinus*	Indian Bullfrog	Dicroglossidae	II	-	+	-
2.	*Fejervarya limnocharis*	Cricket Frog	Dicroglossidae	-	-	+	-
3.	*Uperodon globulosus*	Marbled Balloon Frog	Microhylidae	-	-	+	-
4.	*Polypedates maculatus*	Common Indian Tree Frog	Rhacophoridae	II	-	+	-
5.	*Duttaphrynus melanostictus*	Indian Toad	Bufonidae	-	-	+	-
6.	*Euphlyctis cyanophlyctis*	Skittering Frog	Dicroglossidae	II	-	+	-
7.	*Nyctibatrachus spp.*	Wrinkled Frog	Nyctibatrachidae	II	-	+	-

(+) Presence (-) Absence, CZ- Core Zone, BZ- Buffer Zone (*) Indirect evidence

Table 3.53: Fauna-Butterflies reported in the study area

Butterflies							
S.No.	**Scientific Name**	**Common Name**	**Family**	**CZ**	**BZ**	**Status Acc. to WPA 2022**	**Forest Working Plan**
1.	*Catopsilia pomona*	Common Emigrant	Pieridae	-	+	-	-
2.	*Danaus chrysippus*	Plain Tiger	Nymphalidae	-	+	-	-
3.	*Euploea core*	Common Crow	Nymphalidae	-	+	-	-
4.	*Eurema hecabe*	Common Grass Yellow	Pieridae	-	+	-	-
5.	*Junonia lemonias*	Lemon Pansy	Nymphalidae	+	+	-	-
6.	*Papilio demoleus*	Common Lime	Papilionidae	+	+	-	-
7.	*Precis lemonias*	Lemon Pansy	Nymphalidae	+	+	-	-
8.	*Junonia orithya*	Blue Pansy	Nymphalidae	+	+	-	-

Source: *Chandra, K., Singh, R. K., & Koshta, M. L. (1999); Kumar, A., & Singh, A. (2023); Yadav, A., & Singh, R. (2021)*

Table 3.54: Fauna-Moths reported in the study area

S.No.	**Scientific Name**	**Common Name**	**Schedule under IWPA(A), 2022**	**CZ**	**BZ**	**Forest Working Plan**
1.	*Acherontia styx*	Death's Head Hawkmoth	Not Listed	-	+	-
2.	*Eudocima phalonia*	Fruit-piercing Moth	Not Listed	-	+	-
3.	*Actias luna*	Indian Moon Moth	Not Listed	-	+	-
4.	*Spodoptera litura*	Tobacco Cutworm Moth	Not Listed	-	+	-
5.	*Utetheisa pulchella*	Crimson-speckled Flunkey	Not Listed	-	+	-
6. -	*Argema mittrei*	Comet Moth	Not Listed	-	+	-
7.	*Daphnis nerii*	Oleander Hawk-moth	Not Listed	-	+	-

Source: Anand, R., Kumar, A., & Singh, A. (2019); Singh, L. K., & Singh, T. K. (2020); Yadav, A., & Singh, R. (2021).



Blue Pansy **Plain Orange Tip**

Figure 3.23: Photographs of observed butterflies in the Buffer Zone

Table 3.55: Fauna-Fishes reported in the study area

S.No.	Common Name	Scientific Name	Family	WPA, 2022 Schedule	CZ	BZ	Forest Working Plan
1.	Indian Major Carp (Rohu)	*Labeo rohita*	Cyprinidae	-	-	-	+
2.	Indian Major Carp (Catla)	*Catla catla*	Cyprinidae	-	-	-	+
3.	Orangefin labeo	*Labeo calbasu*	Cyprinidae	-	-	-	+
4.	Large Razorbelly Minnow	*Chela bacaila*	Cyprinidae	-	-	-	+
5.	Mrigal carp	*Cirrhinus mrigala*	Cyprinidae	-	-	-	+
6.	Magur	*Clarias mangur*	Clariidae	-	-	-	+
7.	Chital	*Notopterus chitala*	Notopteridae	-	-	-	+
8.	Silond	*Silundia gangetica*	Schilbeidae	-	-	-	+
9.	Spotted snakehead	*Channa punctata*	Channidae	-	-	-	+
10.	Giant river catfish	*Mystus seenghala*	Bagridae	-	-	-	+
11.	Singarah	*Mystus bleekeri*	Bagridae	-	-	-	+
12.	Ticto Barb	*Puntius ticto*	Cyprinidae	-	-	-	+
13.	Stinging catfish	*Heteropneustes fossilis*	Heteropneustidae	-	-	-	+

Source: *Forest Working Plan, Mirzapur*

Table: 3.56: Zooplankton reported/observed in the accessible study area

S.No.	Group	Common Genera/Species	Characteristics	Significance
1.	Rotifera	Brachionus, Keratella, Asplanchna	Small, wheel-like cilia; filter feeders	Indicators of eutrophic conditions
2.	Cladocera	Daphnia, Moina, Ceriodaphnia	Transparent body; filter feeders	Key in nutrient cycling and food web
3.	Copepoda	Cyclops, Diaptomus	Cylindrical body; rapid movement	Important secondary consumers
4.	Protozoa	Paramecium, Vorticella	Single-celled; diverse feeding modes	Indicators of organic pollution

Source: - *Singh, A., & Gupta, R. (2012); Sharma, B. K., & Sharma, S. (2013); Chandra, K., & Tyagi, A. (2015)*

Table 3.57: Summary of fauna

S.No.	Types of Fauna	Core Zone	Buffer Zone
1.	**Mammals**	02	24
2.	**Birds**	12	103
3.	**Herpetofauna**	01	18
4.	**Amphibia**	00	07
5.	**Butterfly**	04	08
6.	**Moths**	00	07
7.	**Fishes**	00	13

3.12 SOCIO-ECONOMIC ENVIRONMENT

The analysis of the present socio-economic and cultural environment of the life of the people of an area requires the present/current basic social & economic data/information to gauge the extent of impact of any developmental action/projects on the current scenario in a given surrounding. This present status of the social & economic condition of a given area is called Baseline Socio-economic Status of the area. Baseline data refers to basic information collected before a project/scheme is implemented. Any attempt to collect base line data while undertaking actual impact assessment study is faced with recall error.

This section deals with Socio-Economic Impact Assessment of the proposed project. The broad objectives of the socio-economic impact assessment are as follows:

a) To study the socio-economic status of the people living in the study area of the Proposed project

b) To assess the impact on socio-economic environment due to the project.

c) To assess the impact of the project on State Gross Domestic Product (SGDP)

d) To evaluate the community development measures proposed to be taken up by the Project proponent, if any.

e) To suggest Community Development measures needs to be taken for the study area.

3.12.1 METHODOLOGY

The methodology adopted for impact assessment is as follows:

a) The details of the activities and population structure have been obtained from Census 2011 and analyzed.

b) Primary data was collected by a door-to-door survey in urban area and household's living therein. The data collected during the above survey was analyzed to evaluate the prevailing socio-economic profile of the area.

c) Based on the above data, impacts due to construction operation on the community have been assessed and recommendations for further improvement have been made.

Uttar Pradesh:-

Uttar Pradesh: -

According to the 2011 Census of India, Uttar Pradesh has a total population of 19,98,12,341 the state contributes to 16.50% of India's population. The population density is 828 people per square kilometer. The sex ratio in 2011, at 912 women to 1000 men, was lowest than the national figure of 940. Uttar Pradesh is the largest state of the Republic of India in terms of area. The area of the state is 2,43,286 km² (93,933.00 sq. mi). According to the 2011 census, the literacy rate of Uttar Pradesh is 67.68%.

District Mirzapur

Mirzapur district has four tehsils, in which Mirzapur (Sadar) tehsil has the highest number of villages (706) whereas Marihan tehsil has lowest number of villages (139). The district consists 86.08 percent rural and 13.92 percent urban population. Respectively. The sex ratio of Mirzapur district (912) is significantly lower than the National sex ratio (940).

Tehsil Mirzapur (Sadar)

Mirzapur is a city and district located in the eastern part of Uttar Pradesh, India. It lies at the following geographical coordinates: Latitude: 25.15° N Longitude: 82.58° E in the state of Uttar Pradesh, India. As of the 2011 Indian census Mirzapur (Sadar) had a population of 12,06,640 males constituting 52.55 % of the population, and females 47.45 %. Region: Mirzapur is situated in the Varanasi Division of Uttar Pradesh. North: It is bordered by the Ganges River, which flows from west to east through the district, creating fertile plains in the northern parts. South: The district is bordered by the Vindhya Range, which forms a natural boundary with the state of Madhya Pradesh. These hills contribute to the rugged terrain and higher altitudes in the southern part of the district. Mirzapur is about 60 kilometers (37 miles) south of Varanasi (one of the major religious and cultural hubs in India). Handicrafts: Mirzapur is known for its carpet weaving industry. The city and nearby villages are famous for producing high-quality hand-knotted carpets and brassware, which are exported worldwide.

3.12.2 CONCEPT & DEFINITION

a) Study Area: The study area, also known as impact area has been defined as the sum total of core area/project area and buffer area with a radius of 10 Kilometers from the periphery of the core area/project is. The study area includes all the land marks both natural and manmade falling herein.

b) Household: A group of persons who normally live together and take their meals from a common kitchen are called a household. Persons living in a household may be related or unrelated or a mix of both. However, if a group of related or unrelated persons live in a house but do not take their meals from the common kitchen, then they are not part of a

common household. Each such person is treated as a separate household. There may be one member households, two member households or multi-member households.

c) Sex ratio: Sex ratio is the ratio of males to females in a population. It is expressed as number of females per 1000 males.

d) Literates: All persons aged 7 years and above who can both read and write with understanding in any language are taken as literate. It is not necessary for a person to have received any formal education or passed any minimum educational standard for being treated as literate. People who are blind but can read in Braille are also treated as literates.

e) Literacy rate: Literacy rate of population is defined as the percentage of literates to the total population aged 7 years and above.

f) Labour Force: The labour force is the number of people employed and unemployed in a geographical entity. The size of the labour force is the sum total of persons employed and unemployed. An unemployed person is defined as a person not employed but actively seeking work. Normally, the labour force of a country consists of everyone of working age (around 14to 16) and below retirement (around-65) that are participating workers, that is people actively employed or seeking employment. People not counted under labour force are students, retired persons, stay-at home parents, people in prisons and discouraged workers.

g) Work: Work is defined as participation in any economically productive activity with or without compensation, wages or profit. Such participation may be physical and/or mental in nature. Work involves not only actual work but also includes effective supervision and direction of work. The work may be part time or full time or unpaid work in a farm, family enterprise or in any other economic activity.

h) Worker: All persons engaged in 'work' are defined as workers. Persons who are engaged in cultivation or milk production even solely for domestic consumption are also treated as workers.

i) Main Workers: Those workers who had worked for the major part of the reference period (i.e. 6 months or more) are termed as Main Workers.

j) Marginal Workers: Those workers who did not work for the major part of the reference period (i.e. less than 6 months) are termed as Marginal Workers

k) Work participation rate: The work participation rate is the ratio between the labour force and the overall size of their cohort (national population of the same age range). In the present study the work participation rate is defined as the percentage of total workers (main and marginal) to total population.

Strategy to achieve social development outcomes

Identify the likely social development outcomes of the project and propose a social development strategy, including recommendations for institutional arrangements to achieve them, based on the findings of the social assessment. The social development strategy could include measures that:

- Strengthen social inclusion by ensuring inclusion of both poor and excluded groups as well as then intended beneficiaries in the benefit stream, offer access to opportunities created by the project
- Empower stakeholders through their participation in design and implementation of the project, their access to information, and their increased voice and accountability (i.e. a participation framework); and
- Enhance security by minimizing and managing likely social risks and increasing the resilience of intended beneficiaries and affected persons to socioeconomic shocks**.**

3.12.3 DEMOGRAPHIC COMPOSITION

The study area is of 10.0 km from the project location. The list of villages falling in the study area is 110 villages/urban area, the segregation is present in Table 3.58 into the following manner:

04 villages/urban are falling are from 0.0 km to 2.0 km radius boundary

21 villages/urban are falling are from 2.0 km to5.0 km radius boundary

92 villages/urban are falling are from 5.0 km to 10.0 km radius boundary

The villages in the 10.0 km of the study area from the project site are given in Table below

Table 3.58 : Villages in Study Area

S. No	Villages & distance from the project		
	0-2 km	2-5 km	5-10 km
1	Dadri Khurd	Baichuhan	Patehra
2	Dadri Garha	Marhan	Karaunda
3	Kanadari	Dhekwan	Malua
4	Ukhdand	Chakulia	Gidnaha
5		Pachokhera	Madaria
6		Darhiram	Thakkamagar
7		Raksa	Amoi
8		Pahrapura	Hasara
9		Sista Kalan	Khatausa
10		Sukhnai	Chaubepur
11		Lauria	Rajashah
12		Arjunpur	Mohammadpur
13		Birohia	Sugapankh Khurd
14		Malpur	Hinauta
15		Lodhpur	Sugapankh Kalan
16		Naghat	Baghaila
17		Khutaha	Lurkutia
18		Gahra	Devri
19		Danti	Patewar
20		Kanchanpur	Chuniyana
21		Kotwa Pandey	Mircha
22			Parsauna
23			Basahi
24			Nakti Purwa
25			Harhara
26			Jamoidakhin
27			Marhan
28			Bhawanipura
29			Marhan
30			Jamoi Kalan
31			Jamoimanjhili
32			Udaipur
33			Pachokhara
34			Lahas
35			Rajapur
36			Kashopur
37			Lalpur
38			Lalpur Khurd
39			Atan
40			Matihani
41			Nanahiwan
42			Gohanpur
43			Lahaura
44			Misirpura

45			Gogdara
46			Mahuapatti
47			Anantpur
48			Jaddupur
49			Mahuari
50			Piprahi
51			Manoharpur
52			Chhitampur
53			Jarha Chhitampur
54			Jarha
55			Thanapur
56			Siddhi
57			Chandewa Khurd
58			Lalpokhra
59			Chandewa Kalan
60			Rasena
61			Bharpura
62			Imaliya
63			Chandul
64			Naktim Israuli
65			Misrauli
66			Daswantsinghpura
67			Tiwaripura
68			Atraura
69			Gaura Bisen
70			Belwa
71			Kharahra Tiwari
72			Madanpura
73			Gopalpur
74			Dayalpur
75			Gaura Raja
76			Thansinghpura
77			Maholiya
78			Gaura Bisen
79			Bandhwa
80			Belahra
81			Gortutwa
82			Hardi Khurd
83			Andhia
84			Haraura
85			Barsaita
86			Parsiapur
87			Bahuti
88			Atari
89			Tiwarika Pura
90			Dibepur
91			Devpura
92			Banwaripur

Source: Census of India, 2011 & Extrapolated up to 2024

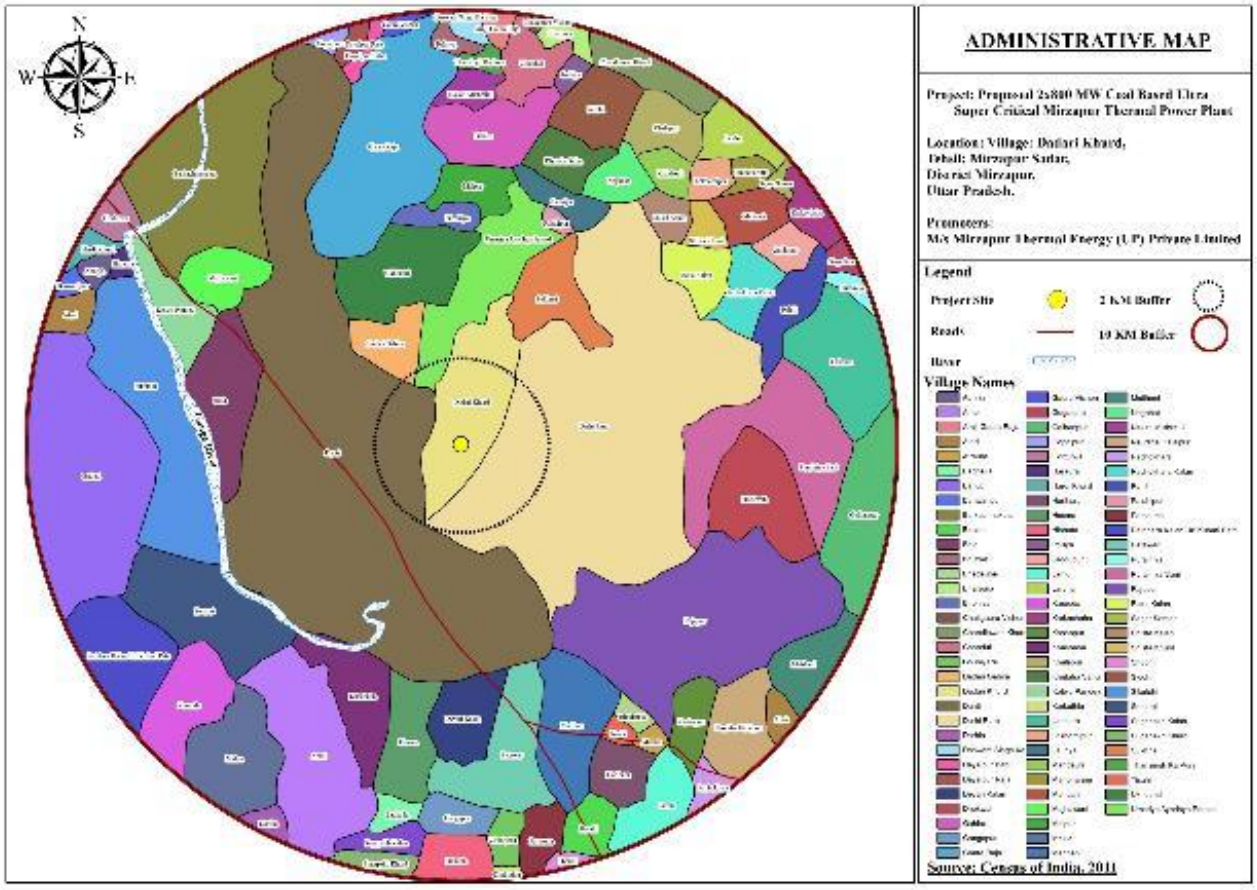


Figure 3.24: Thematic Map depicting Administrative Setup

Table 3.59: Demographic details

S no	Village	Population			Literacy		Illiterates		ST Total		SC Total		Total Worker	Main Worker	Marg Worker	Non Worker
		Male	Female	0-6 total	Male	Female	Male	Female	Male	Female	Male	Female				
1	Amoi	1673	1543	685	758	496	915	1047	0	0	902	834	1172	374	798	2044
2	Anantpur	406	357	101	300	221	106	136	0	0	261	220	364	44	320	399
3	Arjunpur	2367	2158	834	1460	877	907	1281	20	15	440	355	1209	814	395	3316
4	Atari	796	738	279	507	296	289	442	1	0	235	222	841	371	470	693
5	Atraura	107	87	28	74	41	33	46	0	0	58	53	141	130	11	53
6	Baghaila	226	207	77	111	59	115	148	6	8	107	105	263	205	58	170
7	Bahuti	1593	1430	662	923	570	670	860	60	53	849	745	1012	595	417	2011
8	Bandhwa	222	218	108	89	56	133	162	4	5	67	68	89	89	0	351
9	Banwaripur	276	266	69	174	122	102	144	0	0	176	163	182	78	104	360
10	Basahi	502	469	153	334	213	168	256	20	21	276	243	412	325	87	559
11	Belaha	405	415	112	268	212	137	203	14	10	145	139	263	192	71	557
12	Bharpura	2737	2419	929	1679	1137	1058	1282	49	49	1087	928	1789	1318	471	3367
13	Bhawanipur	466	399	155	266	145	200	254	0	0	0	0	306	205	101	559
14	Birohiya	674	650	258	325	176	349	474	0	0	278	244	521	331	190	803
15	Chakauli	140	121	43	76	58	64	63	28	31	64	53	120	21	99	141
16	Chandlewan Kalan	753	685	255	471	299	282	386	0	0	406	387	831	299	532	607

17	Chandlewan Khurd	147	124	56	84	39	63	85	0	0	0	0	73	57	16	198
18	Chanduli	431	405	202	244	138	187	267	0	0	209	218	383	297	86	453
19	Chaubepur	223	184	55	153	96	70	88	2	1	93	77	162	108	54	245
20	Chhitampur	722	653	231	450	297	272	356	0	0	429	387	369	51	318	1006
21	Chuniyara	97	93	31	69	48	28	45	0	0	36	33	92	25	67	98
22	Dadari Gahira	28	16	0	24	9	4	7	0	0	0	0	10	8	2	34
23	Danti	1800	1705	648	1007	681	793	1024	0	0	439	451	1145	648	497	2360
24	Darhi Ram	2474	2315	921	1351	828	1123	1487	35	29	974	975	2053	923	1130	2736
25	Daswant Singh Ka Pura	418	372	190	269	153	149	219	0	0	306	275	162	160	2	628
26	Dayalpur	509	510	165	349	239	160	271	0	0	66	65	391	318	73	628
27	Devpura	1400	1219	418	912	590	488	629	3	15	371	303	1266	723	543	1353
28	Dewahi	1696	1502	610	972	621	724	881	18	15	641	565	1109	861	248	2089
29	Dhekwah	191	159	60	80	37	111	122	0	0	115	91	169	52	117	181
30	Gahira	803	756	325	493	267	310	489	0	0	352	364	633	233	400	926
31	Gaura Raja	444	391	169	276	144	168	247	9	13	158	127	325	201	124	510
32	Gaura Vishen	581	530	227	322	221	259	309	1	1	229	217	381	176	205	730
33	Gogadara	367	355	136	206	146	161	209	0	0	194	168	173	145	28	549
34	Golhanpur	1154	1118	387	686	490	468	628	127	98	408	417	740	300	440	1532
35	Gopalpur	1950	1766	591	979	601	971	1165	70	85	1217	1130	1728	1543	185	1988
36	Gortutwa	543	498	241	281	187	262	311	0	0	327	297	507	497	10	534

37	Haraura	875	827	348	366	238	509	589	152	158	301	255	465	422	43	1237
38	Hardi Khurd	379	322	154	195	97	184	225	0	0	161	126	318	317	1	383
39	Harihara	339	344	101	243	213	96	131	0	0	131	146	320	284	36	363
40	Hasara	691	625	211	428	302	263	323	6	5	268	247	660	437	223	656
41	Hinauta	615	575	192	336	204	279	371	1	0	384	368	792	242	550	398
42	Imalia 84	192	172	37	150	104	42	68	0	0	58	57	124	50	74	240
43	Jaddupur	129	115	29	110	79	19	36	0	0	0	0	60	60	0	184
44	Jaraha	803	732	335	478	353	325	379	0	0	270	225	474	234	240	1061
45	Kanchanpur	339	247	94	217	108	122	139	0	0	60	39	184	132	52	402
46	Kanhari	1103	992	361	646	371	457	621	0	0	947	847	1018	765	253	1077
47	Karauda	522	484	192	321	218	201	266	2	3	335	328	463	192	271	543
48	Kashopur	603	648	225	404	301	199	347	3	1	304	339	714	210	504	537
49	Kharhara Tiwari	344	327	142	229	131	115	196	0	0	100	90	277	255	22	394
50	Khutaha	2110	1827	680	1198	839	912	988	0	0	309	286	1340	973	367	2597
51	Kotawa	979	814	368	621	346	358	468	171	154	214	179	653	265	388	1140
52	Kotwa Pandey	1090	987	363	655	386	435	601	58	54	502	442	668	304	364	1409
53	Lahas	470	434	92	334	205	136	229	20	12	248	234	517	194	323	387
54	Lahaura	720	627	206	431	262	289	365	0	0	182	159	474	447	27	873
55	Lalpur	735	705	179	544	394	191	311	13	7	105	84	483	432	51	957
56	Lauria	380	324	133	222	113	158	211	0	0	157	128	264	62	202	440
57	Madanpura	790	769	222	621	452	169	317	0	0	85	79	442	432	10	1117

58	Madara	1034	969	261	639	432	395	537	0	0	85	64	1307	880	427	696
59	Mahuali	4	6	3	1	2	3	4	0	0	0	0	4	4	0	6
60	Mahuari	946	859	335	568	355	378	504	0	0	338	289	655	452	203	1150
61	Malpur	285	283	113	186	106	99	177	0	0	19	19	253	144	109	315
62	Malua	756	656	261	480	290	276	366	5	3	516	452	745	234	511	667
63	Marihan	1250	1057	426	690	398	560	659	10	4	713	610	776	122	654	1531
64	Matihara	1031	945	408	577	326	454	619	3	6	412	406	767	108	659	1209
65	Mishirpura	122	127	30	84	73	38	54	19	16	0	0	95	86	9	154
66	Mishraulia	114	118	36	89	61	25	57	0	0	0	0	43	42	1	189
67	Mohammadpur	277	262	87	196	108	81	154	0	0	0	0	309	296	13	230
68	Nagahat	200	193	88	117	42	83	151	0	0	92	93	124	82	42	269
69	Nakati Mishrauli	587	552	212	345	229	242	323	0	0	178	157	435	323	112	704
70	Pachokhara	469	408	139	334	211	135	197	0	0	272	244	449	151	298	428
71	Parsauna	529	485	169	302	197	227	288	10	10	339	304	484	78	406	530
72	Patehara	1443	1284	475	896	509	547	775	0	0	693	639	1370	652	718	1357
73	Patewar	2146	1983	721	1412	1018	734	965	29	29	1114	974	1198	467	731	2931
74	Piprahi	550	478	158	317	193	233	285	0	0	7	9	218	162	56	810
75	Rajpur	1749	1609	707	1097	597	652	1012	0	0	800	717	1210	427	783	2148
76	Shista Kalan	263	234	107	175	100	88	134	0	0	109	98	254	31	223	243
77	Siddhi	678	616	276	444	226	234	390	0	0	324	306	685	379	306	609
78	Sugapakh Kalan	212	189	66	143	98	69	91	1	2	92	90	134	130	4	267

79	Sugapakh Khurd	468	452	147	345	254	123	198	0	3	172	173	329	288	41	591
80	Sukhnai	564	510	216	308	185	256	325	5	8	67	67	320	291	29	754
81	Thansingh Ka Pura	151	131	51	115	71	36	60	30	20	0	0	121	92	29	161
82	Tiwaripur	1331	1185	305	1042	572	289	613	0	0	204	163	629	588	41	1887
83	Udaipur	58	40	20	43	21	15	19	0	0	0	0	37	2	35	61
84	Ukhdand	544	547	176	335	212	209	335	3	5	26	41	363	337	26	728
TOTAL (upto 2011 Census)		**61290**	**55908**	**21068**	**37051**	**23412**	**24239**	**32496**	**1008**	**949**	**45100**	**23608**	**45410**	**26274**	**19136**	**71788**
TOTAL (upto 2024 Census)		**68216**	**62226**	**23449**	**41238**	**26058**	**26978**	**36168**	**1122**	**1056**	**50196**	**26276**	**50541**	**29243**	**21298**	**79900**

**Source: Census of India, 2011*

3.12.4 POPULATION

In the study area, there are 21,228 households. The total population falling in the project area is 1,30,441 in 10 km radius. The total male population consists of 52.29 % and female population accounts to be 47.71 % of the total population. The sex ratio of the 10.0 km study area is 912 females over thousand males. There are approx. 5 to 6 members in a family. The 0-6 population comprises of 16.22% of the total population of the study area. The sex ratio of 0-6 population is 914 females over thousand males.

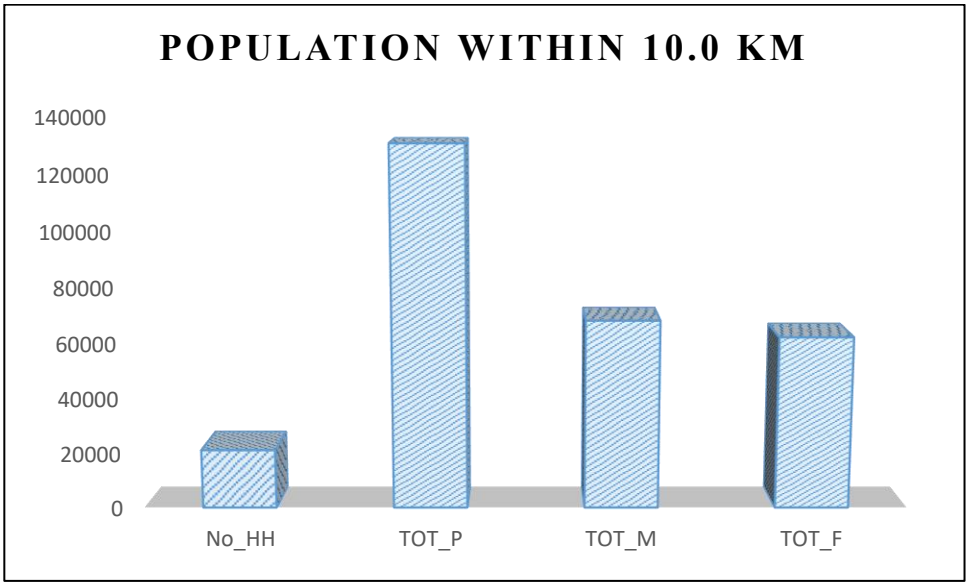


Figure 3.25: Total Population within 10.0 km from Project Site

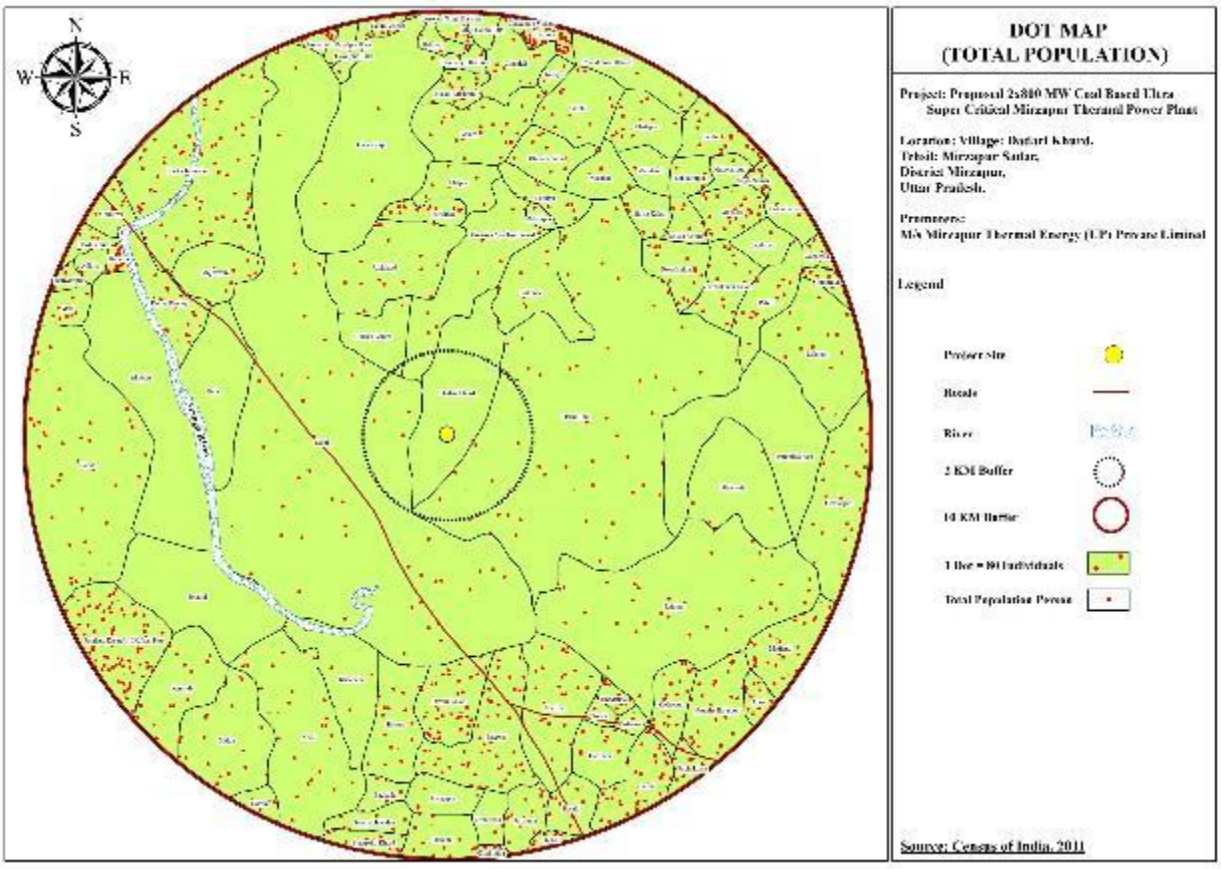


Figure 3.26: Thematic Map depicting Population distribution

Sex Ratio: The sex ratio works out to 581 females per 1000 males for 2 Km buffer and 919 for 10 Km buffer. The sex ratio of Mirzapur District is 903 & Uttar Pradesh State is 908. The sex ratio less than 908 females per thousand males were in 37 villages.

Table 3.60 : Male & Female of the Villages in the study area

S. no.	Demographic Feature	Study area		
		Core zone (Project area)	0-2 Km Buffer	2-10 Km Buffer
1	Male	0	43	57525
2	Female	0	25	52865
3	Sex ratio	0	581	919

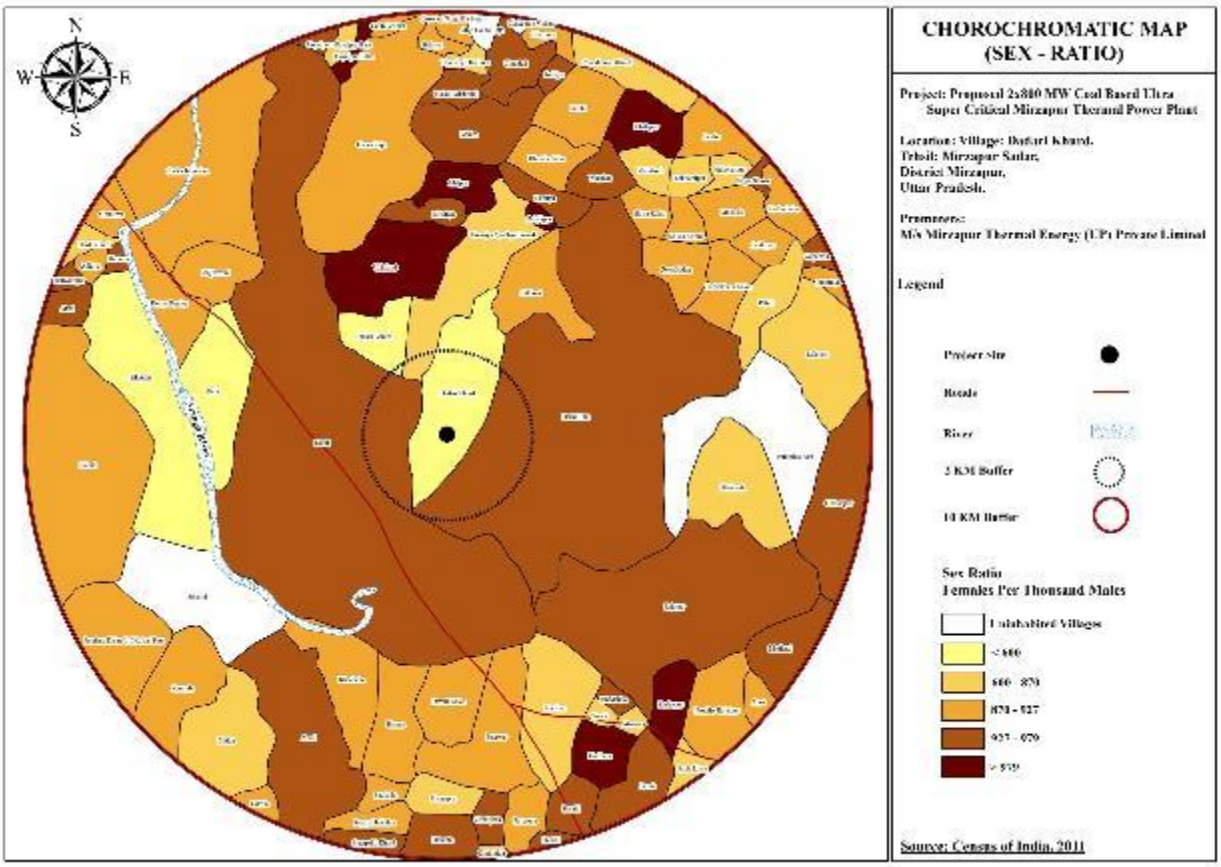


Figure 3.27: Thematic Map depicting Distribution of Sex-ratio

3.12.5 SOCIAL STRUCTURE

In the study area, Schedule Caste population is 38.48 % which is 50,196 of the total population. The males are 38.51 % of the total male population and females account for 38.44 % of the total female population. The sex ratio of SC population is 910 females over thousand males. In the study area, Schedule Tribe population is 1.66 % which is 2,178 of the total population. The males are 1.64 % of the total male population and females account for 1.69 % of the total female population. The sex ratio of ST population is 941 females over thousand males.

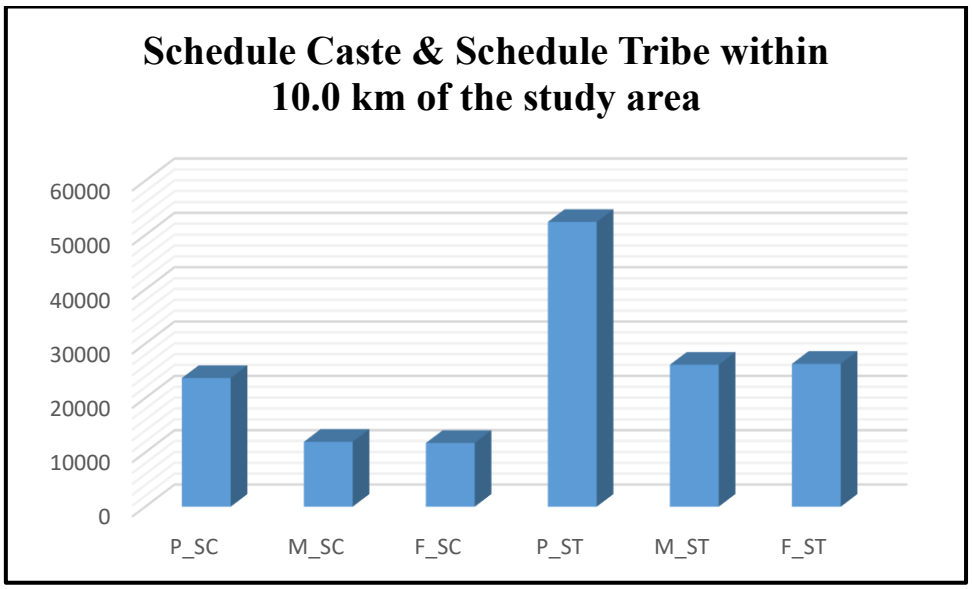


Figure 3. 28: Schedule Caste & Schedule Tribe within 10.0 km of the study area

3.12.6 LITERACY STATUS OF THE STUDY AREA

Persons aged ten years and above, who can both read and write with understanding in any language, are considered literate. In the study area, the literate people are 67,295 which is 51.59 % of the total population. The male literates are 60.65 % of the total male population, and female literates are 41.87 % of the total female population. In the study area, the illiterate people are 63,146 which is 48.40 % of the total population. The male illiterates are 39.54 % of the total male population, and female illiterates are 58.12 % of the total female population.

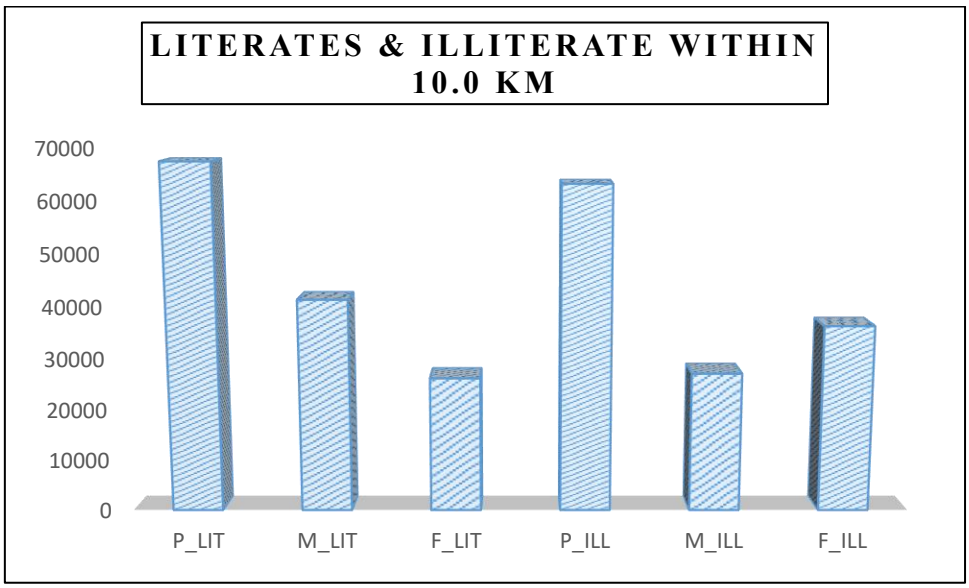


Figure 3. 29: Literates & Illiterate within 10.0 km of the study area

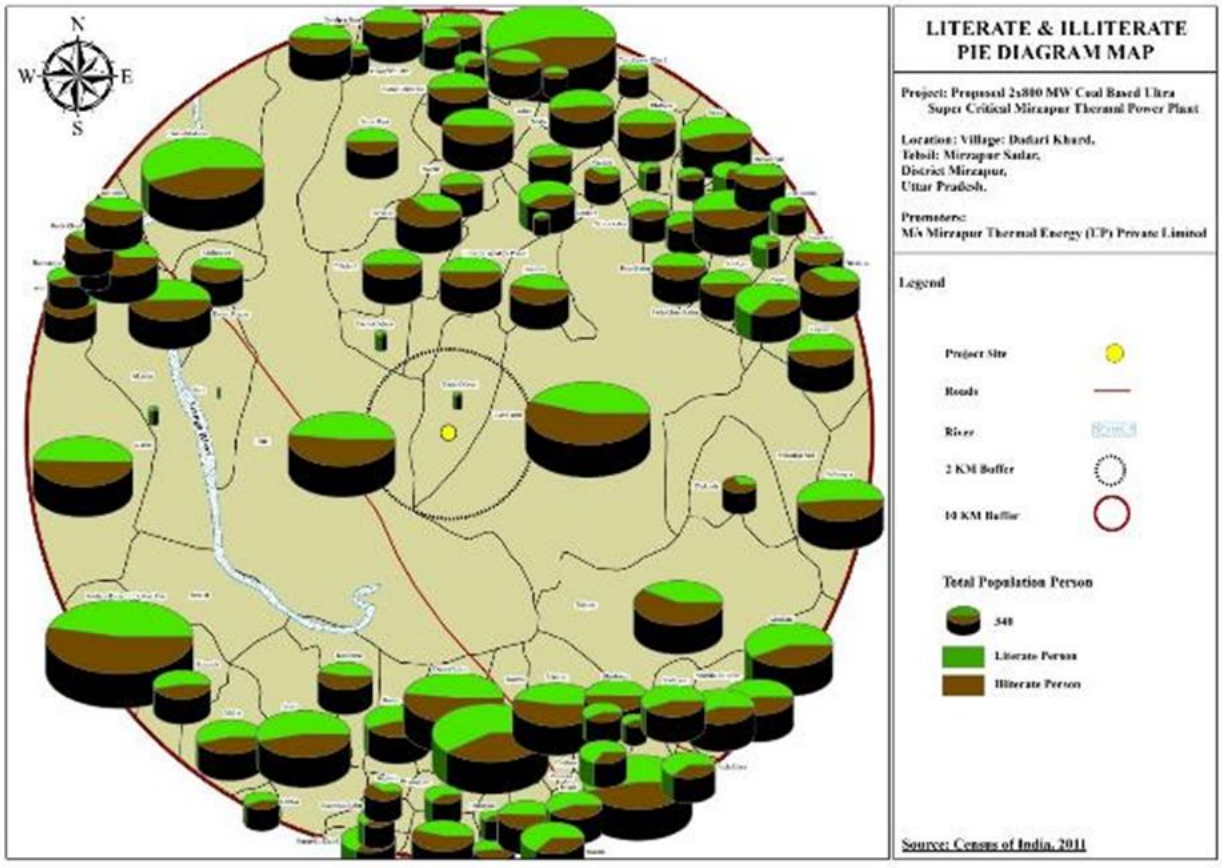


Figure 3.30: Thematic Map depicting Literate & Illiterate

3.12.7 WORKER'S PROFILE & OCCUPATIONAL STRUCTURE

The work participation in the study area is 50,541 which account to be 38.74 % of the total population. The male work participation is 47.67 % with respect to male population and female work participation accounts to be 28.95 % with respect to female population in the study area.

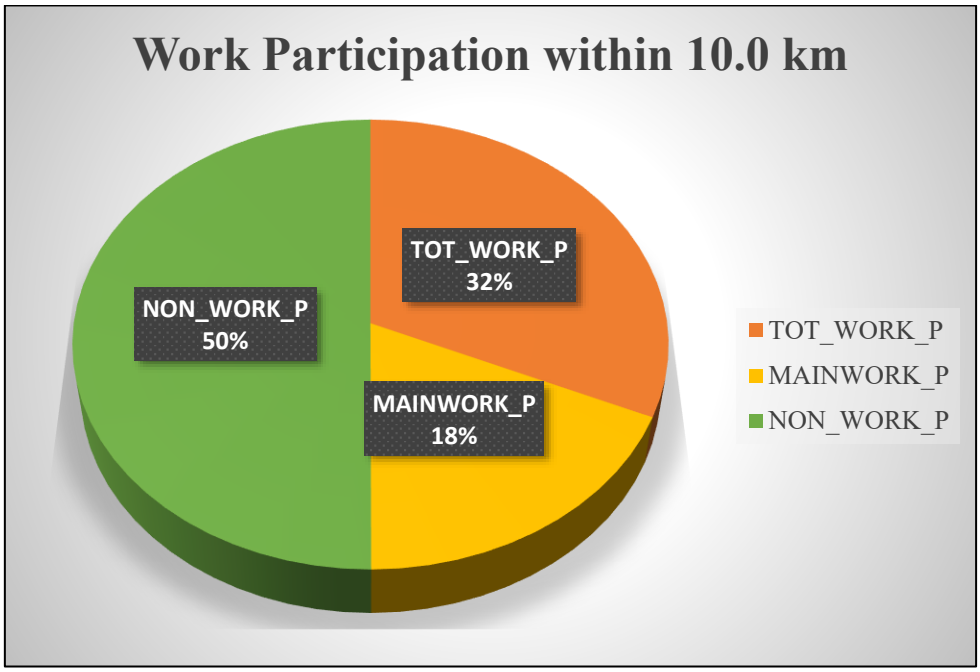


Figure 3.31 : Work participation within 10.0 km of the Study area

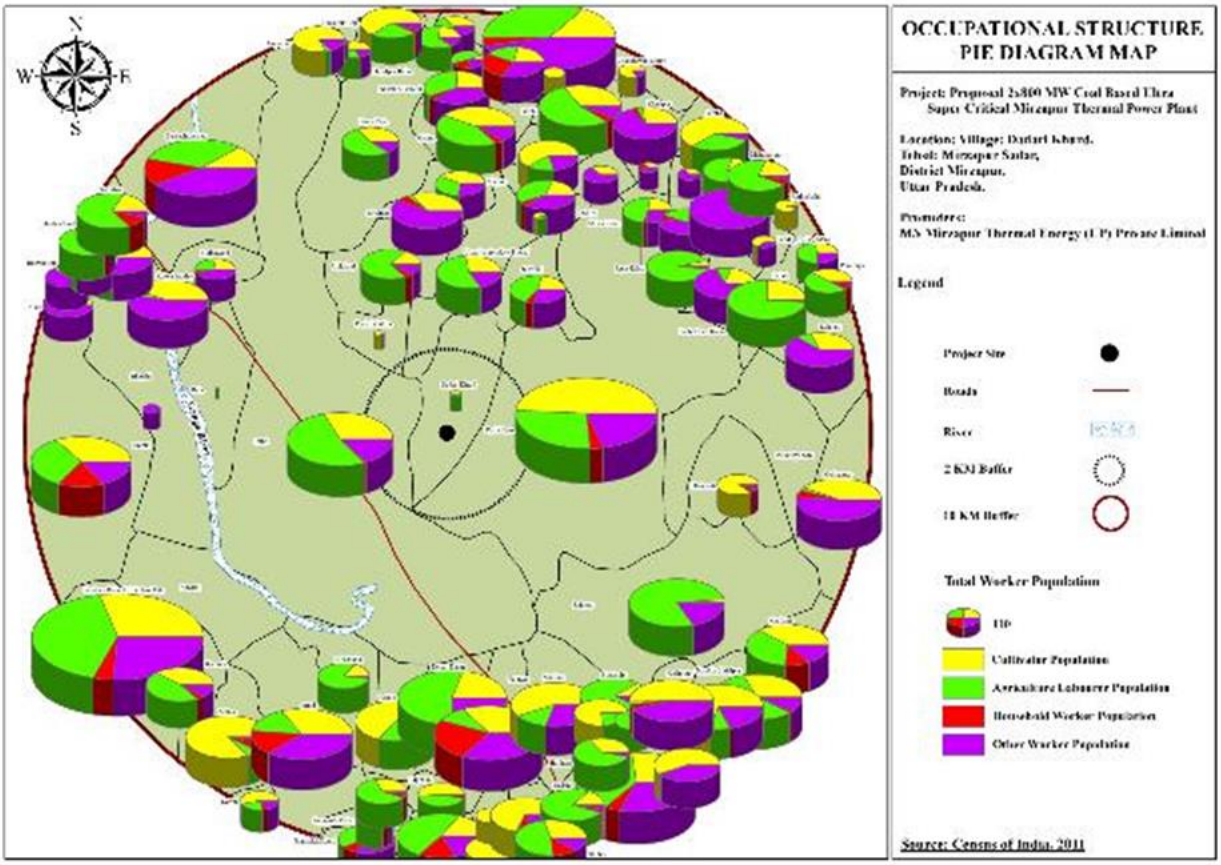


Figure 3.32: Thematic Map depicting Distribution of Occupational Structure

The main work participation is 22.41% and marginal work participation is 16.32% of the total working population. Further analysis of data has revealed that there exists total male dominancy of 37.58% in main work participation. Marginal work participation shows total female and total male dominancy which is 30.92% while marginal male work participation is 16.75%. The males are working in the nearby small industries, agriculturist, labourers, etc as main workers. Women on the other hand work as marginal workers due to their occupancy in household and domestic chores. Women work mostly as marginal cultivators in their fields.

Housing Pattern –

The houses built in the district have flat roofs, as the rains are not heavy; in heavy rainfall areas, sloping roofs are found so as to drain off water. There are also R.C.C. buildings constructed in this area. In rural areas, mostly the houses are of mud or brick walls. There are also some pucca houses in the rural areas. The different materials used for walls include grass/thatch/bamboo, mud/unburnt brick, stone, burnt brick, etc.

Health (Medical) –

The government hospital is located in mirzapur or tehsil area. All modern equipment such as X-rays, ECG Machines, Dental Unit etc. are available here A family welfare and child health center is attached to this hospital.

Education:-

All the different educational facilities available in the village have been given under these columns. Nursery/LKG//UKG classes are included in Pre- Primary Schools, Classes upto class V included in Primary School; Classes from VI to VIII are included in Middle school. Classes from IX and X are included in Secondary School. Classes from XI and XII are included in Senior Secondary School. In the case of composite schools like middle school with primary school or secondary school with middle school, these are also included in the number of primary and middle schools, respectively. The information on the entire educational institutes is given under these columns.

Table 3.61: Details of Primary, Middle and Secondary Schools

S. No.	Name of CD Block	Total number of inhabited villages	Type of educational institutions available			
			No School	At least one primary school and no middle school	At least one primary school and one middle school	At least one middle school and one secondary school
1	Chhanvey	208	77	68	59	24
2	Kon	70	25	23	20	2
3	Majhawa	53	18	16	19	4
4	Nagar (City)	174	55	68	50	8
5	Pahari	115	42	30	38	10
6	Lalganj	185	76	63	39	7

7	Hallia	193	56	77	59	6
8	Marihan	130	92	22	15	5
9	Rajgarh	154	31	54	67	17
10	Sikhar	70	19	25	25	6
11	Narainpur	188	55	73	58	17
12	Jamalpur	205	68	64	73	12
Total		**1745**	**614**	**583**	**522**	**118**

**Source: District Census Handbook (DCHB) 2011*

Cropping Pattern/ Agriculture:

Mirzapur district, located in the state of Uttar Pardesh, has a significant amount of cultivated land, with Agriculture plays a vital role in the economy of Mirzapur District, which is located in the eastern part of Uttar Pradesh. The district's agricultural landscape is shaped by the Ganges River and the Vindhya Hills, which provide a variety of ecosystems, ranging from fertile river plains to the more rugged, hilly terrains. As a result, the cropping pattern in Mirzapur varies from irrigated crops in the plains to rain-fed crops in the hilly regions.

Total Cultivated Area: The total geographical area of Mirzapur District is around 4,524 square kilometers (or about 452,400 hectares). Agriculture is the primary occupation in the district, with the cultivated area making up about 70-75% of the total land area.

Crops: The main crops grown in Mirzapur include rice, maize, cotton, wheat, Barley and pulses. Rice is the primary crop, given the region's favorable conditions for paddy cultivation.

Irrigation: Rivers: The district is located near the Ganga river, which are significant sources of water. The river systems play an important role in the supply of water for both irrigation and other agricultural needs.

Canals: The Ganga Canal and other irrigation canals draw water from the Ganga and are crucial for the irrigation of crops in the region. These canals distribute water over a large area.

Tubes Wells: The use of groundwater through tube wells is common in areas where surface water sources like canals and rivers are insufficient or not easily accessible.

However, over-reliance on groundwater is becoming a concern due to declining water tables in some areas.

Ponds and Wells: Smaller water bodies like ponds and traditional wells also contribute to irrigation, especially in rural or hilly areas of Mirzapur.

Area Sown: The area sown in Mirzapur is the part of the total cultivated area that is actively planted during the crop seasons. The sowing varies based on seasonal crops, weather conditions, and water availability for irrigation.

Transport and communication network:-

Road: National Highways: Mirzapur is well connected to the rest of the country through major national highways. The National Highway 2 (NH-2), also known as the Grand Trunk Road, passes through the district, linking it to cities like Varanasi (around 60 km away) and Kanpur, and further to Delhi. This highway is crucial for trade and travel.

State Highways: Several state highways connect different towns and villages within the district, improving access to key agricultural and commercial areas. For instance, State Highway 76 connects Mirzapur to neighboring districts and towns.

Rural Roads: The district has a network of rural roads that connect the interior villages to the nearest towns and cities. These roads are crucial for agricultural activities, especially for the transportation of crops to markets. The Pradhan Mantri Gram Sadak Yojana (PMGSY) has been instrumental in improving rural road connectivity in the region.

Public Transport: Public transport in Mirzapur district is a vital part of daily life, particularly in connecting rural and urban areas and facilitating the movement of people. While bus services, shared auto-rickshaws, and railways serve the transportation needs of the district, there is room for improvement, especially in terms of frequency, coverage, and infrastructure in remote areas. With ongoing efforts to improve rural connectivity and infrastructure, the public transport system in Mirzapur is likely to become more efficient and accessible in the coming years.

Rail: Mirzapur Railway Station: The Mirzapur Junction is a key railway station in the district, connecting it to several important cities such as Varanasi, Allahabad (Prayagraj), Delhi, and Kolkata. The station handles both passenger and freight trains, and regular services are available for commuters. In addition to long-distance trains, local trains running between Mirzapur and Varanasi or Allahabad are commonly used by residents for intercity travel. The availability of trains makes rail transport an important alternative to road transport for long-distance travel.

Mirzapur's railway station also plays a significant role in transporting goods, particularly agricultural products, to larger markets.

Post, Telegraph & Telephones:

Post Offices: Mirzapur district is served by several post offices, both urban and rural, which are managed by India Post. These post offices provide a variety of services including mail delivery, parcel services, and financial services.

Types of Post Offices: There are different categories of post offices in the district: Head Post Office: Located in the city of Mirzapur, this is the central office that handles the majority of the postal services in the district.

Sub Post Offices: These are smaller branches spread across the district, serving various towns and villages.

Branch Post Offices: These are located in more remote areas and provide basic postal services.

Postal Services: India Post in Mirzapur offers traditional services such as letter mail, speed post, express parcel post, and money orders. It also provides Rural Postal Life Insurance **(RPLI)**, Post Office Savings Bank **(POSB)**, and other financial services.

E-Commerce and Logistics: The post offices also facilitate e-commerce deliveries and provide logistics support to online retailers, especially in the rural areas of the district. Entire area of the district is connected with STD and Fax facilities.

3.12.8 PRIMARY SURVEY:

Methodology used for the Field Survey

In order to access and evaluate likely impacts arising out of any development projects on socio-economic environment, it is necessary to gauge the apprehensions of the people in the study areas.

Methodology applied for selection of sample & data collection

The methodology which is applied for primary source of data collection i.e. gathering data through field survey for socio-economic environment.

Table 3.62: Methodologies applied for gathering data through field survey

Step by step working / process	Type	Main participants
Individual/ Settlement	Household survey/ FGD	People including those are impacted directly or indirectly Local People Stockholders
Govt. office	Discussion	Panchayat office, Govt. School, PHCs (Public Health Center), Madihan, Pahadi and many more villages, Mirzapur.

Site Visit

Site visit was done by Gaurang Environmental Solutions Private Limited (GESPL) consultant for socio-economic studies on 17/12 2024 to 20/12/2024 for 4 days. Survey team performed the survey in villages with socio- economic study format. In the study area, the City were chosen by random sampling for socio-economic survey.

Table 3.63: Sampling location for Socio-economic Survey

S. No.	Survey Area	Particular
1	Madihan, Pahadi, Kotwa Pandey, Danti, Dadri Garha, Darhiram, Chakulia & Tiwaripura	Govt school , Public Health Centre, Parished Office and FGD (focus group Discussion)

Sampling Method

A judgmental and purposive sampling method was used for choosing respondents of various sections of the society i.e. Sarpanch, adult males and females, teachers, medical practitioners, businessmen, agricultural labour, unemployed group etc. Judgmental and

purposive sampling method includes the right cases from the total population that helps to fulfil the purpose of research needs.

Field Survey and Observations

Field survey and observations were made at each sampling ward area and the socio-economic status of that region was studied. Visits were made at hospitals, primary health centers and sub-centers to collect the requisite details of that region.

Interview Method

The interview method helps to collect more correct and accurate information as the interviewer is present during the field survey. The structured interview method was used to collect the data regarding awareness and opinion of the samples selected from various socio-economic sections of the community. Structured interviews involve the use of a set of predetermined questions that includes fixed and alternative questions. The questionnaire mainly highlights the parameters such as income, employment and working conditions, housing, food, water supply, sanitation, health, energy, transportation and communication, education, and environment and pollution to assess the standard of living of that particular region and general awareness, opinion, and expectation of the respondents about the existing project.

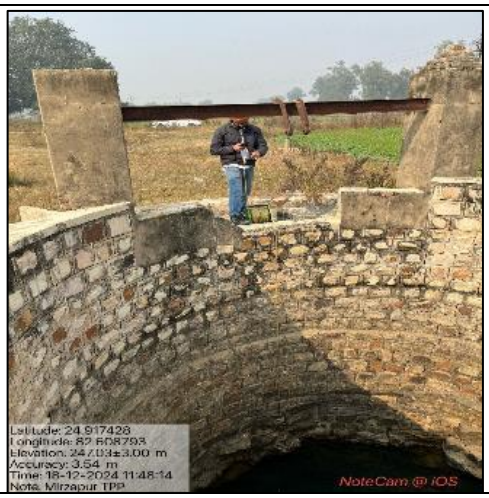
Public consultation meeting was organized at survey area village (Dadri Khurd, Dadri Garha, Kotwa Pandey, Danti Malpur, Darhiram, Chakulia, Malpur & Tiwaripura). Overall number of participants in all type of consultation (FGD) was 35.

Focus Group Discussion Observations: - Focus Group Discussion Observations are conducted with the likely impacted stakeholders, given as below:

Table 3.64: Focus Group Discussion Observations

Components	Description
Survey	

Types of Houses	In the survey, it was seen that the houses of the villages in the Danti, Madihan, and Kotwa Pandey areas are pucca, and many families have their vehicles (mostly used two-wheelers), mobile phones, internet, televisions, newspapers, etc. Rural: Most of the houses in the areas are made of mud or brick walls. Most of the pucca houses are also in rural areas. Domestic installations have electricity for 10-12 hours.
	Household photos  

	
Drinking Water Facilities	 After survey, it was seen that the most sources of water supply are hand pumps, open wells, tube well, and government supplies.
Education Standard	After the survey, the people told that due to the project activities, many educational institutions will be established in the study and surrounding areas. Most of the villages in Danti, Kotwa Palndey, Dadiram, Kalidari and Madihan areas have government schools. The Mirzapur Tehsil has govt. collage, govt. Technical Institute, and Govt. Stadium. Most of the Danti, Madihan and Mirzapur Tehsil has a Pvt Primary/ Middle/ Secondary/ Sr. secondary School/ Collages/Technical Institute following education institutions have been observed during the site visit.

Govt. Schools / Collage:



Govt. Sr. Sec. School, Madihan



Govt. Primary School, Village-Kalidari.

	 **Govt. Primary. School, Village-Kanchha, Mirzapur.**
Health Facilities	Primary Health Centre in the study area is available at a distance of 3.00 Kms (Approx.) village & health sub centers are also available in most of the nearby area. Community Health worker & doctors visit villages periodically & provide health facilities to the people. Vaccination & health camps are also organized by PHC to aware the people about family planning, hygiene, & health care. Community Health Center (CHC)  **<u>Nearby Medical Facilities:</u>** Community Health Center (PHC), Village - Madihan , Mirzapur
Electricity	With the increasing need of electricity in the villages and cities. The problems associated with supply of electricity in city of mirzapur are insignificant. We observed that villages and rural areas used to receive a power supply for about 10-12 hours. Over these years, despite of excessive demand of electricity.

Agricultural Facilities	 The major crops in the study area include rice, maize, cotton, wheat, barley, and pulses during the Kharif season. The primary crop in the villages is from the Kharif season, as cultivation mainly depends on the monsoon rains. The main Kharif crops grown in the sandy tracts of the district are rice, maize, cotton, wheat, barley, and pulses. In contrast, during the Rabi season, crops like wheat, chickpea (gram), mustard, and barley are primarily cultivated in the district. These crops are generally grown after the monsoon, and their cultivation relies on winter rainfall or irrigation.
Crops	 The major crops in the study area include rice, maize, cotton, wheat, barley, and pulses during the Kharif season. The primary crop in the villages is from the Kharif season, as cultivation mainly depends on the monsoon rains

Animals husbandry	  Cows-Buffaloes are mainly used for milk production for own Consumption and sale. Goats and fish are mainly used for meat production.
Economy	 Mirzapur is known for its carpet weaving industry. The city and nearby villages are famous for producing high-quality hand-knotted carpets and brassware, which are exported worldwide.









Village : Madihan Focus Group Discussion (FGD)

Village : Madihan (PHC Center) & Village- Dadiram





Village: Kotwa Pandey.





Source: Primary-Field survey

3.13 TRAFFIC STUDY

The primary traffic volume count survey was done on State Highway-5 for 24 hours to collect existing traffic data on the transport infrastructure and then ascertaining the existing traffic scenario through analysis of the obtained traffic data.

INDIAN ROAD CONGRESS (IRC) GUIDELINES

Factors for conversion of different type of vehicles into equivalent passenger car unit (PCU) based on their relative interference value as per IRC guidelines i.e. IRC 64:1990 (*Guidelines for capacity of Roads in Rural Areas*) is given below:

Table 3.65: Recommended PCU factor for various types of vehicles on Rural Roads

S. No.	Vehicle type	Equivalency factor for PCU
	Fast vehicles	
1.	Motor cycle or scooter	0.50
2.	Passenger car, Pick-up van or auto-rickshaw	1.00
3.	Agricultural tractor, Light commercial vehicle	1.50
4.	Truck or Bus	3.00
5.	Truck-trailer, agricultural tractor-trailer	4.50
	Slow Vehicles	
6.	Cycle	0.50
7.	Cycle-rickshaw	2.00
8.	Hand cart	3.00
9.	Horse-drawn vehicle	4.00
10.	Bullock cart*	8.00

**for smaller bullock-carts, a value of 6 will be appropriate. Source: IRC 64:1990*

3.13.1 TRAFFIC ANALYSIS AS PER IRC GUIDELINES

Traffic analysis is carried out by understanding the existing carrying capacity of the roads near to the project site and the connecting main roads in the area. Then depending on the capacity of the project, the number of vehicles that will be added to the present scenario will be compared to the carrying capacity.

3.13.2 METHODOLOGY

The methodology adopted for the traffic study includes

- Identification and analysis of existing transport network.
- identifying traffic survey locations, conducting 24-hour preliminary traffic survey to gather base data information about existing traffic and travel pattern on surrounding roads, traffic forecast due to proposed project,
- identifying impact of increased traffic on existing road network by adding increased PCU to the existing PCU to estimate the impact of increased PCU due to proposed project on the Level of Service,
- Preparing a traffic management plan based on internal circulation plan and these propose development projects to manage the traffic.

3.13.3 EXISTING CONNECTIVITY TO PROPOSED PROJECT SITE

The proposed site is well connected to the State Highway (S.H.) 5 – Mirzapur to Robertsganj, at an aerial distance of about 1km towards WSW.

Table 3.66.: Current capacity of road as per IRC:60-1990

S. No.	Road name	Lane	Width	Design volume PCU/Day
1.	State Highway 5	Single lane	10 m	15000

Table 3.67.: Existing traffic volume on road

S. No	Type of Vehicle	Current Volume in Vehicles / day	PCU Factor	PCU/day	PCU/hr
1.	Cycle	135	0.5	67.5	2.8
2.	Passenger Car, Pickup Van	66	1	66	2.75
3.	Three Wheelers	68	1	68	2.8
4.	2 axle & 3 axle, bulker, / trailer	72	4.5	324	13.5
Total		**341**		**525.5**	**21.85**

Table 3.68: Reference V/C ratio for LOS & performance of the road

Road	Volume (in PCU/Day)	Capacity (in PCU/Day)	Existing V/C Ratio	LOS	Performance
SH-5	525.5	15000	0.035	A	Excellent

Table 3.69: Reference V/C ratio for LOS & performance of the road

V/C	LOS	Performance
0.0 - 0.2	A	Excellent
0.2 - 0.4	B	Very Good
0.4 - 0.6	C	Good / Average / Fair
0.6 - 0.8	D	Poor
0.8 - 1.0	E	Very Poor

Source: IRC 64:1990

3.13.4 CONCLUSION

From the 24-hour study, it was observed that traffic movement on the studied road is excellent. At present, the calculated traffic load is about 525.5 vehicles per day. The majority of vehicles include two wheelers. The LOS value is calculated as 0.035 i.e. "A" and the traffic condition is "Excellent".

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CHAPTER - IV

ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

4.1 INTRODUCTION

Identification of possible impacts due to an activity is very important while this helps to construct implementation measures and focus attention upon relevant environmental parameters with the activities involved. This chapter describes identification of impacts which may be adverse or beneficial due to proposed activity on various environmental attributes. Accordingly, predict and assess the environmental impacts; observe each environmental aspect- their impact relationship and identify its degree of significance.

The proposed project is likely to create impact on environment, hence identify possible mitigation measures for the project activities and proposed most appropriate mitigation measures to make impacts less in degree, based on the reduction in significance achieved and practicality in implementation.

Details of likely impact on environment due to the project location, project design, decommissioning, during project construction and regular operations are discussed in this section.

Identified environmental impacts have been listed in the table below. Mitigation measures are formulated based on the significance of the impact.

Environmental impacts have been identified based on an assessment of environmental aspects associated with the project. The symbol '●' indicates an adverse (negative) impact and 'o' indicates a beneficial (positive) impact.

Table 4.1: Impact identification matrix

S. No.	Project Stages, Activities	Aspects	Impact (Type: N, AN, E; Duration: 0, T, P)	Potential Environmental Impacts on Environment									Impacts (+/-) with remarks
				LU / LC	AQ	NV	SW	GW	S	EB	SE	OH / CH & S	
1	**PROJECT DESIGN, LOCATION AND CLEARANCES**												
1.1	Preparation of conceptual and final designs & getting its approvals from various authorities	Employment generation	N, P								o		SE (+): Generation of work to service providers
1.2	Tendering and award of work to the selected bidders	Generation of business opportunities	N, T								o		SE (+): Injection of a substantial and large economic stimulus to the local economy
2	**PROJECT PRE-CONSTRUCTION PHASE**												
2.1	Site Preparation	Dust generation	N, 0		•								AQ (-): Deterioration of indoor air quality
2.2	Tree removal	Land cover change	N, 0	•									LU/LC (-): Change in certain land cover as applicable
		Fugitive Dust generation	N, 0		•								AQ (-) : Air quality deterioration
		Loss of green cover, Loss of habitat to avifauna	N,P							•			EB (-) : Shifting of trees, habitat fragmentation and loss of habitat, decrease in avifauna movements
2.3	Movement of vehicles (HEMMs, trucks, tractors, etc.) for transportation of construction equipment, debris generated due to construction activities	Vehicular exhaust and dust emissions	N, T		•								AQ (-) : Air quality deterioration
		Noise generation	N, T			•							NV (-) : Noise pollution
		Works contracts for agencies involved in this activity	N, T								o		SE (+) : Employment for construction workers and vendors
		Operation of vehicles	AN, T								•		SE (-) : Wear and tear of roads
		Accidents during work activity	AN, T									•	OH (-) : Risk of occupational injuries
3	**CONSTRUCTION PHASE**												
3.1	Cut & fill, removal of top soil & excavation and leveling of site	Dust generation	N, T		•								AQ (-) : Air quality deterioration

S. No.	Project Stages, Activities	Aspects	Impact (Type: N, AN, E; Duration: 0, T, P)	Potential Environmental Impacts on Environment									Impacts (+/-) with remarks
				LU / LC	AQ	NV	SW	GW	S	EB	SE	OH / CH & S	
		Noise generation and vibration	N, T			•							NV (-) : Noise pollution and vibration effects on workers
		Generation of top soil & excavated soil	N, 0						•				S (-) : Depletion of top soil cover & loss of native soil
3.2	Storage of construction material in warehouse	Fugitive dust emissions	N, T		•								AQ (-) : Air quality deterioration
3.3	Civil construction (Excavation of earth, Raft and foundation, Carriage / reuse / disposal of excavated earth, Dressing and compaction, Reinforcement, Concrete structure, brick works & finishing activities)	Land utilized for establishing new / additional structures	N, P	•									LU/LC (-) : Change in certain land cover as applicable
		Dust generation	N, P		•								AQ (-) : Air quality deterioration
		Noise generation	N, P			•							NV (-) : Noise pollution
		Generation of C&D Wastes	N, 0						•				S (-) : Land quality degradation
		Accidents during work activity	AN, T									•	OH (-) : Occupation Risk to the workers and labors working at height or other construction
3.4	Movement of Vehicles (Earth moving equipment, JCB, trucks, cranes, tractors, etc.) for carrying cut & fill material, C&D waste, excavated soil, construction material, employees etc.	Vehicular exhausts and dust emissions on road	N T ,		•								AQ (-) : Air quality deterioration
		Noise generation and vibration	N, T			•							NV (-) : Noise pollution and vibration effects on workers
		Spillage of C&D waste from trucks on site or on nearby road	AN, 0						•				S (-) : Risk of soil contamination
		Job opportunities	N, T								o		SE (+) : Employment for contractors, construction workers and Vendors
		Use of roads for transportation	AN, T								•		SE (-) : Wear and tear of roads

S. No.	Project Stages, Activities	Aspects	Impact (Type: N, AN, E; Duration: 0, T, P)	Potential Environmental Impacts on Environment									Impacts (+/-) with remarks
				LU / LC	AQ	NV	SW	GW	S	EB	SE	OH / CH & S	
		Driving transport vehicles	AN, T									•	OH (-) : Risk involved in transportation activity such as accidents etc.
3.5	Water usage / leakage / spillage construction activities at project site	Leaching of contaminated water due to improper handling & storage of water	AN, 0						•				S (-) : Risk of soil contamination
3.6	Storage and disposal of generated waste (C&D)Wastes, Municipal Waste, Hazardous & E- waste) and Soil	Contamination of soil due to leaching of water due to improper handling & storage	AN, 0						•				S (-) : Risk of soil contamination
3.7	External Development (Roads, Greenbelt, etc.)	Greenbelt / Space development	N, P							o			EB (+) : Habitat improvement will attract avian diversity, minimize noise and air pollution Green belts/Tree plantation not only absorb air and water pollutants but also will help in arresting noise and soil erosion, and creating favourable aesthetic conditions.
3.8	Construction works resulting in personnel hit by objects, electric shock, falling from heights and similar incidents	Accidents during work activity	E, E T/P									•	OH (-) : Occupational risk / casualty
3.9	Fire, asphyxiation due to release of hazardous materials or lack of oxygen	Emission of PM, SO_2 & NOx	E, T/P		•								AQ (-) : Air quality deterioration
		Accidents during work activity	E, T/P ,									•	OH (-) : Occupational risk / casualty
3.10	Damage to buildings / surrounding natural environment due to	Noise generation	E, 0			•							NV (-) : Noise pollution

S. No.	Project Stages, Activities	Aspects	Impact (Type: N, AN, E; Duration: 0, T, P)	Potential Environmental Impacts on Environment									Impacts (+/-) with remarks
				LU / LC	AQ	NV	SW	GW	S	EB	SE	OH / CH & S	
	unforeseen activities / act of war / terrorist acts and natural calamities	Damage to trees near the project site	E, 0							•			EB (-) : Affects tree growth & development
		Accidents during work activity	E, 0								•		SE (-) : Loss of life or injuries
		Accidents during work activity	E, 0									•	OH (-) : Occupational risk to workers
4	**OPERATION PHASE**												
4.1	**Raw Material Handling**												
a	Unloading of raw materials (coal, limestone)	Air Pollution	N, P		•								AQ (-) : Air quality deterioration Dust suppression systems shall be provided
b	Transportation of Material through Conveyor	Dust emission	N, P		•								AQ (-) : Air quality deterioration DE system with Bag Filters at all Junction Points
		Noise generation	N, P			•							NV (-): Noise pollution Insignificant
		Spillage of material	N , P						•				S (-): Risk of soil contamination Closed conveyor shall be provided
(c)	Stacking & Reclaiming of material through Stacker cum Reclaimer	Dust is airborne from Stockpile	AN, T		•								AQ (-) : Air quality deterioration mist system, wind break & barrier shall be provided
		Noise generation from operation of Stacker cum Reclaimer	AN, T			•							NV (-): Noise pollution Regular maintenance of machinery
4.2	**THERMAL POWER PLANT**												

S. No.	Project Stages, Activities	Aspects	Impact (Type: N, AN, E; Duration: 0, T, P)	Potential Environmental Impacts on Environment									Impacts (+/-) with remarks
				LU / LC	AQ	NV	SW	GW	S	EB	SE	OH / CH & S	
(a)	Generation of Steam in Boiler	Generation of noise due to steam leakage	N, P			•							NV (-) : Noise pollution Prevent leakages and Provide Glass wool lagging
(b)	Generation of Power in TG Set	Generation of noise	N, P			•							NV (-): Noise pollution Acoustic enclosure for TG Set proposed

N = Negligible (or No impact): The impact is so small that it can be ignored or doesn't cause any real change.

AN = Adverse Negligible (Adverse but not significant): There's a small negative impact, but it's still very minor — not enough to need big actions.

E = Extensive (or Extreme): A major impact — very significant and often requires urgent or substantial intervention

O = One-time (Short-term) Impact

T = Temporary Impact (will disappear with time or recovery)

P = Permanent Impact (long-lasting or irreversible)

The proposed expansion project phases for which impacts are identified in detail are: -

- **Construction phase:** Temporary or short term impact; and,
- **Operation phase: Long** term impacts

The following attributes are of utmost significance to carry out the Environmental Impact Assessment of the proposed project and are being discussed in detail for each attribute of construction and operation phase

1. Land environment.
2. Water environment.
3. Air environment.
4. Noise environment.
5. Solid & Hazardous waste.
6. Biological environment.
7. Socio economic environment

4.2 IMPACT DURING CONSTRUCTION PHASE- SITE PREPARATION/ ERECTION/ FABRICATION/ CIVIL WORKS

Construction activity includes foundation works, civil works, fabrication and erection of plant &machinery. The proposed plant shall be constructed in phased manner to keep impact on the environment low. The major activities during construction phase are given below:

Project Activities

1. Civil works
2. Fabrication
3. Vehicular movement
4. Loading and unloading of construction items, plant &machinery
5. Storage of construction material, plant &machinery
6. Erection & Installation of structures and machinery
7. Maintenance of construction machinery

4.2.1 IMPACT ON THE LAND ENVIRONMENT

Table 4.2: Identification of Impacting Activities for the Proposed Project

S. No.	Activity	Aspect	Impact	Mitigation/ Management
1.	Soil Excavation: Soil will be excavated for foundation works, site levelling and other purposes.	• Excavated soil when stored in open surface in loose will lead in increase in air borne dust. • Possibility of soil erosion	• Respiratory diseases • Decreased visibility. • Loss of fertility of land due to erosion • Higher run-off rate due to soil erosion resulting in increased sedimentation in water ways.	• Soil will be excavated in phased manner adopting cut and fill techniques. • Total cut will be backfilled within site& used for plantation. • Temporary stabilization of the top soil will be carried out to prevent the fertility loss
2.	Civil construction & erection of plant & machinery	change in land cover from vacant / open land to paved / built up land.	Decrease in aesthetics of the area	Planned development with green belt & plantation 121.13 Hectare (~33%) of total land) will improve the aesthetics of the area.

4.2.2 IMPACT ON SOIL

Table 4.3: Impact on soil & mitigation proposed

S. No.	Activity	Aspect	Impact	Mitigation/ Management
1.	Clearance of vegetation / trees	• The trees in the site will be transplanted for development of proposed project • Loss of top-fertile soil	• Loss of fertility of land due to erosion • Higher run-off rate due to soil erosion resulting in increased sedimentation in water ways.	• Planned development with green belt & plantation in 121.13 Hectare (>33%) of total land area. Attempts will be made to protect the existing vegetation and DFO Office will be intimated in case of involvement of any vegetation clearance before commencement of construction activities. • Drainage channels / garland drain as per natural contours of the area to direct storm – water run off towards water reservoir in scientific manner will prevent sediment build-up in water ways and prevent soil erosion.
2.	Soil Excavation:	• Excavated soil when stored in open	• Respiratory diseases • Decreased visibility.	• Soil will be excavated in phased manner adopting cut

S. No.	Activity	Aspect	Impact	Mitigation/ Management
	Soil will be excavated for foundation works, site levelling and other purposes.	surface in loose will lead in increase in air borne dust. • Possibility of soil erosion	• Loss of fertility of land due to erosion • Higher run-off rate due to soil erosion resulting in increased sedimentation in water ways.	and fill techniques. Total cut material will be backfilled within site& used for plantation. • Temporary stabilization of the top soil will be carried out to prevent the fertility loss. • The excavated topsoil would be kept in an isolated earmarked area with tarpaulin cover and utilized for landscaping and greenbelt development
3.	Movement of vehicles	Compaction of soil	Reduced soil fertility since compacted soil has a reduced rate of both water infiltration and drainage	Demarcated vehicular movement area during construction phase.
4.	Generation of hazardous waste like used oil from machinery / DG Set, oil soaked cotton / rags, waste oil & grease from vehicle / equipment maintenance and discarded containers construction related activity like paint works	Spillage of liquid and solid / hazardous wastes resulting in contamination of soil	• Adverse impact on flora, fauna and human health due to direct or indirect contact. • Soil contamination can lead to the degradation of essential soil nutrients, which can then impact plant growth and, ultimately, the entire food chain.	Hazardous waste like used chemical, paint containers etc. will be stored in covered designated rooms with impervious flooring before being sold off to authorized recyclers.
5.	Sewage generation and discharge from labor camp	Contamination of soil due to accumulation of toxic substances like heavy metals	• Adverse impact on flora, fauna and human health through plants / crops • Increased disease vectors	Sanitation facility in labour camps by means of soak pits will be ensured.

Hence, no significant impact is envisaged on the soil quality of the project area. Construction activities would be confined to the plant boundary. Therefore, no impact on the soil quality of the study area located beyond the plant boundary has been envisaged.

4.2.3 IMPACT ON WATER QUALITY& MITIGATION MEASURES

The overall impacts on water environment during construction phase due to proposed activity shall be temporary and marginal.

Table 4.4: Impact on water quality & mitigation proposed

Activity / Aspect	Impact	Mitigation / management plan
• Abstraction of ground water to fulfil Domestic water demand for workers • Water demand during civil works. • Discharge of untreated sewage generated from labour camp on land, surface water bodies. • Land clearance (the silt and soil can erode and increase sediment load in waterways), open storage of construction material, excavated earth construction wastecan increase sediment load in water ways due to run-off from construction site, excavated soil pile etc. from project premises • Storage of hazardous waste like used oil, discarded containers etc. in open on unpaved area resulting in spillage and leaching to sub-soil, water table / aquifer.	• Decrease in ground water level due injudicious abstraction of water. • Risk of contamination of ground or surface water due to discharge of waste water resulting in odour nuisance and water borne diseases in animals and humans and phytotoxicity in plants / crops • Increased sediment load can affect aquatic biodiversity by making the waterway turbid and restricting the amount of sunlight entering the waterway in surface water bodies and water ways. • Risk of contamination of soil, ground water, surface water bodies, toxic substance accumulation by crops / plants, rendering ground water unfit for human / animal consumption and adversely impacting on human and animal health. • Contaminated ground water is extremely difficult to treat. • Odour nuisance from open storage of MSW, increase in disease vectors	• Excavation during dry season only and proper management of excavated soil through stabilized and covered stockpiling of excavated earth to be used for plantation. • 100% excavated earth will be backfilled within project premises for site levelling and grading. • The stockpiles of construction material will be protected with toe wall of adequate height along with garland drain & sedimentation traps to prevent uncontrolled discharge of runoffs during monsoon and reuse the collected waste water for construction purpose after primary settling. • Provision of storm water drains with oil & grease traps and sedimentation traps as per contour & drainage pattern. • Storm water diversion channels to divert storm run-off from flowing over the construction areas. • Removal & proper disposal of all the debris from site, as soon as construction is over. • Domestic sewage generated will be disposed off to well-designed soak pits. • Storage of hazardous chemical & hazardous waste in covered room with impervious flooring. • Wash offs containing these chemicals will be drained into impervious trays / barrels for disposal as hazardous wastes. • Water consumption during construction phase will be met through the surface water from Upper Khajuri Dam.

Activity / Aspect	Impact	Mitigation / management plan
• Improper collection & storage of MSW, plastic waste etc. generated from labour camp	affecting human and animal health.	

4.2.4 IMPACT ON AIR QUALITY

Dust is the predominant pollutant affecting the air quality during the construction phase. Project activities during construction phase would cause a marginal increase in dust levels and gaseous emissions in the ambient air for short duration.

However, this increase in concentration levels of pollutants is distributed throughout the project site and shall fall under the category of area source and would be temporary in nature and localized.

Table 4.5: Impact on air quality & mitigation proposed

Activity / aspect	Impact	Mitigation / Management Plan
• Excavation for foundations and backfilling for site levelling & grading. • Civil works and plant erection / fabrication • Road laying • Vehicular movement for transportation of construction material & manpower to site • Running of DG set and operation of on-site construction machinery / equipment	Increased concentration of fugitive dust, SO_2, NOx, PM, CO and unburnt hydrocarbons in ambient air leading to: • respiratory illnesses, • reduced visibility, • Acidification of surface water affecting marine biodiversity and acidification of soil reducing soil micronutrients • Damage to trees as NO_X is a phytotoxin in elevated concentration. • Sped up weathering of monuments /buildings /metal & concrete structures	• Phase wise construction of project components. • Unloading of construction material and stockpiling of the same at the earmarked site would be covered to prevent fugitive dust emission. • Wind barrier screen would be provided around stockpiles to reduce the wind speed and consequently, reduce the fugitive dust emission. • Ensuring vehicles with valid PUC certificates are used. • Regular & preventive maintenance of construction vehicles & machinery • Water sprinkling shall be carried out at the construction sites at regular intervals • No use of asbestos fibre; and • Construction site shall be barricaded and dust screens shall be placed

		• HSD to be used as fuel for DG Sets

Keeping in mind the nature of the emission sources during construction phase and the phased manner in which construction activity is to be carried out, it is likely that increase in PM levels due to construction would mainly be confined to the project site. Thus, it is inferred that minor negative impact within a few 100 meters from the source within the site would occur on the ambient air quality under the worst conditions, which are mitigated by implementing environmental management plan. However, no significant impacts are expected on the overall ambient air quality due to construction activities at the sensitive receptors outside the project premises.

4.2.5 IMPACT ON NOISE LEVELS

The noise generation during the construction will have significant impact on the existing ambient noise level however it will be temporary, of short duration & mostly restricted to project premises. Increase in noise level will be near the source only and is not expected to create any noise pollution at far off distances and outside the plant premises which itself spans 365.19 hectares. The potential impacts on noise level may arise out of the following:

- Vehicular traffic;

- Civil works such as trenching, foundation casting, steel fabrication work, mechanical works
- Construction equipment like cranes, generators, pumps, compressors, rock drills, pneumatic tools, saws, vibrators etc.
- The typical noise levels of some construction equipment based on "BS 5228: 1997 Noise and Vibration Control on Construction and Operation Sites" are given in Table 4.6.

Table 4.6: Typical Noise Levels of Construction Equipment

Particulars	Noise Levels dB(A)	Reference Distance
Earth Movers		
Front End Loaders	72-84	0.9 m
Backhoes	72-93	
Tractors	76-96	
Scrapers, Graders	80-93	
Pavers	86-88	
Trucks	82-94	
Material Handlers		
Concrete mixers	75-88	0.9 m
Concrete pumps	81-88	
Cranes (movable)	75-86	
Cranes (derrick)	86-88	
Stationary Equipment		
Pumps	69-71	0.9 m
Generators	85-90	
Compressors	74-86	

Source: *BS 5228: 1997 Noise and Vibration Control on Construction and Operation Sites*

The peak noise levels from continuous construction activity are anticipated to be about 85-90 dB (A).

Overall, the impact of noise generated on the environment is likely to be low, reversible and localized in nature.

All the above-mentioned sources at the proposed construction activities will be intermittent and would be experienced occasionally. It may also be noted that, most of the construction activities will be carried out only during the daytime. The general noise level due to construction activities, such as working of HEMM installation, may sometimes go up to 85

dB(A) at the work site during day time. The workers in general are likely to be exposed to an equivalent noise level of 70-75 dB (A) in an eight (8) hour shift for which all statutory precautions as per law will be implemented. Use of proper PPEs like ear plugs will further mitigate adverse impacts of noise on the workers, if any.

Overall, the impact of generated noise on the environment will be insignificant, reversible and local in nature and mainly confined to the day hours.

Table 4.7: Impact on Noise level & mitigation proposed

Activity / aspect	Impact	Mitigation / Management Plan
• Vehicular movement; • Civil works such as trenching, foundation casting, steel fabrication work, mechanical works • Construction equipment operation like cranes, generators, pumps, compressors, rock drills, pneumatic tools, saws, vibrators etc.	• Constant loud noise can adversely affect human &animal health • Physical impact on health: tinnitus or deafness, Respiratory agitation, high blood pressure, headaches • Psychological impact: stress, fatigue, depression, anxiety and hysteria. • Behavioural disorder: aggressiveness & irritability • Memory and concentration: affects people's ability to focus, which can lead to low performance over time	• Provision of silencers on noise generating machinery; • Major Construction/installation work will be carried out works during day hours only. • Ensuring use of PPEs like ear muffs/ear plugs by workers. • Regular & preventive maintenance of Vehicles and construction machinery. • Ensuring that DG sets are provided with acoustic enclosures and exhaust mufflers and provision of silencers on noise generating machinery; • Moveable noise barriers will be considered • Greenbelt development & plantation to be undertaken from the construction stage itself.

4.2.6 IMPACT ON BIOLOGICAL ENVIRONMENT & MITIGATION MEASURES

Due to removal of vegetation: The impact of construction activities would be primarily confined to the project site, covering a total of 365.19-hectare land. The site area is mostly barren land, covered with common tree species like bamboo, weeds, common grasses. The site development works will lead to land clearing & levelling activities involves removal of vegetation & weeds, and grasses within the project area. Removal of these vegetation would not have any significant ecological impact as these species are common and widely available in this area. However, removal of tree will lead to loss of habitat for fauna in the core zone. Tree cutting will be done only after obtaining permission from Forest

department if required and a three-tier greenbelt on plant periphery with avenue plantation along roads within plant premises is proposed using native plant species in an area covering 121.13 hectare of total plant area.

Due to deposition of dust on pubescent leaves: Construction activities leads to removal of top soil, often leads to soil erosion that generate fugitive dust due to vehicular movement. The generation of fugitive dust due to vehicular movement would have negative impact on the surrounding vegetation due to deposition of dust on pubescent leaves which may lead to temporary reduction of photosynthesis. However, this would be confined to the initial periods of the construction phase and would be minimized through water sprinkling, paving roads and phase wise judicious construction management plan.

Due to increase noise level: Additional vehicular movement for import of construction materials and operation of construction machinery may lead to increase of noise level in the surrounding environment causing adverse impact on human health and disturbance to faunal species. Noise prone construction activities such as piling, drilling, excavation, cutting, etc. would be done during daytime only. The noise pollution certified construction machinery would be allowed for operation at site, thus, increased noise level at project boundary would be contained below the permissible limit.

Impact on Aquatic Ecology and Mitigation Measures

Due to construction wastewater: Runoff construction waste water from project site may drain into nearby nallah that causes water pollution, however, it is proposed that no waste water would be discharged and it will be reused for plantation through settling basin. Hence, no impact on aquatic ecology envisaged.

Table 4.8: Impact of Site Preparation/Clearance on Biological Environment

Impact of Site Preparation/Clearance		Mitigation and Measure
Impact on Flora	***1. Loss of Vegetation/Due to Site Clearance:*** When the vegetation in the site is cleared, the most immediate impact is the loss of plant /tree species themselves. Tree species have unique characteristics and adaptations that allow them	***1. Reforestation and Afforestation:*** Planting new trees is crucial for replacing those that have been cut down. Reforestation involves replanting trees in areas where

Impact of Site Preparation/Clearance		Mitigation and Measure
	to thrive in specific environments. Removing trees results in the loss of these species, reducing the overall diversity of flora in the area. ***2. Disruption of Forest Structure:*** Trees play a crucial role in maintaining the structure and composition of forests. They provide the canopy layer, understory vegetation, and ground cover, creating a multi-layered structure. Tree cutting disrupts this structure, resulting in changes to light penetration, humidity, and temperature levels. This can have cascading effects on the growth and survival of other plant species adapted to specific microenvironments within the forest. ***3. Alteration of Plant Communities****:* Trees often form associations with other plant species, including understory plants, shrubs, and groundcover. These plant communities rely on the presence of trees for various ecological interactions such as shade tolerance, seed dispersal, and nutrient cycling. When trees are cut down, the plant communities that depend on them may decline or disappear, leading to a shift in the composition of the flora. ***4. Decreased Biodiversity:*** Trees provide habitats, food sources, and nesting sites for a wide range of plant species. Removing trees can result in the loss of these habitats and resources, leading to a decline in plant biodiversity. This reduction in flora diversity can have far-reaching effects on ecosystem functioning and resilience. ***5. Increased Invasive Species:*** Tree cutting can create disturbances in ecosystems, opening up space and resources for opportunistic and invasive plant species. In the absence of the dominant tree species, invasive plants may establish themselves and outcompete native	forests have been depleted, while afforestation involves establishing new trees in areas that were previously devoid of trees. These practices help restore tree cover and promote the recovery of flora in the affected areas. ***2. Selective Logging and Sustainable Harvesting:*** Instead of clear-cutting entire trees, selective logging involves carefully choosing specific trees for extraction while leaving others intact. Sustainable harvesting practices ensure that only a portion of the trees are cut, allowing for regeneration and the maintenance of forest ecosystems. This approach helps preserve the overall structure and composition of the forest, minimizing the impact on flora. ***3. Restoration of Degraded Areas:*** Rehabilitating degraded areas through ecological restoration efforts can help revive flora that has been negatively affected by tree cutting. This may involve soil stabilization, reintroduction of native plant species, and implementing measures to enhance natural regeneration processes.

Impact of Site Preparation/Clearance		Mitigation and Measure
	flora. These invasive species can alter the composition and dynamics of the plant community, further reducing the diversity of native plants. ***6. Soil Degradation:*** Trees play a crucial role in soil conservation and nutrient cycling. Their root systems help stabilize the soil, prevent erosion, and improve its fertility. When trees are cut down, the exposed soil becomes vulnerable to erosion, loss of organic matter, and reduced nutrient availability. This degradation of the soil can negatively impact the growth and establishment of many plant species.	
Impact on Fauna	***1. Loss of Habitat:*** Trees provide essential habitats for many animal species. When trees are cut down, the loss of habitat can lead to the displacement or even extinction of fauna that depend on those trees for shelter, food, nesting sites, and protection from predators. This loss of habitat disrupts the delicate balance of ecosystems and can have severe consequences for animal populations. ***2. Disruption of Food Sources:*** Trees contribute to the availability of food sources for fauna. Fruits, nuts, leaves, and flowers provided by trees are vital components of the diets of many animals. When trees are removed, these food sources become scarce or disappear altogether, leading to nutritional deficiencies and potential population declines for species that rely on them. ***3. Loss of Biodiversity:*** Trees support a diverse array of fauna, including birds, mammals, reptiles, insects, and amphibians. When trees are cut down, the biodiversity of an area decreases, and certain species may decline or become locally extinct. This loss of biodiversity can disrupt ecological interactions, such as	***1. Habitat Conservation:*** Protecting and conserving existing habitats is crucial for maintaining fauna populations. ***2. Reforestation and Habitat Restoration:*** Planting new trees and restoring degraded habitats can help mitigate the impact of tree cutting on fauna. Reforestation efforts involve replanting trees in areas that have been cleared, while habitat restoration aims to bring back the natural vegetation and ecosystem functions. These practices provide new habitats and food sources for fauna, allowing them to recolonize and thrive. ***3. Species Monitoring and Research:*** Monitoring fauna populations and conducting research on their ecological requirements and behavior can help inform conservation strategies. This information can guide the

Impact of Site Preparation/Clearance		Mitigation and Measure
	pollination, seed dispersal, and predation, which are crucial for the functioning of ecosystems.	implementation of targeted measures to protect vulnerable species and their habitats, identify critical areas for conservation, and assess the effectiveness of mitigation efforts.

4.2.7 IMPACT ON SOCIO-ECONOMIC ENVIRONMENT

Construction phase will affect the influx of Population in the area. During construction, phase significant increase in income of local people is expected as local unskilled, semiskilled and skilled persons will gain direct or indirect employment during construction phase. Since the immigration of work force during construction phase is likely to be very small, the social impacts on demography, literacy, health care, transport facilities and cultural aspect are expected to be insignificant. The following impacts will occur during this phase on social environment:

Economic Impacts

The relatively short-lived economic impacts of the construction stage are likely to be experienced in local area for the duration of construction phase as workers make everyday purchases from local traders in nearby areas. This is likely to give a short-lived stimulus to the shopkeepers / traders that will disappear as soon as the construction is complete.

Noticeable, flow-on economic impacts will be experienced in other sectors of economy as a result of purchase of construction materials and the payment of wages and salaries to the personnel engaged in the proposed project.

Increaseof Temporary Employment

During construction period, increase in income of local people is expected as local semiskilled and skilled persons will gain direct or indirect employment during construction phase. The local people will be given more preference for the unskilled activities under normal condition, as construction labour is proposed to be hired mostly from nearby area and the same are expected to be available with wages as per applicable rules. Provision of wage employment to the local populace during construction period of the project will solve

un-employment problem in the local area temporarily to some extent. This will enhance the income levels of the construction labourers and lead to their socio-economic well-being during the construction phase of the proposed facility, which will be a positive impact due to the project. Since the immigration of work force during construction phase is likely to be very small, the social impacts on demography, literacy, health care, transport facilities and cultural aspect are expected to be insignificant.

Influx of Construction Workers

While the labourers may be from nearby villages, some skilled staff like Site Supervisor and his team will be hired during the construction period to oversee and supervise the construction activities onsite, which may be from other states or other district. Sudden and relatively short-lived influxes of construction skilled workers to communities near the project site may have the potential to 'skew' certain demographic variables and the traditional social coherence.

4.2.7.1 MITIGATION MEASURES

- Preference will be given to locals for direct and indirect employment opportunity;
- Local suppliers for construction machinery and construction material will be given preference;
- Local transporters will be preferred for transportation of machinery / earth / materials;
- To train unskilled local work, short-term skill development course will be organized in the area.

4.2.8 IMPACTS DUE TO INCREASE IN TRAFFIC

The project development will lead to increased movement of HEMMS like cranes, excavators, dozers, dumpers, etc., mass transport vehicles, trucks, motor cars, etc. Adequate road infrastructure is essential for reduction of traffic congestion and air and noise pollution to the extent possible.

Existing Road infrastructure will be used for movement of men & material during construction phase. Project site development identifies several transportation activities during the construction as:

- Transportation of construction workers.
- Transportation of construction aggregates/excavated material.
- Transportation of solid and liquid hazardous and non-hazardous wastes.

4.2.8.1 MITIGATION MEASURES

A traffic circulation and management plan for construction vehicles inside project site will be implemented to provide adequate proactive measures against identified possible traffic congestion and safety issues. To achieve this objective of safe, smooth, congestion free as well as minimum impact of construction vehicles on air and noise, following traffic movement requirements shall be fulfilled at site.

- Route of vehicles inside project site shall be kept shorter to the extent possible.
- Signage plan shall be demarcated throughout the road for guidance of the driver.
- Speed limits shall be imposed throughout site.
- Pedestrian access at worksite and route shall be marked throughout the site for ensuring safety.
- As far as possible, transportation of construction materials will be scheduled for off peak traffic hours. This will reduce the risk of traffic congestion and of road accidents on the access roads to the site.
- Traffic control and construction activities shall co-ordinate to provide for safe and efficient flow of traffic together with efficient, safe, and rapid progress of the construction activity.
- All site roads, parking areas, pedestrian crossings, and other areas accessed by vehicles and pedestrians, shall be appropriately lit and designed to avoid extremes of light variation (i.e., moving from a brightly lit area to a dark one). Parking area, pedestrian walkways and Roads will have a minimum level of lighting as per National Lighting Code 2010.
- Contractors shall implement physical safeguards whenever reasonably practicable wherever pedestrians are required to cross vehicle routes. Measures may include the use of gates, barriers, and traffic lights. Safety barriers, in accordance with Indian Standard Codes, shall be constructed where required as determined by site risk based assessment.

- Adequate parking facilities will be provided for the construction phase.

4.2.9 SOLID WASTE GENERATION & MANAGEMENT

The solid waste generated in the project site may be broadly classified as hazardous and non-hazardous wastes. During construction phase, solid wastes in terms of construction & demolition waste, food packet wrappers, paper, plastic drums, paints, oil containers etc. will be generated. This may cause environmental degradation at the project site as well as its immediate surroundings, if adequate measures are not taken.

4.2.9.1 CONSTRUCTION & DEMOLITION (C&D) WASTE

a. Impact

About 8000 MT of construction waste is anticipated from construction phase of the project. C&D waste if stockpiled and buried without any treatment, will not only increases the cost of waste cleaning and transferring, it will also occupy a large amount of land and cause serious environment impact due to waste leakage, dust, sand generated during the stockpiling and transferring.

✓ **Air Pollution**

The waste plaster of C&D Waste may contain sulphate ions, which could be converted to hydrogen sulphide in anaerobic conditions such as in landfills. In the same conditions, lignin and tannin may be dissolved form waste cardboard and wood and further decomposed to Volatile Fatty Acids (VFA) under anaerobic conditions. These substances could cause air pollution.

✓ **Water Pollution**

Leachate from C&D Waste dumping sites contains a large amount of calcium silicate hydrate, calcium hydroxide, and sulphate and heavy metal ions. Surface and ground water will be polluted if the leachate flows into watercourses and aquifers without proper control.

✓ **Soil pollution.**

- The hazardous ingredients in C&D Waste and leachate generated will cause soil pollution, including changes of the physical and chemical characteristics of soil, impact on the activities of microorganisms in soil, and accumulation of hazardous substances in soil. According to research (*Sun et al, 2015*), it takes decades for stockpiled C&D Waste to be stabilized. Although C&D Waste could be stabilized without generation of harmful gas and leachate, large areas of land are still occupied by a large number of inorganic substances, which may continue to cause persistent environmental impacts.

b. Mitigation Measures

C&D waste generated during construction phase shall be handled as per the Construction and Demolition (C&D) Waste Management Rules, 2016 notified vide G.S.R. 317(E) 29.03.2016 & subsequent amendments.

Contractor / Subcontractor will be informed to comply with all the applicable rules of C&D Waste Rules 2016. Waste shall be segregated into four streams such as concrete, soil, steel, wood and plastics, bricks and mortar and waste management plan will be developed and appropriate approvals will be obtained and the concerned authorities will be informed regarding the relevant activities from the planning stage to the implementation stage. Following mitigation measures are proposed:

- The Contractor shall be responsible for preparing a demolition quality control (QC) plan
- Required SPCB and local administration approval to be obtained for handling and disposal of C&D waste, inline to C&D Waste rules 2016
- Debris net curtain and barricade shall be provided around the construction area to prevent any accidents.
- Spotters should be utilized to prevent workers from entering the area where the excavator is working
- Metal waste should be separated from the debris and hauled separately for recycling
- C&D debris shall not be stored long-term on the site. All debris shall be hauled-off the site as soon as possible. All debris should be taken to a construction debris recycling facility

- Concrete should be separated mechanically from demolition debris by using excavators.
- All the inert construction waste including excavated soil, sand & gravel to be used within premises for levelling & grading works.
- Remaining C&D waste to be sold to vendors through auction &/or disposed off through construction contractor
- Wire and other metal, both ferrous and non-ferrous, will be cut in pieces on site and hauled to metal recyclers.
- Concrete should be separated mechanically from demolition debris by using excavators.

4.2.9.2 MUNICIPAL SOLID WASTE: -

a. Impacts

About 0.8 TPD of municipal solid waste is anticipated during construction phase. MSW if not handled properly may lead to air-borne or water borne diseases; etc. Municipal solid waste from labour camp and office area are required to be disposed off on a daily basis and to be handed over to authorized agency.

b. Mitigation measures

In order to avoid any solid waste disposal problems, an effective MSW management system by means of collection of wastes in different types of dust bins, temporary storage at designated area within project premises and transporting the same & disposed off through Municipal council through authorized agency.

4.2.9.3 HAZARDOUS WASTE:

a. Impact

- Hazardous waste like used oil, oil soaked cotton/rags, used/discarded containers, contaminated soil due to oil spillage etc. poses risk of contamination for air, water, soil, flora and fauna and humans as well.

- Hazardous waste if not segregated and handled properly will lead to pollution load and serious health impacts on construction workers & surrounding environment.

b. Mitigation measures

- Hazardous and flammable materials such as diesel, fuel oil, lubricating oil during development phase shall be stored properly as per the safety regulations and applicable rules.
- Accidental spillages of oil from construction equipment and storage sites shall be prevented & Spill Prevention, Control & Counter measure (SPCC) plan will be put in place.
- Hazardous wastes generated in the project premises during construction phase will be stored in separate covered area with impervious flooring and catch drains with adequate secondary containment and labelling as per the requirements of HoW Rules;
- Records of hazardous wastes generation and disposal will be maintained as per the requirements of HoW Rules
- Hazardous waste shall be handled as per the Hazardous Waste Handling Rule, 2016. Strict adherence to the established solid waste collection and disposal system will ensure clean environment during development period

4.2.10 SUMMARY & CONCLUSION

From the overall assessment of pollution sources and nature of pollutants it may be concluded that the impacts during construction phase are found to be temporary, however mitigation of the same requires strict adherence to environment management plan and mitigation measures in place.

4.3 IMPACT DURING OPERATIONAL PHASE

Impact on the environment during operation phase will be due to the handling of fuel & waste and due to operation of production unit & burning of fossil fuel.

These emissions, discharges and disposal may release different pollutants, which may affect air, water, land and ecological environment directly. However, all these are mainly

primary impact. In addition to these primary impacts, any industrial project has some overall impact on its surrounding socio-economic environment through the existence of social and economic linkages between the project and society, which are actually secondary impact. Under this section, all the primary impacts due to this proposed project are being discussed and wherever required, impacts have also been quantified.

Accordingly, in the subsequent paras, impacts on land, air environment, water environment, soil, noise, biological environment and socio-economic due to the proposed project are discussed.

4.3.1 WATER ENVIRONMENT

Water environment may be affected by the industry due to:

- Withdrawal of water,
- Discharge of polluted water / waste water, and
- Contaminated leachate from storage of solid & hazardous waste

4.3.1.1 IMPACT DUE TO WATER USE

The water requirement of 28 MCM/Year for makeup to the closed cycle re-circulation system of condenser cooling will be drawn from River Ganga to Upper Khajuri Dam and Further to plant site through pipeline of about 32.6 km in length. Permission from WRD Uttar Pradesh for 36 MCM/Year vide letter no. 3613/11-27-C.0-4-174/11 dated 09.10.2011 has already been obtained and Mirzapur TPP has optimized the water requirement to 28 MCM /annum. It is proposed to utilise the power plant wastewater for plant reuse to achieve the Zero Liquid Discharge (ZLD). It is envisaged to utilize cooling water blow down for ash handling purposes and treated wastewater will be used for plantation and gardening activities.

Streams of wastewater emanating from the power station sources during operational phase will be treated individually based on the wastewater quality. The treated wastewater will be recycled for plant use and for green belt development. Therefore, there will be no impact on the ground water resources.

The major wastewater generated from the plant like DM Plant discharge will be treated in a wastewater treatment plant and recycled. The coal pile area run off water during monsoon season will be led to a pond. Coal particles will settle down in the pond and clear water will be allowed to overflow to the central monitoring basin for treatment.

In the power plant, some specific locations in the Steam /Turbine Generator area require washing, to maintain good plant housekeeping and prevent build-up of dirt and waste material, which generates wastewater. This wastewater along with the process drain will be led to an oil water separator for separation of oil. The clear water will be led to the central monitoring basin. The dirty oil will be recovered separately in a drum.

The wastewater treatment plant, which receives discharges from neutralization pit of DM Plant, clarified wastewater from Oil Water Separator, etc. will be designed to enable maximum re-use/recycling. The treated wastewater will be utilised for plant consumptive requirements and for green belt development.

The wastewater management system is designed for efficient recycling and reuse, focusing on minimizing environmental impact. The major sources of plant effluents include CW blowdown, WT plant effluent, coal pile area runoff, and plant drains. Specific measures for each effluent source is outlined as follows:

CW Blowdown:

- Part of CW blowdown will be utilized for ash/coal handling systems and horticulture needs.
- Excess blowdown will be directed to a guard pond.

Water Treatment Plant Effluent:

- Mainly comprises WT plant regeneration waste and filter backwash.
- Effluents will be pumped to the guard pond through a neutralizing pit.

Coal Handling Area Runoff:

- Drains from the coal handling area runoff will be directed to a settling pond.
- Settled coal particles will allow clear water to overflow to the stormwater drain.

Plant Drains (SG/TG Area):

- Drains from SG/TG area will be led to a sump, collecting wastes from transformer and fuel oil farm areas.
- Oily effluents will undergo treatment in an oil-water separator, with clear water going to the guard pond and oily residue disposed of properly.

Guard Pond Treatment:

- Suitable treatment in the guard pond will ensure compliance with regulatory limits.
- Treated water from the guard pond can be used for irrigation or other purposes by local villagers.

Clarifier Sludge:

Clarifier sludge from CW and DM plant clarifiers will be pumped to the sludge handling system, featuring a thickener and centrifuge.

Cooling Tower Blowdown:

Cooling tower blowdown will be directed to the guard pond to maintain acceptable temperature levels before reuse within the plant or discharge outside.

Domestic Sewage:

Domestic sewage will undergo treatment in the proposed Sewage Treatment Plant (STP). Treated sewage will be utilized for greenbelt development.

The impact on water resources shall be insignificant as wastewater generating within the project site will be treated in the ETP & STP and is being recycled & reused following the **Zero Liquid Discharge (ZLD).**

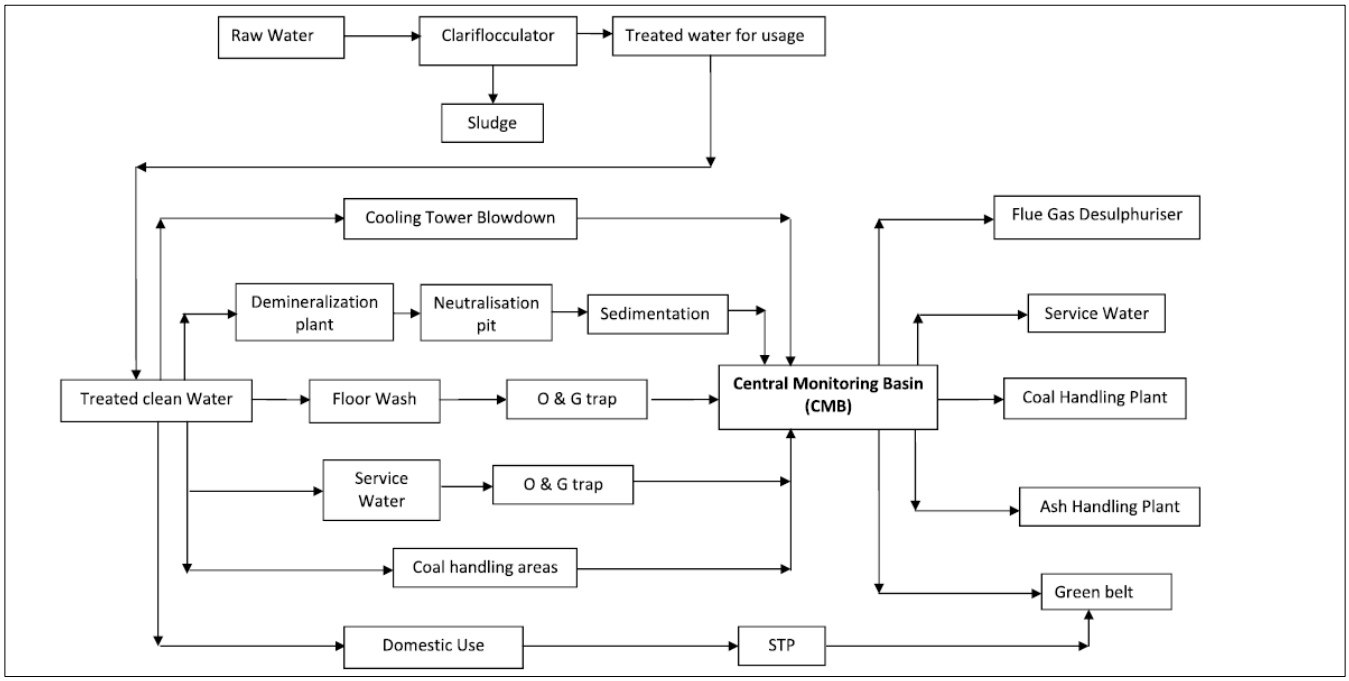


Figure 4.1: Schematic diagram of effluent treatment scheme

4.3.1.2 WATER CONSERVATION MEASURES AND OPTIMIZATION PLAN

The Water conservation measures and optimization adopted are listed below:

1. Recirculating type of cooling water (CW) system with mechanical draft cooling towers (CT) is being adopted. The cooling water system is designed considering Cycles of Concentration (COC) of 5.0 (five). During plant operation, all the measures will be taken to operate the plant above 5 COC which will help further reduce in water consumption. Moreover, drift loss in cooling tower will be maintained less than 0.02% by using multi-layer drift eliminators.
2. Recycling and reutilization of cooling tower blow down water is considered by adopting CW Blow down recycle scheme. Blow down water will be recycled back as cooling tower make up water and the reject water will be reused. The balance CW blowdown water will be recycled to Ash handling system for makeup. No fresh water will be utilized for Makeup of Ash handling system.
3. In the water pre-treatment (PT) plant, thickener will be installed to recover underflow water of the PT plant clarifiers. Appx. 75% water is recovered from the thickener.
4. Effluent collected from various sources will be utilized in the Coal Handling Plant dust suppression system after necessary treatment.

5. In Sewage treatment plant (STP), the sewage generated is treated and utilized in Horticulture.
6. High Concentration Slurry Disposal System will be adopted for ash disposal which will reduce the water requirement substantially.

4.3.1.3 Rainwater Harvesting System

Rainwater harvesting is process of collecting. The project will properly utilize rainwater by implementing appropriate rainwater harvesting mechanisms.

The average annual rainfall (based on last 10 years rainfall data) is as below:

Table 4.9: Rainfall data of Marihan block

Year	Rainfall (mm)
2014	702.5
2015	680
2016	1355.3
2017	577.8
2018	1043.9
2019	1343.4
2020	878.8
2021	1052.8
2022	573.7
2023	433.5
Average	**865**

Source:https://www.jjm.up.gov.in/groundWater/Rain_fall_Data_ON_Map

4.3.1.4 Calculation of RWH:

Calculation of Rainwater Availability of project site.

Based on the site plan of the project area, the computation of rainfall runoff for entire project premises has been worked out and the details are tabulated below:

Table 4.10: Calculation of Hourly Runoff:

S. No	Type of Structure	Area (Sq. m.)	Run off Coefficient	Rainfall (m)	Total (m^3/hr)
1	Plant Area	858000	0.2	0.03	5148.00
2	Reservoir	331800	1	0.03	9954.00

3	Coal Stock Yard	647500	0.2	0.03	3885.00
4	Ash Dyke	493700	1	0.03	14811.00
5	Township	115700	0.85	0.03	2950.35
6	Green Belt	1205100	0.15	0.03	5422.95
Grand Total (1-6)		**36,51,800**			**42171.30**

Table 4.11: Calculation of Annual Runoff

S. No	Type of Structure	Area (Sq. m.)	Run off Coefficient	Rainfall (m)	Quantum of recharge available (m^3/annum)
1	Plant Area	858000	0.2	0.865	148434
2	Reservoir	331800	1	0.865	287007
3	Coal Stock Yard	647500	0.2	0.865	112017.5
4	Ash Dyke	493700	1	0.865	427050.5
5	Township	115700	0.85	0.865	85068.425
6	Green Belt	1205100	0.15	0.865	156361.725
Grand Total (1-6)		**36,51,800.00**			**12,15,939.15**

Calculation of No. of Structure.

Total 1215939.15 m^3/ year of Rainwater will be collected from Project site Area.

We calculate the no of rain Water Storage pond of Coal Stock yard Area (647500 m^2) annual Runoff is 112017.5 m^3/ year and No. of rain water Percolation pond as per Open area ie. Plant Area + Green Belt Area total annual Runoff is 304795.7 m^3/ year, remaining 714057.5 m^3/ year water will be collected in the Reservoir and Ash Pond.

(Township area)

As per GWRE-2022, it is assumed that total 60% of the stored water has been percolated in the ponds and which recharges the ground water. The ground water recharge by Percolation ponds have been given in below table-

Area	Water availability	60% Natural Recharge (m3/year)	Remaining 40 %
Township	85069	51041.4	34027.6

Area of Pond (m^2)	Depth (m)	Volume (m3)	Filled time	Water Storage capacity (m3/year)
3000	3	9000	4	36000

Plant area & Green Belt area

As per GWRE-2022, it is assumed that total 60% of the stored water has been percolated in the ponds and which recharges the ground water. The ground water recharge by percolation ponds have been given in below table-

Area	Water availability	60% Natural Recharge (m3/year)	Remaining 40 %
Plant Area	148434	89060.4	59373.6
Green Belt	156362	93817.2	62544.8
Total	**304796**	**182877.6**	**121918.4**

Area of Pond (m^2)	Depth (m)	Volume (m3)	Filled time	Water Storage capacity (m3/year)
10200	3	30600	4	122400

As per above calculation we have proposed total 2 Nos. Rainwater Percolation Pond.

II. Coal Stock Yard

Area	Water availability
Coal stock yard	112017.5

Area of Pond (m^2)	Depth (m)	Volume (m3)	Filled time	Water Storage capacity (m3/year)
9400	3	28200	4	112800

As per above calculation we have proposed total 1 Nos. Rainwater Storage Pond.

Water Saving:

- To the possible extent water is saved at each point of use by taking proper care in maintenance of drain pipe, tap etc. from leakage. There should be display board for optimum use of water in washroom, toilet or at other appropriate locations.

- Use of recycled water, if possible, in cleaning of toilets or gardening after proper treatment and testing for its intended use.
- Use of sprinkler or drip irrigation method in garden irrigation.
- Adoption of machinery– equipment, methods, if possible and economic viable, for manufacturing.
- Appropriate plantation to reduce evaporation.

4.3.1.5 Conservation of an Ephemeral Path in proximity to the project site

An ephemeral path formed due to the flowing of rainwater only during rainfall is adjacent to project site towards West direction which will not be disturbed and the same will be protected and used in Greenbelt only.

4.3.2 IMPACT ON AIR QUALITY

As it has been described earlier in **Chapter 2**, the operational activities will have impacts on the air quality of the study area.

The results of the monitored data indicate that the ambient air quality of the region in general is conformity with respect to norms of National Ambient Air Quality standards of CPCB, at all locations monitored.

To determine the significance of impacts of project with reference to the baseline ambient air quality status of the study area, impact assessment has been carried out for various emission sources from project as described below.

The proposed coal-based thermal power station is anticipated to emit pollutants such as SO_2, NOx, and PM through flue gas stacks. Additionally, airborne fugitive dust from coal handling plants is expected, leading to deposition on topsoil and leaves of nearby flora. Fugitive dust poses concern for residents, nearby trees accumulating deposits on leaves, and local fauna exposed to the respirable component of these particles. Predictions have been made for stack emissions and emissions from crusher houses, taking into account the worst coal characteristics.

a. Fugitive Emission

The air borne fugitive dust from the plant is likely to be generated from coal handling plants, stockpiles and traffic movement which will be deposited on the topsoil in the immediate vicinity of the plant boundary.

However, the fugitive emission is likely to be controlled to a great extent through control measure like dust suppression system at coal transfer point, dedusting system at Crusher House by bag filter, greenbelt etc. The impact of fugitive emissions from all sources is likely to be restricted over a limited area within the premises.

b. Process Stack Emission

The flue gas emissions from the plant units, resulting from coal combustion, are the primary contributor to increased pollution levels in the ambient air. The emissions will be kept within the specified limits of 30 mg/Nm^3 for PM and 100 mg/Nm^3 for SO_2&NO_X, adhering to TPP standards. Mercury (Hg) emissions will be insignificant and below the TPP emission standard of 0.03 mg/Nm^3 for Indian coals.

In order to quantify the maximum likely impact within buffer area around the project site, the contribution of the existing as well as proposed units of the power plant on the ambient concentration level is assessed using suitable approved dispersion model.

Air dispersion modeling methodology

AMS/EPA Regulatory Model (AERMOD version-9.5) is a steady-state plume model. It is designed to apply to source releases and meteorological conditions that can be assumed to be steady over individual modelling periods (typically one hour or less). AERMOD has been designed to handle the computation of pollutant impacts in both flat and complex terrain within the same modelling framework.

The American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee (AERMIC) was formed to introduce state-of–the-art modelling concepts into the EPA's air quality models. Through AERMIC, a modelling system, AERMOD, was introduced that incorporated air dispersion bases on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.

ASSUMPTION

The dispersion modelling assumption considered is as follow:

- The terrain of the study area was considered as FLAT;
- Stability class and atmospheric inversion level is based on software's database
- Steady-state conditions (constant source emission strength)
- Wind speed, direction and diffusion characteristics of the plume are constant
- Conservation of mass, i.e. no chemical transformations take place

INPUT PARAMETERS:

Meteorological Parameters: The hourly meteorological data considered were wind speed, wind direction, ambient atmospheric temperature, cloud cover, relative humidity, rainfall & ceiling height.

Point Source Emissions:

Air dispersion modelling methodology - Emission from all the stacks were analysed for their impacts on the GLC for various distances using the dispersion modelling guidelines of AERMOD, developed by the AERMIC (American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee) as directed by CPCB. Maximum Ground Level Concentration (GLC's) of PM_{10}, SO_2, NO_X, due to proposed project activity were predicted.

For Proposed Units:

- Chimney/Stack height will be 275 m.
- Highly Efficient Electrostatic Precipitators (ESP) - 99.99% to limit particulate emission (PM) within 30 mg/Nm^3.
- Selective Catalytic Reduction (SCR) system to lower NO_2 emission within 100 mg/Nm^3.
- Bag filters, dry foggers as fugitive dust control measures from coal handling and ash handling systems.

The detail of stack emissions is given in Table 4.12 below:

Table 4.12: Emission details

Details	Proposed 1600 (2x800 MW)
No of Stack	1 (bi flue)
Stack height, m	275
Internal exit diameter of flue, m	11

Details	Proposed 1600 (2x800 MW)
Exit velocity, m/s	25
Flue gas temperature K	413
Emission of PM_{10} in g/s	8.106
Emission SO_2 in g/s	23.84
Emission of NO_X in g/s	16.97
Emission of Hg in g/s	0.05

Table 4.13: Maximum ground Level Concentration Point Sources

Parameter	Maximum GLC	Distance in meter from site	Direction from site
$PM_{10}(\mu g/m^3)$	0.27601	550m	downwind
$SO_2(\mu g/m^3)$	0.81183	550m	downwind
$NO_X(\mu g/m^3)$	0.57789	550m	downwind
Hg ($\mu g/m^3$)	0.00170	550m	downwind

Table 4.14: Cumulative Impact at Monitoring Locations

S. No	AAQM Location Name	Maximum Baseline Concentration			Predicted GLC at Monitoring Location			Cumulative GLC (Baseline + Predicted)		
		Max Baseline Conc.PM_{10} ($\mu g/m^3$)	Max Baseline Conc.SO_2 ($\mu g/m^3$)	Max Baseline Conc. NO_2 ($\mu g/m^3$)	Predicted GLC ($\mu g/m^3$)) – PM_{10}	Predicted GLC ($\mu g/m^3$) –SO_2	Predicted GLC ($\mu g/m3$) – NO_x	Total GLC ($\mu g/m^3$) — PM_{10}	Total GLC ($\mu g/m^3$) –SO_2	Total GLC ($\mu g/m^3$) – NO_x
1.	Project Site	48	4.8	11.8	0.23749	0.69847	0.49719	48.23749	5.49847	12.29719
2.	Kotwa	62	5.3	10.6	0.20337	0.59813	0.42576	62.20337	5.89813	11.02576
3.	Marihan	66	5.8	9.9	0.12228	0.35964	0.256	66.12228	6.15964	10.156
4.	Dhekwah	64	6.4	7.4	0.15961	0.46941	0.33414	64.15961	6.86941	7.73414
5.	Darhiram	65	4.8	11.1	0.11935	0.35102	0.24987	65.11935	5.15102	11.34987
6.	Patehra	62	5.2	8.5	0.06422	0.18888	0.13445	62.06422	5.38888	8.63445
7.	Gogdara	65	4.9	7.9	0.0994	0.29232	0.20809	65.0994	5.19232	8.10809
8.	Sugapankh Khurd	64	5.7	8.7	0.07833	0.23037	0.16399	64.07833	5.93037	8.86399
9.	Bharpura	63	6.2	9.3	0.10904	0.32068	0.22827	63.10904	6.52068	9.52827
10.	Ordial Institute Campus	68	4.7	10.7	0.11758	0.34581	0.24616	68.11758	5.04581	10.94616
11.	Near Rajiv Gandhi South Campus, BHU	69	5.6	8.9	0.12915	0.37983	0.27037	69.12915	5.97983	9.17037

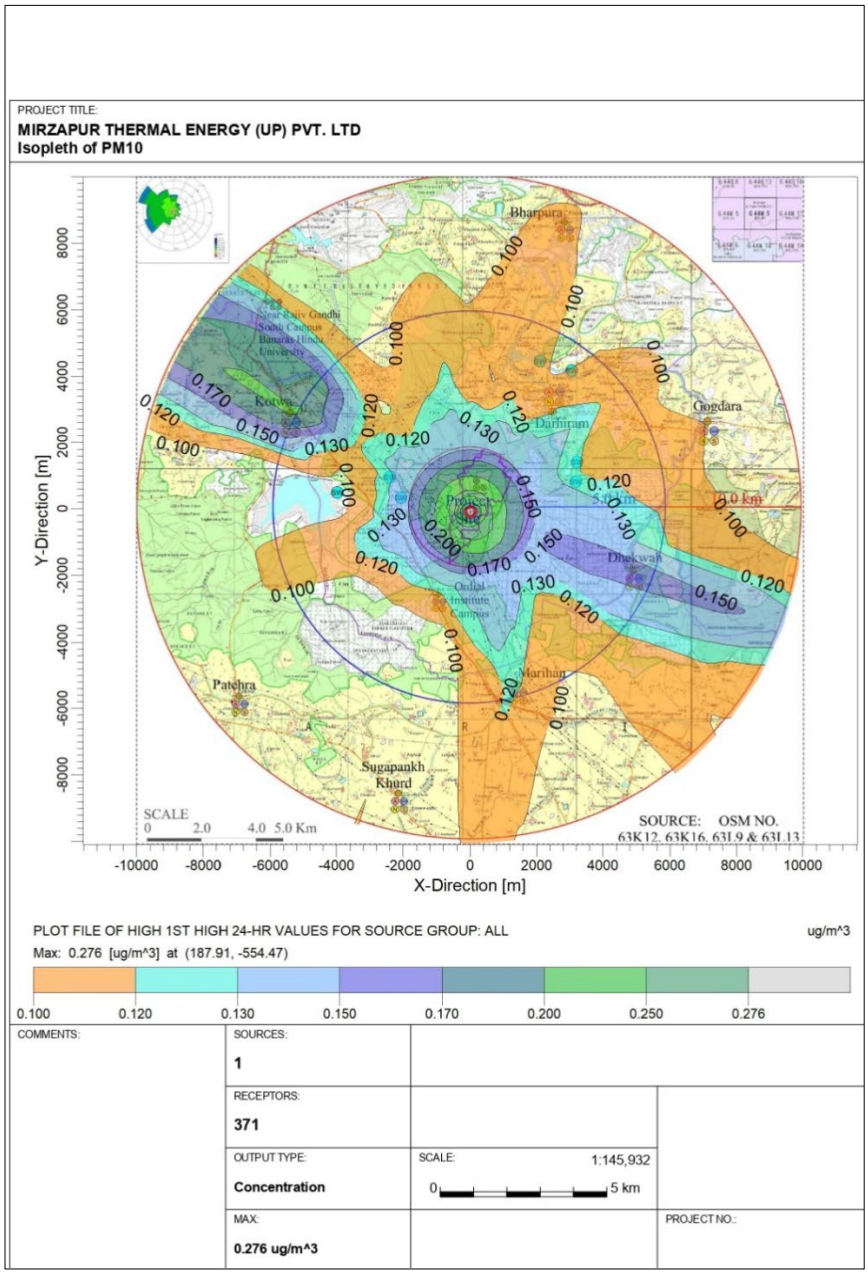


Figure 4.2: Isopleth of PM_{10}

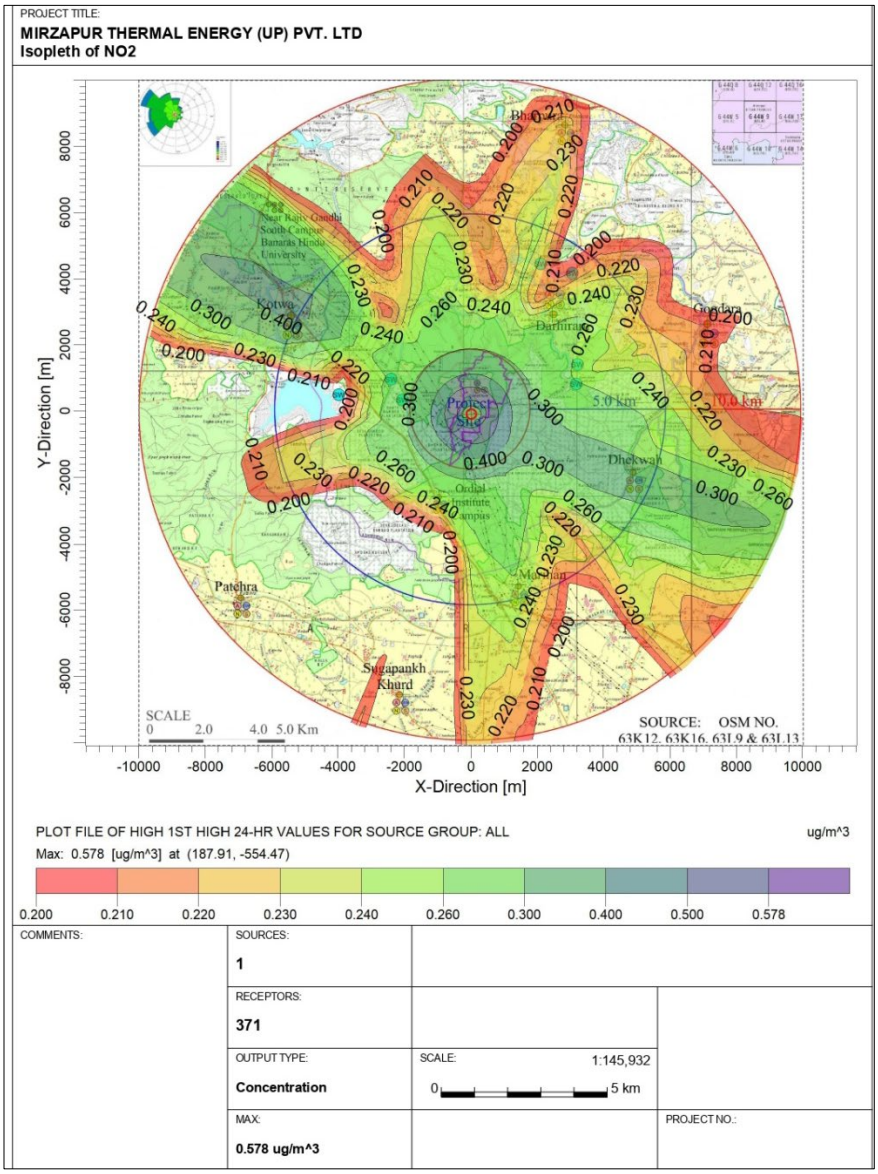


Figure 4.3: Isopleth of NO_x

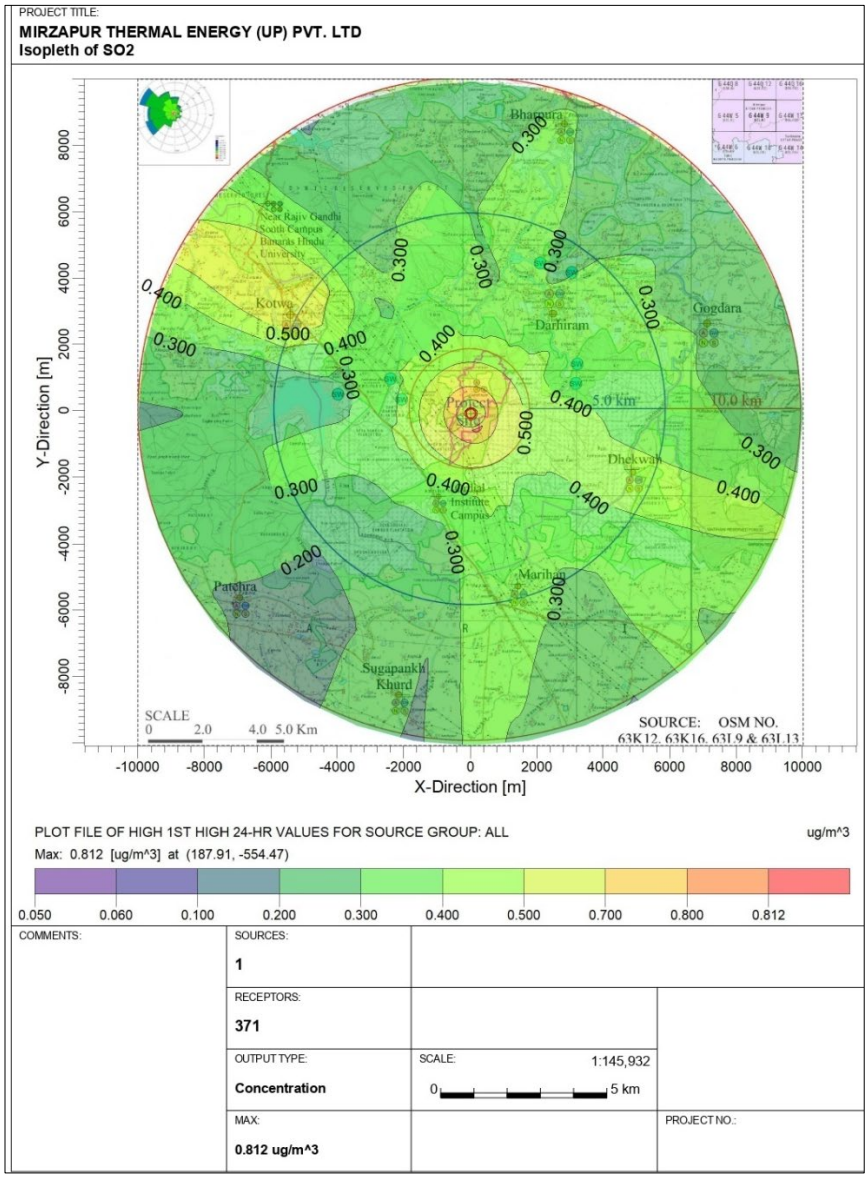


Figure 4.4: Isopleth of SO_2

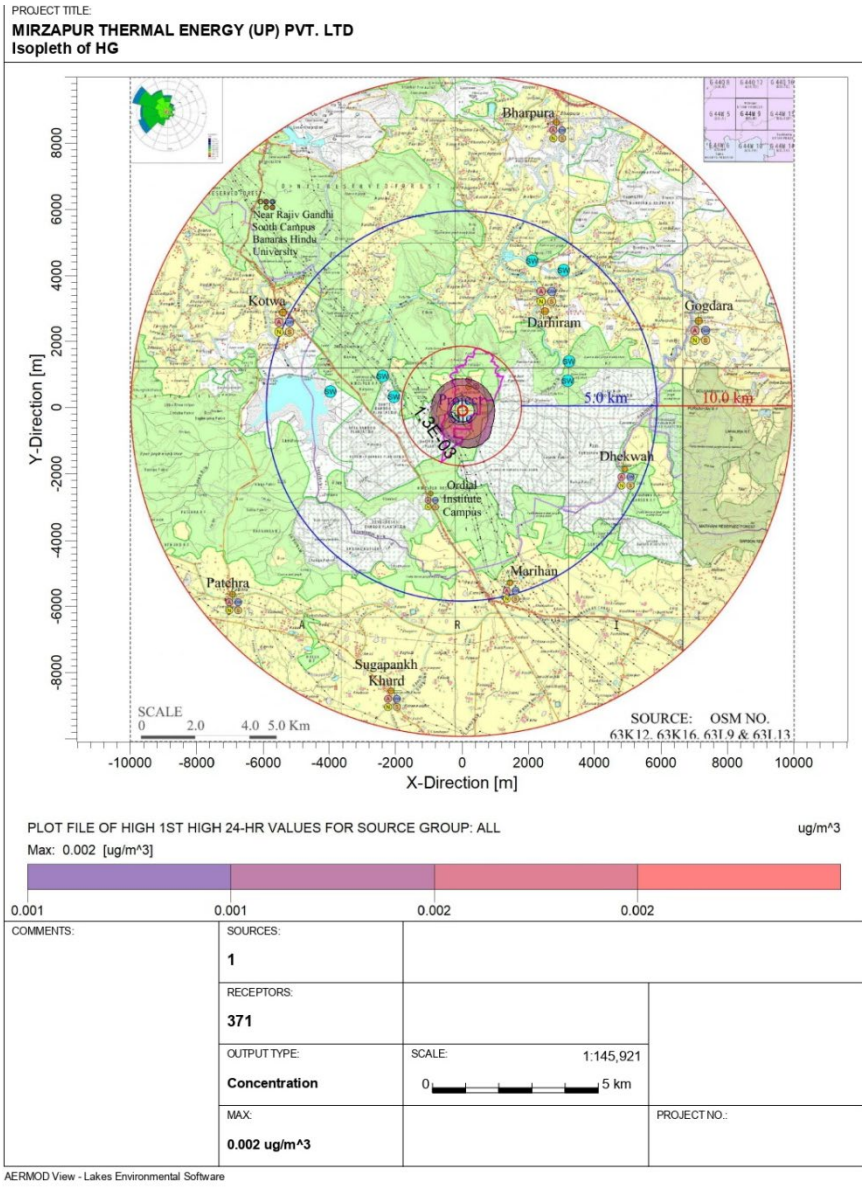


Figure 4.5: Isopleth of Hg

The pollutant levels, presented as averaging values with their respective incremental concentrations (in µg/m³), were monitored at specific distances from the project boundary. For PM_{10}, the 24-hour average showed an incremental concentration of 0.27µg/m³, measured at a distance of 550 meters from the project boundary towardsSE. Similarly, for SO_2, NOx, Hg displayed 24-hour averages with incremental concentrations of 0.811,0.57 & 0.0017µg/m³, respectively, all measured in the SE direction. These data points provide a comprehensive overview of the pollutant levels and their spatial distribution concerning the project site.

Thus, from the prediction of the proposed project, it is clear that even the highest contribution on the ground level concentrations of PM_{10}, NO_X, SO_2, are very low. The resultant concentrations at all locations are found to be within the permissible limits of NAAQS. Therefore, after implementation of the units of project, the maximum GLCs for PM_{10}, $PM_{2.5}$, NO_X, SO_2, predicted to be within the prescribed 24 hours NAAQS for Industrial, Residential, Rural and Other Areas Hence impact on air quality is considered to be insignificant due to the proposed project.

4.3.2.1 Air Pollution Control Measures

- Emission standards shall be as per MoEF&CC notification S.O. 3305(E) dated 7.12.2015, & its subsequent amendments.
- To control the emission of particulates, High Efficiency electrostatic precipitators (ESPs) will be provided.
- To control NOx emission, Ultra-supercritical boilers having advanced low NOx generation system will be installed. In addition, Selective Catalytic Reduction (SCR) system will be installed.
- The Hg content in Indian coals is usually low and does not require additional measures to limit Hg emission within the limits prescribed by MoEF&CC.
- For the control of fugitive dust emission within and around the coal handling plant, coal dust extraction system with pulse jet bag filter and suppression systems will be provided.
- A Twin flue stack with a stack height of 275 m will be provided

Mitigation measures proposed to mitigate impact of raw material transportation

Mitigation Area	Measures
1. Wagon Loading:	• Ensure **proper levelling** and **no overloading** of wagons. • Install **automated rapid loading systems** at coal sidings to reduce spillage and emissions.
2. Wagon Covering:	Use **mechanically covered wagons (e.g., BOXN-HL with side covers)** to prevent fugitive dust during transit.
3. Wagon Unloading:	• Install **mechanized wagon tipplers** or **track hoppers with dust extraction systems**. • Use **closed conveyors** from unloading point to storage yards.
4. Dust Suppression:	Deploy **dust suppression systems (e.g., water mist spray or fog cannon)** at coal transfer points and unloading areas.

Mitigation Area	Measures
7. Air quality & Noise Management:	Use of **electric locomotives** over diesel, wherever possible.
8. Traffic Safety:	• Construct **dedicated rail sidings** within plant boundary to avoid traffic mixing. • Provide **manned or automated level crossings** with signage and lighting.
9. Monitoring & Compliance:	• Install **ambient air quality and noise monitors** near unloading points. • Conduct regular audits of coal handling and compliance with **CPCB guidelines**.

4.3.3 IMPACT OF TRAFFIC ON EXISTING ROAD INFRASTRUCTURE

The proposed project will inevitably increase traffic in the region and result in increased traffic load on the roads connecting the project site. It is essential to study the baseline traffic scenario and carrying capacity of the road infrastructure to cater to the proposed increase in traffic load due to the proposed project. The study is a means of identifying and documenting any deficiencies or improvements both –operational and physical- necessary to accommodate current or projected traffic volumes. Traffic impact study can be used to help evaluate whether the development is appropriate for a site and what type of transportation improvements may be necessary. It will help: -

a. To establish the existing trips/day without the project activity;

b. To understand the increment on the traffic load due to the project activity;

c. To know the existing road will sustain or not after the commissioning of the project.

4.3.3.1 INDIAN ROAD CONGRESS (IRC) GUIDELINES

Factors for conversion of different type of vehicles into equivalent passenger car unit (PCU) based on their relative interference value as per IRC guidelines i.e. IRC 64:1990 (*Guidelines for capacity of Roads in Rural Areas*) is given below:

Table 4.15: Recommended PCU factor for various types of vehicles on Rural Roads

S. No.	Vehicle type	Equivalency factor for PCU
	Fast vehicles	

S. No.	Vehicle type	Equivalency factor for PCU
1.	Motor cycle or scooter	0.50
2.	Passenger car, Pick-up van or auto-rickshaw	1.00
3.	Agricultural tractor, Light commercial vehicle	1.50
4.	Truck or Bus	3.00
5.	Truck-trailer, agricultural tractor-trailer	4.50
	Slow Vehicles	
6.	Cycle	0.50
7.	Cycle-rickshaw	2.00
8.	Hand cart	3.00
9.	Horse-drawn vehicle	4.00
10.	Bullock cart*	8.00

**for smaller bullock-carts, a value of 6 will be appropriate. Source: IRC 64:1990*

4.3.3.2 LEVEL OF SERVICE (LOS)

Capacity standards are fixed normally in relation to the Level of Service (LOS) adopted for design. Six levels of service are recognized commonly designated from A to F. Considering the need for smooth traffic flow; it is recommended that normally LOS-C be adopted for design of urban roads. At this level volume of traffic will be around 0.70 times the maximum capacity. Capacity or Design Service volume is the maximum hourly volume at which vehicle can reasonably be expected to transfers a point or uniform section of a lane or road way during a given time period. As per IRC 64: 1990 guidelines, ratio of existing volume of PCU on roads (V) and its capacity (C) with corresponding level of services (LOS) and their performance is given below: -

Table 4.16: Referenced V/C ratio for LOS & performance of the road

V/C	LOS	Performance
0.0 - 0.2	A	Excellent
0.2 - 0.4	B	Very Good
0.4 - 0.6	C	Good / Average / Fair
0.6 - 0.8	D	Poor
0.8 - 1.0	E	Very Poor

(Note: capacity as per IRC: 64-1990), *Source: IRC 64:1990*

4.3.3.3 TRAFFIC ANALYSIS AS PER IRC GUIDELINES

Traffic analysis is carried out by understanding the existing carrying capacity of the roads near to the project site and the connecting main roads in the area. Then depending on the capacity of the project, the number of vehicles that will be added to the present scenario will be compared to the carrying capacity.

4.3.3.4 METHODOLOGY

The methodology adopted for the traffic study includes

- Identification and analysis of existing transport network.
- Identifying traffic survey locations, conducting 24-hour preliminary traffic survey to gather base data information about existing traffic and travel pattern on surrounding roads, traffic forecast due to proposed project,
- Identifying impact of increased traffic on existing road network by adding increased PCU to the existing PCU to estimate the impact of increased PCU due to proposed project on the Level of Service,
- Preparing a traffic management plan based on internal circulation plan and these propose development projects to manage the traffic.

4.3.3.5 BASELINE DATA COLLECTION

Baseline traffic survey has been done on State Highway 5 (~1.0 Km towards WSW of project site). Approach road from State highway connecting project site will be developed after obtaining permissions from concerned authorities.

The LOS value is calculated as 0.26 i.e. “B” and the traffic condition is “very good”.

4.3.3.6 TRAFFIC IMPACT ANALYSIS DURING OPERATION PHASE

Table 4.17: Increase in traffic load due to proposed project

S. No.	Material to be transported	Quantity (TPD)	No. of Bulkers per day	PCU factor	PCU/Day
1	Limestone	500	10	3	30

S. No.	Material to be transported	Quantity (TPD)	No. of Bulkers per day	PCU factor	PCU/Day
2	Fly ash	5560	102	3	306
3	Bottom ash	1370	25	3	75
			137		**411**

Total no. of increased PCU per day =411

No. of trips = 2

Therefore, total no. of increased PCU per day = 822

Table 4.18: Modified Traffic Scenario and LOS

Road	Existing LOS	Changed V/C and LOS after adding generated traffic from operational phase of proposed project			
		V	C	V/C	Modified LOS
S.H.-5	B 'Very good'	525.5 + 822= 1347.5	15000	0.08	A 'Excellent'

4.3.3.7 OBSERVATION & CONCLUSION

The existing LOS value i.e. 'A' of State highway 5 is same to A 'Excellent' due to proposed traffic increase of 822 PCU per day. Thus, it can be concluded that the present road network is insufficient to handle the increased traffic load due to the proposed project and requires efforts for road upgradation by state administration as well.

4.3.3.8 MITIGATION MEASURES

In order to mitigate the impact due to increased vehicular load, it is proposed to ensure that

- Adequate parking space for trucks, cars and 2-wheelers is provided in the plant premises.
- Heavy trucks would be parked in designated parking area only and idle running would be avoided.
- Further, major fuel i.e.Coal would come by rail.
- Vehicles moving within the plant premises are speed controlled & PUC Certified.

- Roads and crossings would be suitably planned to avoid traffic congestion.
- Plant layout has been planned having all internal roads minimum 6m width and 9m turning radius with proper looping for smooth traffic flow, including fire tender as per NBC. Road network will connect all service areas in layout.
- Fugitive emission arising from vehicular movement for transportation of raw materials & finished products would be mitigated by installation of tyre washing system and using speed controlled vehicles.

4.3.4 NOISE ENVIRONMENT

IMPACT

During operation, the major noise generating sources from various units of the plant are;

- Crusher unit
- Induced draft & Forced draft fans
- Boilers feed pump
- Turbine
- Generator
- Cooling Tower
- vehicular movement

During the operation phase, the noise anticipated from the proposed project shall be highest within the source area. The details of the noise generating sources are given in Table 4.19:

Table 4.19: Noise Levels for Different Sources

S. No.	Name of source	Noise level, dB (A)
1	ID & FD Fans	85
2	Crusher unit	85
3	Boilers feed pump	85
4	Turbine generator	90
5	Cooling Tower	80

MITIGATION MEASURES

Following mitigation measures are being/will be adopted:

- Acoustic enclosure shall be provided with TG set
- Compressor shall be housed in a separate room with acoustic wall panelling.
- Noise proof cabins will be provided for operators wherever possible
- Inlet and outlet mufflers shall be provided wherever required.
- Suitable isolators will be provided at required locations to avoid rattling due to vibration
- Process air blower, pneumatic valves etc., shall be provided with Silencers
- Noise shall be reduced by preventing leakages from compressed air lines and steam lines
- The high noise zones are demarcated and provided with enclosures & barriers.
- The risks of exposure to high noise levels and the appropriate control measures will be displayed at various places in the workplace.
- Design/installation will be taken as specified by the manufacturers with respect to noise control and will be strictly adhered.
- Sound attenuation panels will be installed wherever required around noise generating equipment.
- All rotating equipment / parts will be well lubricated and provided with enclosures as far as possible to reduce noise transmission.
- Regular maintenance of all the machinery and equipment shall be done
- Regular ambient noise level checks shall be carried out at the site
- Greenbelt development inside the plant premises shall be done which will serve as a buffer between the periphery and the industry, there by controlling noise level.
- In addition to this, effective ear plugs will be provided and their use will be made mandatory in specified areas where noise level is high.

Table 4.20: Proposed Noise Pollution Control Devices

S. No.	Pollution control device with noise source	Control measure
1	Compressor house	Acoustic panelling
2	Start-up vent, safety valve outlets	Silencer
3	Hogging Ejector	Silencer
4	TG Set	Acoustic enclosure
5	Water pump and Compressor (Rolling Mill)	Rubber mounting

Elevated noise levels would have detrimental impact on the health of working personnel in and around the plant premises. Health effects due to noise include hearing impairment, hypertension, cardiovascular diseases and sleep disturbance. Beyond these effects, elevated noise levels can create stress, increase workplace accident rates, and stimulate aggression and other anti-social behaviours. Higher noise levels also have traumatizing effect on animals.

The monitored baseline data shows that the existing noise level for the study area are within the regulatory standards. The integrated noise mitigation measures would control the generated noise due to the proposed project and there would be minimal impact due to the additional generation of noise. Apart from these measures, the peripheral greenbelt would help in containing the generated noise within the plant boundary.

4.3.5 IMPACT ON SOIL ENVIRONMENT

Major impact on the soil will be due to storage of coal, gypsum, storage, handling and transportation of solid wastes and hazardous wastes and also on the soil of nearby agricultural land due to air pollution. Impact due to air pollution has been discussed in the previous sections.

Leachate from improper storage of material, solid waste like ash, hazardous waste like used/spent oil etc. may alter the soil characteristics of the area can also contaminate soil and subsequently ground water regime.

4.3.5.1 MITIGATION MEASURES

Action Plan to avoid Leaching

- All the yards will have RCC flooring after hard surface rolling and compacting.
- Along with that, all the yards will have proper drainage system with garland drains & guard ponds.

4.3.6 SOLID WASTE GENERATION, IMPACT AND MANAGEMENT

- Fly ash and bottom ash will be main solid waste to be generated from the plant. The details of the ash generated from the proposed power plant are given in Table 4.16.100% utilization of fly ash as per MoEF&CC guidelines is proposed.
- The bottom ash will be collected in wet form and fly ash in dry form. Fly ash will be collected in dry form to facilitate utilization.
- Ash Dyke is proposed in 49.37 Ha, which is less than **0.1 Ha./MW** (i.e 160 Ha. for 1600 MW) allowed as per Fly Ash Notification dated 31.12.2021.
- Unutilized Fly ash and bottom ash shall be disposed via High Concentration Slurry disposal (HCSD) system to Ash dyke in case of exigencies.
- Bottom ash generated shall be supplied to the Road Mix Concrete (RMC) / brick producers / filling of low lying area / filling of mine voids as per the statutory guidelines thereby eliminating the need for separate area shall be explored.

Table 4.21: Ash generation from the Proposed Plant

S. No.	Description	Ash quantity in Million TPA	Management & disposal
1.	Fly ash	2.06	Collection in dry form, pneumatic transfer to closed silos & sent to cement manufacturing, Construction work (RMC plant, Roads, Highways), Brick Manufacturing, etc.
2.	Bottom ash	0.5	Collection in wet form & Road Mix Concrete (RMC) / brick producers / filling of low lying area / filling of mine voids
3.	Gypsum	0.26	Will be utilized in Cement manufacturing.
Unutilized Fly ash and bottom ash shall be disposed via High Concentration Slurry disposal (HCSD) system to Ash dyke in case of exigencies.			

IMPACT

- Improper storage, handling and disposal of solid & hazardous waste leads to contamination of soil, ground water and surface water.
- Contamination may also be caused by spillage of hazardous waste, run-off from hazardous waste storage area etc.
- Plants may take up contaminants from soil and accumulate toxic substances ultimately adversely affecting human / animal health due to ingestion.
- Hazardous waste and some industrial wastes as well by virtue of their quantity may alter soil profile affecting soil fertility and soil microbiology.
- Soaking through soil, the toxic substances may reach and contaminate ground water table / aquifer rendering it unfit for human / animal consumption.

Hazardous Waste Generation, Storage & Disposal

Table 4.22: Hazardous waste details

S. No	Type of waste	Source of generation	Schedule as per HWM Rules, 2016	Total	Final Disposal
1	Used or spent oil	DG set operation & Machine operation	Schedule I, Category 5.1	60 TPA	Handed over to CPCB/SPCB approved recycler
2	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	Handling of hazardous chemicals and wastes	Schedule I Category 33.1	12 TPA	Collection, Storage, Transportation and disposal to authorized recycler
3	Contaminated cotton rags or other cleaning materials	Handling of hazardous chemicals and wastes	Schedule I Category 33.2	10 TPA	Collection, Storage, Transportation and disposal to authorized TSDF

- Hazardous waste will be handled, stored & disposed off in line with Hazardous & Other waster (management & transboundary movement) Rules 2016, amended till date.
- Separate covered storage area with impervious flooring and catch drains connecting to WTP will be provided with Hazardous waste storage area.

- E-Waste (about 2.0 TPA), Battery waste (about 3 TPA), Bio-medical waste (about 0.02 TPA) will be handled, stored & disposed of as per applicable rules & guidelines.
- Used batteries will be given back to the supplier under buy back agreement with supplier.
- Bio-medical waste generated from medical unit will be handed over to nearest CBWTF &/or hospital having BMW disposal agreement with CBWTF.

Municipal Solid waste generation & management

Improper disposal of MSW may cause contamination of soil, ground water and surface water over time. It may lead to odour nuisance as well as increased disease vectors in the area.

Table 4.23: Municipal Solid waste generation& disposal

Particulars	Population	Basis	Quantity of waste generated (in kg/day)
Workers	275	@0.3 kg/day	82.5
Landscaping	299.3 acre	@0.2kg/acre/day	59.86
STP sludge (dry)	--	--	50
Total			**192** Approx..

- MSW generated to the tune of about 192 Kg/day will be collected, segregated at source itself using color coded bin collection system placed strategically in the plant premises.

  The organic component of MSW will be segregated and composted in Organic waste converters proposed at site. The remaining waste will be handed over to authorized vendors for recycle/reuse & disposal.

4.3.7 IMPACT ON BIOLOGICAL ENVIRONMENT AND MITIGATION MEASURES

Habitat Loss and Degradation

Clearing of Vegetation: Construction of buildings, roads, and other infrastructure leads to the removal of trees, shrubs, and grasslands, causing direct loss of habitat for species.

Fragmentation of Ecosystems

- Reduced Habitat Connectivity: Urban development creates barriers between wildlife habitats, hindering the movement of species and reducing gene flow, which can lead to isolated populations and decreased biodiversity.

- Edge Effects: When natural habitats are fragmented, the edges of these areas become exposed to human activities, altering microclimates and increasing vulnerability to invasive species.

Air Pollution (SO_2, NOx, CO_2, PM, HCl, Cl_2)

- **Air Quality Degradation**: The combustion of coal, oil, or gas in thermal power plants results in the emission of several harmful gases such as sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon dioxide (CO_2), particulate matter (PM), hydrogen chloride (HCl), and chlorine gas (Cl_2).
- **SO_2 and NOx**: These gases contribute to the formation of acid rain, which can lead to soil acidification, reduced crop yields, and damage to plant life.
- **CO_2**: As a major greenhouse gas, CO_2 is a significant contributor to global warming and climate change.
- **PM**: Particulate matter consists of tiny particles that can be inhaled by humans and animals, leading to respiratory issues. PM can also harm plant life by clogging stomata and interfering with photosynthesis.
- **HCl and Cl_2**: These gases are toxic to both flora and fauna. They can damage plant tissues, impair plant growth, and harm aquatic ecosystems when deposited into water bodies.

Impact on Aquatic Ecosystems

Cooling Water Withdrawal: Thermal power plants use large quantities of water for cooling purposes, often withdrawing it from nearby rivers, lakes, or groundwater sources. This can lead to:

- Depletion of local water resources, affecting local communities and ecosystems that depend on the same water.
- Thermal Pollution: After cooling, water is returned to the source at a higher temperature, which can increase water temperature in the receiving body. This leads to thermal shock for aquatic life, particularly fish species that are sensitive to temperature changes.

- Oxygen Depletion: Higher temperatures reduce the oxygen levels in the water, making it difficult for aquatic organisms to survive.

Disruption of Faunal Movement

- Roads and Buildings: The development of townships and associated infrastructure can block wildlife corridors, causing mortality (e.g., road kills) and forcing animals to enter human areas in search of food or shelter.
- Noise and Light Pollution: Increased human activity, noise, and artificial lighting in developed areas can disturb nocturnal species and alter the behaviour of birds, mammals, and insects.

Introduction of Invasive Species

- Landscaping Choices: Ornamental plants and species introduced for aesthetic purposes in townships may become invasive, competing with native flora and altering the local biodiversity.
- Pest Species: Urbanization often attracts pest species (e.g., rodents, crows), which can thrive in human-altered environments, displacing native fauna.

Soil Contamination and Habitat Destruction

- **Soil Contamination**: The disposal of **fly ash**, a by-product of coal combustion, can lead to contamination of soil and water sources if not managed properly. Fly ash contains heavy metals such as arsenic, mercury, and lead, which can leach into the soil and nearby water bodies, affecting plants, animals, and human health.
- **Habitat Destruction**: During the construction phase, large tracts of land are cleared for the power plant and associated infrastructure. This results in the loss of vegetation and local habitats for wildlife, reducing biodiversity.

Impact on Local Flora and Fauna

- **Flora**: Emissions of sulfur compounds, particulates, and acid rain can significantly damage plant life by affecting photosynthesis and inhibiting growth. Plant species that

are sensitive to air pollution may become less abundant or even disappear in the vicinity of the plant.

- **Fauna**: Wildlife, particularly those in close proximity to the plant, may experience respiratory issues from air pollutants like NOx, CO_2, and particulate matter.
- **Thermal Pollution**: As mentioned, thermal pollution from cooling water discharges can alter the local aquatic ecosystem, causing a decline in fish populations and altering the composition of aquatic plants

Noise and Vibration Pollution

Noise: Thermal power plants generate high levels of noise due to machinery, turbines, and equipment used in power generation. Continuous exposure to high levels of noise can disturb wildlife behavior, breeding, and migration patterns, especially for birds and mammals.

Vibrations: Vibration from heavy machinery and operational processes can disturb the surrounding environment, potentially affecting soil structure, plant growth, and the well-being of local fauna.

Climate Change Implications

- **CO_2 Emissions**: Thermal power plants, particularly those that use coal, are major sources of CO_2, a greenhouse gas responsible for global warming. Increased CO_2 emissions contribute to climate change, which can alter regional weather patterns, affect plant growth, and disrupt ecosystems.
- **Other GHGs**: Thermal power plants may also emit methane (CH_4) and nitrous oxide (N_2O), both potent greenhouse gases, although in smaller quantities compared to CO_2.

The impact significance level (s) arrived at from the above matrix are decided and categorized as stated below to develop strategies of environmental management.

High (H): Those activities which may result in severe and acute effects to the receptors, severe and irreversible deterioration of the quality of environment or very seriously affect the sustainability of the biological environment and/or irreversible and adverse modification of landscape or may cause irreparable damage to the ecological balance.

Moderate (M): Those activities which may result in moderate effects to the receptors, slight deterioration of the quality of environment or slightly affect the sustainability of the biological environment and/or irreversible but socio-economically feasible modification of landscape which may not cause irreparable damage to the ecological balance.

Low (L): Those activities which may result in little effects to the receptors, minimum but reversible deterioration of the quality of environment or not to seriously affect the sustainability of the biological environment and/or irreversible but acceptable modification of landscape considering its positive benefits.

Negligible (N): Those activities which may not have significant effects to the receptors, or may not seriously affect the sustainability of the biological environment and/or may not cause irreparable damage to the ecological balance.

Table 4.24: Impact identification matrix

Activities	Impact on		
	Flora	Fauna	Ecosystem
CONSTRUCTION PHASE			
Site Clearing and Land Preparation	H	H	H
Material Transportation and Storage	M	M	M
Construction of Buildings and Infrastructure	M	L	M
Solid Waste Generation	N	N	L
Water Usage and Management	M	M	M
Dust Emissions from Construction Activities	H	H	M
Noise Pollution from Machinery	L	M	L
Temporary Worker Camps	L	M	L
OPERATION PHASE			
Coal Transportation and Handling	M	M	H
Energy Production (Combustion Process)	N	N	L
Cooling Water Extraction and Discharge	L	L	H
Air Emissions (from stacks) (SO_2, NOx, PM, CO_2)	M	H	H
Air Emissions (from Process vents) (HCl, Cl_2)	H	H	H
Wastewater Discharge	M	M	H

Ash and Solid Waste Disposal	**M**	**H**	**H**
Impact on Aquatic Ecosystems (Thermal Discharge)	**H**	**H**	**H**
Transportation and Infrastructure	**M**	**M**	**M**
Expansion and Further Development	**M**	**M**	**H**
Noise Pollution from Operations	**N**	**L**	**M**
Long-term Soil Contamination (Fly Ash)	**H**	**M**	**H**
Greenhouse Gas Emissions	**N**	**N**	**N**

MITIGATION MEASURES:

Habitat Loss and Fragmentation:

- **Conservation of Green Spaces**: Integrate natural habitat areas, parks, and green belts into urban planning. Preserve key biodiversity hotspots and mature trees during construction.
- **Microhabitat Creation**: Installation of bird boxes and artificial water bodies to provide an alternate habitat for the species.
- **Wildlife Corridors**: Establish wildlife corridors that allow animals to move between fragmented habitats safely.
- **Reusing Fly ash**: Instead of open dumping, fly ash should be used as a construction material.

Water Pollution Prevention

- **Cooling Towers**: The discharged water should undergo appropriate treatment and should be discharged with lowered temperatures to avoid the impacts of thermal pollution.
- **Wastewater Treatment**: Install and properly maintain onsite wastewater treatment systems to prevent contamination of aquatic ecosystems.
- **Artificial Wetlands**: Aquatic plants like *Typha angustifolia* can affectively absorb heavy metals and are natural purifiers of water. Before discharging wastewater, it can undergo treatment in artificial ponds comprising bioremediating species.

Air Quality Management

- **Installation of vegetative barriers:** Creation of Green belts with species that can absorb pollutants, such as *Azadirachta indica (Neem)* and *Delonix regia (Gulmohar*), which are effective in trapping particulates and improving air quality**.**
- **Low-Emission Machinery**: Use modern, fuel-efficient machinery and vehicles to reduce air pollution from construction activities.
- **Integration of technology**: Specialised nanomaterials can be installed within the gas ducts to trap harmful emissions.

Noise and Light Pollution Reduction

- **Acoustic Shields for Machinery**: Install customized acoustic shields or enclosures around high-noise equipment like turbines and coal crushers to absorb sound waves
- **Sound Barriers**: Develop dense forest patches around the plant using species like Bamboo and Eucalyptus, which are highly effective at dampening sound waves.
- **Directional Noise Barriers**: Erect barriers angled to redirect noise away from sensitive areas, such as nearby wildlife habitats or residential zones
- **Low-Impact Lighting**: Use downward-facing, low-intensity lighting to reduce the impact on nocturnal species and reduce light pollution.

Preventing the Spread of Invasive Species

- **Native Landscaping**: Use native plant species for landscaping to maintain local biodiversity.

- **Quarantine Protocols**: Ensure that imported construction materials are free of invasive species and follow strict quarantine protocols.
- **Invasive Species Monitoring**: Implement a monitoring program to identify and remove invasive species before they spread.

Mitigating Greenhouse Gas (GHG) Emissions:

- **Carbon Mineralization**: Capture CO_2 emissions and react them with minerals like magnesium silicate to form stable carbonates. This technology mimics natural processes but is much faster.
- **Biochar Production**: Convert plant waste from nearby agricultural fields into biochar, which can be used as a soil amendment. The process locks carbon into the soil while improving its fertility.

Wildlife Protection Measures

- **Wildlife Surveys**: Conduct pre-construction wildlife surveys to identify sensitive species and habitats. Develop species-specific protection plans (e.g., moving nests, establishing no-go zones).
- **Staged Construction**: Avoid large-scale simultaneous clearing of land. Gradual construction allows wildlife time to relocate to safer areas.
- **Roadkill Prevention**: Install wildlife crossings or underpasses near major roads to reduce wildlife mortality due to traffic.

Table 4.25: Key Impacts on Biodiversity need to be discussed in detail at different levels of activities

-Negative +positive impact	Site Clearing and Land Preparation		Transportation		Construction of Buildings and Infrastructure	Wastewater Generation	Solid Waste Management
	Construction	Operation	Construction	Operation	Construction	Operation	Operation
Biodiversity	-	-	+	+	+	+	+

4.3.7.1 Greenbelt development

a. Introduction

Green canopy not only absorbs some of the air pollutants but also improve the environment. Therefore, a "Green Belt Development Plan" by using the local species has been proposed around the project area, colonies and the project roads.

b. Development of Greenbelt

The development of green belts in industries refers to the implementation of sustainable practices and technologies to minimize the environmental impact of the project activities

and promote eco-friendly operations. Green belt initiatives aim to address various aspects of steel manufacturing, including energy consumption, emissions reduction, waste management, and resource conservation. The average width of the green belt will be around 10 m, which may vary depending on the physiographic and topographic features. There would be at least 3 layers of plantation.

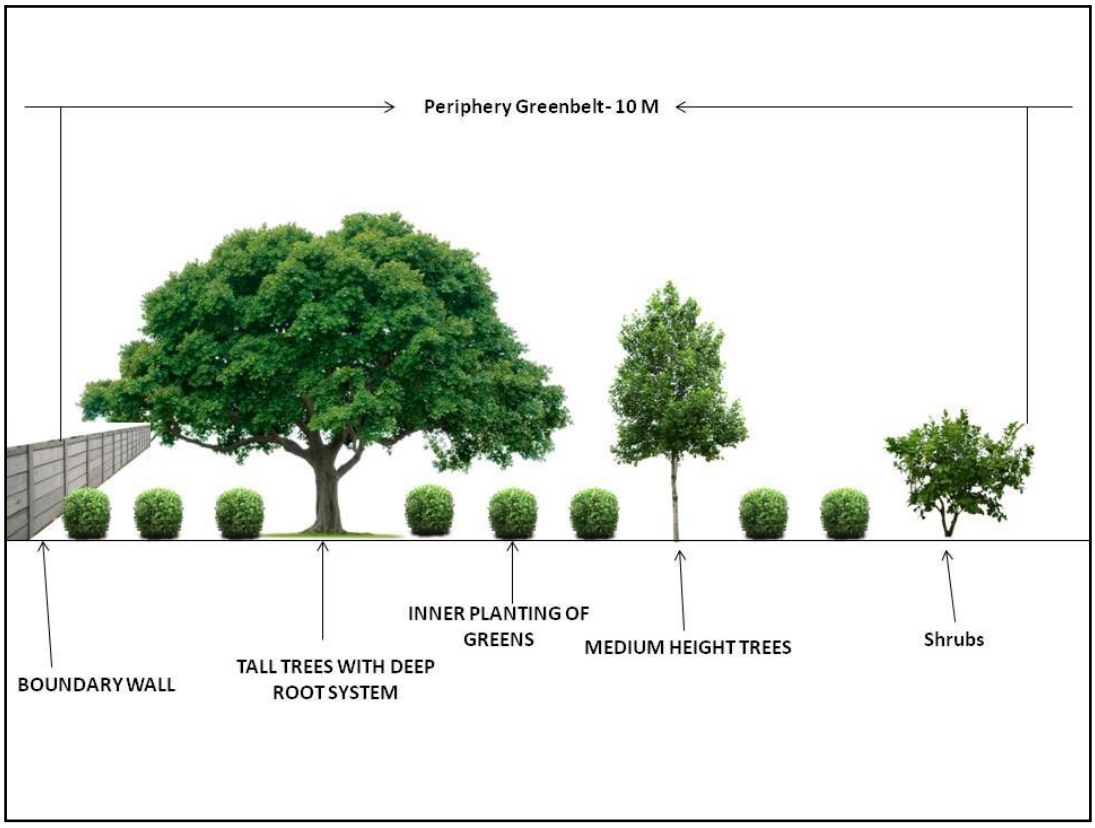


Figure 4.6: Schematic Arrangement of Greenbelt Plantation

c. Strategy for Greenbelt:

The strategy worked out for development of greenbelt consists of the following:

- The species selected should be capable of growing fast,
- The species should be wind firm and long lived.
- Broad leaf trees growing above 10 m in height should be planted along the roads, offices and infrastructure facilities.
- The species should form a dense crown cover.
- The species should form a litter in abundance on the plantation flow.
- Generally local/indigenous fast-growing trees shrubs should be planted.

- The trees should be protected by plantation of non-palatable shrub species to avoid browsing by animals.
- Placement of tree guards (metal tree guard, pre-fab RCC tree guard, Fiber tree guard etc.), should be provided to save avenue plantation.
- For protection against biotic interference thorn fencing around the plantation, circular trench around the planting pit and sown with fast growing thorny shrubs on the ridge should be followed.

d. Guidelines and Techniques for Greenbelt Development

Extensive survey in the project area was undertaken to observe the vegetation types and its density. Soil characteristics were also kept in mind. Based on the survey and environmental conditions suitable plant species have been proposed for green belt development. To meet the requirement of sapling for development of greenbelt, a temporary nursery with following details is suggested.

i. Size of Greenbelt area:

The size of a nursery depends upon the number and type of seedlings to be produced. To produce approx a nursery of about. 1211300 Sq. m area would be required.

ii. Greenbelt Site Selection

Lighting shading site for the site is important for the protection of the young seedlings against sun, frost, hailstorms or heavy rains.

iii. Transportation

The greenbelt site should be readily accessible all the year round in order to facilitate transportation of materials required in the nursery and dispatch of seedling from the nursery.

iv. Fertilizer Application

The organic fertilizer produced through organic waste coupled with vermin compost can be utilized for the nursery. Farmyard manure (FYM) can also be used but chemical fertilizer should be avoided. The compost/vermin compost proposed to be developed through solid waste management.

vii. Soil and Soil Fertility

The best site for raising the nursery is the area, which has got a thich layer of humus. The fertile and well-drained soil with sandy loam texture, pH varying from 5.5-7.5 should always the preferred for nursery sites.

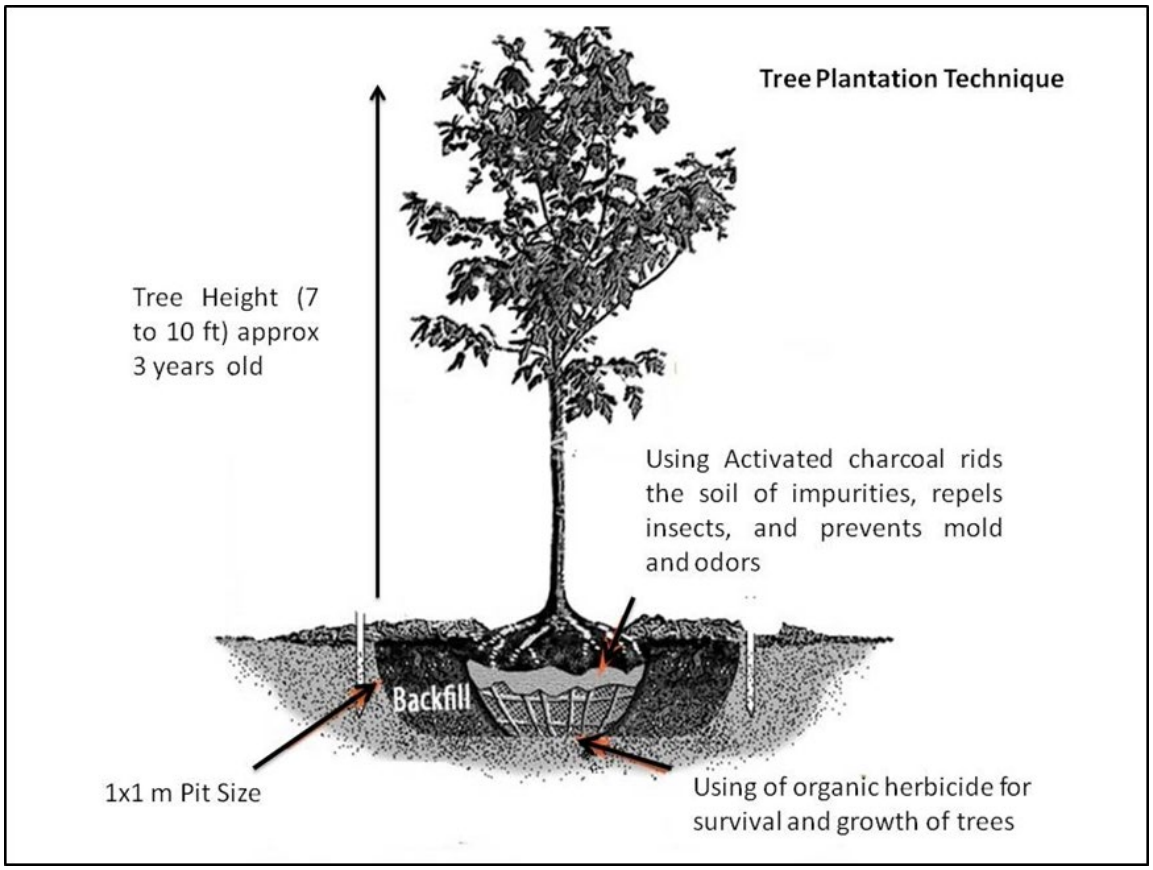


Figure 4.7: Tree Plantation Technique

e. Water supply and Drainage: -

The site should have perennial water supply. The drainage of soil has important bearing on the health of seedlings.

f. Species to be planted: -

The choice of plant species for plantation in greenbelt is mainly governed by the natural factors of bio-climate of the area. For efficacious removal of pollutants (gasses/fugitive dust), It is essential that the plants developed in conditions confirming to adequate supply

of nutrition for their growth, availability of water to avoid water stress i.e. to maintain openness of stomatal apertures and form of epidermal structures. Besides, the adequate exposure to sunlight and wind i.e. without hindrance to free flow of air. In the project area, pollutants like SO_2 and NOx shall result from the operation of construction/excavation machinery and movement of vehicles besides particulate matter mostly PM_{10} shall result as fugitive dust emission from movement of vehicles on project site as primary source from quarrying activities. It is suggested that spreading/round canopy shaped trees should be planted nearby the construction site like excavation sites and oblong and conical trees along the roadside. For absorption of gases pollutants, it is necessary to plant such trees, which have tolerance towards pollutants at reasonable concentration; have longer foliage period and freely exposed foliage besides large number of stomata apertures. For removal of suspended particulate matter high trees with good spread of crown with leaves firmly supported on petioles and abundance of surface area on bark and foliage should be planted. A list of indigenous trees found suitable after identification of species for raising in the nursery and for development of greenbelt around the project area.

g. Precautions during Plantation

Some important precautions should be taken during the plantation, which are as under:

- Open grazing is practiced in general in the area; therefore, protection should be provided in advance.
- Polyculture should be practiced. Mixture by group should be preferred over intimate mixture.
- Species mentioned should be planted in sufficient numbers so as to increase their population size in the area.
- Multipurpose species should be planted in large, so as toprovided direct benefit to people living around.

Table 4.26: Details of Green Area Development Plan

Total Plot area	: 365.19 Ha.
Total Greenbelt area	: 121.13 Ha (>33 %) [0.62 ha. – included for greenbelt development]

Tree to tree distance	: 2 m
Row to row distance	: 2 m
Width of Greenbelt	: 10 m (Approx.)
Trees Calculation	: 302,825 nos (2500 Tress/Ha.)
Trees will be provided	: 302,825 nos.

Table: 4.27: List of plant species recommended for greenbelt development

S. No.	ScientificName	Local Name
1.	*Syzygiumcumini*	Jamun
2.	*Terminalia arjuna*	Arjun
3.	*Pongamia pinnata*	Karanj
4.	*Psidium guajava*	Guvava
5.	*Mangifera indica*	Aam
6.	*Annona squamosa*	Sitaphal
7.	*Neolamarckiacadamba*	Kadamba
8.	*Mimusopselengi*	Molshree
9.	*Melia azedarach*	Bakain
10.	*Tectona grandis*	Teak
11.	*Anogeissus pendula*	Kardhai
12.	*Butea monosperma*	Chewla/Dhak
13.	*Madhuca longifolia*	Mahua
14.	*Lagerstroemia parviflora*	Seja
15.	*Azadirachta indica*	Neem
16.	*Saracaasoca*	Ashok
17.	*Holoptelea integrifolia*	Chilbil
18.	*Ailanthus excelsa*	Mahanim
19.	*Tamarindus indica*	Imli
20.	*Ficus benghalensis*	Bargad
21.	*Ficus religiosa*	Peepal

Table 4.28: List of shrubs and herbs species recommended for greenbelt development

Shrubs		
S. No.	**Scientific Name**	**Common Name**
1.	*Bougainvillea spp.*	Bogoonbel
2.	*Hibiscus rosa-sinensis*	China Rose
3.	*Durantaerecta*	Golden Dewdrop

4.	*Thevetia peruviana*	Yellow Oleander
5.	*Ixora coccinea*	Jungle Flame
6.	*Plumbago zeylanica*	Leadwort
7.	*Ruellia tuberosa*	Minnieroot
8.	*Tecoma stans*	Yellow Bells
9.	*Tabernaemontanadivaricata*	Crape Jasmine
10.	*Codiaeum variegatum*	Croton
11.	*Acalypha wilkesiana*	Copperleaf
12.	*Nerium oleander*	Oleander
13.	*Pentas lanceolata*	Egyptian Star Cluster
14.	*Eranthemumpulchellum*	Blue Eranthemum

Herbs		
S. No.	**Scientific Name**	**Common Name**
1.	*Chrysanthemum indicum*	Chrysanthemum
2.	*Tagetes spp.*	Marigold
3.	*Petunia violacea*	Violet-flowered petunia
4.	*Zinnia elegans*	Common zinnia
5.	*Salvia splendens*	Scarlet Sage
6.	*Viola tricolor*	Pansy
7.	*Celosia cristata*	Cockscomb
8.	*Gomphrena globosa*	Bachelor's buttons
9.	*Cosmos bipinnatus*	Mexican aste
10.	*Portulaca grandiflora*	Moss rose

Table 4.29: Budget Allocations for Green Area Development

No. of trees to be planted	Greenbelt	Budget allocation for the project	Recurring cost
302,825 nos.	121.13 Ha	11.80 Cr.	2.3 Cr.

Period of greenbelt plantation: 5 years

4.3.7.2 CONCLUSION:

In conclusion, incorporating ecological and biodiversity considerations into project is crucial for achieving sustainable and responsible development. The preservation and enhancement of natural ecosystems not only contribute to the overall health of the environment but also provide a range of benefits to both local communities and the construction projects.

- Eco-friendly practices will be adopted and by implementing biodiversity conservation measures, proponent can mitigate their impact on the surrounding environment. This includes the protection of local flora and fauna, the restoration of ecosystems, and the promotion of sustainable land use practices. Integrating green spaces and wildlife corridors into core zone and buffer zone.
- The entire study area (Terrestrial and Aquatic) was covered in the best possible manner to enlist the flora, fauna and avian species (terrestrial and aquatic).
- An inventory of the various plant groupings observed in the study region was created. In the study area, 27 species of flora were identified in core zone Herbs and grasses - 09; Shrubs:10; Trees:08) and 254 species of flora were identified in Buffer Zone 113 species of trees, 49 species of shrubs, 64 species of herbs & grasses, climbers- 28 have been recorded in the study area of Buffer Zone based on information collected from the secondary data.
- Analysis of Fauna: A number of faunal terrestrial species comprising mammals, reptiles, Birds and Amphibians were recorded from the study area. In the study area, 15 species of fauna were identified in core zone (Birds: 12; Butterfly: 04; Mammals: 02; Reptile: 01), in the buffer zone 170 species of fauna were identified (Bird: 95; Mammals: 26; Reptiles: 14; Amphibians: 07; Fishes: 10; Moths: 08, Butterfly: 10) However 22 Schedule I species as per WPAA, 2022 is present in the study area. No National Park, Wildlife Sanctuary Falls within 10 km radius study area.
- Wildlife conservation plan for schedule I species: a total of 22 Schedule I species are found in the buffer zone. A site-specific Wildlife Conservation Plan shall be prepared in consultation with the Forest Department Mirzapur for implementation through Uttar Pradesh Forest division under the proposed budget.
- Green belt Development and Plantation with suitable indigenous Local Fast-Growing species & High Carbon sequestration/sink potential species will improve the environment.
- In summary, a holistic approach to development that integrates ecological and biodiversity considerations is essential for fostering environmental resilience, promoting responsible stewardship, and ensuring the long-term viability of both aviation infrastructure and the ecosystems it interacts with. Through collaboration with

environmental experts, local communities, and regulatory bodies, projects can strive to strike a balance between human activities and the preservation of biodiversity, contributing to a more sustainable and harmonious future.

4.3.8 IMPACT ON SOCIO ECONOMIC ENVIRONMENT & MITIGATION MEASURES

Proposed activities and possible impacts of this Greenfield project are shown below:

SOCIO-ECONOMICENVIRONMENT

Impacts

Critically analyzing the existing environmental status of the socio-economic profile and visualizing the scenario with the project, the impacts of the project would be varied and may generate both positive and negative impacts of the proposed expansion in the region that are stated below.

POSITIVE IMPACTS

The villages and their inhabitants are far off the project site and will not be disturbed from their settlements due to the expansion. Therefore, neither villages nor any part of a village or any hamlet will be disturbed during the project. As the project operations will not disturb or relocate any village or settlement, no adverse impact is anticipated on any human settlement.

Increase in Job Opportunities

As per the survey, it has been observed that the population in general does not have opportunities for earning from employment, and the non-worker population is higher in the region, so the project in general will help to provide direct and indirect job opportunities for auxiliary and ancillary works, etc. The proposed project may employ approx. 2000 personnel. Thermal power plants, especially large-scale coal-based ones, require a substantial workforce for operations, maintenance, and management. The local community may benefit from these job opportunities in various roles, such as plant operators, engineers, technicians, electricians, safety officers, and administrative staff.

No burden in the existing Infrastructure Facilities

The local workforce will be given first preference in the activity, due to which an influx of the outsiders is not envisaged, or it will be very minimal. Thus, there will not be the necessity of provision of housing facilities for the local workers and not stressing on the existing civic amenities of the area. If enough local workers will not be available, then workers from outside will be engaged.

Improvement in Infrastructure

As the power plant develops, nearby areas might experience urbanization, with better housing, transportation, and healthcare infrastructure becoming available. These improvements can uplift the living standards of the local population. Urbanization can lead to more opportunities for education and employment, as better infrastructure attracts other industries and businesses to the area. The activity will benefit the local people due to the provision of more infrastructural facilities such as the development of connecting roads, streetlights, health facilities, etc.

Agriculture

Thermal power plants generate a significant amount of ash (fly ash), which can be used in agriculture to improve soil fertility. Fly ash contains beneficial minerals such as calcium, magnesium, and potassium, which can enrich soil health and improve crop yields when used as a soil amendment.

Impacts on air quality

The proposed project is coal-based and is a major source of air pollution. However, as per the technical advisor on air pollution, high-quality equipment will be installed and airbag stacks, etc., will be placed as per the guidelines of CPCB.

Impacts on human health

The project may have impact due to air pollution on the buffer zone villages near to the Project site. The impact from the air emissions are controlled efficiently using air pollution control equipment and stacks will be designed in such a manner that in future after the implementation of the project, the air emissions will be well within the prescribed ambient

air quality limits set forth by CPCB. The proponents of this facility will adopt effective control systems at all the identified sources of emission.

ADVERSE IMAPCTS

Impacts on Agriculture

Productivity of crops may be deteriorated affecting the agriculture-based livelihood due to the pollution arising out of the project activity, if proper mitigation measures are not implemented.

Impacts on air quality if the air systems at a thermal power plant (especially coal-fired plants) are not functioning properly, it can lead to serious health-related problems for people living in nearby villages. Thermal power plants, especially those burning fossil fuels like coal, can emit large quantities of harmful pollutants, and if the air filtration or pollution control systems (electrostatic precipitators, or selective catalytic reduction) are not working as intended, the risks to public health can increase significantly.

Table 4.30: Qualitative Effects on Socio-economic Environment

Parameter	Local	Regional	Direct	Indirect	Reversible	Irreversible
Employment	+	#	+	+	#	+
Income	+	#	+	+	#	+
Transport	+	+	+	+	#	+
Education	+	#	#	#	#	+
Medical facilities	+	#	+	+	#	+
Communication	+	+	+	#	#	+
Sanitation	-	#	-	#	#	-
Housing	+	#	+	#	#	+
Health	-	#	-	-	#	-
Recreation	+	+	#	+	#	+
Agriculture	-	#	-	-	#	-
Cost of living	+	#	#	+	#	+
Business	+	+	+	#	#	+
Per Capita Income	+	+	+	#	#	+
Pollution	-	#	-	#	#	#

+: Positive;-:Negative; # insignificant

Mitigation Measures of Socio-Economic Environment

- Adequate measures will be taken in the design of the project to control air and noise pollution, including dust suppression.
- Awareness programs shall be arranged on health, hygiene and sanitation.
- Periodic health check-up camps, eye check-up camp shall be organized by the project authority for villagers, contract laborers, employees and their family
- Apart from the normal health check-up, emphasis shall also be given to prevent specific diseases originating due to emission of different pollutants such as respiratory alignments, skin problems, water borne diseases, hearing abilities etc.
- Organizing job-oriented training courses through industrial and technical training institutions can significantly benefit the youth by providing them with practical, marketable skills that open doors to employment and entrepreneurial opportunities. By focusing on areas like electrical, tailoring, plumbing, welding, machine repairing, and other skills, training programs can create a highly skilled workforce, boost employment, and contribute to local economic development.
- Collaboration between the project authority and local bodies, whenever required, will be undertaken on a regular basis with the aim to build and maintain good relations, which are essential for the smooth functioning of the project as well as for the progress and well-being of the people in the study area.
- Awareness programs will be taken to make people aware about the environmental protection, need of water conservation etc.
- At the workplace, first aid facilities shall be maintained at a readily accessible place with necessary appliances including sterilized cotton wool etc. Ambulance facility shall also be provided during emergency.
- Enough supply of potable water at suitable places.
- Sanitary facilities shall be provided at accessible place within the work zone and kept in a good condition.

4.4 BUDGETARY ALLOCATION FOR ENVIRONMENTAL MANAGEMENT PLAN

In order to comply with the environmental protection measures as suggested in the above sections, the project management has made budgetary provision for environmental protection and safety measures. The total capital cost towards EMP is Rs. 3012.39 Crore and the recurring cost will be 31.12 Crore per annum. The annual expenditure to be incurred on plantation, maintenance, monitoring and analysis of ambient air, noise, water resources, effluent water and soil etc. as shown in Table below:

Table 4.31: Budgetary Allocation for Environmental Management Plan

S. No.	Item Description	Cost (Rs. in Crores)
1	Electrostatic Precipitator	542.80
2	SCR/De-NOx System /Low NOx Burner	1638.98
3	Chimney	269.00
4	Dust extraction & suppression system	8.26
5	Cooling Tower including civil works	189.15
6	DM Plant Waste Treatment System	60.00
7	Sewerage collection, treatment & disposal	1.77
8	Ash Handling including ash water recirculation	225.38
9	Ash disposal civil work	29.50
10	Green Belt & landscaping	11.80
11	Rainwater harvesting	7.19
12	Solar power harnessing	3.19
13	Environmental Laboratory & Environmental Monitoring	10.03
14	CEMS, CAAQMS, EQMS monitoring system & Main gate display board	11.80
15	Wind Breaking Wall, Dry Fog System & RCC Flooring in Coal Storage Area.	3.54
Total in Rs in Crores		**3012.39 Cr.**

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CHAPTER – V
ANALYSIS OFALTERNATIVES (TECHNOLOGY AND SITE)

5.1 INTRODUCTION

A comparison of alternatives helps to determine the best method of achieving the project objectives with minimum environmental impacts environmental impacts or indicates the most environment friendly and cost-effective options.

5.2 ANALYSIS OF ALTERNATE SITE

The project site admeasuring 365.19 Ha. is proposed for 2x800 MW Coal based Ultra Super Critical Thermal Power Plant. As detailed in **Chapter 1** of the EIA/EMP report, the MoEFCC has issued Environmental Clearance to set up 2x660 MW Super Critical Coal based thermal power plant at Village Dadri Khurd, Tehsil Mirzapur, Uttar Pradesh to M/s. Welspun Energy UP Pvt. Ltd. (WEUPPL) vide F. No: J-13012/12/2011-IA II(T) dated 21.08.2014. Subsequently, UPPCB has also granted Consent to Establish (CTE) dated 13.01.2015.

Latterly, Mirzapur Thermal Energy UP Pvt. Ltd. (MTEUPPL) after taking over the project from WEUPPL through MoEFCC letter vide no. J-13012/ 12/2011-IA. II(T) dated: 20.12.2019.

Now the proposal has changed from 2x660 MW to **2x800 MW** and almost 10 years have lapsed, **a new reference (*De Novo*) is being made through this application.** Alternative Site study is not envisaged for the proposed (*De Novo*) project.

The Approach Road outside the pant boundary connecting State Highway from site & water pipeline involves Forest land measuring 8.3581 Ha. & application for obtaining diversion of the same for approach road & pipeline has been submitted. The stage –I approval for the same is under progress with the authority. ***[Proposal no. FP/UP/THE/14236/2015].***

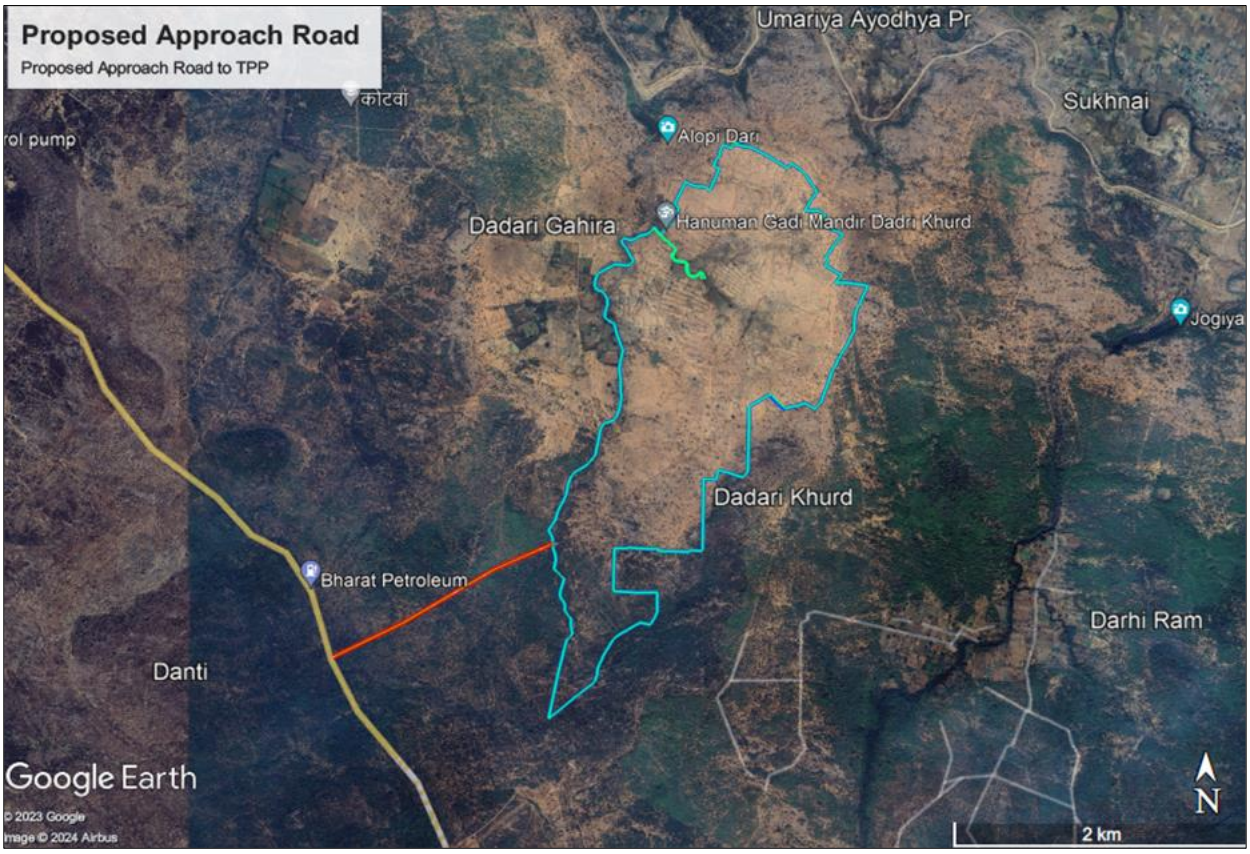


Figure 5.1: Proposed Approach Road to Site



Figure 5.2: Proposed water pipeline on Google Earth Imagery



Figure 5.3: Proposed coal transportation route on Google Earth Imagery

5.3 ANALYSIS OF ALTERNATE TECHNOLOGY

Exploring technology alternatives is crucial as it enables informed decision-making by evaluating factors like cost-effectiveness, energy efficiency, and environmental impact. The choice of technology significantly impacts overall project performance, efficiency, and long-term sustainability. This analysis ensures that the selected technology aligns with project goals and optimizes resource utilization.

The classification of boilers into Subcritical, Supercritical, and Ultra Supercritical is based on the operating pressures and temperatures, with Ultra Supercritical boilers offering the highest efficiency and environmental performance. Mentioned below are the insight on the various types of boiler alternatives explored for the proposed project.

a. Sub critical Boiler:

Operating within a temperature range up to 374°C and under a pressure of 3,208 psi, sub-critical boilers exemplify a system with a consistent evaporation endpoint, with the drum-type steam generator being a notable example.

When the fluid undergoes natural circulation, the application range is restricted to around 190 bar as the maximum drum pressure. However, utilizing a circulating pump (forced circulation) extends this range, achieved by fixing the endpoint of evaporation in the drum. This also determines the size of the heating surface in both the evaporator and super-heater. A significant drawback of sub-critical boilers is the potential for bubble formation, resulting in increased water consumption.

The boiler's internal workings involve initiating the natural circulation of fluid by heating the risers. The resulting mixture of water and steam from these risers undergoes separation in the drum, where water is directed back to the evaporator inlet through downward corners, while steam proceeds into the super-heater chamber.

b. Super Critical Boiler

A supercritical boiler utilizes pulverized coal and operates as a once-through boiler, eliminating the need for a drum to separate steam from water. Unlike traditional boilers, which boil water to generate steam for turbine rotation, a supercritical boiler operates at extremely high pressures (3,208 psi/221.2 bar or above), causing the fluid within to transition into a state known as a "supercritical fluid."

This supercritical fluid directly drives the turbine responsible for electricity generation. During this process, the fluid, now a mix of steam and water, undergoes a transition back to its original state as it drops below the critical pressure point, subsequently entering a condenser. The efficiency of supercritical boilers surpasses that of their subcritical counterparts, leading to reduced fuel consumption.

The advantages of supercritical boilers extend to three critical areas for plant owners and operators: efficiency, emissions, and cost. Although supercritical boilers involve a higher initial investment compared to similarly sized subcritical boilers, the enhanced efficiency, reduced emissions, and lower operating costs over the technology's lifecycle offset the upfront costs. This is attributed to the higher steam temperature and pressure parameters characteristic of supercritical boilers.

c. Ultra Super Critical Boiler

The ultra-supercritical boiler operates on the principle of a "once-through type" system. In comparison to a natural circulation boiler, the volume of the evaporator system in a once-through boiler is significantly smaller. This results in a reduced amount of water in the evaporator. The smaller inventory of stored water and steam in ultra-supercritical units allows for a theoretically faster rate of response compared to drum-type units.

The use of ultra-supercritical parameters brings about an enhancement in cycle efficiency due to elevated pressure and temperatures. However, it's worth noting that for smaller units, the improvement in heat rate is relatively marginal. The advantages of ultra-supercritical boilers lie in their rapid response capability and the overall efficiency gains achieved through advanced pressure and temperature parameters.

Table 5.1: Comparison of Boiler Types: Subcritical, Supercritical, and Ultra-Supercritical

Characteristic	Subcritical Boiler	Supercritical Boiler	Ultra-Supercritical Boiler
Operating Parameters	Below the critical point	Above the critical point	Above the critical point with higher parameters
Pressure	Lower pressures	Higher pressures	Extremely high pressures
Temperature	Moderate temperatures	High temperatures	Extremely high temperatures
Efficiency	Lower thermal efficiency	Improved thermal efficiency	Higher thermal efficiency

Characteristic	Subcritical Boiler	Supercritical Boiler	Ultra-Supercritical Boiler
Fluid State	Liquid and gas phases during operation	Supercritical fluid (Neither liquid nor gas)	Supercritical fluid (Neither liquid nor gas)
Boiler Complexity	Moderate complexity	Higher complexity	Higher complexity due to elevated parameters
Steam Generation Rate	Moderate steam generation rate	Higher steam generation rate	Higher steam generation rate
Response Time	Moderate response time	Faster response time	Rapid response time due to smaller evaporator volume
Fuel Consumption	Relatively higher fuel consumption	Reduced fuel consumption	Lower fuel consumption due to improved efficiency
Environmental Impact	Higher emissions	Less emissions	Lower emissions due to improved efficiency
Initial Capital Investment	Lower initial investment	Moderate initial investment	Higher initial investment due to advanced parameters
Lifecycle Costs	Moderate lifecycle costs	Reduced lifecycle costs	Optimized lifecycle costs due to improved efficiency

5.3.1 TECHNOLOGY SELECTED FOR THE PROPOSED PROJECT

The proposed project incorporates Ultra-Supercritical technology, offering notable advantages. Ultra-Supercritical units exhibit low thermal inertia, leading to quicker start-up times, enhanced load change rates, and reduced forced cooling time during emergency shutdowns. This technology facilitates easier pressure changes and allows for a genuine sliding pressure operation mode with efficient load change capabilities. In ultra-supercritical units, the main steam temperature is regulated through water-fuel ratio control, ensuring the achievement of rated steam outlet temperature at all loads and with various fuel types.

The utilization of ultra-supercritical parameters proves particularly beneficial for larger units, where the improvement in thermal efficiency is more prominent. Opting for ultra-supercritical steam parameters can yield efficiency gains of approximately 3 - 5% compared to conventional supercritical technology.

Beyond expedited response times, the adoption of ultra-supercritical technology enhances overall plant thermal efficiency, resulting in reduced fuel consumption per unit of electricity generated. This reduction in fuel consumption contributes to a subsequent decrease in CO_2 emissions in coal-fired power plants. Additionally, ultra-supercritical units emit lower levels of SOx and NOx, contributing to environmental benefits. The heightened thermal efficiency also leads to a significant reduction in the emission of suspended particulate matter into the environment. Finally, the improved efficiency is directly linked to lower fuel costs, further emphasizing the economic advantages associated with this advanced technology.

5.3.2 ADVANTAGES OF ULTRA SUPER CRITICAL THERMAL POWER PLANT

Ultra Super Critical thermal power plants combine high efficiency, reduced emissions, and operational flexibility, making them a compelling choice for large-scale power generation projects aiming for both economic and environmental sustainability. The same can be summarized as under:

The benefits of ultra-supercritical technology, maybe summarized as:

- Improved thermal efficiency attainable
- Reduced fuel cost
- Reduction of carbon-dioxide emission compared to typical sub-critical units. This may attract incentive permitted as per governing CDM norms.
- Very good part load efficiency.
- Very low emissions of NOx, SO_2 and PM achievable using modern flue gas clean-up equipment.
- Initial investment requirement marginally higher than super critical technology and less than other clean coal technology. This, however, depends on the unit size considered.

It is needless to mention that significant research and development work in the field are being carried out to optimize on:

- Cycle layout and heat rate
- Requirement of auxiliaries
- Environmental impact
- Initial cost
- Plant availability

In Indian context, the following features need special attention compared to the technologies available in other Countries:

- Dependence on imported materials for heat transfer surfaces and the turbine parts handling high temperature steam will offset the cost advantages normally available in advanced countries.
- Indian coal has high ash content, which is also abrasive in nature. This aspect may be given due attention during furnace design.
- Suitable training of O&M staff and indigenous vendors would be necessary.
- Superior water treatment along with 100% condensate polishing being essential requirement needs to be ensured.

An evaluation of steam cycle performance shows that a cycle efficiency in excess of 42% is attainable in ultra-supercritical applications compared to 38 – 40% % attainable with super-critical steam parameters. At a more specific level, improvements are possible and are being attained through:

- Increase in main and reheat steam temperatures, main steam pressure including transition to ultra-supercritical conditions.
- Changes of cycle configuration, namely, increasing number of reheat stages, feed heaters with associated increase in final feed water temperature. For example, utilizing topping de super heater (dry heater) over and above normal regenerative feed heating arrangement and utilizing LP drip pump with feed forward arrangement.
- Changes in the boundary conditions of the cycle, namely, flow and temperature of flue gas at the outlet, condenser pressure etc.

- Improvements in steam turbine efficiency through optimized flow paths & last stage blade design improvements
- Reduction in auxiliary power consumption.
- Improvement in the performance of the individual plant components, which in turn, has an effect on the other areas listed above (coal combustion, turbine efficiency, pump efficiency, condenser performance etc.).

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CHAPTER - VI
ENVIRONMENTAL MONITORING PROGRAMME

6.1 INTRODUCTION

Regular monitoring of environmental parameters is of immense importance to assess the status of environment during project operation. With the knowledge of baseline conditions, the monitoring programme will serve as an indicator for any deterioration in environmental conditions due to operation of the project, to enable taking up suitable mitigatory steps in time to safeguard the environment. Monitoring is as important as that of control of pollution since the efficiency of control measures can only be determined by monitoring.

Usually, as in the case of the study, an impact assessment study is carried over short period of time and the data cannot bring out all variations induced by the change of seasons or changes in the domain and nature of activities. Therefore, regular monitoring programme of the environmental parameters is essential to determine any changes in the environmental quality.

6.2 ENVIRONMENTAL MONITORING AND REPORTING PROCEDURE

Monitoring will confirm that commitments are being met. This may take the form of direct measurement and recording of quantitative information, such as amounts and concentrations of discharges, emissions and wastes, for measurement against corporate or statutory standards, consent limits or targets. It may also require measurement of environmental quality in the vicinity of a site using ecological/biological, physical and chemical indicators.

The key aims of monitoring are:

i. To monitor impacts on the surrounding environment and the effectiveness of mitigation measures during the construction and operation phases.

ii. To ensure that the environmental control systems are installed and operating satisfactorily.

iii. To verify the evaluations made during the planning process, particularly with risk and impact assessments.

iv. Monitoring will also be required to meet compliance with statutory (MoEF&CC, CPCB/UPPCB) and corporate requirements.

6.2.1 OBJECTIVES OF MONITORING

The objectives of monitoring are to:

- Verify effectiveness of planning decisions.
- Measure effectiveness of operational procedures.
- Conform statutory and corporate compliance.

6.2.2 ENVIRONMENT ASPECTS TO BE MONITORED

i. Work zone monitoring.

Regular work zone monitoring will take place for PM_{10}, $PM_{2.5}$, SO_2, NO_X. If concentrations are higher than threshold limit values the source of fugitive emissions will be identified, and necessary measures will be taken.

ii. Ambient air and stack monitoring

- Ambient air quality will be monitored for pollutants Particulate Matter (PM_{10}, $PM_{2.5}$), Sulphur Dioxide (SO_2) and Oxides of Nitrogen (NOx). The regular monitoring will be carried out by the third party. Continuous Ambient Air Quality Monitoring System (CAAQMS) is proposed to install with connectivity to the SPCB/CPCB server.
- Regular monitoring of stacks will be carried out for the parameters such as PM, SO_2, NOx, to assess the performance of pollution control facilities installed for the unit. Mirzapur TPP will install a 24x7 Continuous Emission Monitoring System (CEMS) at main process stacks to monitor stack emission concerning standards prescribed in

Environment (Protection) Rules 1986 and connected to CPCB/UPPCB online servers and calibrate these systems from time to time according to equipment supplier specification.

iii. Water and wastewater quality

The program for monitoring water and wastewater quality encompasses the examination of treated wastewater parameters before reuse, recycling, and recirculation. Additionally, it includes monitoring of surface water and groundwater quality. The schedule for monitoring treated water derived from diverse sources, along with the specified parameters for analysis, is detailed in the monitoring plan.

Surface and groundwater quality assessment, encompassing sources like drinking and irrigation wells, ponds, tube wells, etc., in the vicinity, will be conducted on six monthly basis at various locations within 2 km radius of the power plant. The monitored parameters will include dissolved solids, oxygen levels, bacterial contamination, heavy metals and other demand parameters.

- Ground water level & quality monitoring once in six months in the plant vicinity.
- Surface water monitoring once in six months in the plant vicinity.
- The characteristics of cooling tower blow down will be analyzed periodically.
- The characteristics of inlet and outlet water of STP and ETP will be tested on a monthly basis and reports will be submitted to CPCB/UPPCB.
- Environment Statement Reports will be filed as per the schedule prescribed by the State Pollution Control Board. Regular sampling and analysis for the same shall be carried out through an NABL & CPCB recognized environmental monitoring laboratory.

iv. Noise Levels

- Noise levels in the work zone environment will be monitored
- The frequency will be once in six months in the work zone.
- Similarly, ambient noise levels in the plant site & plant vicinity will be monitored once in six months.

v. Soil Quality

- Soil quality will be monitored inside plant premises near the waste storage area once in six months as per guidelines and in plant vicinity once in a year.
- The parameters will include physico-chemical parameters and heavy metals.

6.3 ENVIRONMENTAL MANAGEMENT DIVISION

Monitoring of pollution is as important as implementation of measures for control of pollution since the efficiency of control measures can only be determined by monitoring. The following routine monitoring program will be implemented under the post-project monitoring as per CPCB/UPPCB guidelines. The major environmental considerations involved in the construction and operation of the thermal power station will be taken up by a full-fledged multi-disciplinary Environmental Management Division (EMD) with key functions of environmental, safety and occupational health for management of the entire plant and surrounding environment.

Environmental monitoring schedules are prepared covering various aspects of the environment during the regular operational phase. To affect the monitoring schedule, it is important to allocate responsibilities to individuals by an environment management cell.

The monitoring program for different parameters of environment, outlined in the following sections, is based on the findings of the impact assessment. Environment Monitoring Plan during Construction Phase & Operation Phase is as below:

6.3.1 MONITORING SCHEDULE DURING CONSTRUCTION PHASE

Table 6.1: Environment Monitoring Program during Construction Phase

S. No.	Aspect	Parameters	Frequency	Location
1	Meteorological aspects	Wind speed & direction, temperature, rainfall and humidity	Continuous hourly monitoring	At plant site
2	Ambient Air quality	PM_{10}, $PM_{2.5}$, SO_2, and NOx	Twice a week	At major construction sites
3	Noise	Equivalent noise pressure level	Once in three months	At major construction sites

S. No.	Aspect	Parameters	Frequency	Location
4	Ground water quality	Physical, chemical and biological parameters including heavy metals	Twice in Six months	Two locations
5	Surface water quality	Identification of water related diseases and curative measure, etc.	Twice in Six months	Two locations in study area likely to receive surface run-off from the site (only if required)

6.3.2 MONITORING SCHEDULE DURING OPERATIONAL PHASE

During operational stage, mainly particulate matter and flue gases are emitted from the proposed unit. Following attributes which merit regular monitoring based on the environmental setting and nature of project activities are listed below:

- Source emissions and ambient air quality.
- Groundwater levels and ground water quality;
- Surface water quality;
- Water and wastewater quality (water quality, effluent & sewage quality etc);
- Soil quality;
- Noise levels (equipment and machinery noise levels, occupational exposures and ambient noise levels);

The following routine monitoring program as detailed shall be implemented at site. Besides to this monitoring, the compliances to all environmental clearance conditions and regular permits from UPPCB and MoEF&CC will be monitored and reported periodically.

Table 6.2: Environmental Monitoring During Operational Phase

S. No.	Environmental Aspect	Parameters Monitored	Location (Monitoring Frequency)	Responsible Person/Organization
1.	Meteorology	Wind speed & direction,	Project Site (Continuous Automatic Monitoring)	Environmental Management Division (EMD)

S. No.	Environmental Aspect	Parameters Monitored	Location (Monitoring Frequency)	Responsible Person/Organization
		temperature, rainfall, and humidity		
2.	Work Zone Air Quality	PM_{10}, $PM_{2.5}$, SO_2, NOx	Work zones inside (twice a year)	MoEF&CC/NABL Accredited Laboratory Coordinated by EMD
3.	Ambient Air Quality	PM_{10}, $PM_{2.5}$, SO_2, NO_2, (Within and outside the plant area)	1 Location at Plant Gate (CAAQMS) & 1 location within plant & 2 location in nearby habitation (Twice a week)	Continuous Online Monitoring System, MoEF&CC/NABL Accredited Laboratory, Coordinated by EMD
4.	Stack	PM, SO_2, NO_2, (Continuous Emission Monitoring System at all major stacks)	All Stacks (Continuous Emission Online Monitoring) CEMS. Manual monitoring (Monthly)	CEMS, MoEF&CC/ NABL Accredited Laboratory, Coordinated by EMD.
5.	Noise & Vibration	Noise & Vibration	4 Locations (2 in Nearby habitation, 2 within the Project Boundary) (Monthly)	MoEF&CC/NABL Accredited Laboratory Coordinated by EMD
6.	Surface Water Quality	Physical, chemical, and biological parameters including heavy metals	2 Locations Near Project Site (Quarterly)	MoEF&CC/NABL Accredited Laboratory Coordinated by EMD
7.	Groundwater Quality	Physical, chemical, and biological parameters including heavy metals	4 Locations Near Project Site (Quarterly)	MoEF&CC/NABL Accredited Laboratory Coordinated by EMD, Piezometer for Long-Term Monitoring (1 Location) - NABL Accredited Laboratory Coordinated by EMD

S. No.	Environmental Aspect	Parameters Monitored	Location (Monitoring Frequency)	Responsible Person/Organization
8.	Wastewater Quality	Physical, chemical, and biological parameters including heavy metals	2 Locations in Project Site (monthly)	MoEF&CC/NABL Accredited Laboratory Coordinated by EMD
9.	Soil	Physical and chemical parameters with organic content	2 location in plant site near Waste Storage Area & township (six monthly), 2 location in nearby habitation (yearly)	MoEF&CC/NABL Accredited Laboratory Coordinated by EMD
10.	Health	Health-related parameters (e.g., air quality impact on respiratory health)	Project Site and nearby habitation (Regular Monitoring)	Health Department and EMD Collaboration

Vibration levels will undergo monitoring at the interior Quality Control (QC) laboratory, which will house vibration-sensitive equipment. This will be done to assess potential impacts arising from both construction and operation activities. Mitigation measures will be implemented, such as notifying equipment operators in advance to coordinate activities. Additionally, temporary relocation of sensitive equipment and the installation of isolation equipment, such as vibration-dampening mounts, may be considered as part of these measures. Regular monitoring at the QC laboratory will continue to ensure ongoing assessment of potential impacts from construction and operation, with timely coordination and appropriate measures as needed.

6.4 REPORTING SCHEDULES OF THE MONITORING DATA

It is proposed that voluntary reporting of environmental performance with reference to the EMP should be undertaken.

The environmental monitoring contracted laboratory will co-ordinate all monitoring programmes at site and data thus generated will be regularly furnished by project proponent to the UPPCB.

The Environmental Audit reports will be prepared for the entire year of operations and will be regularly submitted to regulatory authorities. Consistent monitoring and meticulous data analysis will be conducted, adhering to a robust documentation and reporting system. A comprehensive report, inclusive of recommendations, will be formulated and submitted to the regional offices of UPPCB/CPCB and other relevant authorities within the Ministry of Environment Forest and Climate Change (MoEF&CC) for their thorough evaluation. This entire process will be seamlessly integrated into routine contract monitoring activities. Proposals for Reporting and Monitoring Systems at various stages will be outlined to ensure the monitoring plan's timely and efficient implementation.

6.5 INFRASTRUCTURE FOR ENVIRONMENTAL MONITORING

Mirzapur Thermal Energy (UP) Private Limited will conduct environmental monitoring by an external NABL/MoEFCC approved laboratory and also through proposed in-house environmental monitoring laboratory.

6.6 DETAILED BUDGET PROVISION

The cost estimates for the monitoring plan are as detailed as under: -

Table 6.3: Budgetary Provision for Environmental Monitoring

Component	Stage	Locations	Frequency	Total no. of samples annually	Cost per Sample (Rs)	Capital Cost (Rs)	Recurring cost (Rs)
Air	Construction	03	Twice a week	312	5000	--	1,560,000
	Operation	CEMS & CAAQMS	Continuous	--	--	8,00,000	
		03	Twice a week	312	5000	--	1,560,000
Water	Construction	02 surface water samples	Quarterly	08	5,660	--	45,280

Component	Stage	Locations	Frequency	Total no. of samples annually	Cost per Sample (Rs)	Capital Cost (Rs)	Recurring cost (Rs)
		02 ground water samples	Quarterly	08	5,660	--	45,280
	Operation	02 surface water samples	Quarterly	08	5,660	--	45,280
		04 Ground water samples	Quarterly	16	5,660	--	90,560
		02 wastewater samples	Once a month	24	4000	--	96,000
		Piezometer (GW Levels)	Long term assessment	01	-	30,000	--
Noise	Construction	02	Once in three months	8	4000	--	32,000
	Operation	04	Monthly	48 (4 sample at each location)	4000	--	1,92,000
Soil	Operation	04	Twice in a year	08	8490	--	67,920
Ecology	Operation	Study Area	Once a year	01			-
Total Environment Monitoring Cost during Construction Phase:					Rs. 16,82,560/-		
Total Environment Monitoring Cost during Operation Phase:					Rs. 20,51,760/-		
Total Environment Monitoring Capital Cost:					Rs. 8,30,000/-		

The recurring environmental cost during the construction phase and operation phase will be Rs. 16,82,560 and Rs. 20,51,760 respectively. The capital cost will be Rs. 8,30,000/-.

6.7 PROPOSED MAINTENANCE SCHEDULE FOR AIR POLLUTION CONTROL EQUIPMENT

Table 6.4: Proposed maintenance schedule for air pollution control equipment

Frequency	System	Action Items
Daily Maintenance	Electrostatic Precipitators (ESP)	Inspect hopper levels and ensure dust removal system is operational.
		Monitor voltage and current levels for ESP functioning.

Frequency	System	Action Items
	Selective Catalytic Reduction (SCR)	Verify ammonia injection system for leaks and proper functioning.
		Monitor SCR operating temperature and NOx levels.
	Continuous Emission Monitoring Systems (CEMS)	Inspect for sensor and analyzer faults and perform quick fixes.
Weekly Maintenance	ESP	Clean electrodes and collecting plates if excessive dust build-up is observed.
		Inspect insulators for cracks or contamination.
	SCR	Conduct a visual inspection of catalyst modules for early signs of erosion or plugging.
	Bag Filters	Check and clean bag housing and pulse jet systems.
	Activated Carbon Injection Systems	Inspect carbon feed lines and check silo levels.
	CEMS	Perform sensor calibration for accuracy.
Monthly Maintenance	ESP	Conduct detailed inspections of electrodes and collecting plates for misalignment or damage.
		Test and clean the transformer-rectifier units.
	SCR	Test the ammonia flow control system for uniform injection.
		Perform catalyst performance assessments (pressure drop and NOx reduction efficiency).
	Bag Filters	Replace damaged or worn-out filter bags.
		Check the structural integrity of filter frames.
	Activated Carbon Injection Systems	Inspect and clean injection nozzles for blockages.
	CEMS	Conduct a full performance check of analyzers and flow meters.
Quarterly Maintenance	ESP	Overhaul insulators, rapping systems, and hopper heaters if needed.
		Perform thermographic inspections of electrical systems.
	SCR	Conduct a thorough cleaning of catalyst modules and assess for signs of catalyst deactivation.
		Inspect and repair ammonia storage and handling systems.
	Bag Filters	Conduct pressure drop tests to assess bag filter efficiency.
		Inspect ducting and seal systems for air leaks.
	Activated Carbon Injection Systems	Perform a system performance review to ensure proper mercury removal efficiency.
	CEMS	Perform software updates and diagnostics on data logging systems.
Annual Maintenance	ESP	Replace damaged electrodes and collecting plates.
		Conduct a complete overhaul of transformer-rectifier units and control panels.
	SCR	Replace catalyst modules if they have reached end-of-life.
		Perform a full inspection of the ductwork and support structures.

Frequency	System	Action Items
	Bag Filters	Conduct a comprehensive inspection of bag frames and housings for structural issues.
		Replace entire sets of filter bags if nearing design life.
	Activated Carbon Injection Systems	Overhaul feed and storage systems, including silo maintenance.
	CEMS	Validate system performance against regulatory requirements and replace aging sensors.
Every 3-5 Years	All Systems	Conduct a complete system overhaul for all air pollution control equipment.
		Replace aging components such as ESP electrodes, catalyst modules, scrubber linings, and bag filter frames.
		Perform a detailed performance analysis to identify and resolve inefficiencies.

6.8 CONCLUSION

Post project environmental monitoring is an essential step in the EIA process, if the predicted impacts, the efficiency of mitigation measures and the shortcomings of prediction methods, measures and even regulations are to be verified, and EIA practice improved. Environmental indicators could contribute to designing and evaluating monitoring programs, thus improving the establishment of the cause effect relationship and the reporting and communication of environmental data.

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CHAPTER – VII: ADDITIONAL STUDIES

7.1 INTRODUCTION

The additional studies as suggested in Para 7 & Appendix-III of EIA Notification 2006 amended to date are (i) Public Consultation; (ii) Risk Assessment; (iii) Social Impact Assessment and (iv) Rehabilitation & Resettlement (R&R) Action Plan. No R& R is involved in the project.

Based on the ToR specified by MoEF&CC, issued vide letter no. J-13012/12/2011-IA. II (T) dated 29.07.2024 for preparation of EIA& EMP report for the proposed project, additional studies done for the project include hydrogeology study & rainwater harvesting, water source sustainability study, need base & socio-economic assessment, land use & land cover study for land optimization, biodiversity (ecology) study, etc. which help in the understanding the environmental impact of the project in better ways. A summary of all the additional studies will be presented in this chapter with the detailed report during the EIA report. The separate cumulative impact assessment study is considered as another Additional Study as prescribed in the ToR specific condition no. 1.1 is detailed in **Chapter 13** of this EIA report.

7.2 PUBLIC CONSULTATION

The public hearing was conducted on 11.04.2025 at Near Upper Primary School, Madihaan Market, Madihaan Tehsil and District – Mirzapur. Copy of Public Hearing Proceedings along with attendance sheet, newspaper cuttings, written representations/letters, notarised English translated PH processing is enclosed as **Annexure VIII** with this Report. Summary of public hearing proceedings are as below:

Table 7. 1: Summary of Public Hearing Proceedings

Advertisement of PH	1. The Indian Express dated 07.03.2025

	2. Umar Ujala dated 07.03.2025
Date & Time of PH	Date: 11.04.2025, Thursday, 11:00 AM
Venue	Near Upper Primary School, Madihaan Market, Madihaan Tehsil and District – Mirzapur
Members	1. Sri S.P Shukla, Additional District Magistrate, Mirzapur 2. Sri R.K Singh, Regional Officer, U P. Pollution Control Board, Sonbhadra 3. Shri Abhay Kumar Singh, U P. Pollution Control Board, Sonbhadra 4. Shri R N Shukla, Head Environment and Forest – (Subsidiary of Adani Power Limited) (Project Proponent) 5. Mr. Abhishek Gautam, Gaurang Environmental Solutions Private Limited.

7.2.1 PUBLIC HEARING NOTICE PUBLISHED IN NEWSPAPERS



Umar Ujala (Hindi), dated 10.09.2024



Patrika (Hindi), Satna dated 10.09.2024

Figure 7. 1: Photographs showing newspaper advertisement for Public Hearing

7.2.2 PUBLIC HEARING PHOTOGRAPHS



Figure 7.2: Public Hearing photographs

7.2.3 SUMMARY OF PUBLIC HEARING PROCEEDINGS

Initiating the proceedings, Sri R.K Singh, Regional Officer, UPPCB, Sonbhadra welcomed all the dignitaries and villagers and informed about the public hearing and the notification issued by the GoI regarding the need purpose of Public Hearing. He also informed that this public hearing is organized as per the MoEF&CC, EIA notification 2006 and subsequent amendments. He requested everyone present to provide their suggestions, comments, and objections on the proposed project.

The public hearing was attended by people from villages Madihan, Dadri Khurd and other nearby villages and the issues raised during the hearing are listed in **Table 7.2.**

Table 7. 2: Physical target on Issues/opinion raised (Public Needs) during Public Hearing

S. No	Name and address	Public comments/appeals/suggestions	Responses from Project Proponent & Action Plan	Physical Target
1.	Shri Mahendra Singh, Madihan, District-Mirzapur.	Our Hon'ble Prime Minister says that when a big company decides to set up an industry in an area, the first priority should be given to the development of that area. There are less employment opportunities in our area. The industry that will be set up here will not affect the people in any significant way, so local people should be given employment and it would be great if it is told how much percentage of employment will be given to local people.	The company is committed to providing preference to locals based on their educational qualification and experience. MTEUPPL through Adani foundation proposes to focus on development of the project area in the following areas under the Socio-EMP (CER) initiative: • Education • Community Health • Sustainable Livelihood Development • Community Infrastructure Development • Sports & Cultural Development	Budgetary allocation for Socio-EMP (CER) programme is Rs. 46.50 Crores under which an amount of Rs. 5.65 Crores has been allocated for Development of Sustainable Livelihood in the area.
2.	Shri Baburam Yadav, Dadra Hill, Madihan, District-Mirzapur	I thank everyone present in this public hearing. I would like to ask a question to the company representatives: Earlier a power plant was set up in Sonbhadra, but the people of Sonbhadra, especially Mirzapur and Vindhyachal did not get the benefit of its electricity. So I request you to please	Preference for employment will be given to locals for this project based on eligibility & qualification by MTEUPPL. However, the distribution of electricity is done by the government. MTEUPPL is not entitled to provide electricity.	Budgetary allocation of Rs. 5.65 Crores under Sustainable Livelihood Development.

S. No	Name and address	Public comments/appeals/suggestions	Responses from Project Proponent & Action Plan	Physical Target
		clarify how much percentage of the electricity generated will be distributed to Mirzapur. Also, please tell how much employment will be provided to the local residents of Mirzapur. I support this project because setting up a project of such a large capacity plays an important role in the development of the region.		
3.	Shri Nandan Yadav Dadra Hill, Madihan, District-Mirzapur.	We want to see development in our region. And this project can play a vital role in achieving this goal. We also hope that employment opportunities will be provided to local residents, and this power plant will help in improving nearby schools, community centers and other necessary facilities.	Noted. MTEUPPL through Adani Foundation will focus on improvement in Education, Community Health, Community Infrastructure Development, Sustainable Livelihood Development & Sports and Cultural Development sectors under the CER/CSR Program.	Rs. 46.50 Crores has been allocated under CER Program.
4.	Shri Deendayal Singh (NTPC Retired), Madihan, District-Mirzapur	I appreciate the CSR work done by Adani Group. A borewell should be installed to solve the drinking water problem.	Noted. MTEUPPL will focus on improvement and development of Community Infrastructure under CER/CSR Program.	Budgetary Allocation of Rs. 14.55 Crores has been done for Community Infrastructure

S. No	Name and address	Public comments/appeals/suggestions	Responses from Project Proponent & Action Plan	Physical Target
				Development under CER Program.
5.	Shri. Dinesh Kumar Patel, Madihan, District-Mirzapur.	The water requirement of the project will be met by taking water from the Ganga river. However, this may lead to water shortage for farmers, which may affect agriculture and other related activities in the region.	The water will be drawn from River Ganga to Upper Khajuri Dam and from Upper Khajuri Dam to plant site through dedicated pipeline. Water Source Sustainability Study has been conducted by reputed Institute which has concluded that there will be no significant impact on downstream users due to drawl of water for MTEUPPL.	-
6.	Mrs. Rinku Devi Devrikala, Madihan, District-Mirzapur.	I support Adani Group for this project as they are doing commendable work in the education sector, including the development of smart classrooms in schools.	MTEUPPL will focus on improving the educational facilioties under CER program through providing support for Basic teaching and learning infrastructure to Govt. Schools including development of smart classrooms,	Budgetory allocation for Basic teaching and learning infrastructure support to Govt. Schools: Rs. 3.50 Crores.
7.	Shri. Hari Shankar Patel, Madihan, Mirzapur.	I support this project as it will generate electricity which will contribute significantly to the development of the	Noted.	Budgetory allocation of Rs. 5.65 Crores under Sustainable Livelihood Development.

S. No	Name and address	Public comments/appeals/suggestions	Responses from Project Proponent & Action Plan	Physical Target
		region. Earlier a cement factory was operational here but now it has been shut down leaving no major source of employment for the local people. The total area of the district is around 4.5 lakh hectares out of which 1.6 lakh hectares is agricultural land. The remaining land is hilly forest area or inhabited area. As per the Land Acquisition Act 2013 agricultural land cannot be acquired for industrial purpose. Since the land selected for this project is non-agricultural, we welcome this project with open heart. Mirzapur is becoming the hub of various important activities of the country, and the establishment of this power plant can be seen as a blessing for this region. The people of Mirzapur should be given priority in employment opportunities, especially	Locals would be preferred for employment in the project based on their eligibility & qualification. However, MTEUPPL has no role regarding the regulation & management of water in Upper Khajuri Dam which is governed by the guidelines/policies of the Government of Uttar Pradesh.	

S. No	Name and address	Public comments/appeals/suggestions	Responses from Project Proponent & Action Plan	Physical Target
		when the population of the district has crossed 30 lakhs. I would also like to give a suggestion that when water is required from Khajuri Dam for this project, water will be released, but it should be released at other times as well, so that local people can make better use of this water resource.		
8.	Smt. Ram Dulari (Dadri Khurd), Madihan, Mirzapur	I support this power plant project and only requesting to provide priorities to be given to locals for employment opportunities.	Based on eligibility & qualification, locals would be preferred for providing employment opportunities in the project.	Budgetory allocation of Rs. 5.65 Crores under Sustainable Livelihood Development.
9.	Shri Vaijnath Prajapati, Madihan, Mirzapur	This project will contribute to the development of Mirzapur and increase employment opportunities so I support it.	Noted.	Budgetary allocation under Socio-EMP (CER) Initiative: Rs. 46.50 Crores.
10.	Smt. Pushpanjali Devi Deori Kali, Madihan, Mirzapur	I support the Adani power plant project because it will provide employment opportunities. Additionally, the project will also contribute to many other benefits	Noted. Preference for employment will be given to locals based on their eligibility. Through CER/CSR initiative, the company will focus on improving & developing the	Budgetary allocation for improving the educational facilities is Rs. 11.75 Crores. Rs. 14.55 Crores has been allocated for Community

S. No	Name and address	Public comments/appeals/suggestions	Responses from Project Proponent & Action Plan	Physical Target
		including improving the education system and improving road infrastructure	Educational facilities & Community Infrastructure.	Infrastructure Development under Socio-EMP (CER) Program.
11.	Mr. Praveen Kumar Pandey, Madihan, Mirzapur	There is a problem of employment in Uttar Pradesh. If this group provides employment to the local people, it will encourage the youth to stay in their villages and live a stable and peaceful life.	Preference will be given to locals for employment opportunities based on their eligibility and qualification.	-
12.	Mr. Manish Kumar Singh, Patehra Kala, Madihan, Mirzapur	I support Adani Power Limited as Adani Power Plant is doing commendable welfare work for the local community which is really praiseworthy.	Noted. MTEUPPL will focus on improvement in Education, Community Health, Community Infrastructure Development, Sustainable Livelihood Development & Sports and Cultural Development sectors under the CER/CSR Program	A budget of Rs. 46.50 Crores has been allocated under CER Program.
13.	Mrs. Rukmani, Madihan, Mirzapur.	I support Adani Power Limited.	Noted.	-
14.	Mr. Anil Kumar Singh (Principal Shanti	I really appreciate this project. I have been working for the last 27 years, and during this time no private organization has	Under the CER initiative, MTEUPPL will install solar streetlights/panels in nearby schools and villages under Community	Budgetary allocation for Community Infrastructure

S. No	Name and address	Public comments/appeals/suggestions	Responses from Project Proponent & Action Plan	Physical Target
	Niketan School Goddodhara)	installed even a single tap in schools. In contrast, this group has installed solar panels in 40-50 schools, done renovation work in colleges and also provided cricket net practice grounds for sports activities. This group has made significant contributions in the fields of sports, health and environment. Their medical van service is currently operational, and I want this service to continue. Some people believe that when this plant is established, all welfare work will stop, but this will not happen. Due to modern technology, there will be no pollution from this project. Tree plantation will be done in a proper manner and responsibility of ash management will be taken care of.	Infrastructure Development Program and will provide Cricket net practice ground under the Sports & Cultural Development Program. Further, focus will be given for the improvement and development of health infrastructure. Under the Environment Management Plan (EMP), the company has proposed all the adequate mitigation measures like ESP, SCR, Dust Suppression system & dust extraction systems to control pollution within prescribed standards, fly ash management, greenbelt development etc.	Development: Rs. 14.55 Crores. Budgetary allocation for educational facilities: Rs. 11.75 Crores. Budgetary allocation for community health: Rs. 10.50 Crores. Budgetary allocation for sports & cultural development: Rs. 2.05 Crores. Budgetary allocation for A budget of Rs. 3012.39 Crores has been allocated for Environment Management Plan.

Table 7. 3: Action plan with budgetary allocation and physical targets to address PH issues

Sr. No	Key Area Identified under Socio-EMP (CER) based on issued raised during Public Hearing	Time bound (Year wise) expenditure (Rs. In Crores)					Budget
		1st	2nd	3rd	4th	5th	
A	**Educational Initiatives**						
	Modernization, Repair & construction/maintenance of identified **Primary / Higher Secondary School of nearby villages** of the project site in consultation with Local Government/School Authorities in villages Dadri Khurd & Madihan.	0.5	0.75	0.75	0.75	0.75	3.5
	Distribution of drinking water filters/Drinking water coolers in schools in madihan and others nearby villages.	0.35	0.35	0.35	0.35	0.35	1.75
	Basic teaching and learning infrastructure support to Govt. Schools, Supporting in creation of assembly halls, prayer halls, classrooms and smart class, computer room, space for mid-day meals, playground, school boundary walls etc. for government schools in villages Kotwa Pandey,Sukhnai, Devari Kalan.	0.5	1	1.25	1.25	1.25	5.25
	Online courses for students in emerging technologies such as Artificial Intelligence, **Electric Vehicles, Renewable Energy etc**. to equip students with job-ready skills through **Adani Skill Development Centre (ASDC).**	0.25	0.25	0.25	0.25	0.25	1.25
	Sub Total	**1.6**	**2.35**	**2.6**	**2.6**	**2.6**	**11.75**
B	**Community Health Initiatives**						
	Development of hospitals, strengthening of PHC's & CHC's, and improvement of health facilities in villages Madihan & nearby villages.	0.50	0.75	0.95	1.00	1.00	4.20
	Rural Medical Camps through Medical Team of Primary Health Centre @ 4 Nos. of camps per month (@ 60 patients per camp), Safe	0.40	0.80	0.80	0.5	0.5	3.00

	Menstrual Hygiene Management Awareness, Mega Health Camp, Cataract Screening & Operation, Sanitary napkin vending & disposal machine, provision of Girls' Toilets with regular water supply facilities in Madihan & other nearby villages.						
	Promotion of awareness of malnutrition and anemia.	0.12	0.12	0.12	0.62	0.62	1.60
	Promotion of Poshan Vatika at backyard of villagers & Project Suposhan.	0.34	0.34	0.34	0.34	0.34	1.70
	Sub Total	**1.36**	**2.01**	**2.21**	**2.46**	**2.46**	**10.50**
C	**Sustainable Livelihood and Women Empowerment**						
	Adani Skill Development Centre (**ASDC/SDC**) to train the youth under different trades viz. Welding, Fitting, Masonry & Bar-bending, Electrical, industrial machine operating & digital literacy/smart classes.	0.40	0.80	0.80	0.90	0.90	3.80
	Development & Support for Drip irrigation, assistance for mushroom, vegetable cultivation and livestock management in core zone villages.	0.37	0.37	0.37	0.37	0.37	1.85
	Sub Total	**0.77**	**1.17**	**1.17**	**1.27**	**1.27**	**5.65**
D	**Community Infrastructure Development**						
	Repairing, strengthening & Maintenance of Existing Roads in consultation with Gram Panchayats/Local Administration	0.50	1.50	1.50	1.75	0.50	5.75
	To provide facility for potable drinking water, and water supply system through overhead tanks	0.20	0.20	0.20	0.20	0.20	1.00
	Creation of clean and hygienic environment by proper drainage systems, community sanitation campaign, waste management awareness etc. implementation of Swachchh Bharat Initiative.	0.30	0.30	0.40	0.40	0.35	1.75
	Upgradation & Renovation of sanitation facilities such as toilets in schools with priority for girls.	0.70	0.70	0.70	0.70	0.70	3.50
	Provision of **Solar Power and street** lighting/panels in nearby schools, local health centers of nearby	0.51	0.51	0.51	0.51	0.51	2.55

	villages, green nurturing programs, plantation drives etc.						
	Sub Total	**2.21**	**3.21**	**3.31**	**3.56**	**2.26**	**14.55**
E	**Sports & Culture Development**						
	Promotion of sports for youths and women	0.25	0.25	0.25	0.25	0.25	1.25
	Cultural activities for villagers	0.16	0.16	0.16	0.16	0.16	0.80
	Sub Total	**0.41**	**0.41**	**0.41**	**0.41**	**0.41**	**2.05**
F	**Tree plantation in Govt. School and Community Health Centre in nearby Villages**	**0.20**	**0.60**	**0.40**	**0.40**	**0.40**	**2.00**
	Sub Total						
Total Budget		**6.55**	**9.75**	**10.1**	**10.7**	**9.4**	**46.50**

- *Budget has been allocated to address the issues raised during Public Hearing.*
- *>90% villagers have requested employment opportunities which shall be taken care during construction & operational phase of the plant.*

7.3 RISK ASSESSMENT, HAZARD ANALYSIS & DMP

7.3.1 INTRODUCTION

The objective of this study is to identify major risk contributing events, demarcate vulnerable zones and evaluate the nature of risk posed to nearby areas due to proposed activity, in addition to ensure compliance to statutory rules and regulations. The scope of work for the study is described below:

- Identify potential risk scenarios that may arise from the proposed project and other associated activities
- Analyze the possible likelihood and frequency of such risk scenarios by reviewing historical accident related data.
- Predict the consequences of such potential risk scenarios and if consequences are high, establish the same by through application of quantitative simulations.
- Recommend feasible preventive and risk mitigation measures as well as provide inputs for drawing up of Emergency Response Plan (ERP) for the project.

- The assessments to be based on various documents including Emergency Response Plan (ERP), Disaster Management Plan (DMP).
- The scope involves risk assessment of storage of chemicals, coal & ash, BTG operation at project site that may have a detrimental impact to the personnel and plant properties.

7.3.2 METHODOLOGY & APPROACH

Risk analysis consists of hazard identification studies to provide an effective means to identify different types of hazard during the operation of the facility. This is followed by an assessment of the impacts of these hazards.

Hazard is present in any system, plant or unit that handles or stores flammable materials, involves equipment operating at high pressures. The mere existence of hazards, however, does not automatically imply the existence of risk. Screening & ranking methodologies based on Preliminary Hazard Analysis (PHA) techniques have to be adopted for risk to be evaluated.

The approach and methodology followed for the Risk Assessment study are described hereunder:

The study comprises of the following stages:

- Identification of potential major hazard scenarios;
- Assessment of the likelihood and consequences of identified hazards;
- Estimation of the impact of identified hazards on personnel; and
- Assessment of the risks against tolerance criteria.

The Risk Assessment (RA) uses conventional risk assessment techniques as shown in **Figure 7.3** and described as follows:

- Identify the preliminary causes of major accidents associated with the process, and develop a list of representative potential events involving the release of hazardous materials or other events, which could lead to loss of life or damage to infrastructure.
- Model the possible scale of severity of the physical effects of each identified hazardous event. Predict the criticality of the damage that could be caused and the potential for escalation, developing rule sets and assumptions to form the basis of an analysis of the possible outcomes.

- For each identified hazard, use appropriate models and data to estimate its frequency, taking into account any site-specific features that may influence the likelihood of the scenarios. Compare the event frequency estimates with historical data to confirm the validity of the model.
- Combine the predicted consequences of each event with its frequency to estimate the risks to personnel. Assess the Individual Risk (IR) for the facilities.
- Compare the results of the study with Company Risk Tolerance Criteria to establish whether the operation of the project can be regarded as adequately safe. Consider the risk mitigation provided by other measures such as the gas detection and shutdown system.
- Propose additional Risk Reduction Measures (RRM).

The methodology is presented pictographically in the following section:

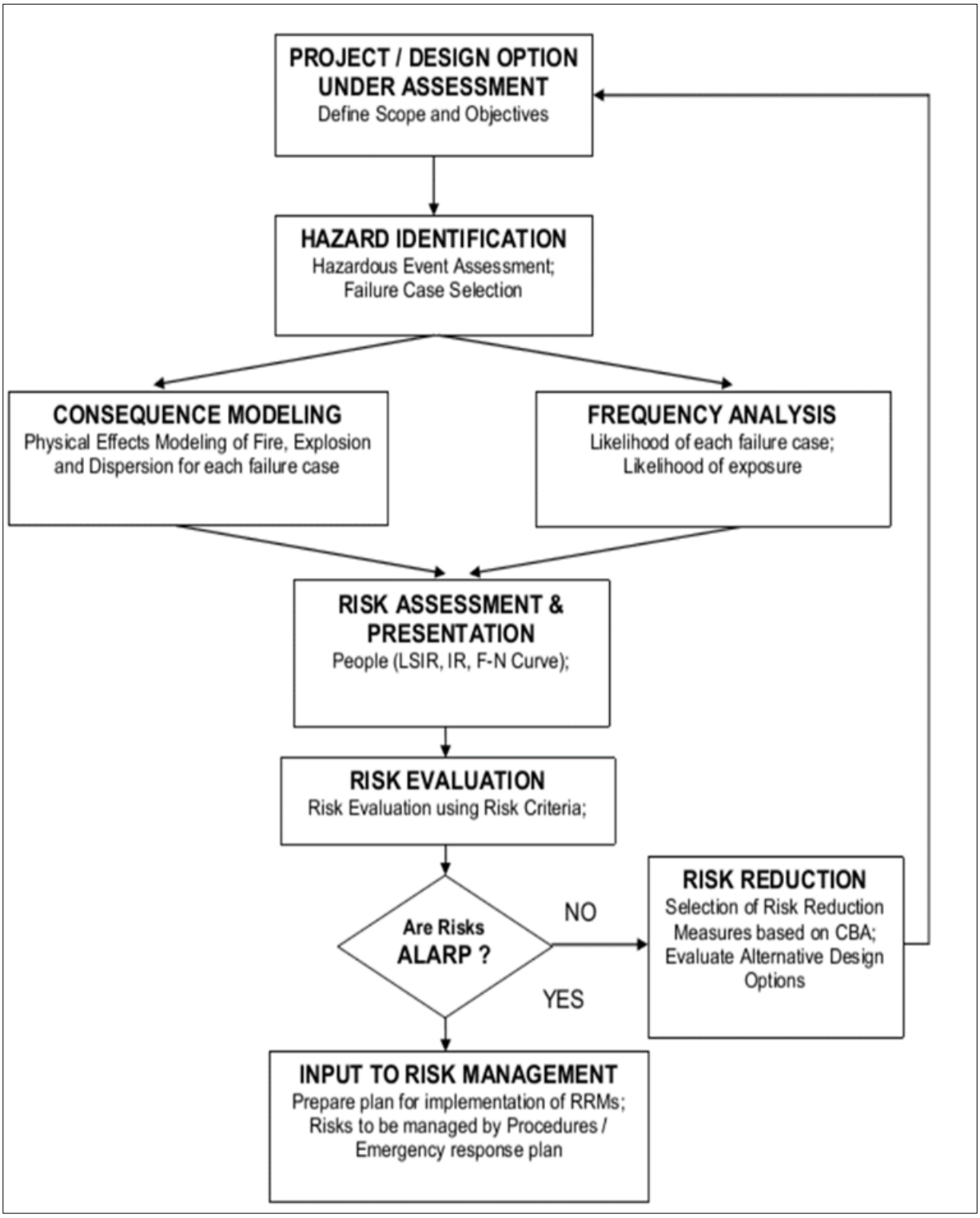


Figure 7.3: Risk Assessment Methodology

7.4 HAZARD IDENTIFICATION

Identification of causes and types of hazards is the primary task for planning for risk assessment. Hazard can happen because of the nature of the chemicals handled and also the nature of process involved.

The methods employed for hazard identification in this study are:

The methods employed for hazard identification in this study are:

- Identification of major hazards based on Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 of GoI (as amended in 2000) and
- Identification of hazardous units and segments of plants and units based on relative ranking technique. Example: Fire- Explosion and Toxicity Index (FE&TI)

7.4.1 IDENTIFICATION OF MAJOR HAZARDS

A systematic analysis of the fuels/chemicals and their quantities of storages have been carried out, to determine threshold quantities as notified by GoI Rules, 1989 (as amended in 2000) and the applicable rules are identified.

The proposed TPP involves storage of various hazardous bulk chemicals (Toxic and Flammable) which will be used as fuel and auxiliaries. The major hazardous Chemicals/Fuels that are stored and involved with process are Light Diesel Oil (LDO), Heavy Fuel Oil (HFO), Chlorine, and Hydrogen. The threshold quantities of storage of these substances as notified by GoI Rules, 1989 (as amended in 2000) are provided in Table 7.4.

Table 7.4: Details of Flammable, Explosive and Hazardous materials

S. No.	Product	Codes/Labels	Type of storage	Storage capacity	Remarks
1.	Coal	Flammable	Open yard	16,00,000 MT	30 day storage
2.	LDO	Flammable	Tanks	15000 KL	30 day storage
3.	Chlorine	Toxic	Cylinders	2 MT	30 day storage

Table 7.5: Details of Flammable, Explosive and Hazardous materials

S. No.	Chemical/Fuel	Listed in Schedule	Threshold Quantity for Application of Rules (MT)		Quantities envisaged to be stored
			5,7-9,13-15	10-12	
1.	LDO	1 (part I)	5000	50000	15000 KL
2.	Chlorine	3 (part I)	10	25	2 MT

7.4.2 FIRE EXPLOSION AND TOXICITY INDEX (FETI) APPROACH

The most widely used relative ranking hazard index is Dow's Fire Explosion Index (F&EI) and Mond's Toxicity Index (TI) together is called as Fire Explosion and Toxicity Index (FETI). It involves objective evaluation of the realistic fire, explosion, toxicity and reactivity potential of process or storage units. The quantitative methodology relies on the analysis based on historic loss data, the energy potential of the chemical under study and the extent to which loss prevention measures are already applied.

7.4.2.1 FETI OBJECTIVES AND METHODOLOGY

The basic objectives that characterize FETI are,

- Identification of equipment within the plant that would contribute to the initiation or escalation of an incident.
- Quantification and classification of the expected damage potential due to fire, explosion and toxicity incidents in realistic terms.
- Determination of "area of exposure" surrounding the process or storage unit.

F&EI is a product of Material Factor (MF) and Hazard Factor (F3). While MF represents the flammability and reactivity of the substances, hazard factor (F3) is itself a product of General Process Hazard (GPH) and Special Process Hazard (SPH). An accurate plot plan of the plant, a process flow sheet and Fire and Explosion Index and Hazard Classification Guide published by Dow Chemical Company are required to estimate F&EI and TI of any plant or storage units.

The toxicity index is primarily based on the index figures for health hazards established by NFPA in codes NFPA 704, NFPA 49 and NFPA 325m.

7.4.3 RISK ASSOCIATED WITH PROCESS

The power generation process of an Ultra Super Critical thermal power plant involves several critical steps, each carrying specific risks that need careful consideration. Here are the process risks associated with each step:

Table 7.6: Process risks

Process	Associated risks

Coal Handling and Combustion:	• Coal Dust Explosions: Fine coal powder in the handling and pulverizing process can form explosive mixtures with air. • Conveyor Belt Issues: Risks of conveyor belt malfunctions or breakdowns during coal transportation.
Thermal-to-Mechanical-to-Electrical Energy Conversion	• Boiler Tube Failures: High-pressure, high-temperature conditions in the boiler may lead to tube failures. • Steam Turbine Issues: Potential turbine blade damage or failure during operation. • Generator Malfunctions: Risks associated with the electrical generator's operation and potential failures.
Ash Generation and Disposal	• Bottom Ash Handling: Risks in the handling, conveyance, and disposal of bottom ash. • Fly Ash Disposal: Environmental concerns related to the disposal of fly ash and potential contamination.
Flue Gas Treatment and Ash Handling	• Chemical Exposure: Risks associated with the handling of chemicals in the flue gas treatment system. • Ash Handling System: Risks in the extraction and conveyance of ash from Electrostatic Precipitators.
Fly Ash Utilization	Handling and Conveyance: Risks related to the transportation and utilization of fly ash slurry.
Steam Condensation and Reuse	• Condenser Tube Fouling: Risks associated with the fouling of condenser tubes, impacting efficiency. • Water Pump Failures: Potential failures in water pumps affecting the condensation process.
Cooling Tower Operation	• Cooling Tower Malfunctions: Risks of malfunctions impacting the efficiency of heat dissipation. • Blowdown Management: Risks associated with the controlled blowdown process and its impact on water quality.

Mechanical Hazards: those associated with power-driven machines, whether automated or manually operated Mechanical operations.

Table 7.7: Mechanical Hazards, risks and preventive measures

Hazard	Risk	Preventive measures
Rotating Equipment	Entanglement or contact with rotating parts.	Guards, barriers, and warning signs.
Conveyor Systems:	Pinch points, entrapment during material handling.	Safety guards, emergency stop buttons, training.

High-Pressure Systems	Explosions or ruptures in boilers or steam lines.	Inspection, maintenance, safety standards.
Crane and Lifting Operations	Accidents during lifting, transporting heavy loads	Qualified operators, inspection, load limits
Electrical Hazards:	Electric shock during work on electrical systems.	Lockout/tagout, insulation, PPE.
Material Handling Equipment	Collisions, overturning of forklifts or cranes	Operator training, signage, designated pathways.
Working at Heights	Falls from elevated platforms or structures	Fall protection systems, guardrails, training.
Hot Surfaces	Burns from contact with hot surfaces or equipment.	Insulation, warning signs, PPE.
Equipment Startup and Shutdown	Injuries during initiation or cessation of equipment operation.	Clear procedures, warning signals, training
Machine Maintenance	Injuries during equipment maintenance or repairs.	Lockout/tagout, training, safety equipment.

7.4.4 Risk related to Fire incidents.

- Combustible Materials Handling
- Electrical Faults and Malfunctions
- Hot Work Operations
- Equipment Overheating
- Flammable Gases and Liquids Handling
- Spontaneous Combustion Risks
- Ignition Sources Control
- Inadequate Fire Suppression Systems
- Poor Housekeeping Practices
- Lack of Emergency Response Planning

Hazard Identification

Hazard Identification is used as the first step in a process used to assess risk. The result of a hazard analysis is the identification of different type of hazards. A hazard is a potential condition and exists or not (probability is 1 or 0). It may in single existence or in combination with other hazards (sometimes called events) and conditions become an actual Functional Failure or Accident (Mishap).

Hazard Identification and Risk Assessment is a method by which, we try to identify the main hazardous substance, and then try to reduce the effect of hazard. For this purpose, we will use various risk assessment methodologies by knowing hazards consequences and by analyzing all the processes which are being carried out during handling.

7.5 HAZARD/ RISK IDENTIFICATION & ANALYSIS

Hazard Identification

The proposed thermal power plant presents various potential hazards that need careful consideration. Handling and combustion of coal pose risks related to combustible materials, while electrical faults may result in short circuits. Hot work operations such as welding introduce fire hazards, and equipment overheating can occur due to mechanical failures. The presence of flammable gases and liquids adds complexity, and spontaneous combustion risks are associated with materials like coal. Ignition sources, inadequate fire suppression systems, poor housekeeping, and the lack of emergency response planning further contribute to the overall risk profile. Identifying and addressing these hazards is crucial for ensuring the safety and resilience of the project.

Table 7.8: - Identification of Hazards

Plant Section	Activity	Emergency
Coal Handling	Transportation and Conveyor Operations	Fire Incidents, Combustible Material Handling
Boiler	Coal Combustion and Steam Generation	Boiler Malfunctions, Flammable Gas Leak
Turbine	Steam-to-Electricity Conversion	Mechanical Failures, Electrical Faults
Ash Disposal	Ash Generation, Handling, and Disposal	Fly Ash Management
Cooling Tower	Operation and Cooling Water Recycling	Overheating, Cooling Water Contamination
Electrical	Power Distribution and Electrical Operations	Short Circuits, Electrical Fires

Fuel Storage	Storage and Handling of Fuels	Fuel Leak, Fire Hazards
Water Treatment	Effluent Treatment and Water Recycling	Water Contamination, Chemical Spills
Emergency Response	Preparedness and Response Planning	Evacuation, Fire Control, Medical Emergencies

7.5.1 HAZARDOUS MATERIAL AND SAFETY MANAGEMENT

The hazardous material and safety management involves a comprehensive approach to identify, handle, and mitigate risks associated with potentially harmful substances. Key considerations include the safe handling and transportation of coal, implementation of proper storage and containment measures for flammable fuels, and the management of hazardous by-products like ash and flue gas. Additionally, the project emphasizes the importance of Material Safety Data Sheets (MSDS) for each substance encountered, enabling a thorough understanding of their properties and behaviors. Robust safety measures are integrated into storage, handling, production processes, and disposal, ensuring adherence to safety norms and minimizing the risk of accidents. The development of a Disaster Management Plan (DMP) further enhances preparedness for unforeseen events. Ongoing monitoring, regular inspections, and adherence to safety protocols contribute to maintaining a secure environment throughout the project's lifecycle.

7.5.2 HAZARDOUS CHEMICALS

Various hazardous chemicals are used in the ultra-super critical TPP like:

Aqueous ammonia: commonly used in power plants for various applications. It is utilized as a reagent to remove sulfur dioxide from flue gases, helping in the reduction of air pollutants.

Chlorine: often employed in water treatment processes within power plants. It helps control microbial growth, ensuring the cooling water remains free from harmful bacteria and other contaminants. Chlorine is also used in the disinfection of water to maintain system integrity.

Light Diesel Oil (LDO): used in power plants for various purposes, including start-up operations, flame stabilization during boiler ignition, and load support for the units. It is a common auxiliary fuel that facilitates the initial phases of power generation.

Light-Diesel Oil (LDO) and Flammability Class

LDO is a vital component in the fuel inventory of a Thermal Power Plant (TPP), serving essential functions during start-up operations. LDO falls under Class B Flammable Liquids, as per its flammability classification criteria.

Flammability Classification Criteria (Class B Flammable Liquid)

Flash Point (°C): 23 > FP < 65

Being a Class B Flammable Liquid, LDO exhibits properties that categorize it as a substance with a moderate flashpoint. The flashpoint, which is the minimum temperature at which the liquid gives off vapor in sufficient concentration to ignite, places LDO within a specific range, making it susceptible to combustion under certain conditions.

Pool Fire Risk in LDO Storage

LDO handling and storage pose potential hazards, particularly concerning the risk of a pool fire. The setup includes storage of 15000 KL, strategically positioned within a dyke featuring a 1-meter-high wall. In the event of an inadvertent spillage resulting from minor leakage or pipeline rupture, coupled with an ignition source, a fire incident could transpire. For worst-case scenario considerations, it is assumed that the entire contents might leak out from the storage tank into the tank bund, accentuating the gravity of the potential fire hazard.

Other chemicals commonly encountered in thermal power plants may include:

Cooling Water Treatment Chemicals:

- Corrosion inhibitors
- Scale inhibitors
- Biocides
- Reagents for pH adjustment

Boiler Water Treatment Chemicals:

- Oxygen scavengers
- Scale and corrosion inhibitors
- Alkalinity adjusters

Ash Handling System Chemicals:

- Dust suppressants for ash disposal

- Chemicals for ash conditioning

Emission Control Chemicals:

- Selective Catalytic Reduction (SCR) reagents for NOx reduction
- Ammonia injection for De-NOx systems

Fuel Additives:

- Additives to enhance combustion efficiency
- Anti-fouling agents

Cleaning Agents and Lubricants:

- Chemicals for equipment cleaning and maintenance
- Lubricants for rotating machinery

Water Demineralization Chemicals:

- Ion-exchange resins
- Regenerants for demineralization plants

7.5.3 STORAGE AND HANDLING OF HAZARDOUS CHEMICALS

- Maintaining a detailed inventory of all hazardous chemicals used in the project, including liquid ammonia, chlorine, and light diesel oil (LDO).
- Classifying chemicals based on their properties and risks.
- Implementing a clear segregation plan to separate incompatible chemicals and prevent cross-contamination.
- Ensuring that storage areas are marked and color-coded according to the nature of the stored chemicals.
- Designating specialized storage facilities for high-risk chemicals, such as chlorine, with enhanced safety features, including leak detection and emergency shutdown systems.
- Ensuring compliance with regulatory requirements for the storage of specific chemicals.
- Establishing a comprehensive emergency response plan specifically tailored to the hazards associated with the stored chemicals.
- Conducting regular emergency drills to ensure effective responses to different scenarios.

- Installing adequate ventilation and exhaust systems in storage areas for chemicals that emit fumes or vapors.
- Ensuring that the ventilation system is designed to handle the specific chemical properties.
- Monitoring and controlling storage temperatures for chemicals sensitive to temperature fluctuations.
- Implementing cooling or heating measures as needed.
- Implementing stringent security measures for chemical storage areas to prevent unauthorized access.
- Using access control systems and surveillance to monitor storage facilities.
- Maintaining detailed documentation for each chemical, including updated MSDS.
- Clearly labeling storage containers with information such as chemical names, hazard symbols, and handling instructions.
- Providing specialized training for personnel involved in the storage and handling of specific hazardous chemicals.
- Ensuring that personnel handling certain chemicals are appropriately certified.
- Conducting regular inspections and audits of chemical storage facilities to identify and address potential issues.
- Ensuring compliance with environmental, health, and safety regulations.

7.6 RISK ASSESSMENT

Risk assessment for the proposed project: Ultra Super Critical Thermal Power Plant (TPP) involves a comprehensive analysis to identify, evaluate, and mitigate potential hazards associated with its operation. The principal objective is to ensure the safety of personnel, protect the environment, and safeguard surrounding communities. The assessment considers various phases of the power generation process, from coal handling and combustion to flue gas treatment and ash handling.

One significant risk lies in the combustion phase, where the handling and combustion of coal pose potential hazards. This includes the transportation of coal to bunkers, pulverizing it into a fine powder, and the subsequent combustion in the boiler. The release of toxic and

flammable gases during this process necessitates careful strategies to prevent accidents, from design considerations to operational protocols.

Ash generation and disposal present another area of concern. The transformation of non-combustible coal parts into ash requires effective management to handle both bottom ash and fly ash.

Moreover, the operation of cooling towers and steam condensation involves managing heated cooling water and ensuring its safe reuse. Hazards related to noise, vibration, and ecological impact also require thorough assessment.

7.6.1 IDENTIFICATION OF HIGH-RISK AREAS:

Identification of High-Risk Areas in the Ultra Super Critical Thermal Power Plant involves a meticulous examination of different sections and activities to pinpoint potential hazards that may pose significant risks to personnel, the environment, and surrounding communities. The identification process is crucial for implementing targeted safety measures and risk mitigation strategies. The key high-risk areas are:

- Coal Handling and Combustion Zone
- Thermal-to-Mechanical-to-Electrical Energy Conversion
- Ash Generation and Disposal Areas
- Flue Gas Treatment and Ash Handling
- Steam Condensation and Reuse
- Cooling Tower Operation
- Ecological Impact and Surrounding Areas

Table 7.9: Event & causes of failure cases

Event	Causes
Boiler Tube Rupture	• High pressure and temperature fluctuations • Corrosion of boiler tubes • Material fatigue over time
Turbine Malfunction	• High-speed rotor imbalance • Blade erosion or damage • Steam quality issues

Electrostatic Precipitator failure	• Insufficient voltage supply • Accumulation of dust on electrodes • Equipment wears and tear
Cooling Tower Malfunction	• Inadequate water flow or distribution • Scaling and corrosion in heat exchangers • Mechanical failure of fans or pumps
Ash Handling Equipment Failure	• Blockage or jams in conveyors • Wear and tear in ash handling components • Failure of ash extraction systems
Steam Condenser Issues	• Scaling or fouling of condenser tubes • Loss of cooling water flow • Condenser air in-leakage
Coal Handling Equipment Breakdown	1. Conveyor belt failures 2. Blockages in coal bunkers or mills 3. Equipment wear and tear

Enhancing Operational Safety: Boiler Risk Assessment in Ultra Super Critical Thermal Power Plant

Boilers are critical components in Ultra Super Critical (USC) Thermal Power Plants, and assessing the associated risks is paramount for ensuring operational safety. The following table outlines potential risk areas related to boiler operation, their potential causes, and corresponding mitigation strategies.

Table 7.10: Boiler-Specific Risk Assessment

Risk Area	Potential Causes	Mitigation Strategies
Boiler Tube Corrosion and Erosion	• High-temperature fluctuations • Presence of corrosive elements in fuel or water • Poor water treatment practices	• Regular water treatment and quality checks • Installation of corrosion-resistant materials • Monitoring and controlling temperature fluxes
Pressure and Temperature Fluctuations	• Operational errors • Instrumentation failures • Control system malfunctions	• Implementing advanced control systems • Regular calibration of instruments • Operator training on proper handling and monitoring

Emergency Shutdown Procedures	• Delayed response to abnormal conditions • Inadequate training on emergency protocols	• Conducting regular emergency response drills • Providing comprehensive training on shutdown procedures Implementing automated shutdown systems

7.6.2 CONSEQUENCE ANALYSIS

In the risk analysis study, probable damages due to worst case scenarios were quantified and consequences were analyzed with object of emergency planning. Various measures taken by the company and findings of the study were considered for deciding acceptability of risks.

Use of ALOHA software for consequence analysis has been done. ALOHA is an acronym for Areal Locations of Hazardous Atmospheres. ALOHA is the hazard modeling software program for the CAMEO software suite, which is used widely to plan for and respond to chemical/hazardous materials emergencies. Details about a real or potential chemical/hazardous materials release can be entered into ALOHA and it will generate threat zone estimates for various types of hazards. ALOHA can model toxic gas clouds, flammable gas clouds, BLEVEs (Boiling Liquid Expanding Vapor Explosions), jet fires, pool fires and vapor cloud explosions. The threat zone estimates are shown on a grid in ALOHA and they can also be plotted on maps in MARPLOT, Esri's Arc Map, Google Earth and Google Maps. The red threat zone represents the worst hazard level; the orange and yellow threat zones represent areas of decreasing hazards.

Weather Data: (during baseline)

Average wind speed; blowing from	1.3 m/s; E
Average Ambient Temperature	28 deg. C
Relative Humidity	50%
Ground Roughness	Open Country
Cloud Cover	5 tenths
Stability Class	C

SITE DATA:

Location:	Mirzapur, Uttar Pradesh, India
Building Air Exchanges Per Hour	0.40 (unsheltered single storied)

CHEMICAL DATA:

Chemical Name:	**CHLORINE**
CAS Number:	7782-50-5
Molecular Weight:	70.91 g/mol
Ambient Boiling Point:	-30.7° F
Vapor Pressure at Ambient Temperature:	Greater than 1 atm

Scenario: Leak from hole in vertical cylindrical tank

Type of tank failure: Non-flammable chemicals are escaping from tank

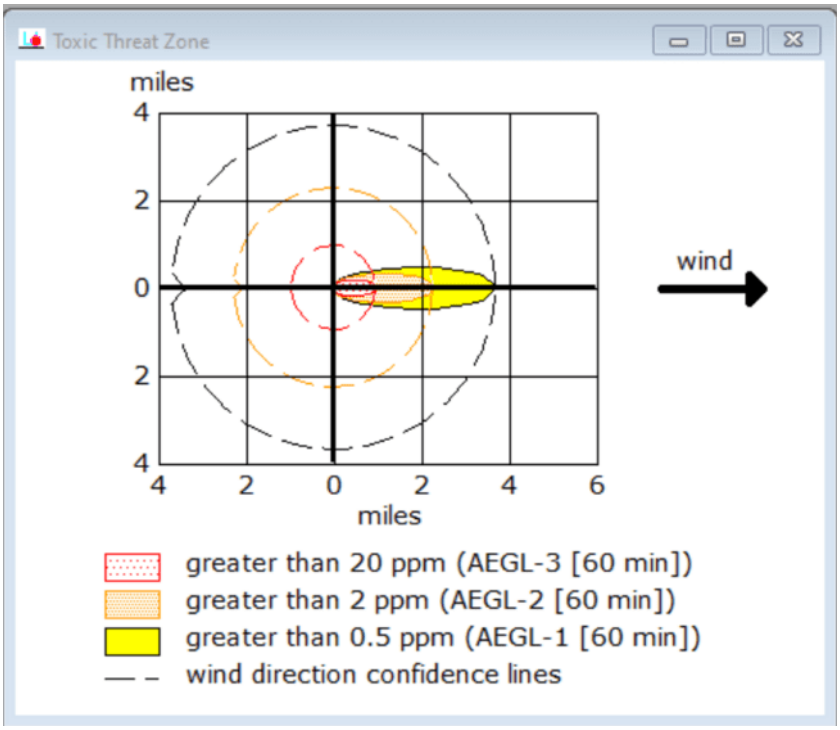


Figure 7.4: Threat zone: Chlorine (Leak from hole in vertical cylindrical tank)

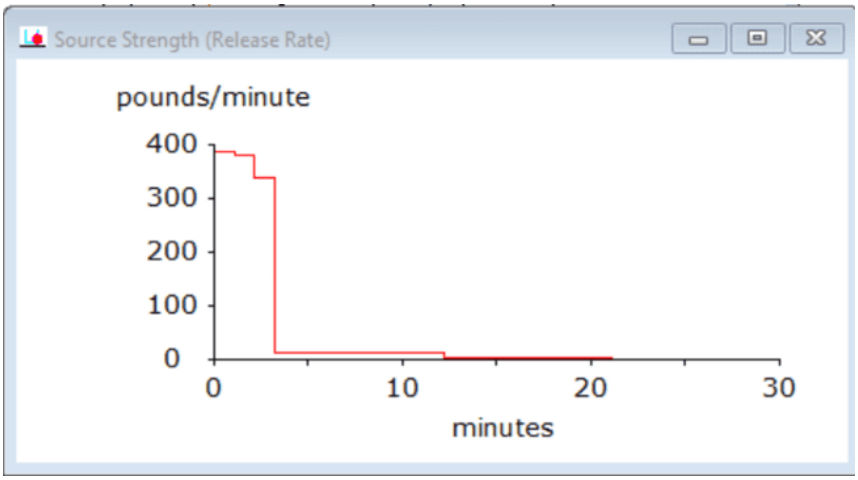


Figure 7.5: Source strength: Chlorine (Leak from hole in vertical cylindrical tank)

THREAT ZONE:

- Red: 1732 yards --- (20 ppm = AEGL-3 [60 min])
- Orange: 2.3 miles --- (2 ppm = AEGL-2 [60 min])
- Yellow: 3.7 miles --- (0.5 ppm = AEGL-1 [60 min])

CHEMICAL DATA:

Chemical Name:	**Aqueous Ammonia**
CAS Number:	7664-41-7
Molecular Weight:	17.03 g/mol
Solution Strength:	25% (by weight)
Ambient Boiling Point:	95.7° F
Partial Pressure at Ambient Temperature:	0.69 atm
Ambient Saturation Concentration:	714,073 ppm or 71.4%
Hazardous Component:	AMMONIA
SOURCE STRENGTH:	
Evaporating Puddle	chemical is flammable
Puddle Diameter:	5 meters
Puddle Volume:	55 cubic meters
Ground Type & Temperature:	Default soil ; 28° C
Initial Puddle Temperature:	Ground temperature
Release Duration:	ALOHA limited the duration to 1 hour

Max Average Sustained Release Rate: 10.4 pounds/min

Total Amount Hazardous Component Released: 568 pounds

Scenario: Evaporating puddle of a flammable chemical. Puddle is not on fire

Hazard: 1. Toxic area of vapour cloud

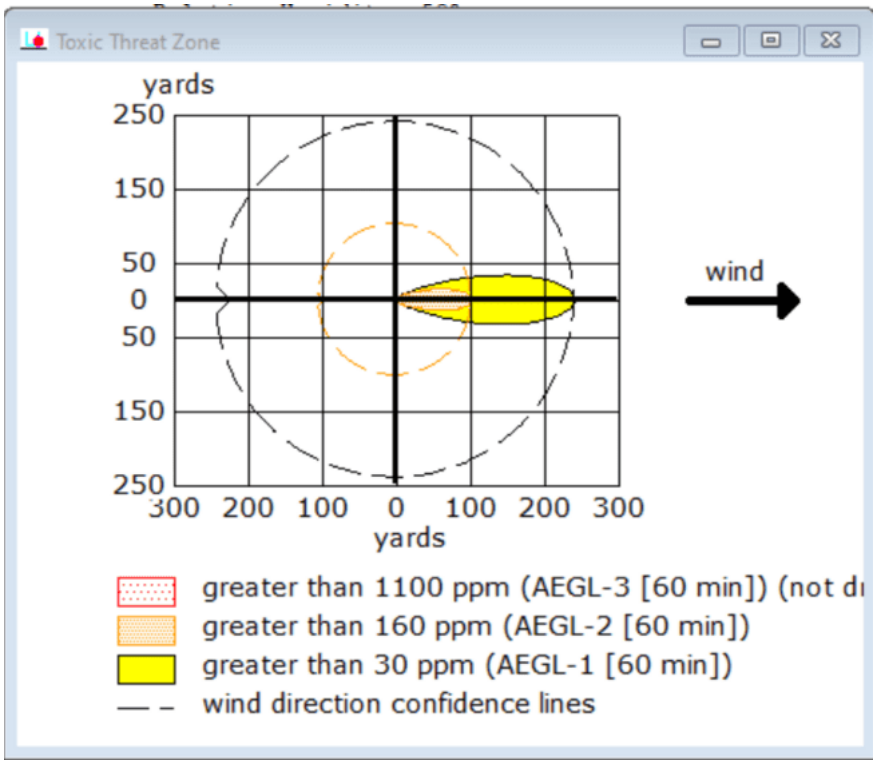


Figure 7.6: Toxic threat zone of Aqueous Ammonia

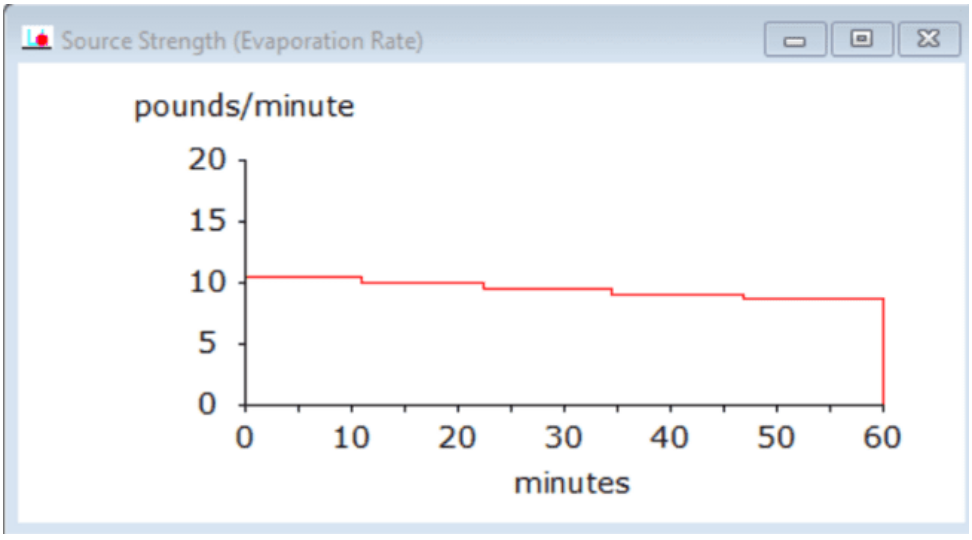


Figure 7.7: Source strength of Aqueous Ammonia

Hazard: 2. Flammable area of vapour cloud

Threat zone was not drawn because effects of near-field patchiness make dispersion predictions less reliable for short distances

Hazard: 3. Blast area of vapour cloud explosion

Type of Ignition: ignited by spark or flame

No explosion: No part of the cloud was above LEL at any time.

7.6.2.1 CONSEQUENCE SUMMARY REPORT

- **Outdoor and Indoor Toxic Effect Results**

Distances to toxic effect levels concentrations

The reported distances are for pre-defined toxic effect levels, using the toxic averaging time.

Path	Scenario	Weather	Distance downwind to ERPG 3 outdoor effect level [m]	Distance downwind to ERPG 2 outdoor effect level [m]	Distance downwind to ERPG 1 outdoor effect level [m]
Study\Ammonia Vessel 1	5mm Leak	Category 2/F	88.3429	241.205	803.126
		Category 5/D	28.6685	58.7348	161.358
	25mm Leak	Category 2/F	486.731	887.696	3981.82
		Category 5/D	241.205	440.318	1084.45
	Catastrophic rupture	Category 2/F	7040.59	29425	0
		Category 5/D	3021.55	9589.96	26625.1
Study\Ammonia Vessel 2	5mm Leak	Category 2/F	88.3429	241.205	803.126
		Category 5/D	28.6685	58.7348	161.358
	25mm Leak	Category 2/F	486.731	887.696	3981.82
		Category 5/D	241.205	440.318	1084.45
	Catastrophic rupture	Category 2/F	7040.59	29425	0
		Category 5/D	3021.55	9589.96	26625.1
Study\Chlorine Vessel	5mm Leak	Category 2/F	398.322	1464.21	2949.55
		Category 5/D	88.6811	266.677	538.025

	25mm Leak	Category 2/F	2190.4	8019.41	14613.1
		Category 5/D	657.365	1788.6	3259.86
	Catastrophic rupture	Category 2/F	4403.05	17474.9	32181
		Category 5/D	2517.45	5780.9	10711.4

- **Jet Fire Results**

Distance downwind to defined radiation levels

The reported radiations are defined in the parameters

Path	Scenario	Weather	Flame length [m]	Distance downwind to intensity level 1 (4 kW/m2) [m]	Distance downwind to intensity level 2 (12.5 kW/m2) [m]	Distance downwind to intensity level 3 (37.5 kW/m2) [m]
Study\Ammonia Vessel 1	5mm Leak	Category 2/F	3.78068	3.47119	n/a	n/a
		Category 5/D	2.93883	2.76272	n/a	n/a
	25mm Leak	Category 2/F	16.3288	18.4165	17.4538	n/a
		Category 5/D	12.6928	15.5928	13.7942	n/a
Study\Ammonia Vessel 2	5mm Leak	Category 2/F	3.78068	3.47119	n/a	n/a
		Category 5/D	2.93883	2.76272	n/a	n/a
	25mm Leak	Category 2/F	16.3288	18.4165	17.4538	n/a
		Category 5/D	12.6928	15.5928	13.7942	n/a
Study\LDO Storage	10mm Leak	Category 2/F	2.9544	4.64477	3.26177	n/a
		Category 5/D	2.34562	4.13771	2.87831	n/a

- **Late Pool Fire Results**

Distance downwind to defined radiation levels

The reported radiations are defined in the parameters

Path	Scenario	Weather	Pool diameter [m]	Distance downwind to intensity level 1 (4 kW/m2) [m]	Distance downwind to intensity level 2 (12.5 kW/m2) [m]	Distance downwind to intensity level 3 (37.5 kW/m2) [m]
Study\Ammonia Vessel 1	Catastrophic rupture	Category 2/F	54.6719	62.8535	40.4024	n/a
		Category 5/D	54.534	64.1632	45.0796	n/a

Study\Ammonia Vessel 2		Category 2/F	54.6719	62.8535	40.4024	n/a
		Category 5/D	54.534	64.1632	45.0796	n/a
Study\LDO Storage	10mm Leak	Category 2/F	21.3497	44.0927	26.623	19.0743
		Category 5/D	19.8842	44.903	26.2022	19.3468
	Catastrophic rupture	Category 2/F	611.889	550.071	375.605	326.16
		Category 5/D	604.589	584.126	383.945	330.602

- **Fireball Results**

Distance downwind to defined radiation levels

The reported radiation is defined in the parameters

Path	Scenario	Weather	Fireball diameter [m]	Distance downwind to intensity level 1 (4 kW/m2) [m]	Distance downwind to intensity level 2 (12.5 kW/m2) [m]	Distance downwind to intensity level 3 (37.5 kW/m2) [m]
Study\Ammonia Vessel 1	Catastrophic rupture	Category 2/F	308.171	672.298	385.843	204.635
		Category 5/D	308.171	672.298	385.843	204.635
Study\Ammonia Vessel 2		Category 2/F	308.171	672.298	385.843	204.635
		Category 5/D	308.171	672.298	385.843	204.635

- **Flash Fire Results**

Distance downwind to defined concentrations

The reported LFL and LFL fraction are defined in the respective material property

Path	Scenario	Weather	Distance downwind to LFL [m]	Distance downwind to LFL Fraction [m]
Study\Ammonia Vessel 1	5mm Leak	Category 2/F		
		Category 5/D		
	25mm Leak	Category 2/F		
		Category 5/D		
	Catastrophic rupture	Category 2/F	55.0402	73.0717
		Category 5/D	55.3152	74.3565

Study\Ammonia Vessel 2	5mm Leak	Category 2/F		
		Category 5/D		
	25mm Leak	Category 2/F		
		Category 5/D		
	Catastrophic rupture	Category 2/F	55.0402	73.0717
		Category 5/D	55.3152	74.3565
Study\LDO Storage	10mm Leak	Category 2/F		
		Category 5/D		
	Catastrophic rupture	Category 2/F	17.4319	33.5085
		Category 5/D	17.5645	34.7221

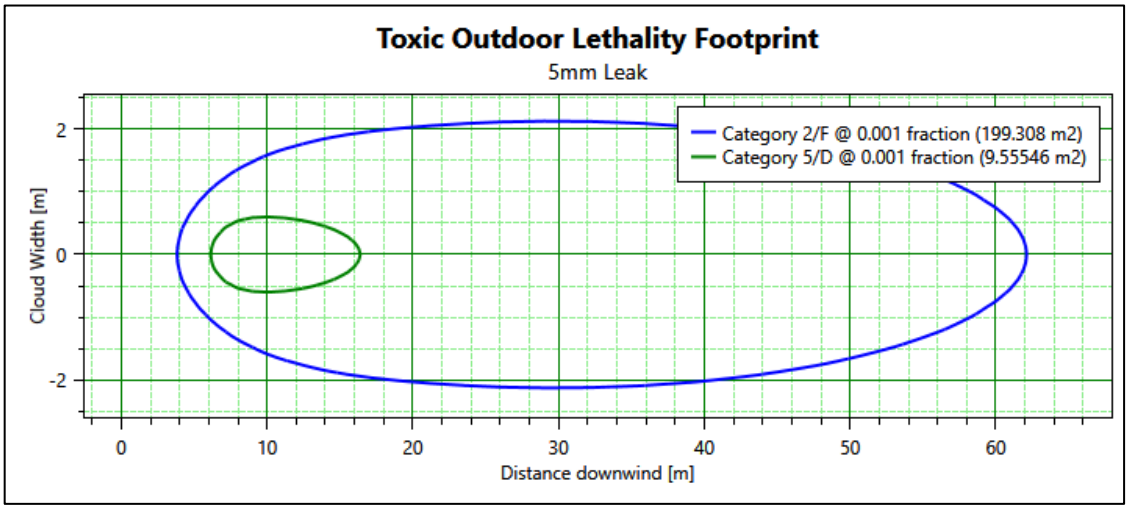
- **Explosion Results**

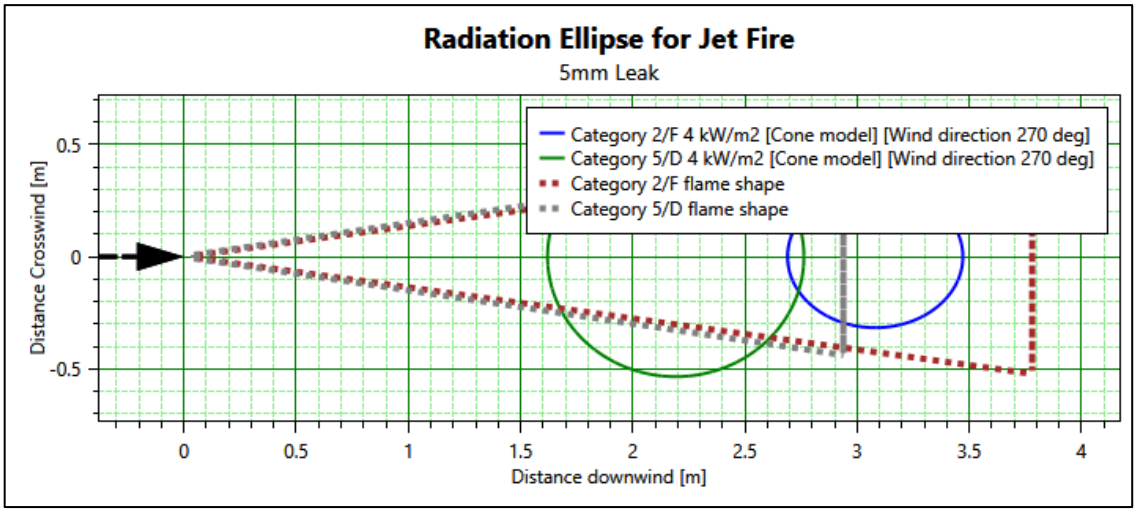
  Explosion scenarios for worst-case maximum downwind distance to defined overpressures**.**

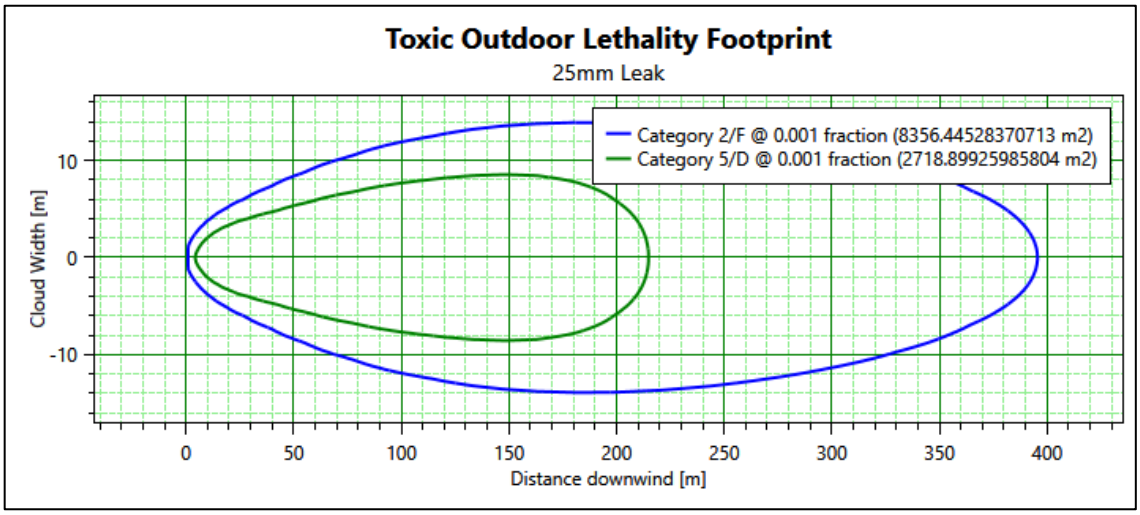
Path	**Scenario**	**Weather**	**Overpressure level [bar]**	**Maximum distance [m]**	**Diameter [m]**
Study\Ammonia Vessel 1	Catastrophic rupture	Category 2/F	0.02068 0.1379 0.2068	1005.96 243.854 197.847	1891.93 367.709 275.694
		Category 5/D	0.02068 0.1379 0.2068	1009.95 251.357 205.975	1899.9 362.714 271.949
Study\Ammonia Vessel 2		Category 2/F	0.02068 0.1379 0.2068	1005.96 243.854 197.847	1891.93 367.709 275.694
		Category 5/D	0.02068 0.1379 0.2068	1009.95 251.357 205.975	1899.9 362.714 271.949
Study\LDO Storage		Category 2/F	0.02068 0.1379 0.2068	107.387 37.5979 35.6966	174.774 15.1959 11.3933
		Category 5/D	0.02068 0.1379 0.2068	103.174 36.1654 32.1202	166.347 32.3307 24.2403

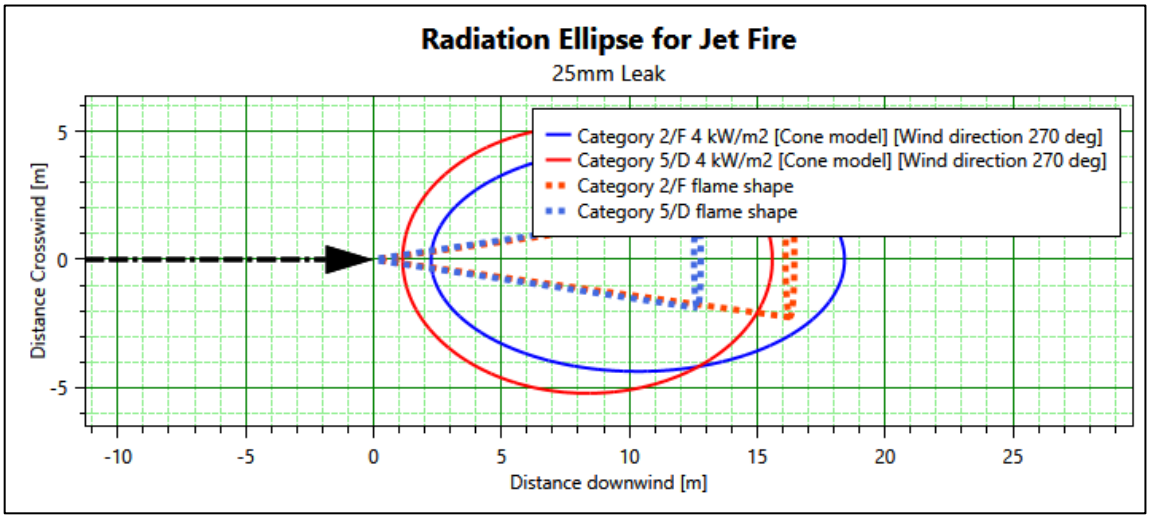
7.6.2.2 CONSEQUENCE CONTOURS

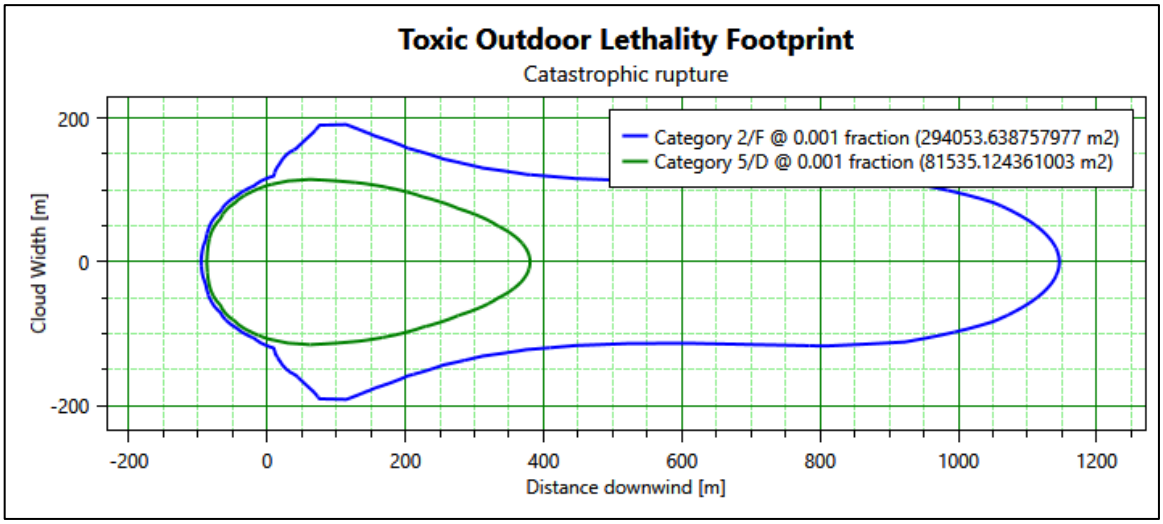
- **AMMONIA VESSEL**

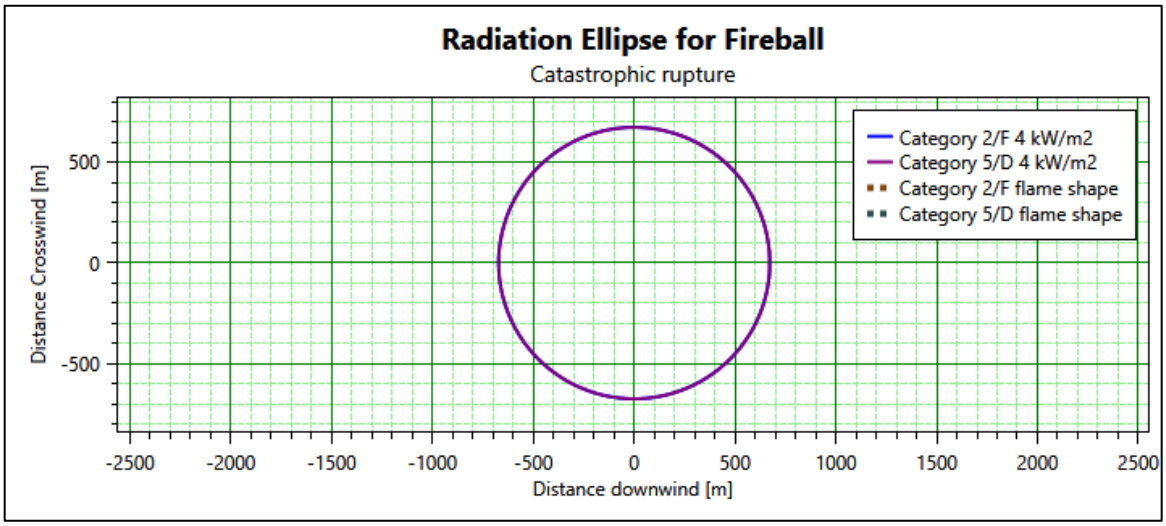

Toxic Outdoor Lethality Footprint
5mm Leak
Category 2/F @ 0.001 fraction (199.308 m2)
Category 5/D @ 0.001 fraction (9.55546 m2)
Cloud Width [m]
Distance downwind [m]

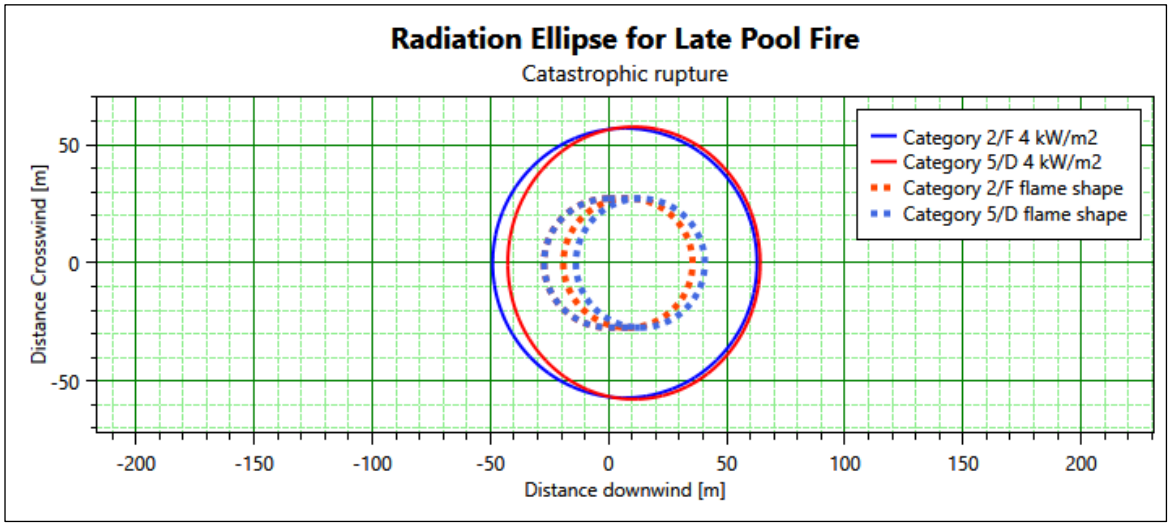

Radiation Ellipse for Jet Fire
5mm Leak
Category 2/F 4 kW/m2 [Cone model] [Wind direction 270 deg]
Category 5/D 4 kW/m2 [Cone model] [Wind direction 270 deg]
Category 2/F flame shape
Category 5/D flame shape
Distance Crosswind [m]
Distance downwind [m]

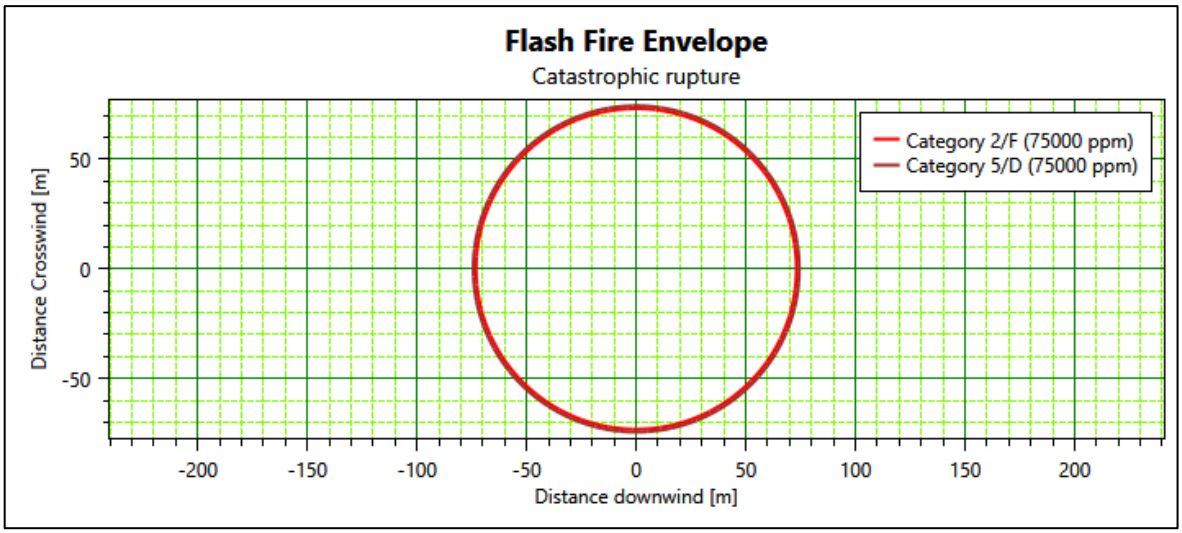

Toxic Outdoor Lethality Footprint
25mm Leak
Category 2/F @ 0.001 fraction (8356.44528370713 m2)
Category 5/D @ 0.001 fraction (2718.89925985804 m2)
Cloud Width [m]
Distance downwind [m]

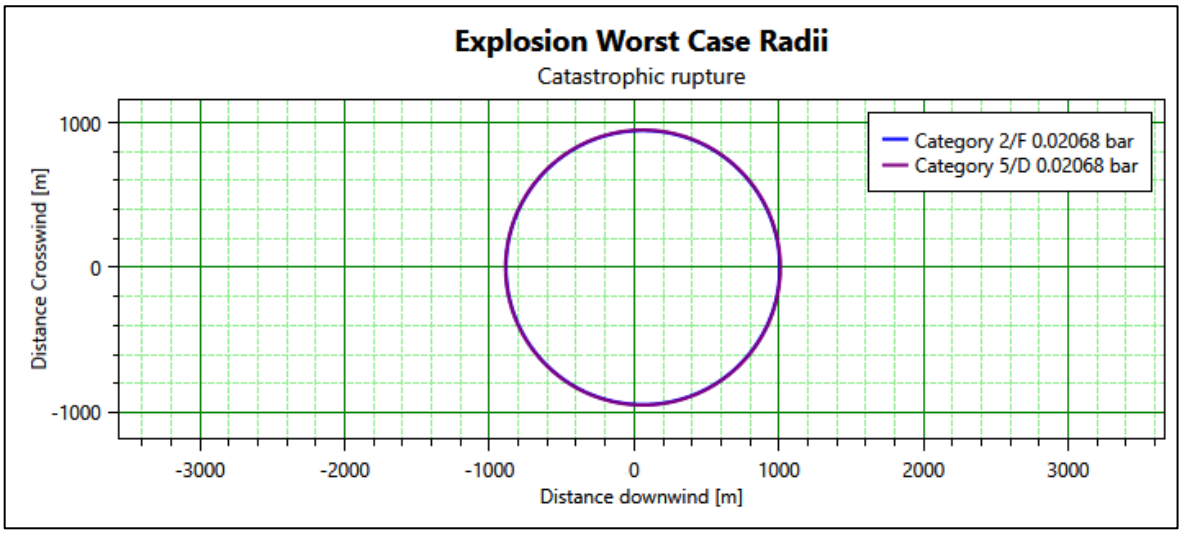

Radiation Ellipse for Jet Fire
25mm Leak
Category 2/F 4 kW/m2 [Cone model] [Wind direction 270 deg]
Category 5/D 4 kW/m2 [Cone model] [Wind direction 270 deg]
Category 2/F flame shape
Category 5/D flame shape
Distance Crosswind [m]
Distance downwind [m]


Toxic Outdoor Lethality Footprint
Catastrophic rupture
Category 2/F @ 0.001 fraction (294053.638757977 m2)
Category 5/D @ 0.001 fraction (81535.124361003 m2)
Cloud Width [m]
Distance downwind [m]

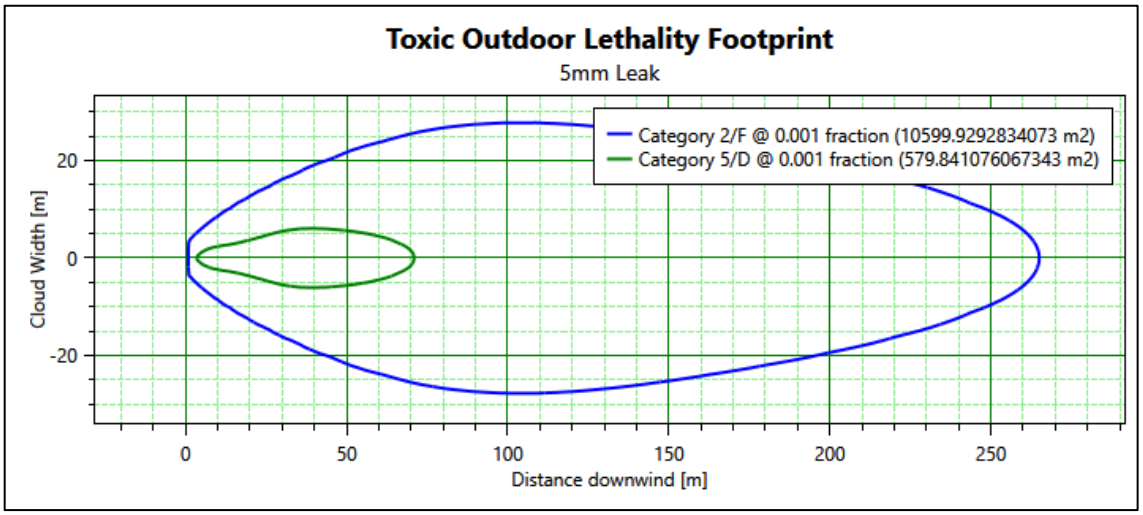

Radiation Ellipse for Fireball
Catastrophic rupture
Category 2/F 4 kW/m2
Category 5/D 4 kW/m2
Category 2/F flame shape
Category 5/D flame shape
Distance Crosswind [m]
Distance downwind [m]

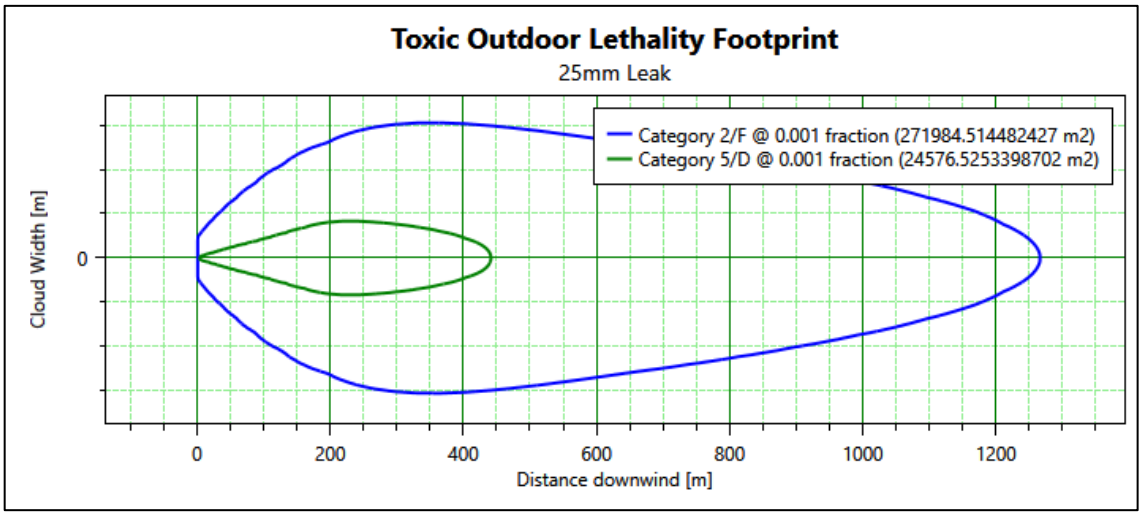

Radiation Ellipse for Late Pool Fire
Catastrophic rupture
Category 2/F 4 kW/m2
Category 5/D 4 kW/m2
Category 2/F flame shape
Category 5/D flame shape
Distance Crosswind [m]
Distance downwind [m]
50
0
-50
-200
-150
-100
-50
0
50
100
150
200

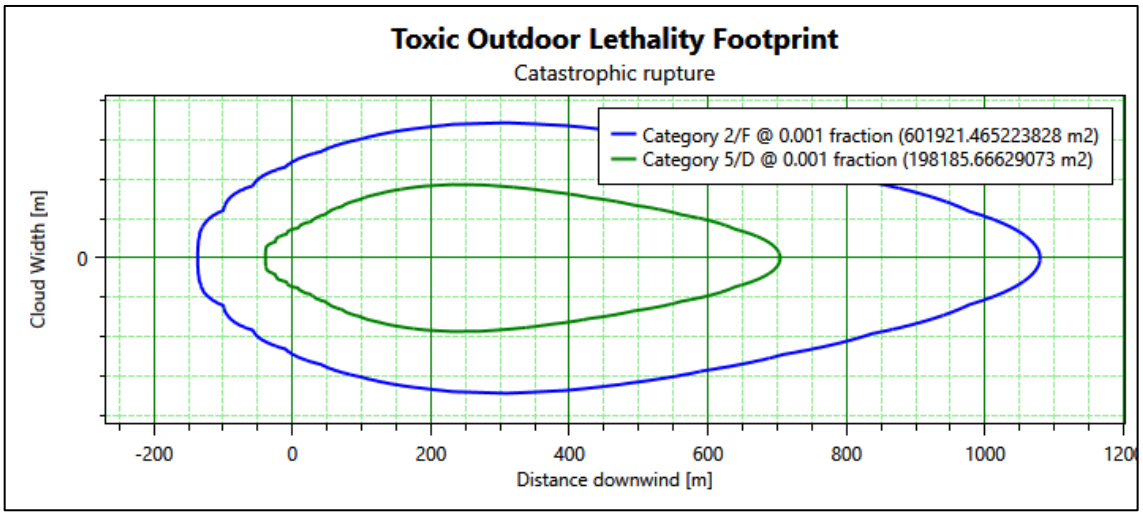

Flash Fire Envelope
Catastrophic rupture
Category 2/F (75000 ppm)
Category 5/D (75000 ppm)
Distance Crosswind [m]
Distance downwind [m]
50
0
-50
-200
-150
-100
-50
0
50
100
150
200


Explosion Worst Case Radii
Catastrophic rupture
Category 2/F 0.02068 bar
Category 5/D 0.02068 bar
Distance Crosswind [m]
Distance downwind [m]
1000
0
-1000
-3000
-2000
-1000
0
1000
2000
3000

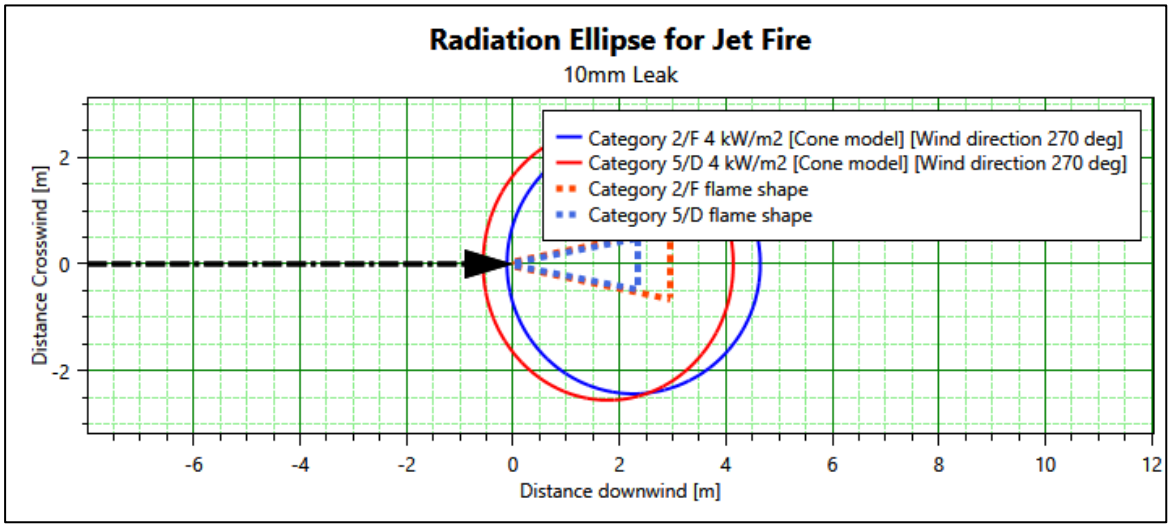
➢ **CHLORINE VESSEL**

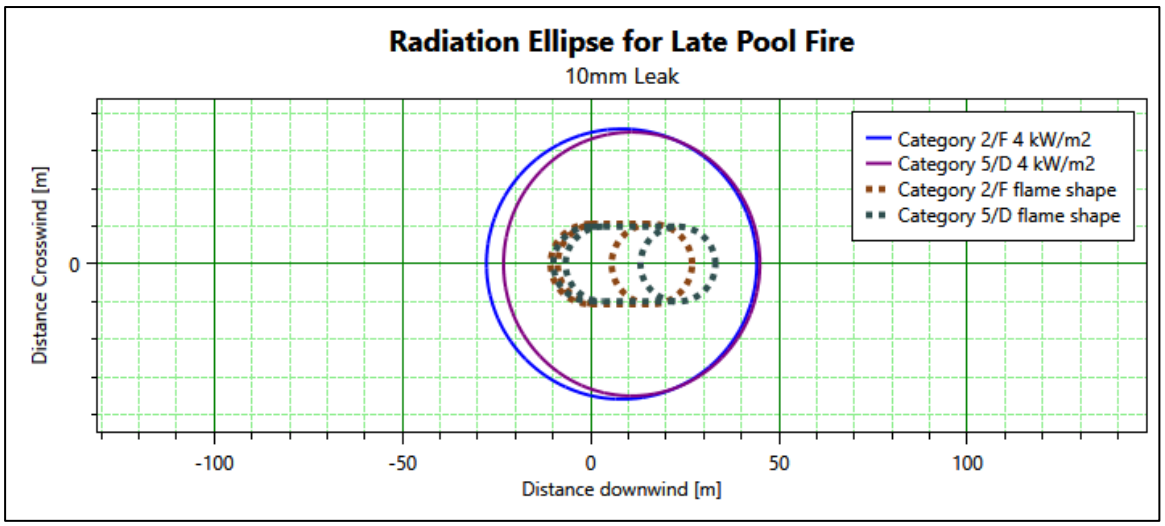


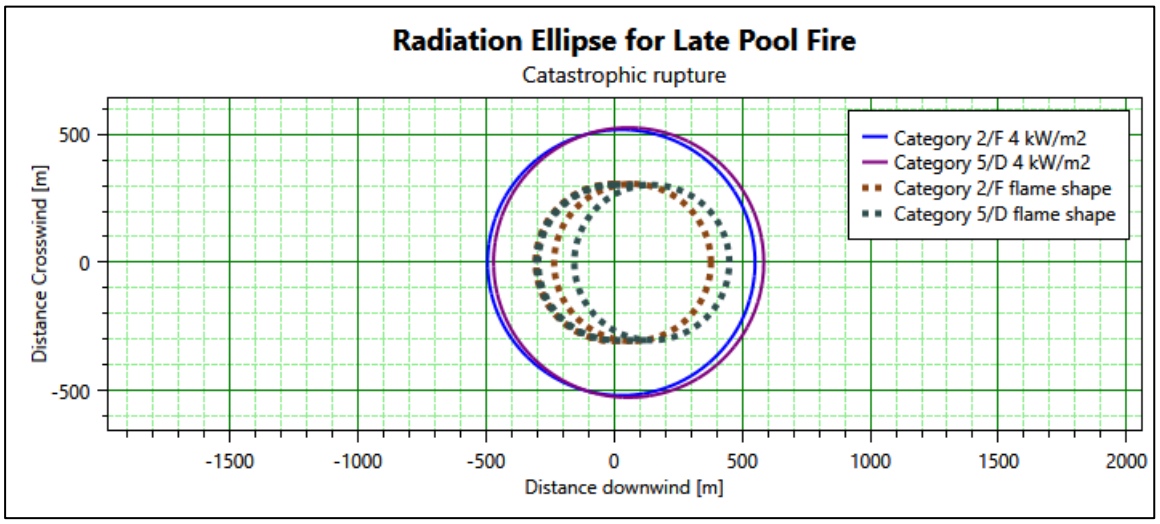


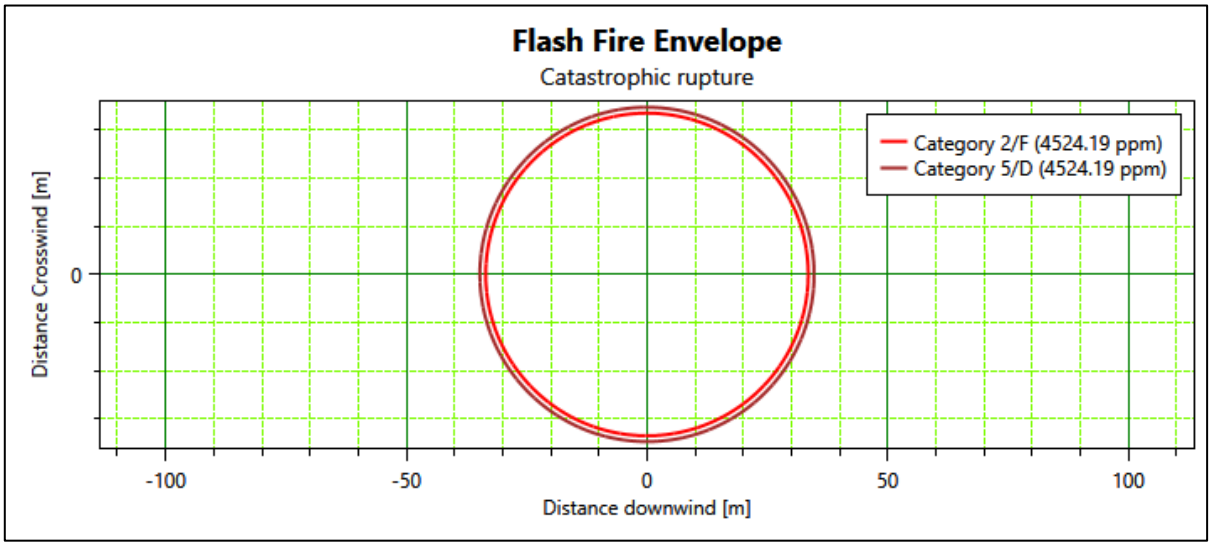


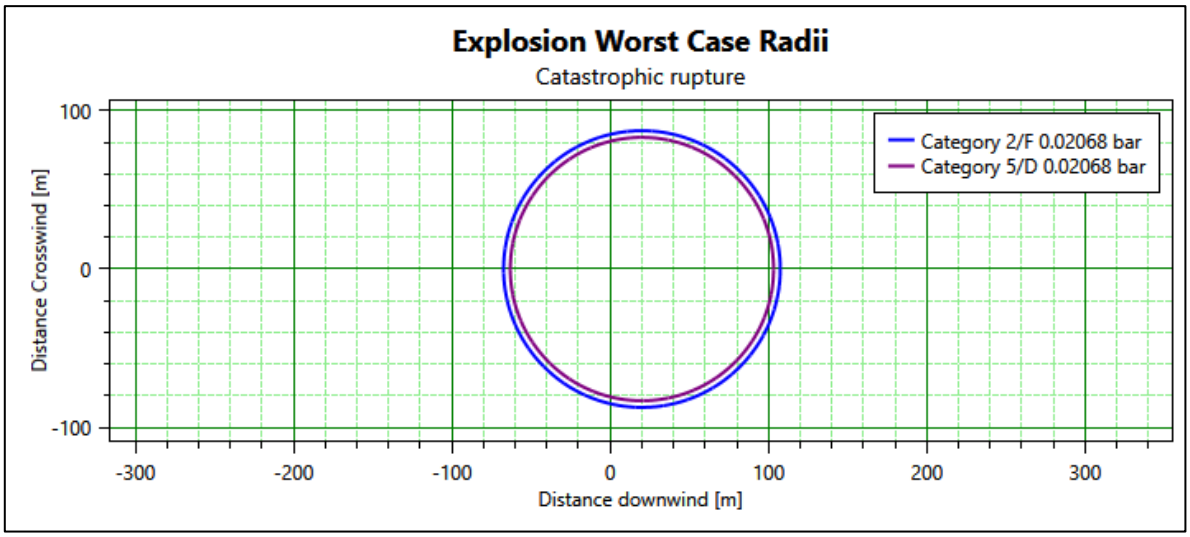
➢ **LDO STORAGE**


Radiation Ellipse for Jet Fire
10mm Leak
Category 2/F 4 kW/m2 [Cone model] [Wind direction 270 deg]
Category 5/D 4 kW/m2 [Cone model] [Wind direction 270 deg]
Category 2/F flame shape
Category 5/D flame shape
Distance Crosswind [m]
Distance downwind [m]


Radiation Ellipse for Late Pool Fire
10mm Leak
Category 2/F 4 kW/m2
Category 5/D 4 kW/m2
Category 2/F flame shape
Category 5/D flame shape
Distance Crosswind [m]
Distance downwind [m]

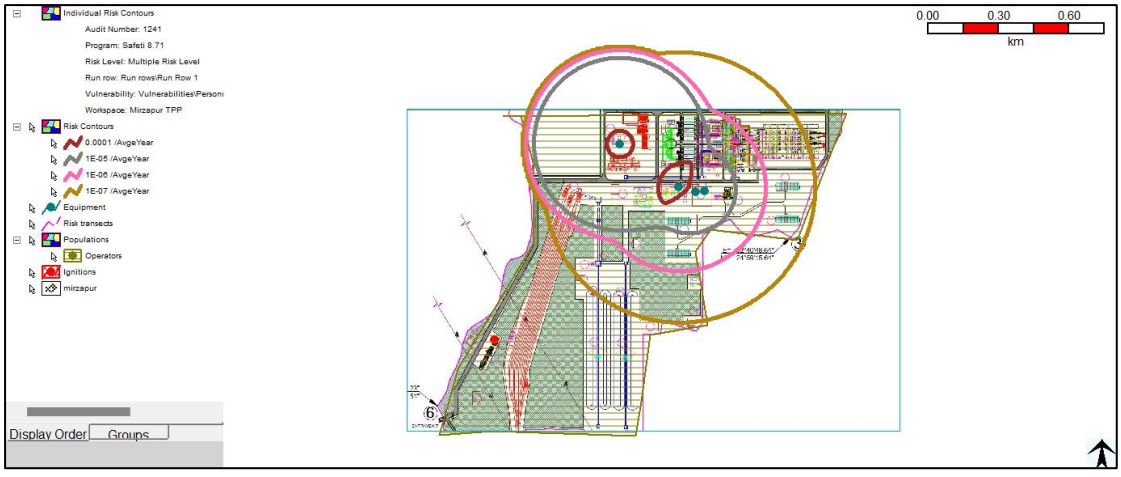

Radiation Ellipse for Late Pool Fire
Catastrophic rupture
Category 2/F 4 kW/m2
Category 5/D 4 kW/m2
Category 2/F flame shape
Category 5/D flame shape
Distance Crosswind [m]
Distance downwind [m]



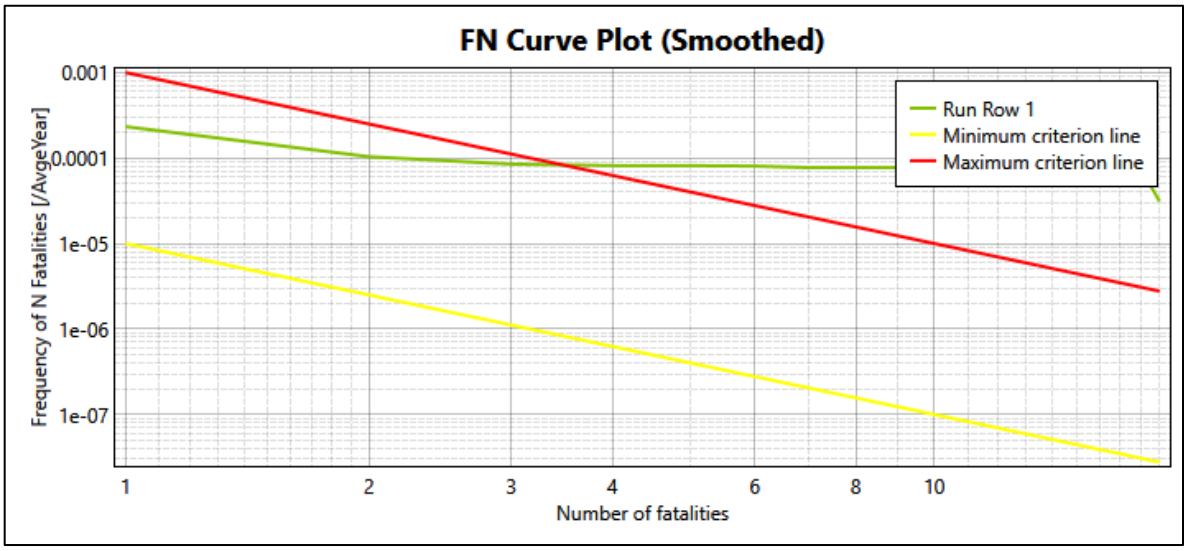


7.6.2.3 RISK CONTOURS

- **LSIR Contours**



➢ **FN Curve**



7.6.3 IMPACT ON DEMOGRAPHY

Within the plant: Personnel working in the plant during the operational phase.

Outside the plant: There are no major habitation within 1.0 km of project site.

However, by implementing all the possible risk mitigation measures the same could be minimized. The populations in nearby villages are:-

Table 7.11: Nearby demography details

Nearest locations	Name	Distance & Direction w.r.t. Plant
Human Settlement	Garhawa	2.0 Km towards NE
	Ukhdand	2.1 Km towards NNW
Railway Station	Jhingura - Train Station, Imambara,	13.6 km towards NNW
Highway	S.H.- 5 (Mirzapur –Robertsganj Road)	1.0 km towards WSW
School	Ordial Institute Campus, SH 5, Danti,	1.35 Km towards SSW
Medical Facility	CHC Hospital, Marihan, Mirzapur Danti,	4.6 km towards SSE
Police Station	Marihan Police Station, Patewar	5.3 KM SSE
Major City	Mirzapur	18 km NW

7.7 DISASTER MANAGEMENT PLAN

The important aspect in emergency management is to prevent by technical and organizational measures, the unintentional escape of hazard or the hazardous materials out of the facility and minimize accidents and losses.

A disaster is a natural or man-made (or technological) hazard resulting in an event of substantial extent causing significant physical damage or destruction, loss of life, or drastic change to the environment. It is a phenomenon that can cause damage to life and property and destroy the economic, social and cultural life of people.

Emergency planning demonstrates the organization's commitment to the safety of employees and increases the organization's safety awareness. The format and contents of the Disaster Management Plan have been developed taking into consideration the regulatory guidelines, other applicable documents and accepted industry good practice principles formulated as a result of lessons learned in actual emergencies requiring extensive emergency response. A plan can work smoothly and effectively only if the instructions are correctly and promptly followed and action taken at various levels is well coordinated.

Mirzapur Thermal Energy (UP) Private Limited shall have a disaster management plan in place approved by Chief operations officer and periodically reviewed and updated by board of MTE(UP)PL. This plan will provide disaster preparedness, mitigation, response, relief, rehabilitation, and recovery etc. applicable to Mirzapur Thermal Power Plant.

7.7.1 OBJECTIVES OF DISASTER MANAGEMENT PLAN

The Disaster Management Plan is aimed to ensure safety of life, protection of environment, protection of installation, restoration of production and salvage operations in this same order of priorities. For effective implementation of the Disaster Management Plan, it should be widely circulated and personnel trained through rehearsals/drills.

The Disaster Management Plan should reflect the probable consequential severalties of the undesired event due to deteriorating conditions or through 'Knock on' effects. Further the management should be able to demonstrate that their assessment of the consequences uses good supporting evidence and is based on currently available and reliable information, incident data from internal and external sources and if necessary, the reports of outside

agencies. To tackle the consequences of a major emergency inside the plant or in the immediate vicinity of the plant, a Disaster Management Plan has to be formulated and this planned emergency document is called "Disaster Management Plan". The objective of the Industrial Disaster Management Plan is to make use of the combined resources of the plant and the outside services to achieve the following:

- Effect the rescue and medical treatment of casualties;
- Safeguard other people;
- Minimize damage to property and the environment;
- Initially contain and ultimately bring the incident under control;
- Identify any dead;
- Provide for the needs of relatives;
- Provide authoritative information to the news media;
- Secure the safe rehabilitation of affected area; and
- Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the Emergency. In effect, it is to optimize operational efficiency to rescue, rehabilitate and render medical help and to restore normalcy.

7.7.2 ON SITE & OFFSITE EMERGENCY PLAN

Emergency Classifications

(1) Level - I: On-Site Emergency - Plant Level Crisis

Manageable by project resources. Examples: Small fires, brief hazardous material leaks, minor equipment collapse.

(2) Level - II: On-Site Emergency - Mutual Aided / Local Level Crisis

Beyond internal control, requires external help. Handled by neighboring units or local crisis group. Examples: Significant fires, electrical issues, larger hazardous material leaks.

(3) Level - III: Off-Site Emergency - District Level Crisis

Managed by District Crisis Group. Extensive impact on project and nearby public areas. Examples: Explosions, structural collapses, external threats (terrorism, sabotage).

7.7.2.1 ON-SITE EMERGENCY PLAN

The On-Site Emergency Control Plan is in place to address potential hazards arising from project activities or equipment failure. It is an integral part of the organization's overall loss control program, ensuring effective accident and incident management to minimize losses. The plan focuses on preventing unintentional releases of hazardous materials and highlights deficiencies in resources for an efficient emergency response. It reflects the organization's commitment to employee safety and serves as a valuable resource for all, providing clear insights into emergencies and aiding in their management. Regular updates will be made to the plan in response to technological changes or organizational shifts.

Objective

The objective of this On-Site Emergency Control Plan (EMP) at Mirzapur Thermal Energy (UP) Private Limited is to anticipate potential emergencies during construction and ensure a quick, controlled response to minimize damage to human life, equipment, property, and the environment. Emergencies can result from natural disasters or manmade incidents, and the plan aims to provide swift, organized actions to address unforeseen events. Despite efforts to assess and minimize risks, accidents may still occur, requiring prompt action from operating staff, emergency teams, and external agencies. The plan focuses on:

- declaring emergencies,
- alerting people,
- implementing control measures,
- evacuating affected areas,
- providing treatment,
- minimizing damage,
- guiding people to safety,
- ensuring security,
- and preserving records for inquiries.

Key elements include reliable detection, resource availability, effective response actions, communication facilities, regular reviews, proper training, and an organized command structure. Speed is crucial in achieving these objectives.

Statutory Provisions: On-Site Emergency Plan of the Unit has to be developed by the occupier of the Project as per statutes given below:

- The Building and Other Construction Workers (Regulation of Employment and Condition of Service) Act, 1996 & The BOCW Central Rules 1998: Rule 36
- The Central Electricity Authority (Safety Requirement, for Construction, Operation & Maintenance of Electrical Plant and Electric Line) Regulation -2011: Rule 9 (1)

RESPONSIBILITY OF ON-SITE EMERGENCY PLAN (EMERGENCY MANAGEMENT PLAN)

The primary responsibility for establishing and overseeing the On-Site Emergency Control Plan lies with the Employer/Construction Manager. The Construction Manager is tasked with maintaining, distributing, and controlling the plan, ensuring its applicability through procedural implementation, and conducting annual reviews and revisions.

The HSE Manager is responsible for personnel training, ensuring that emergency response capabilities align with the plan. Additionally, the HSE Manager oversees the organization and execution of Mock Drills outlined in the On-Site Emergency Control Plan.

All employees from various departments are individually responsible for fulfilling their roles and duties as outlined in this On-Site Emergency Control Plan.

Nature of Emergencies Covered

In formulating the On-Site Emergency Control Plan, it is imperative to contemplate the worst-case scenario for potential accidents or incidents within the unit. Calculating the adverse effects of the maximum quantity of hazardous chemicals, leading to a major accident, is crucial. The nature of emergencies varies based on the chemical properties of hazardous materials and their maximum storage inventory.

Emergencies can be categorized into the following types, contingent on their nature:

- **Fire Emergency:** Arises due to the flammable properties of hazardous materials.
- **Explosion Emergency**: Occurs with explosive materials.
- **Toxic Release Emergency**: Caused by the dispersion of toxic gases into the atmosphere.

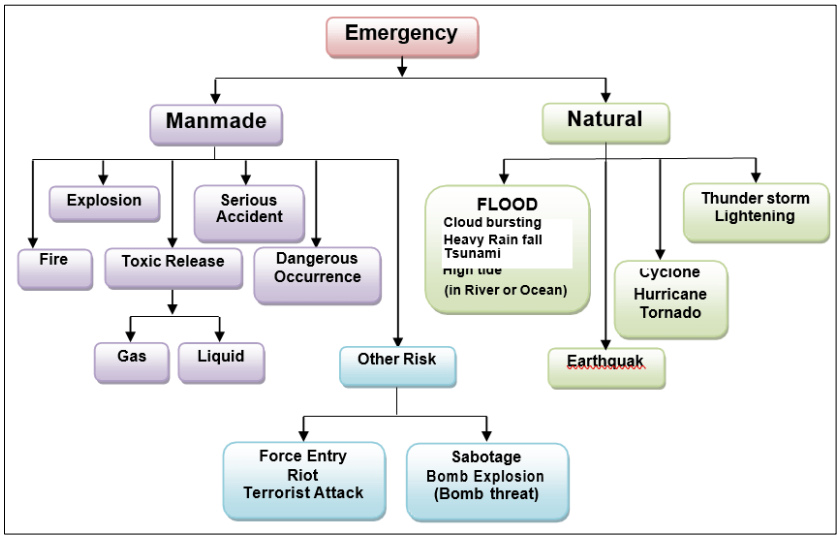


Figure 7.8: Type of emergencies

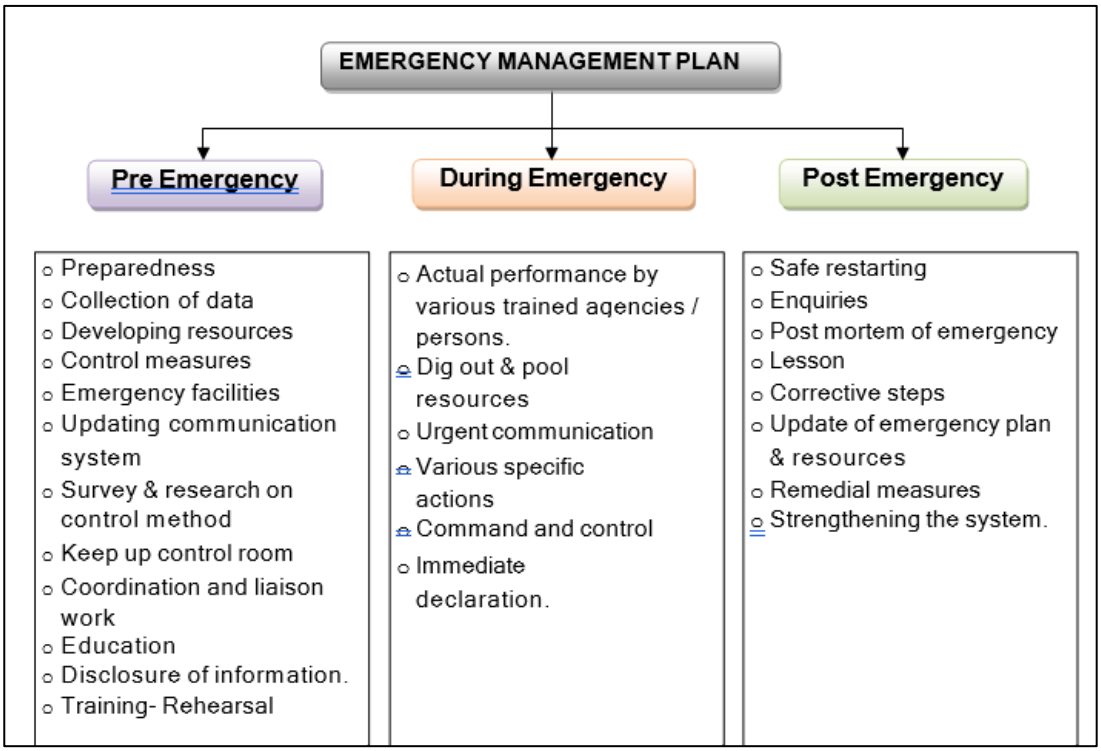


Figure 7.9: Emergency Management Plan

Methodology for On-Site Emergency Plan Preparation

a) Initial Review: Comprehensive site visit for hazard assessment.

b) Hazardous Chemicals: Detailed info on storage, processes, and equipment.

c) Documents, Maps, Facilities: Collection of layout plans, alarms, safety details, and past incidents.
d) Preparedness Details: Occupier, manager, roles, resources, and emergency room specifics.
e) Maximum Credible Scenarios: Consideration of worst-case scenarios based on risk assessments.
f) Major Accident Response System: Systematic actions during emergencies for designated personnel.

Mock Drill

The Station Head shall ensure that a Mock Drill of the On-Site Emergency is conducted at least one in a every six months as provided under Rules and a detailed report of the conducted Mock Drill shall be submitted to the Authority.

The Mock Drill / Exercise / Rehearsal on On-Site Emergency Plan are required to test adequacy of the plan. Further, it will generate self-confidence amongst the Staff / Workers / Supervisors to tackle the emergency successfully.

SAFETY MEASURES

The general safety measures as provided at project site are described as below;

Project Area

1. Day to day Monitoring system.
2. Prohibition of Smoking
3. Fire Extinguishers, Fire Hydrant System, Fire protection system are provided.
4. Safe Operating Instructions are displayed
5. Provision of wind Indicator at height structure
6. Qualified Persons look after the Operations
7. Arrangement of PPEs & SCBA Set
8. Arrangement of work safety permit system
9. On Site Emergency Plan is prepared.
10. Full-flag Safety Department
11. Facilities of O.H.C.

Storage Area

1. Separate tank farm with fenced area
2. Dyke wall with acid proof lining to Hazardous chemicals' tank.
3. Water shower with eye washer arrangement.
4. Display of Cautionary Notice.
5. Colour code system for pipelines & notice is displayed accordingly.
6. Arrangement of Personnel Protective Equipment.
7. Qualified operatives are deployed.
8. Earthing for the tank containing flammable liquid
9. Fire Extinguishers, Fire Bucket Post, Hose Reel Box, Fire Hydrant are provided.
10. Flameproof Electrical Fittings in flammable zone
11. Prohibition of Smoking & Mobile Phone.
12. Emergency Communication System

The Thermal Power Project activities hazards are assessed and identified the different levels of emergences may occur in the premises, which can be classified in three levels as below.

Table 7.12: Designated personnel for Site Incident Controller

S. No.	Designated Person	Scope: Area / Locations
1	Chief Incident Controller (CIC)	All areas of Project Site
2	Dy. Chief Incident Controller (DCIC)	All areas of Project Site
3	Site Incident Controller (SIC) – Civil Work	Civil Work Activities - Boilers, TG House, GT Yard, switchyard, CW Pump House, ESP, Chimney, and all other Building areas, etc.
4	Site Incident Controller (SIC) – Mechanical-BTG	Mechanical Work Activities - Boilers, Turbine, ESP areas
5	Site Incident Controller (SIC) – Mechanical-Off Site	Mechanical Work Activities - CHP & OFF-SITE areas
6	Site Incident Controller (SIC) – Electrical BTG	Electrical Work Activities – in GT Yard, Cable galleries, SWGR, Control Room, and all other areas
7	Site Incident Controller (SIC) – ELECTRICAL OFF SITE	Electrical Work Activities – in Switchyard, construction power, and off-site areas
8	Site Incident Controller (SIC) – C&I AREA	C&I work activities – in all areas

S. No.	Designated Person	Scope: Area / Locations
9	Site Incident Controller (SIC) – STORES	Stores activities – in STORES and all other areas
10	Site Incident Controller (SIC) – Other areas	All Other Area of Plant
11	Dy. Site Incident Controller (SIC) – CIVIL	Area assigned to SIC
12	Dy. Site Incident Controller (SIC) – mechanical-BTG	Area assigned to SIC
13	Dy. Site Incident Controller (SIC – Mechanical-OFF SITE	Area assigned to SIC
14	Dy. Site Incident Controller (SIC) – electrical BTG	Area assigned to SIC
15	Dy. Site Incident Controller (SIC) – electrical OFF SITE	Area assigned to SIC
16	Dy. Site Incident Controller (SIC) – C&I area	Area assigned to SIC
17	Dy. Site Incident Controller (SIC) – stores	Area assigned to SIC
18	Dy. Site Incident Controller (SIC) – Other areas	Area assigned to SIC

DUTIES & RESPONSIBILITIES OF DESIGNATED PERSONNEL

- **Chief Incident Controller (CIC)**

  In charge of the project site during emergencies.

  Responsibilities include communication, security, firefighting, rescue operations, station operation, shut downs, transportation, evacuation, logistics, investigations, statutory requirements, repair & maintenance, first-aid & hospitalization, public relations.

  Activates On-Site Emergency Plan, coordinates with key personnel, communicates with authorities, reviews and directs actions, coordinates with crisis groups, issues statements, investigates root causes, and authorizes termination of emergency.

  Note: Major crisis statements only by COO (Operations) / COO (Projects) / Chief Incident Controller (CIC).

- **Deputy Chief Incident Controller (DCIC)**

Assumes CIC duties in the absence of CIC.

- **Site Incident Controller (SIC) & Deputy Site Incident Controller (DSIC)**

- SIC takes charge at the incident site, assesses and starts remedial measures.
- Reports to COO in CIC's absence, makes decisions on emergency operations, shutdowns, rescues, evacuations, etc.

Duties & Responsibilities of Key Personnel: Key Personnel (experienced managerial staff) follow instructions from CIC/SIC during emergencies.

- **On-Site Support Team**
  - Chief Project Coordinator: Coordinates emergency repairs, maintenance, logistics.
  - Mechanical, Electrical, C&I Coordinators: Handle system-specific repairs/maintenance.
  - Services Coordinator: Manages workshop & services system.
- **Emergency Response Team**
  - Fire & Rescue Responder: Directs firefighting, rescue operations.
  - Safety Coordinator: Ensures safe conditions.
  - Medical Responder: Establishes medical center, organizes medical help.
  - Evacuation Coordinator: Manages security, plant evacuation.
  - Environment Coordinator: Guides on environmental issues.
  - Assembly Point Coordinator: Coordinates safe assembly areas.
  - Chemical Coordinator: Manages chemical leakage.
  - Material Coordinator: Coordinates material/equipment requirements

On Site Emergency Plan Provisions

Safe Assembly Points (SAP)

Safe Assembly Points, marked in the Plant Layout-Plot Plan, serve as non-hazardous areas for personnel not involved in disaster or fire control activities. Designated points are safe for assembly during emergencies.

Emergency Exits

Emergency Exits, marked in the Plant Layout Plot Plan, are designated rescue exits during emergencies. Personnel not in disaster or fire control activities move to these exits under guidance from Department Heads.

Rehabilitation Centre

Rehabilitation Centres are non-hazardous, safe areas for temporarily relocating affected personnel from public vicinity areas during emergencies.

Emergency Control Centre (ECC)

Emergency Control Centres (ECC), marked in the Plant Layout Plot Plan, serve as command hubs during emergencies. Directed by the Chief Incident Controller, ECC oversees operations, collaborates with external agencies, and establishes a Safe Emergency Control Centre if needed.

Facilities at ECC include:

- Copies of the On-Site Emergency Control Plan
- Plot and master plans of the complex
- Layout plans indicating plants, equipment, and storage areas
- Details of hazardous substances with Material Safety Data Sheets (MSDS)
- Lists of key personnel, outside agencies, and statutory authorities with contact numbers
- Communication facilities (public address system, phones, video conferencing, etc.)
- First aid boxes, firefighting equipment, personal protective equipment (PPE), and SCBA sets
- General stationery, employee lists, and information on rare blood groups.

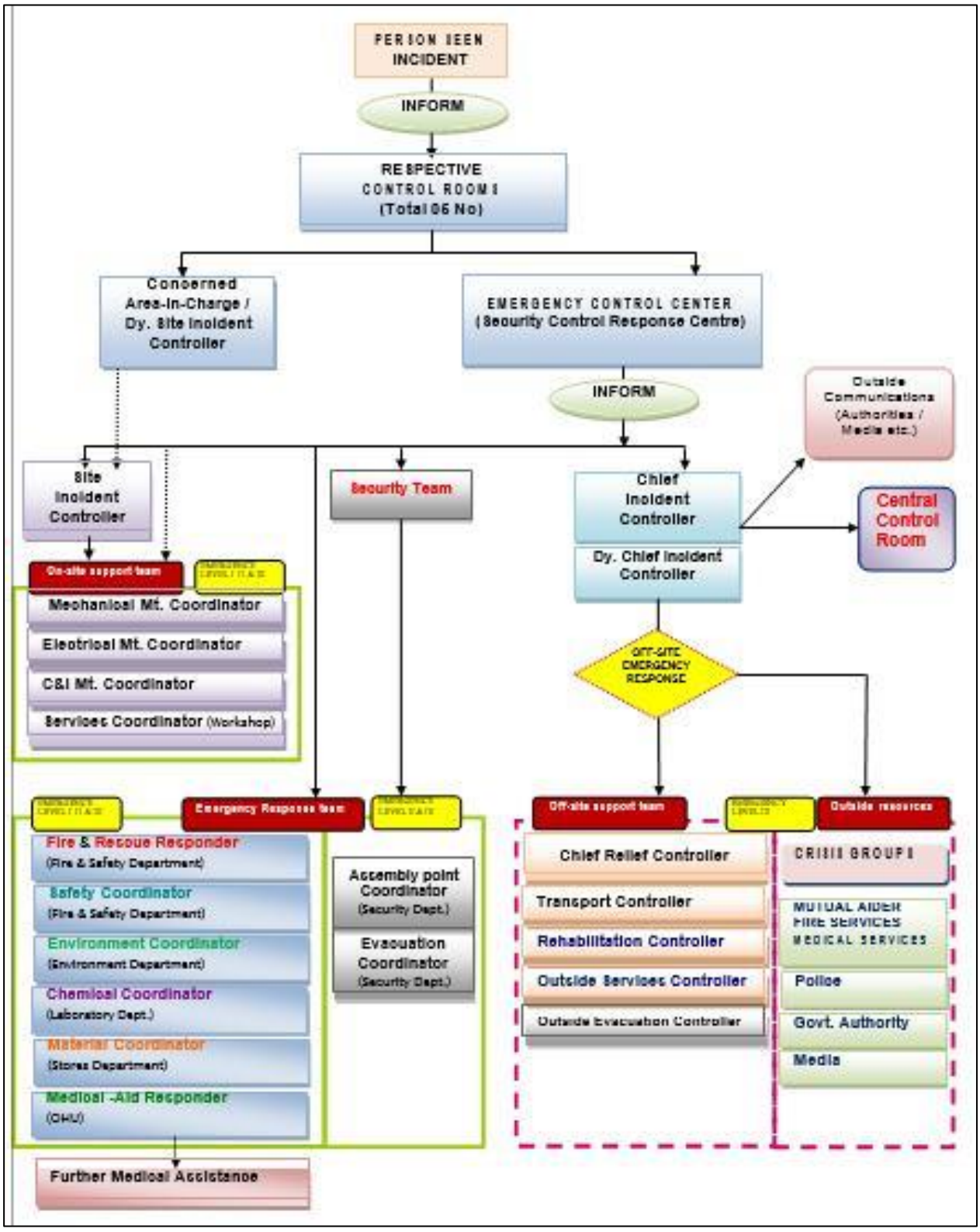


Figure 7.10: Emergency Communication Flow Chart

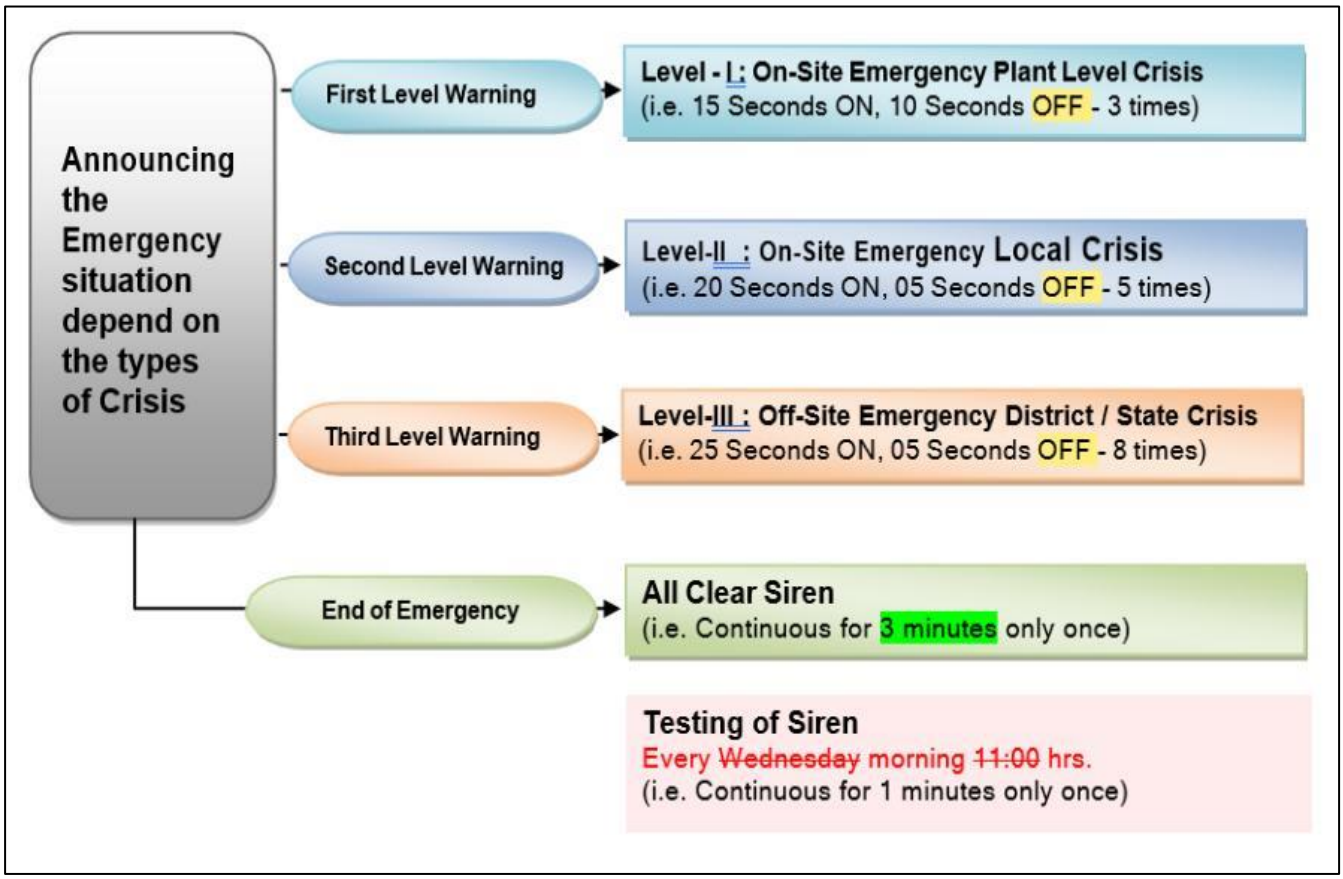


Figure 7.11: Declaring Emergency

Emergency Siren Codes:

Level - I: On-Site Emergency Plant Crisis: Managed on-site as per the Emergency Control Plan.

Level - II: On-Site Emergency Mutual Aided / Local Crisis: External resources assist in uncontrollable situations.

Level - III: Off-Site Emergency - District / State Level Crisis:

- Extends beyond internal resources; requires district-level aid.
- Escalates to State or National Crisis if necessary.

End of Emergency: All Clear Siren

Chief Incident Controller signals the end with a three-minute continuous siren.

All clear announcements conveyed to employees and the public through PA system and local authorities.

7.7.2.2 OFF-SITE EMERGENCY

An Off-Site Emergency occurs when an incident, such as explosions or collapses, extends beyond a facility's control, impacting nearby public areas, requiring external agencies like District or State Crisis Groups to manage the situation.

(A) Off Site Emergency

When an industrial disaster surpasses unit resources and impacts the surroundings, it becomes Off-Site Emergency, managed by the District Crisis Group. The unit supports with facilities, liaison, and coordination.

(B) Probability for Off-Site Emergency

Though MTE(UP)PL Project site anticipates no Off-Site Emergencies, potential scenarios include hydrogen release, fuel tank emergencies, electrical fires, and major coal area fires.

(C) Outside Participation / Government Body

Off-Site emergency operations involve collaboration with local authorities, with local participants taking a dominant role. Industrial management provides comprehensive support, emphasizing the need for local efforts and financial assistance.

Action by Chief Incident Controller & Site Incident Controller During Off Site Emergency.

In Off-Site Emergency, the District Crisis Group assumes control, with the Chairman as Chief Incident Controller. The unit's Chief Incident Controller becomes a Site Coordinator, and the Site Incident Controller serves as the Incident Coordinator.

Fire and Explosion

- Upon noticing a fire or explosion:
- Shout "Fire, Fire, Fire" to alert nearby personnel.
- Report to the Security Control Room or Fire Station, specifying the emergency type and location.
- If safe, estimate severity, return, and await instructions.
- For fires, use appropriate extinguishers or seek trained help.
- Move to the Safe Assembly Point if not part of emergency response.
- Do not attempt heroic efforts.

First Actions for Electrical Fire

- Cut off power supply to convert it into a class "A" fire.
- For small fires, use CO_2/DCP extinguishers; avoid foam or water near electrical installations.
- Prohibit entry into electrical equipment rooms after a fire outbreak.

(A) Fire Inside Cable Gallery

- Toxic smoke affects respiratory systems; entry is prohibited.
- Project/Electrical Head activates Emergency Response Plan, alerts the fire station.
- Instructs steps to stop or isolate power supply.
- Evacuate affected people, use appropriate extinguishers.
- For major fires, await firefighting team.

(B) Fire Inside Transformer Yard

- Project/Electrical Head activates Emergency Response Plan, alerts the fire station.
- Cut off power supply, attempt to extinguish with CO2/DCP.
- Use High Velocity Water Spray Systems for quick detection.
- Evacuate affected people, await firefighting team for major fires.

Toxic Gas/Chemical Release

In case of a toxic gas release:

- Run to safety, shouting "Gas, Gas, Gas."
- Report to Project Security/Project Office/Execution Engineer via phone, identifying oneself and specifying the location.
- If trained, attempt control; if not, move to the Safe Assembly Point.
- Area Manager/Laboratory staff take charge, inform the Fire Station, and ensure no one is alone.
- Fire Station sends a trained crew with Gas Emergency Kit and Safety Officers.
- Area Manager, as Site Incident Controller, informs Project Head, evacuates vulnerable persons, avoids crowding, and assists in identifying release points.

- Close isolation valves for hose pipeline or manifold gas release; for cylinder releases, place them in an open area.

Bomb Threat and Countermeasures

In case of a bomb threat:

- Remain calm and obtain details from the caller.
- Trace the caller's number if possible.
- Inform Security Control Room (SCRC), which will pass information to key personnel.
- Bomb search team, led by Plant Security Head, conducts a silent search in designated areas.
- Be cautious and follow safety protocols during the search.
- If a suspicious object is found, keep a 300-foot clear zone and contact Bomb Disposal Squad.
- Evacuate if needed; seek police assistance and follow emergency procedures.

Sabotage/Riots and Countermeasures

- Close all gates to prevent entry of anti-social elements.
- Maintain heightened security; contact Chief Incident Controller and local authorities.
- Conduct round-the-clock patrolling.
- Alert all employees about the Emergency Control Action Plan.
- Consider advising non-security employees to take leave during major disturbances.

Action Plan to Respond Specific Natural Disaster

Weather Forecast Emergency Response

- Chief Incident Controller (CIC) activates emergency teams upon weather forecast information.
- Mitigation plan is prepared with precautionary measures for cyclones, thunderstorms, floods, heavy rain, tsunamis, etc.
- Ensure communication facilities, emergency tools, PPEs, first aid, and other resources are available.
- Cyclone countermeasures include evacuation, securing buildings, and monitoring updates.

- Thunderstorm precautions involve seeking shelter indoors and avoiding electrical appliances.
- Flood response includes assessing the situation, shutting off hazardous operations, and evacuation if necessary.

Dos & Don'ts:

- Follow safe routes to shelters during floods.
- Avoid walking through flooded areas.
- Climb to higher levels if water rises.
- Inspect buildings for damage after floods.
- Do not try to return home/plant until declared safe.
- During earthquakes, take cover indoors or move into open areas away from buildings.
- Be prepared for aftershocks and help injured persons.
- Listen to emergency information and stay out of damaged buildings.

7.8 OCCUPATIONAL HEALTH AND SAFTEY

For large industries, where multifarious activities are involved during construction, erection, testing, commissioning, operation and maintenance, the men, materials and machines are the basic inputs. Along with the boons, industrialization generally brings several problems like occupational health and safety.

The industrial planner, therefore, has to properly plan and take steps to minimize the impacts of industrialization and to ensure appropriate occupational health and safety including fire plans. All these activities again may be classified under construction and erection, and operation and maintenance.

7.8.1 OCCUPATIONAL HEALTH

Occupational health needs attention both during construction and erection and operation and maintenance phases. However, the problem varies both in magnitude and variety in the above phases.

7.8.2 CONSTRUCTION AND ERECTION

The proposed project prioritizes occupational health and safety in construction and erection activities through rigorous training, mandatory use of personal protective equipment, and strict adherence to safety protocols. The project emphasizes preventive measures, proper site planning, equipment safety, fall protection, electrical safety, emergency preparedness, health monitoring, safe material handling, effective communication, and meticulous documentation to create a secure working environment. Regular reviews and updates ensure continuous compliance with occupational health and safety regulations, fostering a culture of well-being among the workforce.

7.8.3 OPERATION AND MAINTENANCE

The problem of occupational health, in the operation and maintenance phase is primarily due to noise which could affect hearing. The necessary personal protective equipments will be given to all the workers. The working personnel shall be given the following appropriate personnel protective equipment's.

1. Industrial Safety Helmet;
2. Face shield with replacement acrylic vision;
3. Zero power plain goggles with cut type filters on both ends;
4. Zero power goggles with cut type filters on both sides and blue color glasses;
5. Cylindrical type earplug;
6. Ear muffs;
7. Self-contained breathing apparatus;
8. Leather apron
9. Leather hand gloves;
10. Acid/Alkali proof rubberized hand gloves;
11. Canvas cum leather hand gloves with leather palm;
12. Electrically tested electrical resistance hand gloves; and
13. Industrial safety shoes.

All working personnel will be medically examined at least once in every year and at the end of his term of employment. Pre and Post-employment Medical check-up is being/ will be carried out. This is in addition to the pre-employment medical examination.

7.8.4 DETAILS OF OCCUPATIONAL HEALTH SURVEILLANCE PROGRAM

Occupational Health Program is being developed. The Company is committed to promoting the health, safety and well-being of its workers, employees, visitors and contractors. The industry will strive to develop and implement best practices in occupational and environmental hygiene principles. The industry has developed and implemented a comprehensive Occupational Hygiene Program (OHP) devoted to the recognition, evaluation and control of those environmental factors, arising in or from the work place that may cause illness, injury, or discomfort. To help reduce the risk of hazardous exposures, ensure regulatory compliance, and improve working conditions, appropriate occupational hygiene practices will be applied to the Industrial operations. The Occupational Hygiene Program clearly defines and stipulates the responsibilities of all workplace parties involved in its development, administration and implementation of the program.

The Occupational Hygiene Program includes the following elements:

1. Organizational Commitment;
2. Occupational Hygiene Process;
3. Roles and Responsibilities;
4. Training and Education;
5. Annual Program Review;
6. Definitions; and,
7. References.

Purpose and Scope

The Occupational Hygiene Program provides information to departments, supervisors and workers to allow for informed decision-making regarding exposure to hazardous agents in the workplace. This program outlines how worker exposures hazards will be addressed in the workplace including the interpretation of technical data, conducting research, and assist

in the development of guidelines and procedures that support workplace health and wellness. A hazard may be chemical, biological or physical in nature:

i. Chemical hazard - is any chemical capable of causing bodily injury or illness;
ii. Physical hazard - arises from the interaction of matter and energy related to the science of physics such as sounds, light, vibration, and radiation that could result in an occupational injury or illness.

Supporting Programmes and Standards

There are a number of occupational hygiene related hazards that have regulatory requirements. For these hazards, additional programs or standards have been developed and will work in conjunction with this program. These programs or standards include, but are not limited to the:

1. Respiratory Protection Program;
2. Indoor Environmental Quality Program;
3. Personal Protective Equipment Program;

Safety Training

Safety trainings (on Safe Material Handling, First Aid & all Safety aspects) shall be provided to Safety Officers. In addition to regular employees, limited contractor labors shall be provided safety trainings. To create safety awareness, safety films will be shown to workers and leaflets are distributed.

7.9 SOCIAL IMPACT ASSESSMENT

The project to be implemented with adequate pollution control measures will have an overall positive impact on the socio-economic aspects of the surrounding area. The socio-economic impact of the proposed project has been detailed in **Chapter 4** of this EIA report. The proposal does not involve any rehabilitation & resettlement.

MTE(UP)PL is committed to the Social Environmental Management Plan (EMP) & a total of **Rs. 46.50 Cr.** Has been allocated to be spent under Social EMP (CER), in accordance with the Ministry's Office Memorandum **(F. No. 22-65/2017-IA.III) dated 01.05.2018.** The

budget will be finalized after incorporating/addressing the issues which will be raised during public hearing as EMP Social initiatives as per the **Office Memorandum dated 30.09.2020.**

7.10 WATER SOURCE SUSTAINABILITY STUDY

In view of the total water requirement of 28 MCM/year for the proposed project of thermal power plant units and for the sustainability of water source in the coming future, Environment management Department, IISWBM, Kolkata in association with CSIR-CGCRI, Kolkata and Academy of Water technology & Environment management was awarded the work for the study of Upper Khajuri dam water levels and water availability in the Upper Khajuri dam at the tapping point for the past 10 years for all the possible scenarios such as scanty rainfall months and lowest reservoir levels. Water availability in the Upper Khajuri dam has also been confirmed by the data provided by UPWRD, Mirzapur District and along with this efficacy and efficiency of the existing intake structure, pump house details and the pipeline used to deliver the raw water from the intake structure to the plant

From all these studies and analysis of data via graphs and official government sources, it is found that water storage in the Upper Khajuri dam is always present in adequate amount and the level in the dam at the tapping point has always been above the dead storage level. Therefore, we can say that an adequate amount of raw water is available in the Upper Khajuri dam for all the possible scenarios

Moreover, the raw water can be easily pumped in the near future as per the provisions of adding pumps in accordance with the requirements of the intake structure as discussed above. Impact due to water withdrawal is also nil as even after maximum utilization of water from the Upper Khajuri dam by different sectors, the government of Uttar Pradesh will be still left with 2.44 MCM of water per year as a whole and 95.885 MCM of water per year if we go months which can also be utilized for downstream ecology sustainability. Looking at the overall project scenario, it has been noticed that the project in totality considered environmentally safe.

Source Sustainability Study for withdrawal of water from River Ganga for proposed project has been carried out through Environment Management Department, IISWBM, (A

Constituent Institute of University of Calcutta), in association with, CSIR-CGCRI, Kolkata, & Academy of Water Technology & Environment Management.

7.11 HYDROGEOLOGICAL ASSESSMENT & RAINWATER HARVESTING

Hydrogeological assessment & rain water harvesting study of the project site & study area along with Action plan for Water shed development within 10 km radius of the project boundary has been prepared Akshar Geo Services, vetted through National Institute of Technology, Delhi.

Geologically, the study area comprises of sedimentary of upper Vindhya Kaimur and Rewa group of Cambrian geological time age. The Ganga and Belan are the two major rivers flowing through the district. The pattern of drainage is dendritic in hectare excepting the localized radial pattern in the hilly terrain. The general flow direction is towards North and North East. Well Inventory was carried out at 30 locations of existing wells. The deepest depth to water level encountered at W-27 bore well i.e. 76 m and shallowest water level encountered at 1 m depth from the existing ground surface of W-14 open well. The maximum pH value was found at W-24 water sample, viz., 7.7 whereas the minimum pH value was 6.5 at W-25. The lithology inferred from the resistivity sounding is thin layer of soil and alluvium. The resistivity data interpreted with the help of inverse slope method IGIS software.

The water level in the study area varies between 1.00 m to 76.00 m The rainwater available for harvesting is calculated 262570 m^3 or 0.26 MCM per annum There is no extraction of groundwater for industrial use. The total consumption of water is 28 MCM per annum. The total rainwater available is 0.26 MCM, the natural recharge is computed from the rainfall infiltration factor method is 0.13 MCM. Hence, the 0.13 MCM water is available for the artificial recharge rainwater harvesting.

S. No.	NIT Recommendation	Action Plan
1	Since the TDS value in W-13 well was slightly above the acceptable TDS limit, it is recommended to monitor that the TDS levels in the discharged water meet regulatory requirements to prevent any negative environmental impact from the plant's operations.	Water quality monitoring shall be done once a month through NABL accredited laboratory to monitor TDS Level.
2	As the value of hardness as CaCO, in W-l groundwater sample was found to be above acceptable limit but within the permissible limit, a need for ongoing monitoring and potential remediation efforts can be suggested in the report.	Water quality monitoring shall be done once in a month engaging NABL accredited laboratory to track hardness as CaCO3 content and corrective/preventive actions will be taken based on findings in the report.
3	By reviewing the report, it was found that the value of Calcium at W-l groundwater sample was found to be above acceptable limit but within permissible limits which may result in encrustation, the plant may take some preventive measures accord	Regular monitoring of groundwater quality, particularly calcium concentration, will be conducted to track any trends or deterioration. Installation of suitable water softening systems, such as ion exchange units or lime softeners, can be considered to reduce hardness at the source. Periodic maintenance and descaling of pipelines, storage systems, and water-handling equipment will be done.
4	The maximum value pf alkalinity at W-13 groundwater sample falls above the 'acceptable limit' as per Indian Drinking Water Standards 10500:2012. It is recommended to suggest some preliminary treatment measures for ensuring operational efficiency of the plant.	Mirzapur TPP will initiate a routine water quality monitoring program, with monthly sampling and analysis of alkalinity and associated parameters such as pH, hardness, and total dissolved solids, particularly at W-13 and nearby borewells. This will help detect trends and fluctuations over time. Based on monitoring results, preliminary treatment measures such as controlled chemical dosing (e.g., with alum or lime), pH adjustment, or aeration will be implemented to manage alkalinity effectively.

7.12 BIODIVERSITY (ECOLOGICAL) ASSESSMENT & FLORA FAUNA (WILDLIFE) CONSERVATION & MANAGEMENT PLAN

Study of biological environment is one of the important aspects in Environmental Impact Assessment in view of the need for conservation of Environmental quality. Ecological study was carried out by ecology team of GESPL Reconnaissance study of the area was done to obtain flora & Fauna structure of the area. An ecological survey was carried out both in the project site & the 10 km radius. Birds in the study area were observed and identified with the help of field guidebook and photographs. For mammals, information on recent sightings/records of mammals by the villagers/locals was collected. For carnivores, indirect sampling was carried out and the mammals were identified by foot marks, faeces and other marks/sign created by them. In case of reptiles mainly lizards were sampled by direct count on open width transects. No National Park, Sanctuary, Elephant/Tiger Reserve, or migratory routes/wildlife corridor exists within 10 km of the TPP.

The survey recorded 22 species of Schedule-I species of which 10 are mammals, 6 are fauna and 6 herpeto-fauna as per Indian Wildlife (Protection and Amendment) Act, 2022. No Schedule-I species was recorded from the core zone.

Biodiversity (Ecological) Assessment and Flora and Fauna (Wildlife) Management Plan for Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant has been prepared by Good Earth Envirocare Consultancy in association with the Indian Institute of Social Welfare and Business Management Kolkata in 2024. The budgetary provision of 148 lakhs have been earmarked for the conservation of the 22 Schedule 1 species, under the Habitat Management, Fire Management and Awareness Creation and Capacity Building heads.

7.13 NEED-BASED ASSESSMENT SURVEY & ACTION PLAN

The Social Impact Assessment (SIA) was conducted for the proposed 2×800 MW Ultra Super-Critical Thermal Power Plant at Dadri Khurd village in the Mirzapur district of Uttar Pradesh by Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL). The primary objective of the SIA study was to evaluate the potential social impacts of the project on the

surrounding communities and to identify strategies to mitigate these effects. In addition, the study aimed to formulate a comprehensive Corporate Social Responsibility (CSR) action plan that supports infrastructure development, livelihood enhancement, and long-term sustainable growth for the Project Affected Families (PAFs) and neighboring populations. The assessment ensures that the implementation of the project aligns with inclusive and responsible development goals.

The study identified several positive social impacts associated with the project. Notably, it would lead to significant improvements in physical infrastructure through the construction of roads, expansion of electrification networks, and provision of better water facilities. Social infrastructure is also expected to be enhanced, with an emphasis on improving educational and healthcare services. Another major benefit of the project is employment generation, both directly during the construction and operational phases and indirectly through ancillary activities. Furthermore, the project is anticipated to support skill development among the local population, improve connectivity, and stimulate local economic activities.

However, the assessment also highlighted certain negative social impacts. Land acquisition and displacement could lead to loss of agricultural land and disruption of livelihoods. There may also be impacts on housing and immovable properties, potentially requiring the relocation of families. Additionally, the project could affect common property resources (CPRs) such as grazing lands, water bodies, and culturally significant areas. Vulnerable groups—including Scheduled Castes (SC), Scheduled Tribes (ST), and women—are particularly susceptible to these disruptions. The lifestyle and traditional practices of local communities may be altered, leading to social fragmentation and loss of cultural identity.

To further understand the severity of these challenges, an Impoverishment Risk Assessment (IRA) was conducted. This analysis utilized a value function model that assigned weightage to various risks on a scale of 1 to 10. Among the parameters, landlessness received the highest concern due to its direct impact on the livelihood of affected individuals, followed by homelessness. This quantitative approach provided a structured method to prioritize risks and guide mitigation strategies accordingly.

The demographic and socio-economic survey covered 104 villages within a 10 km radius of the project site. The findings revealed that only 38% of the population was engaged in

productive work, with a significant 62% classified as non-workers. Literacy levels were found to be relatively low at around 48%, and access to essential services such as healthcare and vocational training remained inadequate. Only 29% of the surveyed villages had functioning Integrated Child Development Services (ICDS) centers, and approximately 45% of the population depended on open sources for drinking water. Other critical deficiencies included the absence of proper drainage systems, poor sanitation, and inadequate transport infrastructure.

To gather accurate and holistic data, the study employed a combination of participatory tools and methodologies. These included structured socio-economic surveys, key informant interviews, focused group discussions (FGDs), and public consultations. Participatory Rural Appraisal (PRA) techniques such as social and resource mapping, timeline analysis, and institutional mapping were also utilized to ensure community involvement and to reflect grassroots perspectives in the assessment.

Based on the identified gaps and stakeholder inputs, several key recommendations and CSR priorities were proposed. These include infrastructure development projects focusing on roads, sanitation, and electrification; enhancing educational facilities at the middle and high school levels; expanding access to healthcare through mobile units and dispensaries; and establishing vocational training centers aimed at youth and women empowerment. Furthermore, the action plan encourages linking the affected population with relevant government welfare schemes such as MGNREGA and PMEGP to ensure livelihood sustainability.

This structured and targeted approach aims to facilitate inclusive and sustainable development in the region surrounding the Mirzapur Thermal Power Plant. The detailed Socio EMP (CER) along with Action plan with budgetary allocation and incorporated to address PH issues is furnished in Table no. 7.3.

A Need based assessment & SIA has been carried out for study area through Indian Institute of Social Welfare & Business Management, (A Constituent Institute of University of Calcutta).

7.14 WATERSHED MANAGEMNET PLAN

A watershed is an area of land that drains all the streams and rainfall to a common outlet. The word "watershed" is sometimes used interchangeably with drainage basin or catchment.

The watershed and drainage of the study area of 10 km radius is prepared by reputed institute 'Akshar Geo Services vetted by Dr. Kapil Kumar, Assistant Professor, Dept. of Civil Engineering, National Institute of Technology Delhi. The report provides an in-depth analysis on different components associated with Watershed Study with some recommendations and action plan on precautionary conservation measures to counterbalance any unforeseen negative impact on the natural ecosystem of the area.

The maps are prepared from the SRTM 30m resolution Digital Elevation Model (DEM) from open topography. The Geographic Information System software QGIS/ArcGIS used for the delineation of watershed. The study area is broadly divided by two watersheds and the highest rank of the stream order is 4th order stream flowing towards NE direction.

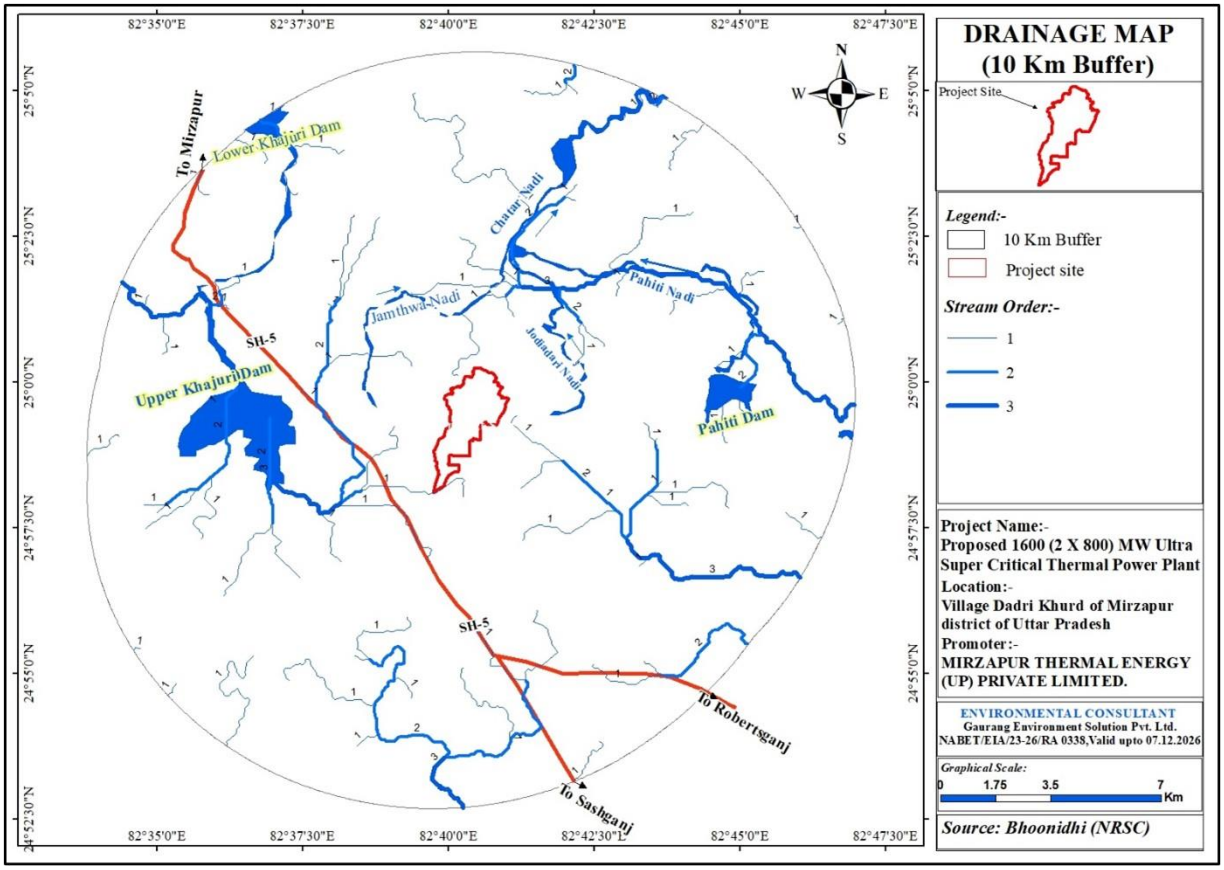


Figure 7.12: Watershed with streams

The project site falls in the first order streams of the watershed with medium to low drainage density. The streams are flowing towards north and north east direction. There is no significant management related to watershed needs to be developed at the present stage. The care should be taken not to dispose any waste to the streams. This will be taken care as the industry is having zero liquid discharge policy. The surface water reservoir or check dam can be constructed at suitable location probably near Hanuman Gadhi Mandir, Dadri Khurd village with detailed survey and study.

Watershed Management Strategies:

- Maintain and enhance groundwater recharge through artificial recharge methods.
- Control soil erosion and improve water retention using check dams and contour bunding.
- Promote vegetative cover and reduce impervious surfaces to increase infiltration.

- Regular monitoring of groundwater levels and quality to evaluate the impact of interventions.

7.15 COMPARISON OF PREVIOUS BASELINE AND CURRENT BASELINE STUDY

Specific ToR point no. 1.3 of ToR issued to the project requires comparison of changes previous baseline study and present baseline study to bring out the changes in the baseline.

The previous EIA report was prepared in 2012 with baseline period of Pre-monsoon season 2011 (March-May' 2011). The said EIA was appraised by EAC & project issued Environmental Clearance dated 21.08.2014. However, the said EC set aside by Hon'ble NGT vide order dated judgement dated 21.12.2016 (details given **Chapter 1** of this EIA report). The comparison of previous baseline has been done with current baseline study and the results are as below:

Table 7.13: Baseline Comparison-Ambient Air

Parameters	**Previous Study (March to May 2011)**	**Present Baseline Study (October –December 2024)**	**Remark/ comparison**
PM_{10}	71.35 µg/m^3 – 45.10 µg/m^3	69 µg/m^3 - 48 µg/m^3	Comparison is not conclusive due to different monitoring seasons
$PM_{2.5}$	28.15 µg/m^3 – 13.22 µg/m^3	41 µg/m^3 – 22 µg/m^3	
SO_2	9.65 µg/m^3 - 5.78 µg/m^3	10.5 µg/m^3 – 4.7 µg/m^3	
NO_2	21.39 µg/m^3 – 12.67µg/m^3	11.8 µg/m^3 – 3.7 µg/m^3	
CO	-	0.054 mg/m^3- 0.454 mg/m3	
Ambient Noise			
Day Time	52.66 dB (A) to 41.60 dB (A)	52.3 dB to 49.2 dB	
Night Time	43.31 dB (A) to 37.39 dB (A)	44 dB to 40.2 dB	

Table 7.14: Baseline Comparison- Ground Water Quality

Parameters	Previous Study (March to May , 2011)	Present Baseline Study (Oct. –Dec., 2024)
pH	7.84- 7.14	7.79- 6.69
Total Dissolved Solids	517 mg/l -166 mg/l	390 mg/l -166 mg/l
Total Hardness	218.16 -76.66 mg/l	178 mg/l 6.66 mg
Alkalinity	402.52 -66.33 mg/l	120.52 -66.33

Table 7.15: Baseline Comparison- Surface water Quality

Parameters	Previous Study (March to May , 2011)	Present Baseline Study (Oct. t Baseline S	Remark/ comparison
pH	7.82-7.25	7.75to 7.26	No impact due to operational plant
COD	11.20-19.92 mg/l	23 – 3 mg/l	
BOD	7.50 -3.60 mg/l	8 – 1 mg/l	

Table 7.16: Baseline Comparison- Soil Quality Analysis

Parameters	Previous Study (March to May , 2011)	Present Baseline Study (Oct. –Dec., 2024)
pH	7.87- 6.76	8.12 to 7.81
Avalable Nitrogen (as N)	265.50 kg/ha- 131.79 kg/ha	191.20 to 221.04 kg/hec
Available Phosphorus	32.98 kg/ha- 11.56 kg/ha	13.5 to 11.4 kg/hec
Potassium (as K)	142.19 kg/ha- 99.02 kg/ha	162.00 to 58 kg/hec
Organic Matter	0.62 %-0.21 %	0.89% to 0.80%

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CHAPTER - VIII
PROJECT BENEFITS

8.1 PROJECT BENEFITS

The proposed 2x800 MW Ultra Super Critical Thermal Power Plant is poised to bring substantial benefits to the local and regional economy. This proposed project aims to uplift the standard of living for the local populace through increased employment opportunities and enhanced infrastructure. Additionally, it is anticipated to attract investments from high-income groups, fostering economic growth in the region. The key project benefits include:

- Infrastructure Development: The proposed project will contribute to the development of physical infrastructure, including approach roads, drainage, communication, and transportation facilities.
- Direct & Indirect Employment Opportunities: The proposed project will generate both direct and indirect employment opportunities, benefiting the local workforce and contributing to economic development.
- Revenue Generation to Central & State Government: The increased economic activity is expected to result in revenue generation for both central and state governments.
- Allocation of 2% of Profit towards ESC Activities: A commitment to allocate 2% of profits towards Environmental and Social Commitments (ESC) activities, ensuring a focus on sustainable and responsible practices.
- Trickledown Effect of Enhanced Profitability: The enhanced profitability of the project is expected to have a positive impact on the local population through a trickledown effect.
- Skill Development and Capacity Building: Initiatives such as vocational training, income generation programs, and entrepreneurship development programs will contribute to skill development and capacity building.
- Awareness Programs and Community Activities: Various community-centric activities, including health camps, medical aid, family welfare camps, sanitization/cleanliness

awareness programs, immunization camps, sports, cultural activities, and plantation drives, will be undertaken.

- Awareness about Waterborne and Pandemic Diseases: The project aims to raise awareness about waterborne and pandemic diseases among local villagers.

8.2 IMPROVEMENTS IN THE PHYSICAL INFRASTRUCTURE

The proposed project will lead to improvements in physical infrastructure and community development. Besides power generation facilities, the project will provide the following facilities:

- Areas designated for construction-related offices and stores.
- Amenities for time management and security assurance.
- Prepared with suitable equipment for handling emergencies.
- Zones dedicated to offering meals and comprehensive welfare support.
- Sufficient sanitation facilities catering to the workforce.
- Parking provisions for both 2-wheelers and 4-wheelers.
- Specifically allocated space for skill development and training.

The improvement in physical infrastructure is expected to contribute to the overall well-being of the local population. There will be a significant improvement in the physical infrastructure at site and immediate neighborhood due to the development of proposed unit. The areas of nearby vicinity of the project will see a positive change from the present scenarios.

8.3 IMPROVEMENTS IN THE SOCIAL INFRASTRUCTURE

The proposed project will positively impact social infrastructure, a subset of the infrastructure sector that includes assets accommodating social services. The commissioning of the Ultra Super Critical Thermal Power Plant is expected to create a conducive environment for urbanization in the area. The project will employ additional workers, supervisors, and engineers locally whenever possible. Medical facilities will be upgraded as part of Corporate Environmental Responsibility (CER) activities, benefiting the local

residents. The influx of educated and skilled individuals from outside the area, coupled with secondary developments such as new schools and shops, is anticipated. These developments will be beneficial to the local population, contributing to improved social infrastructure.

8.4 EMPLOYMENT POTENTIAL – SKILLED; SEMI-SKILLED & UNSKILLED

The employment potential of the proposed project includes both direct and indirect opportunities. Approximately 10,125 permanent & contractual employees are estimated to be required for the constructiona & operational phase of the 2x800 MW Ultra Super Critical Thermal Power Plant. Direct employment opportunities during the operational phase will be limited due to mechanized and automated processes. Skilled manpower requirements will be expected to come from outside the study area, while semi-skilled & unskilled labor may be sourced locally, depending on availability and feasibility. Indirect employment opportunities in the service sector are anticipated, along with the potential for secondary developments leading to increased family population and employment generation in the study area.

8.5 CORPORATE SOCIAL RESPONSIBILITY (CSR) ACTIVITIES

MTEUPPL will carry out its CSR activities, inline to the applicability of Company's Act 2013, in the field of Education, Health, Sustainable Livelihood, Community Infrastructure, Training & Skill development thereby increasing the quality life in study area. Therefore, positive impacts are anticipated on socio-economic aspects during operation phase after implementation of the proposed project

MTEUPPL is determined to work closely with the local community to deliver the project in a way which is fair to local communities and creates a legacy for the next generation. It is also important that the stakeholders are held collectively responsible and encouraged to take ownership of the development, thus promoting the agenda of sustainability for future generation.

MTE(UP)PL will align its initiatives with Sustainable Development Goals, thus translating business growth into holistic community development & creation of sustainable livelihood opportunities.

8.6 SOCIO-ECONOMIC DEVELOPMENT (CER)

The Ministry of Environment, Forests & Climate Change (MoEF&CC) issued an Office Memorandum (OM) on CER dated 01.05.2018, superseded by a subsequent OM dated 30.09.2020. This revision directs Environmental Appraisal Committees (EAC) and State-level EACs to prescribe specific conditions for grant of prior environmental clearance instead of allocating funds under CER. A separate budget Rs. 46.50 Crore towards CER activities (as per Ministry's OM dated 01.05.2018) is allocated for CER activities, and efforts will be made to address concerns raised after the public consultation during the final EIA ensuring responsible corporate practices.

A time bound, year-wise & activity wise social-EMP plan has been developed in line to Ministry's O.M. dated 30.09.2020 to address issues raised during the Public Hearing & socio-economic survey of the study area with a budgetary allocation of Rs. 46.50 crore (as per Ministry's O.M. dated 01.05.2018). Details are given in **Table 7.2 & 7.3** of **Chapter 7** of this EIA report.

Activities under Socio-Economic development will be carried out under the heads community infrastructure development, Education, Health, etc. based on socio economic study findings, issues raised during public consultation process and will be finalized based on recommendation of the Hon'ble EAC during appraisal for Environmental Clearance.

MTE(UP)PL will be also work in resource conservation, biodiversity conservation, solid waste management, rainwater harvesting, Plantation in community areas etc.

The budgetary allocation based on socio-economic survey of the study area is subject to revisions based on recommendations/suggestions received from stakeholders during public consultation and recommendations/directions of the Hon'ble EAC during appraisal of environmental clearance.

8.7 CONCLUSION

The proposed project will aid in meeting demand & supply of the power sector in India. The overall effect will improve the buying power of people and thus a higher standard of living viz. better education, improved health and sanitation facilities, housing and acquisition of consumer durables. Housing, transport, medical, educational and other civic amenities will improve in the future. This is envisaged as a major positive benefit.

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CHAPTER IX: - ENVIRONMENT COST & BENEFIT ANALYSIS

9.1 INTRODUCTION

ECBA aims to provide a rationality between gain and loss. It forces the decision maker to assess the benefits and losses in different dimensions like social, economic and environmental in a timely manner. CBA is clear in its requirement that any policy/project should be seen as a choice of alternatives for achieving the fundamental goal and explicit the individual preferences. This is a major limitation of ECBA that the preference is based on self-interest of those individuals.

Environmental Cost-Benefit Analysis (CBA) involves evaluating the economic impact of policies and projects designed to enhance environmental services or those that may unintentionally impact the environment, sometimes negatively. This analysis helps assess the trade-offs between benefits and costs related to environmental outcomes.

The theoretical foundations for CBA that provide the basis for evaluating projects or policies in terms of their impact on individual welfare and the overall social good and which allow decision-makers to determine whether the benefits of a proposed intervention justify its costs from a societal perspective can be summarized as:

- **Individual Preferences as the Source of Value:** CBA assumes that the value of any good or service is derived from the preferences of individuals. This means that if an individual prefers situation A to situation B, then A provides greater well-being (or utility) to that individual. In CBA, the goal is to assess and aggregate the preferences of individuals to determine the overall benefits and costs of a project or policy.
- **Measurement of Preferences:** Preferences are measured either by the willingness to pay for a benefit or by the acceptance of compensation for a cost. Willingness to Pay (WTP) refers to how much an individual is willing to pay to receive a benefit or to avoid a loss. In essence, WTP reflects the monetary value that people assign to a specific benefit.

Willingness to Accept (WTA) refers to the amount of money an individual requires in order to accept a cost or a loss. The difference between WTP and WTA can sometimes lead to different valuations, especially when individuals are faced with losses versus gains

Social Benefit and Social Cost: The total social benefit is the sum of the individual benefits derived from a particular project or policy, which reflects the total value that society places on the benefits provided by the policy. Similarly, the total social cost is the sum of the individual costs that individuals bear in relation to the policy or project. In CBA, the overall net benefit (or social welfare) is the difference between the total social benefits and total social costs. A project or policy is considered socially worthwhile if the benefits outweigh the costs, leading to a positive net benefit.

9.2 OVERVIEW OF THE PROJECT

Mirzapur Thermal Energy (UP) Private Limited has proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh. The proposed project intends to implement the coal-based Power Project firing domestic Indian coal sourced from nearby mines. The total plot area of the project is 365.19 Ha. The total project cost for proposed expansion is Rs. 18,300 Crores.

9.3 PROBLEM ANALYSIS

As stipulated in Section **A - Specific Terms of Reference,** para **1.15 of TOR** issued by MoEF&CC vide TOR Identification No. TO24A0601UP5665287N dt. 29.07.24, Cost-Benefit Analysis with respect to the environment due to the project is done.

Problems: The proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant brings several environmental and operational challenges. One of the most significant issues is the increased emissions of greenhouse gases and other pollutants, such as sulfur dioxide (SO_2), oxides of nitrogen (NOx), and particulate matter, which will put

additional strain on air quality and public health. Even with modern technologies to reduce emissions, coal-fired plants still face criticism for their contribution to climate change. Moreover, the proposed project could face infrastructure constraints, especially in terms of water supply for cooling, ash disposal, and land utilization, potentially affecting local ecosystems.

Opportunities: On the positive side, expanding the Super Critical Coal-Based Thermal Power Plant offers significant economic and energy security benefits. The addition of 2x800 MW units can substantially increase the plant's total generation capacity, enabling the facility to meet growing energy demands in the region. The proposal is mooted to deploy the state-of-the-art technology and accordingly two units of 800 MW i.e., 2x800 MW are being considered with ultra-supercritical steam parameters to attain high cycle efficiency. With the advanced ultra-supercritical technology, the units will operate at higher efficiencies, reducing fuel consumption per unit of electricity generated, which can help offset some environmental concerns. The expansion also creates opportunities for job creation, both during the construction phase and in long-term operations and maintenance. Additionally, by enhancing the capacity of the existing plant, there is potential for economies of scale, reducing the overall cost of electricity production per unit. If paired with initiatives to improve the plant's environmental performance, such as carbon capture and storage or using cleaner coal technologies, this expansion could help strike a balance between energy production and environmental responsibility.

In response to the challenges and opportunities associated with the plant, policy objectives may be structured around several key areas like regulatory framework (incentives for sustainable practices), sustainable development (promotion of eco-friendly products and waste management policies), economic support (support for local supply chains and financial aid for R&D), workforce development (skill development programs), etc.

9.4 ASSIGNING VALUES

Environmental assets also have value, and degradation of environment also leads to a lot of dis-benefits. Economic activity creates environmental costs. Preserving or conserving

environment creates benefits. These have to be measured to ascertain the environmental Cost Benefits of the economic activity.

User value/use value is the benefit that an individual derives by using environment. It is of two types:

Actual use value - This includes the direct use of environmental resources that could be affected by the expansion of the power plant. For instance, nearby communities and industries may rely on local water sources for consumption or irrigation, and the potential alteration or depletion of these resources due to the plant's expansion could result in measurable economic losses. The value of resources like fresh water, air quality, and agricultural land can be assessed in monetary terms, reflecting the direct cost of using those environmental resources.

Option value - This reflects the potential future benefits that individuals or society may derive from conserving the environment, even if they are not using it currently:

It is of two types. (a) People might not use certain natural resources directly now, but they may wish to do so in the future. For example, residents in the surrounding region may not currently use the forest or water bodies near the plant but may wish to preserve these for future generations or future recreational use (b) Bequeath value: The preservation of the environment for future generations, even if not directly used today, could hold value for society. For instance, the surrounding ecosystem, which could be impacted by emissions or land use changes due to the expansion, may be important for future generations who could benefit from its conservation for tourism, biodiversity, or health.

These option values are more difficult to quantify directly in monetary terms but can be assessed through market research, public surveys, or environmental impact studies that gauge public sentiment and willingness to pay for preserving environmental quality.

Intrinsic value is non-user or passive value. It refers to the non-use or passive value people place on the conservation of environmental resources for their inherent worth, regardless of

whether they directly benefit from them. In the case of the power plant expansion, this could involve:

- The value people place on preserving local wildlife, forests, or biodiversity that might be at risk due to the power plant's emissions or land clearing.
- The protection of endangered species or ecosystems that are part of the broader environment, such as preserving wetlands or forests that help maintain the ecological balance.

9.5 ANALYSIS OF RISK

9.5.1 WATER ENVIRONMENT

The water demand for the proposed project will be 28 MCM/ year.

Benefit due to using STP and ETP

The impact on water resources due to the project shall be insignificant as wastewater generating within the project site will be treated in the ETP & STP. Domestic sewage will undergo treatment in the proposed Sewage Treatment Plant (STP) and 10 KLD treated water will be utilized for greenbelt development. ETP treated water is reused in the process. Thus, the unit envisages the Zero Liquid Discharge (ZLD) concept.

STP/ETP can indeed be considered a benefit as it effectively removes harmful pollutants from wastewater, significantly reducing the release of toxic substances into the environment. This leads to improved water quality in nearby rivers, lakes, and groundwater, benefiting ecosystems and public health. While the initial investment in an STP/ETP can be significant, the long-term savings from reduced water treatment costs, avoided fines, and lower health-related costs can outweigh these initial expenses. Additionally, efficient wastewater treatment can extend the life of local water resources, which may be crucial in water-scarce areas. Accordingly, the cost of STP/ETP **around Rs. 1.77 Cr.** may be accounted as benefit.

Benefit due to Rainwater Harvesting Structure

The total fresh water requirement after the proposed expansion is 28 MCM/Year which will be sourced from River Ganga to Upper Khajuri Dam and from Upper Khajuri Dam to plant site through dedicated pipeline of about 32.6 km in length.

12,15,939.15 m^3/ annum of recharge for entire project premises is available based on the site plan of the project area. Out of this, 501881.65 m^3/ year of rainwater annual recharge from plant area, coal stock yard, township and greenbelt area by means of percolation ponds and natural recharge is considered for annual ground water recharge.

Hence the budget to the tune of **Rs. 7.19 Cr.** towards installation of RWH structures by means of percolation ponds may be accounted as benefit, as ground water recharge can be accounted under benefit. Accordingly, considering the 'Safe' Category status of ground water in the project site, the benefit towards recharge of annual ground water regime may be calculated as follows:

(Source: Report of the CPCB In-house Committee on Methodology for Assessing Environmental Compensation and Action Plan to Utilize the Fund)

Total recharge of Ground Water Regime through RWH = 501881.65 m^3/ year

Benefit derived through ground water recharge = 501881.65 × Rs. 50 = Rs. 2,50,94,082.5/-

Cost required for RWH = 7.19 Cr.

Total cost as benefit on account of recharge of ground water regime = **Rs.9,69,94,082.5/-**

9.5.1.1 GREEN BELT

Benefit due to reduction of noise

Total trees proposed to be planted as part of green belt development plan = 3,46,466 Nos.

Cost estimated for plantation = Rs.11.80 Cr.

The noise attenuation at 50-meter width is 18 dB [Ref: Noise Attenuation by Greenbelt]. Since the noise levels are well within the limits prescribed by the CPCB for industrial area,

there is no need to calculate the additional benefit provided by the greenbelt in terms of noise reduction and hence it is not accounted.

Benefit due to reduction of Air pollution

Pollution removal value per unit canopy cover was 23.1 $gm^{-2}a^{-1}$ [Ref: Air pollution removal by urban trees and shrubs in the U.S.]

We will take total area required for plantation as canopy area.

So total area for plantation =12,05,100 sq.m.

We have pollution removal value per unit canopy as 23.1 $gm^{-2}a^{-1}$.

So, total pollution removal by greenbelt = 12,05,100 × 23.1 = 27837.81 (Kg/a)

Cost is different for different pollutants listed as follows:

PM – Rs. 432/Kg Emissions, SO_2 – Rs. 165/Kg Emissions, NOx – Rs. 96/Kg Emissions

As per the stack emissions, the percentage composition of pollutants will be as follows:

PM = 16.57 %; SO_2 = 48.74 %; NO_2 = 34.69%

Benefit Cost

PM = 4613.08 × 432 = Rs. 19,92,849.38/-

SO_2 = 13567.2 × 165 = Rs. 22,38,588.79/-

NO_2 = 9657.53 × 96 = Rs. 9,27,122.68/-

Total cost as benefit = Rs. 51,58,560.86/-

9.5.1.2 AIR POLLUTION

Damage cost

Calculations of the emissions in environment:

PM = 2,31,118.27 Kg/yr

SO_2 = 6,79,726.08 Kg/yr

NO_2 = 4,83,848.64 Kg/yr

Total damage cost would be as follows:

Total PM emission = 2,31,118.27 Kg × Rs 432 = Rs. 9,98,43,093.5 /-

Total SO_2 emission = 6,79,726.08 Kg × Rs 165 = Rs. 11,21,54,803.20 /-

Total NO_2 emission = 4,83,848.64 Kg × Rs 96 = Rs. 4,64,49,469.44/-

Damage cost

Total damage cost would be Rs. 25,84,47,366.14/-.

9.5.1.3 SOLID WASTE MANAGEMENT

The waste generation shall be accounted for CBA depending up on the fate of the waste. The proposed project generates:

Table Error! No text of specified style in document.**.1: Details of municipal solid waste generation**

Particulars	Population	Basis	Quantity of waste generated (in kg/day)
Workers	7275	@0.3 kg/day	2182.5
Landscaping	299.3 acre	@0.2kg/acre/day	59.86
STP sludge (dry)	--	--	50
Total			2292.36 say 2293

Table Error! No text of specified style in document.**.2 :Details of Hazardous waste**

S. No.	Type of waste	Source of generation	Schedule as per HWM Rules, 2016	Total	Final Disposal
1	Used or spent oil	DG set operation & Machine operation	Schedule I, Category 5.1	60 TPA	Handed over to CPCB/SPCB approved recycler
2	Spent ion exchange resin containing toxic metals	Spent Resin from DM Plant	Schedule I Category 35.2	5 TPA	Collection, Storage, Transportation and disposal to

S. No.	Type of waste	Source of generation	Schedule as per HWM Rules, 2016	Total	Final Disposal
					authorized TSDF
3	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	Handling of hazardous chemicals and wastes	Schedule I Category 33.1	12 TPA	Collection, Storage, Transportation and disposal to authorized recycler
4	Contaminated cotton rags or other cleaning materials	Handling of hazardous chemicals and wastes	Schedule I Category 33.2	10 TPA	Collection, Storage, Transportation and disposal to authorized TSDF

Fly Ash Management

Bottom ash to the tune of 0.5 million TPA will be collected in wet form; while fly ash to the tune of 2.06 million TPA will be collected in dry form to facilitate utilization. Fly ash is collected in dry form, pneumatically transferred to closed silos, and then utilized in various applications such as cement manufacturing, construction activities including RMC plants, roads and highways, as well as in brick manufacturing, ensuring effective management and environmentally sound disposal. Unutilized Fly ash and bottom ash shall be disposed via High Concentration Slurry disposal (HCSD) system to Ash dyke in case of exigencies. Bottom ash generated shall be supplied to RMC (Ready Mix Concrete) plants, brick manufacturers, used for filling low-lying areas, or for mine void filling, in accordance with statutory guidelines, thereby eliminating the need for dedicated disposal areas.

Cost due to loss of Benefit: 100% ash utilization shall be taken up as per Fly Ash Notification, 31st December, 2021 and its amendments.

Ash generated = Total quantity is 2.56 million TPA

Market Price of fly ash (if sold) = Rs. 1/ Kg (if sold out)

Cost due to loss of Benefit (given out free of cost) = 25,60,008 × 1 = Rs. 25,60,008/year

Total cost due to loss of benefit would be Rs. 25,60,008 /- from Fly Ash generated. **Since, the fly ash is not sold out, but given free of cost, the amount needs to be accounted under the cost of fly ash management.**

9.5.2 CORPORATE ENVIRONMENT RESPONSIBILITY

Total CER proposed = 45.75 Cr.

Even though it is the responsibility of an industry to incur expenditure towards various activities on account of CER, the benefits of the same are passed on to the society. CER initiatives are planned under the heads such as educational initiatives, community health initiatives, sustainable livelihood & women empowerment, community infrastructure development, sports & culture development and tree plantation drive. The benefits, such as improved air and water quality, public health, infrastructure development, etc. directly improve the quality of life for communities. Hence this amount shall be considered as benefit.

9.6 BUDGETARY ALLOCATION FOR ENVIRONMENTAL MANAGEMENT PLAN

Table Error! No text of specified style in document.**.3: Budgetary allocation for Environmental Management Plan**

S. No.	Item Description	Cost in Rs. (Crores)
1	Electrostatic Precipitator	542.80
2	SCR/De-NOx System /Low NOx Burner	1638.98
3	Chimney	269.00
4	Dust extraction & suppression system	8.26
5	Cooling Tower including civil works	189.15
6	DM Plant Waste Treatment System	60.00
7	Sewerage collection, treatment & disposal	1.77
8	Ash Handling including ash water recirculation	225.38
9	Ash disposal civil work	29.50
10	Green Belt & landscaping	11.80

S. No.	Item Description	Cost in Rs. (Crores)
11	Rainwater harvesting	7.19
12	Solar power harnessing	3.19
13	Environmental Laboratory & Environmental Monitoring (Capital + Recurring)	10.03
14	CEMS, CAAQMS, EQMS monitoring system & Main gate display board	11.80
15	Wind Breaking Wall, Dry Fog System & RCC Flooring in Coal Storage Area.	3.54
Total in Rs in Crores		**3012.39 Cr.**

In the environmental cost-benefit analysis, it is important to consider the relevance and impact of each measure in addressing environmental concerns.

Cooling towers serve an essential function in the cooling processes of a power plant, their role primarily being related to operational efficiency and thermal management rather than directly addressing environmental impact. Cooling towers do not significantly contribute to the mitigation of air or water pollution, which are primary environmental concerns that the analysis seeks to address. Hence, the budget set aside for **Cooling Towers** (Rs. 189.15 Crores) is considered under cost in this environmental cost-benefit analysis.

Since the fly ash is not sold but provided free of cost, there is no direct revenue generated from its disposal. Consequently, the associated expenses—such as ash handling, including ash water recirculation (Rs. 225.38 Crores), and ash disposal civil works (Rs. 29.50 Crores)—are considered as costs rather than benefits in this environmental cost-benefit analysis. These activities, while environmentally necessary, do not contribute to monetary gains and therefore cannot be accounted for as benefits in the analysis.

The cost of the chimney (Rs. 59 Crores), environmental laboratory and environmental monitoring (Rs. 10.03 Crores), along with CEMS, CAAQMS, EQMS monitoring systems, and the main gate display board (Rs. 11.80 Crores), are not considered as direct pollution mitigation measures. The chimney primarily serves to disperse emissions rather than reduce them, while the monitoring systems and laboratory facilities are designed to track and report existing environmental conditions rather than actively improve them. As these

components do not directly contribute to pollution reduction or environmental restoration, they are classified under costs rather than benefits in the environmental cost-benefit analysis.

Total cost = 25,84,47,366.14 + 25,60,008 +59,00,00,000 + 1,89,15,00,000 + 225,38,00,000 + 29,50,00,000 + 10,03,00,000 + 11,80,00,000

= 5,50,96,07,374.14/-

Total Benefit = 1,77,00,000 + 7,19,00,000 + 2,50,94,082.5 + 51,58,560.86 + 45,75,00,000 + 5,42,80,00,000 + 18,48,98,00,000 + 8,26,00,000 + 60,00,00,000 + 11,80,00,000 + 3,19,00,000 + 3,54,00,000 **= 25,36,30,52,643.36/-**

Table 9.4: Total Cost Vs Total Benefit

Total Cost (year)	Total Benefit	Net Benefit (per year)
5,50,96,07,374.14	25,36,30,52,643.36	19,85,34,45,269.22

Here, a 10% recurring cost is considered annually. Since the NPV is being calculated over a 10-year period, the recurring cost will also be accounted for across all 10 years in the analysis.

So total recurring cost for 10 years = 5,50,96,07,374.14 × 0.10 × 10 = Rs. 5,50,96,07,374.14/-

NPV Formula

To calculate net present value, you need to determine the cash flows for each period of the investment or project, discount them to present value, and subtract the initial investment from the sum of the project's discounted cash flows.

In this formula:

- Cash Flow is the sum of money spent and earned on the investment or project for a given period of time.
- n is the number of periods of time.
- r is the discount rate.

$$NPV = \frac{Cash\ Flow_1}{(1+r)^1} + \frac{Cash\ Flow_2}{(1+r)^2} + \frac{Cash\ Flow_n}{(1+r)^n} - Initial\ Investment$$

Cash Flow

Cash flows are any money spent or earned for the sake of the investment, including things like capital expenditures, interest, and loan payments. Each period's cash flow includes both outflows for expenses and inflows for profits, revenue, or dividends.

Number of Periods (n)

The number of periods equals how many months or years the project or investment will last. Sometimes, the number of periods will default to 10, or 10 years, since that's the average lifespan of a business. However, different projects, companies, and investments may have more specific timeframes.

Discount Rate (r)

In most situations, the discount rate is the company's weighted average cost of capital (WACC). A company's WACC is how much money it needs to make to justify the cost of operating. WACC includes the company's interest rate, loan payments, and dividend payments.

Cash flows need to be discounted because of a concept called the time value of money. This is the belief that money today is worth more than money received at a later date. For example, $10 today is worth more than $10 a year from now because you can invest the money received now to earn interest over that year. Additionally, interest rates and inflation affect how much $1 is worth, so discounting future cash flows to the present value allows us to analyze and compare investment options more accurately

NPV = Σ (Benefits - Costs) / (1 + Discount Rate) ^{t}

Table Error! No text of specified style in document..**4: NPV Calculation for 10 years**

**Year	Benefits (Cr)	Discount rate (10%)	Time Period	Value of benefits for each time period
1	19,85,34,45,269.22	0.1	1	18048586608
2	19,85,34,45,269.22	0.1	2	16407806008
3	19,85,34,45,269.22	0.1	3	14916187280
4	19,85,34,45,269.22	0.1	4	13560170254
5	19,85,34,45,269.22	0.1	5	12327427504
6	19,85,34,45,269.22	0.1	6	11206752276
7	19,85,34,45,269.22	0.1	7	10187956615
8	19,85,34,45,269.22	0.1	8	9261778741
9	19,85,34,45,269.22	0.1	9	8419798855
10	19,85,34,45,269.22	0.1	10	7654362596
Total	1,98,53,44,52,692			121990826736.157

Net Present Value (NPV) = (+) 1,10,97,16,11,987.877 (for 10 years) say (+) 11,097.16 Cr

9.7 OVERVIEW OF THE COST AND BENEFITS

- Positive NPV: Project is expected to generate more value than it costs, indicating it is financially viable.
- Negative NPV: Project is expected to cost more than it generates, suggesting it should be avoided.
- Zero NPV: Project's expected value is equal to its cost, meaning it's indifferent from an economic standpoint.

9.8 CONCLUSION

- The Net Present Value (NPV) of the project over the 10-year period is (+) 1,10,97,16,11,987.877 say 11,097.16 Cr., indicating a positive outcome and confirming

that the project's benefits exceed its costs. This suggests that the project will be profitable and contribute to the overall socio-economic development of the region.

- The environmental benefits of this project outweigh the costs by a significant margin. This is a strong and positive conclusion that highlights the substantial positive impact of the project on the environment.
- This project is a worthwhile investment that will generate significant long-term benefits for the environment. This conclusion emphasizes the long-term value of the project and its ability to improve the energy sector and environment over time.
- The social benefits of this project are also significant. This conclusion highlights the broader benefits of the project, which extend beyond environmental protection to impact the energy sector and people's quality of life.

Environmental Management Plan detailed in Chapter-10 will be implemented along with regular monitoring and compliance of applicable regulatory provisions. Project is expected to generate more value than it costs, indicating it's financially viable within 10 years. This proposed project aims to uplift the standard of living for the local populace through increased employment opportunities and enhanced infrastructure. Additionally, it is anticipated to attract investments from high-income groups, fostering economic growth in the region.

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CHAPTER X

ENVIRONMENTAL MANAGEMENT PLAN

10.1 INTRODUCTION

The Environmental Management Plan (EMP) is a site-specific plan developed to ensure that the project is implemented in an environmentally sustainable manner. EMP also ensures that the project implementation is carried out in accordance with the design by taking appropriate mitigative actions to and progress indicators to monitor improvements made. Also, the plan outlines roles and responsibility of the key personnel and contractors who are charged with the responsibility to manage the plant. An EMP reduces adverse environmental impacts during its life cycle. The plan will outline the short- and long-term strategies for managing a range of environmental issues prepared in accordance with rules and complying with guidelines of the MoEF&CC and UPPCB/CPCB.

10.1.1 OBJECTIVES OF ENVIRONMENTAL MANAGEMENT PLAN

The EMP consists of a set of mitigation, monitoring and institutional measures to be taken up during the design, construction and operation stages of the project. The EMP has been designed keeping in view of the regulatory and other requirements to ensure the following:

- **Prevention:** Least disturbance to the environment attributes and social aspects Compliance with the environmental acts, rules and guidelines prescribed by CPCB and MOEF&CC time to time
- **Preservation**: Keep the quality of air, water, soil and noise as per the prescribed norms by regulatory bodies.
- **Minimization:** Conservation of natural resources to the extent possible by limiting or reducing the degree, extent, magnitude, or duration of adverse impacts to have a sustainable development.

10.1.2 ENVIRONMENT MANAGEMENT SYSTEM DESIGN

The unit will ensure the following activities

a. Commitment & Policy

i) The project management will strive to provide and implement the Environmental Management Plan that incorporates all issues related to describing quality of air, soil and water, safety of workmen.

b. Planning

This includes identification of environmental impacts, compliance to legal requirements and setting environmental objectives. The various potential impacts are discussed under **Chapter 4** of the EIA Report.

c. Implementation:

This comprises of resources available to the proponents, accountability of contractors, training of operational staff associated with environmental control facilities and documentation of measures to be taken.

d. Measurement & Evaluation

This includes monitoring, corrective actions, and record keeping. Evaluation of EMP achievements will lead to continual improvement.

10.1.3 ENVIRONMENTAL MANAGEMENT SYSTEM & MONITORING PLAN

It is recommended that, for the effective and consistent functioning of the project an Environmental Management system (EMS) will be established at the site. The EMS would include the following:

- Environmental management cell.
- Environmental Monitoring
- Personnel Training
- Regular Environmental audits and Correction measures.

- Documentation – standards operation procedures Environmental Management Plan and other records.

10.1.4 ENVIRONMENTAL MANAGEMENT DIVISION/CELL (EMD)

The comprehensive handling of environmental considerations during the construction and operation phases of the thermal power station will be entrusted to a dedicated and fully equipped Environmental Management Division (EMD). This division will play a crucial role in managing the overall plant and its surrounding environment, focusing on environmental, safety, and occupational health aspects.

The EMD will be staffed with a proficient team encompassing environmental engineers, chemists, horticulturists, safety specialists, and well-trained personnel responsible for the operation and maintenance of pollution control equipment. Ongoing staff training programs will cover various areas, including environmental management, ambient air and water quality monitoring, solid waste management, noise abatement, safety, and health. Adequate spares and maintenance facilities will be provided for pollution control equipment, and the staff will be well-trained to ensure the optimal efficiency of equipment like ESP. MTE(UP)PL's proposed Environmental Management Division (EMD), led by a senior manager and supported by a team of engineers, chemists, and operating staff, will assume additional responsibilities for the environmental functions associated with the proposed mega power plant.

Table 10.1: Environmental Functions

Areas	Responsibilities
Operations & Maintenance Group	The O&M team, led by a senior manager, will oversee the operation and maintenance of the power station, incorporating environmental responsibilities for the proposed Ultra Super Critical Thermal Power Plant. The team comprises four functional areas:
Operations	Personnel in this section will manage the Power Plant's operation, coal and ash handling systems, water treatment, switchyard, and auxiliary plant components on a three-shift basis. Shift In charges will oversee specific areas, assisted by Control Engineers.

Maintenance	This section will handle mechanical and electrical plant maintenance, control systems, building upkeep, and scheduled maintenance, working during regular shifts.
Engineering	Responsibilities include monitoring plant performance, documentation, system improvements, safety, information services, and training during regular shifts.
Administration	This area will manage spares, equipment, fuel coordination, plant security, finance, medical services, personnel, and clerical services.

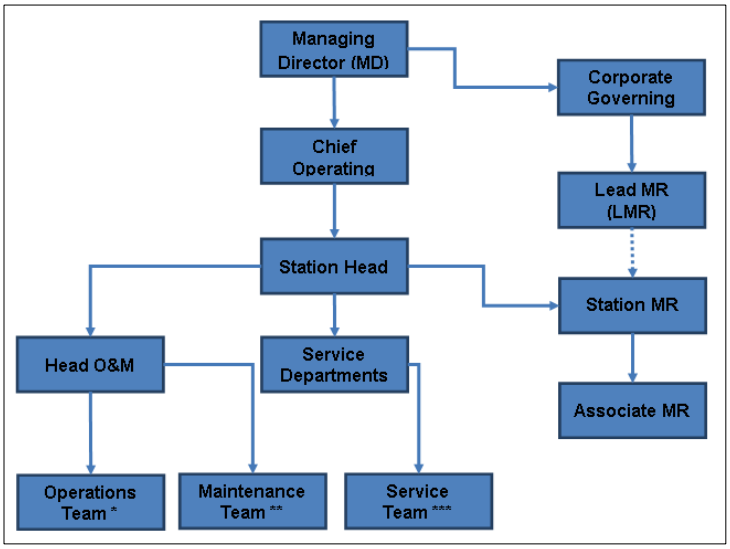


Figure 10.1: Organizational hierarchy chart

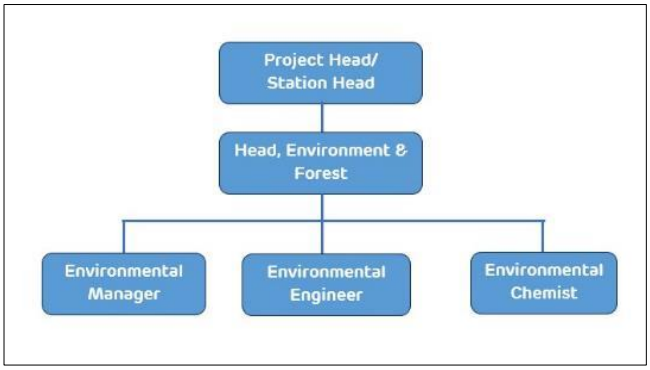


Figure 10.2: EMD Chart

10.1.5 ENVIRONMENTAL MONITORING PROGRAMME

A comprehensive environmental monitoring programme is essential to furnish scientifically sound information about the environmental quality surrounding the power station. This program ensures continuous assessment of critical pollutant levels, maintaining environmentally acceptable limits. By promptly identifying unacceptable conditions, immediate control measures can be implemented. Regular monitoring during construction and operation phases is integral to environmental mitigation efforts, evaluating pollution control equipment efficiency. For proposed 2x800 MW USCTPP, detailed in Chapter 4: Environment Monitoring Plan.

Environmental Monitoring activities will be conducted through an internal and external NABL/MoEF&CC approved laboratory, with provisions for an in-house laboratory.

10.1.6 CORPORATE ENVIRONMENT POLICY

MTE(UP)PL has set goals and objectives laid by its board of Directors for Environment, Health & Safety. The EHS Policy prescribes standard operating processes to bring into focus any infringement/ deviation/ violation of the environmental or forest norms/ conditions. It also constitutes the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. MTEUPPL will be a system of reporting non-compliances/ violations of environmental norms. The Corporate Environment Policy will be updated regularly, and all the environmental laws are considered while carrying out operations in industry. The Environmental Policy of MTEUPPL prescribing SOP / procedures to bring into focus any infringement / deviation / violation of the environmental norms / conditions. The Environment Health & Safety Policy of Adani Group is enclosed as **Annexure – XVII.**

10.2 ENVIRONMENTAL ASPECTS AND POLLUTION CONTROL MEASURES

10.2.1 WATER POLLUTION & CONTROL MEASURES

Impact due to water use:

Mirzapur TPP has optimized the water requirement to 28 MCM /annum. It is proposed to utilise the power plant wastewater for plant reuse to achieve the Zero Liquid Discharge (ZLD). It is envisaged to utilize cooling water blow down for ash handling purposes and treated wastewater will be used for plantation and gardening activities.

Impact due to water pollution

Domestic sewage is proposed to be treated in STP and treated sewage will be used for greenbelt development & plantation purpose within plant premises.

STP DESIGN DETAIL:

Table 10.2: STP design characteristics

Parameters	Influent	Treated effluent
pH	7.5 - 8.5	7 - 8
Suspended solids	100-150 mg/l	<10 mg/l
BOD	200 - 250 mg/l	<10 mg/l
COD	350 - 400 mg/l	<50 mg/l
Oil & Grease	10-15 mg/l	<1 mg/l
Coliform (CFU /100 ml)	10^3- 10^5	<5 MPN/100ML

- Sewage generated from various sources in the plant, after passing through an oil & grease trap will be carried through manholes interconnected through soil pipes under gravity flow and will be collected in the collection cum equalization tank after passing through screen chambers near the STP.
- Bar screens will be installed in the screen chamber to screen of any large pieces.
- Coarse bubble aeration system will be provided to keep the sewage in homogeneous condition.
- From the Collection cum Equalization Tank, the wastewater will be pumped via two submersible solids handling pumps (1 w + 1 s) into adjoining aeration tank.

- In the aeration tank wastewater will be mixed with micro-organisms in presence of dissolved oxygen.
- Micro-organisms will assimilate organic impurities. The mixed liquor suspended solids (MLSS) will be maintained at levels of 3,000 mg/l – 4,000 mg/l. The bottom of the aeration tank will be covered with submerged air diffusers. Submerged air diffusers will provide mixing and oxygen for the needs of micro-organisms.
- Compressed air will be supplied through two common air blowers (1 working + 1 standby) for collection cum equalization tank, aeration tank & sludge holding tank.
- From the aeration tank mixed liquor will flow by gravity into adjoining clarifier tank (Secondary settling tank). The solids will settle in the clarifier tank. Sludge Recirculation pumps will pump the settled sludge from the bottom of clarifier tank to sludge holding tank and the aeration tank for maintaining desired MLSS level.
- Overflow weir with scum baffle will be provided in the clarifiers to take treated wastewater out of the clarifier.
- From the clarifier, treated wastewater will flow via gravity into adjoining treated effluent cum filter feed tank.
- Treated wastewater after treated effluent cum Filter Feed tank will be clear, odorless, low BOD and low suspended solids.
- For improving the treated wastewater quality, treated wastewater after Filter Feed tank will be passed through Pressure Sand Filter followed by Activated Carbon Filter for further reduction of Suspended Solids, BOD, COD, etc. so as to make it suitable for Irrigation purpose.
- Disinfection using Sodium Hypochlotire dosing or H2O2 dosing will be used to remove biological contamination, to safe level for recirculation or use for plantation purposes.

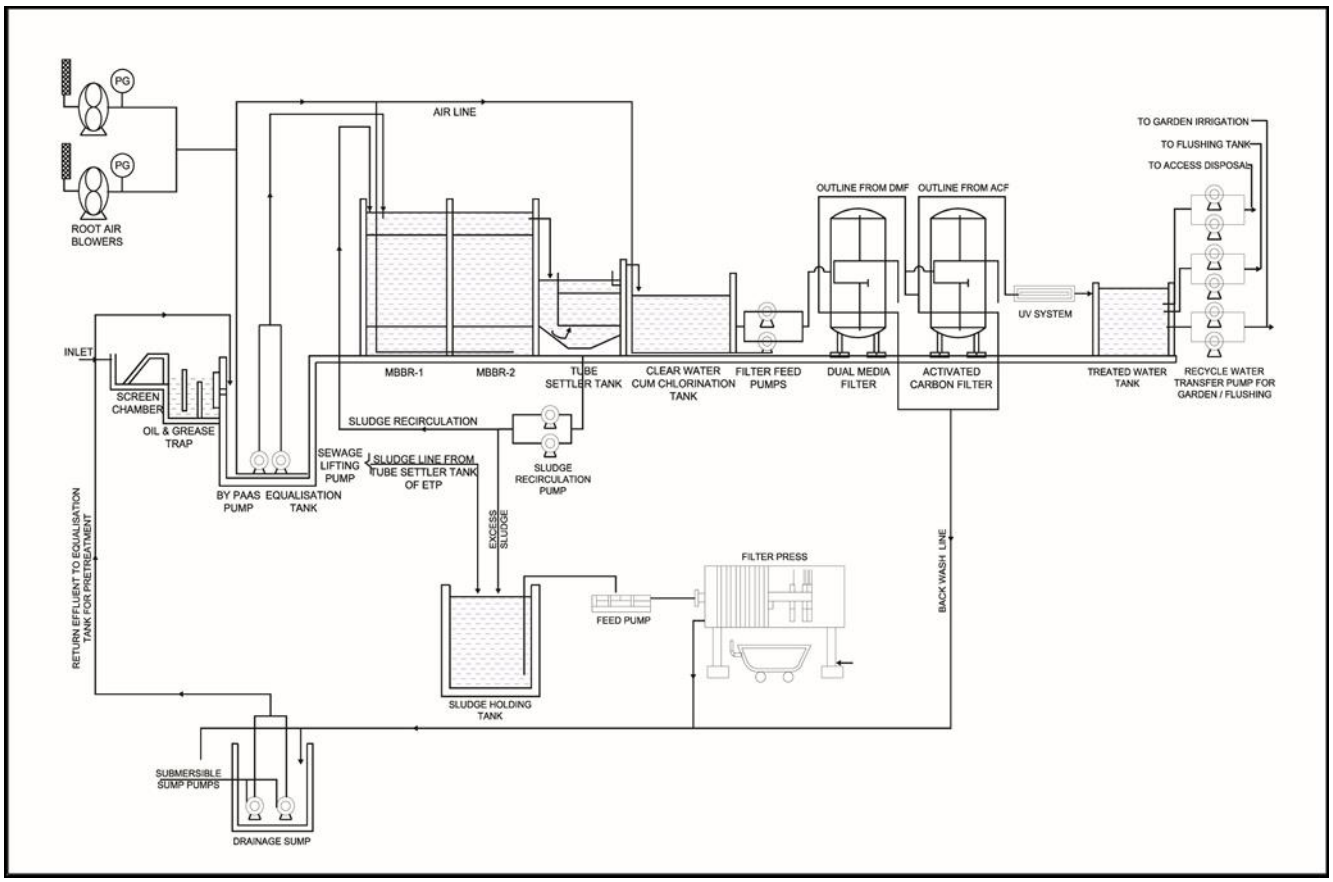


Figure 10.3: Schematic of STP Based on MBBR Technology

(Pictorial representation of proposed tentative technology)

Industrial Wastewater

The major sources of plant effluents include CW blowdown, WT plant effluent, coal pile area runoff, and plant drains. Specific measures for each effluent source is outlined as follows:

CW Blowdown:

- Part of CW blowdown will be utilized for ash/coal handling systems and horticulture needs.
- Excess blowdown will be directed to a guard pond.

Water Treatment Plant Effluent:

- Mainly comprises WT plant regeneration waste and filter backwash.

- Effluents will be pumped to the guard pond through a neutralizing pit.

Coal Handling Area Runoff:

- Drains from the coal handling area runoff will be directed to a settling pond.
- Settled coal particles will allow clear water to overflow to the stormwater drain.

Plant Drains (SG/TG Area):

- Drains from SG/TG area will be led to a sump, collecting wastes from transformer and fuel oil farm areas.
- Oily effluents will undergo treatment in an oil-water separator, with clear water going to the guard pond and oily residue disposed of properly.

Guard Pond Treatment:

- Suitable treatment in the guard pond will ensure compliance with regulatory limits.
- Treated water from the guard pond can be used for irrigation or other purposes by local villagers.

Clarifier Sludge:

Clarifier sludge from CW and DM plant clarifiers will be pumped to the sludge handling system, featuring a thickener and centrifuge.

Cooling Tower Blowdown:

Cooling tower blowdown will be directed to the guard pond to maintain acceptable temperature levels before reuse within the plant or discharge outside.

10.2.1.1 WATER CONSERVATION MEASURES AND OPTIMIZATION PLAN

The Water conservation measures and optimization adopted are listed below:

1. **Recirculating type of cooling water (CW) system** with mechanical draft cooling towers (CT) is being adopted. The cooling water system is designed considering Cycles of Concentration (COC) of 5.0 (five). drift loss in cooling tower will be maintained less than 0.02% by using multi- layer drift eliminators.

2. **Recycling and reutilization of cooling tower blow down water** is considered by adopting CW Blow down recycle scheme. Blow down water will be recycled back as cooling tower make up water and the reject water will be used in AHP. No fresh water will be utilized for Makeup of Ash handling system.
3. In the water pre-treatment (PT) plant, thickener will be installed to recover underflow water of the PT plant clarifiers. Appx. 75% water is recovered from the thickener.
4. Effluent collected from various sources will be utilized in the Coal Handling Plant dust suppression system after necessary treatment.
5. In Sewage treatment plant (STP), the sewage generated is treated and utilized in Horticulture.
6. High Concentration Slurry Disposal System will be adopted for ash disposal which will reduce the water requirement substantially.

10.2.1.2 RAINWATER HARVESTING SYSTEM

Calculation of Rainwater Availability of project site.

Based on the site plan of the project area, the computation of rainfall runoff for entire project premises has been worked out and the details are tabulated below:

Table 10.3: Calculation of Annual Runoff

S. No	Type of Structure	Area (Sq. m.)	Run off Coefficient	Rainfall (m)	Quantum of recharge available (m^3/annum)
1	Plant Area	858000	0.2	0.865	148434
2	Reservoir	331800	1	0.865	287007
3	Coal Stock Yard	647500	0.2	0.865	112017.5
4	Ash Dyke	493700	1	0.865	427050.5
5	Township	115700	0.85	0.865	85068.425
6	Green Belt	1205100	0.15	0.865	156361.725
Grand Total (1-6)		**36,51,800.00**			**12,15,939.15**

Calculation of No. of Structure.

Total 1215939.15 m^3/ year of Rainwater will be collected from Project site Area.

Annual run-off from Coal Stock yard Area (647500 m^2) 112017.5 m^3/ year and annual run-

off as per Open area i.e. Plant Area (858000 m^2) + Green Belt Area (1205100 m^2) is 304795.7 m^3/ year, remaining 714057.5 m^3/ year, water will be collected in the Reservoir and Ash Pond.

Township area

As per GWRE-2022, it is assumed that total 60% of the stored water in the ponds has been percolated, which recharges the ground water. The ground water recharge by Percolation ponds have been given in below table-

Area	Water availability	60% Natural Recharge (m3/year)	Remaining 40 %
Township	85069	51041.4	34027.6

Area of Pond (m^2)	Depth (m)	Volume (m^3)	Filled time	Water Storage capacity (m^3/year)
3000	3	9000	4	36000

Plant area & Green Belt area

As per GWRE-2022, it is assumed that total 60% of the stored water has been percolated in the ponds and which recharges the ground water. The ground water recharge by percolation ponds have been given in below table-

Area	Water availability	60% Natural Recharge (m^3/year)	Remaining 40 %
Plant Area	148434	89060.4	59373.6
Green Belt	156362	93817.2	62544.8
Total	**304796**	**182877.6**	**121918.4**

Area of Pond (m^2)	Depth (m)	Volume (m^3)	Filled time	Water Storage capacity (m^3/year)
10200	3	30600	4	122400

As per above calculation we have proposed total 2 Nos. Rainwater Percolation Pond.

II. Coal Stock Yard

Area	Water availability
Coal stock yard	112017.5

Area of Pond (m^2)	Depth (m)	Volume (m^3)	Filled time	Water Storage capacity (m^3/year)
9400	3	28200	4	112800

As per above calculation we have proposed total 1 Nos. Rainwater Storage Pond.

10.2.1.3 Conservation of an Ephemeral Path in proximity to the project site

An ephemeral path formed due to the flowing of rainwater only during rainfall is adjacent to project site towards West direction which will not be disturbed and the same will be protected and used in Greenbelt only.

10.2.2 AIR POLLUTION & CONTROL MEASURES

Fugitive Emission

The air borne fugitive dust from the plant is likely to be generated from coal handling plants, stockpiles and traffic movement which will be deposited on the topsoil in the immediate vicinity of the plant boundary.

The fugitive emission likely to be generated from coal handling plants, stockpiles and traffic movement is proposed to be controlled to a great extent through control measure like dust suppression system at coal transfer point, dedusting system at Crusher House by bag filter, greenbelt etc.

Process Stack Emission

- Emission standards shall be as per MoEF&CC notification S.O. 3305(E) dated 7.12.2015, & its subsequent amendments.
- To control the emission of particulates, High Efficiency electrostatic precipitators (ESPs) will be provided.
- To control NOx emission, Ultra-supercritical boilers having advanced low NOx generation system will be installed. In addition, Selective Catalytic Reduction (SCR)

system will be installed.

- The Hg content in Indian coals is usually low and does not require additional measures to limit Hg emission within the limits prescribed by MoEF&CC.
- For the control of fugitive dust emission within and around the coal handling plant, coal dust extraction system with pulse jet bag filter and suppression systems will be provided.

- A Twin flue stack with a stack height of 275 m will be provided
- The major air polluting plant activities and their respective mitigation measures are as under:

Table 10.4: Plant activities and mitigation

S. No.	Plant Activities	Pollution Control Measures
1	Coal Yard	Dust Suppression System
2	Coal Handling system: • Wagon Tippler • Crusher House • Coal Bunker • Coal Transfer House	 Dust Suppression System Dust Extraction & Dry fog diffusion systems Dust Extraction System Dry Fog diffusion system
3	Boilers	Electrostatic Precipitators (ESPs)
4	DM Plant	ETP & Neutralization Pit.
5	Domestic Effluent	Sewage Treatment Plant (STP)
6	Fly Ash Storage Silos	Dust Extraction System (Bag Filters)
7	Fly Ash & Bottom Ash Disposal	Efforts will be made to utilise 100% Ash in Cement Industries, Road Construction, etc as per the MoEF&CC, Fly ash Utilisation Notification. Bottom ash generated shall be supplied to the Road Mix Concrete (RMC) / brick producers / filling mine voids/stone quarry as per the statutory guidelines thereby eliminating the need for separate area shall be explored
8	Vehicle Movement	Concrete Road & Road Sweeping
9	Dispersion of Emission	275 m Height Chimney with bi-flue stack.
10	Reduction of Gaseous Emission	Low NOx Burners Selective Catalyst Reactor (SCR)

10.2.3 IMPACT ON ROAD NETWORK DUE TO INCREASED VEHICULAR TRAFFIC & ITS MANAGEMENT

In order to mitigate the impact due to increased vehicular load, it is proposed to ensure that

- Adequate parking space for trucks, cars and 2-wheelers is provided in the plant premises.
- Heavy trucks would be parked in designated parking area only and idle running would be avoided.
- Further, major fuel i.e. Coal would come by rail.
- Vehicles moving within the plant premises are speed controlled & PUC Certified.
- Roads and crossings would be suitably planned to avoid traffic congestion.
- Plant layout has been planned having all internal roads minimum 6m width and 9m turning radius with proper looping for smooth traffic flow, including fire tender as per NBC. Road network will connect all service areas in layout.
- Fugitive emission arising from vehicular movement for transportation of raw materials & finished products would be mitigated by installation of tyre washing system and using speed controlled vehicles.

10.2.4 NOISE POLLUTION & CONTROL MEASURES

- Acoustic enclosure shall be provided with TG set
- Compressor shall be housed in a separate room with acoustic wall panelling.
- Noise proof cabins will be provided for operators wherever possible
- Inlet and outlet mufflers shall be provided wherever required.
- Suitable isolators will be provided at required locations to avoid rattling due to vibration
- Process air blower, pneumatic valves etc., shall be provided with Silencers
- Noise shall be reduced by preventing leakages from compressed air lines and steam lines
- The high noise zones are demarcated and provided with enclosures & barriers.

- The risks of exposure to high noise levels and the appropriate control measures will be displayed at various places in the workplace.
- Design/installation will be taken as specified by the manufacturers with respect to noise control and will be strictly adhered.
- Sound attenuation panels will be installed wherever required around noise generating equipment.
- All rotating equipment / parts will be well lubricated and provided with enclosures as far as possible to reduce noise transmission.
- Regular maintenance of all the machinery and equipment shall be done
- Regular ambient noise level checks shall be carried out at the site
- Greenbelt development inside the plant premises shall be done which will serve as a buffer between the periphery and the industry, there by controlling noise level.
- In addition to this, effective ear plugs will be provided and their use will be made mandatory in specified areas where noise level is high.

Table 10.5: Proposed Noise Pollution Control Devices

S. No.	Pollution control device with noise source	Control measure
1	Compressor house	Acoustic panelling
2	Start-up vent, safety valve outlets	Silencer
3	Hogging Ejector	Silencer
4	TG Set	Acoustic enclosure
5	Water pump and Compressor (Rolling Mill)	Rubber mounting

10.2.5 IMPACT ON SOIL ENVIRONMENT

Major impact on the soil will be due to storage of coal, handling and transportation of solid wastes and hazardous wastes

- All the yards will have RCC flooring after hard surface rolling and compacting.

- Along with that, all the yards will have proper drainage system with garland drains & guard ponds.

10.2.6 SOLID WASTE GENERATION & MANAGEMENT

Ash Handling System

For each unit, Bottom ash will be collected in wet form; while fly ash will be collected in dry form to facilitate utilization. Fly ash and bottom ash shall be disposed via High/Medium Concentration Slurry disposal (HCSD/MCSD) system to Ash dyke in case of exigencies; Ash extraction system is unitized basis and ash disposal systems will be common for Two (02) units. Provision for truck disposal of both bottom and fly ash is provided.

For the design of the Ash Handling System, the following data has been considered for each Unit. Necessary design margin shall be considered while selecting the equipment capacity.

Table 10.6: Ash generation details

Coal Consumption @85% PLF	**Units**	**Proposed**
	Million MTPA	**6.4**
	MT Per Annum	**6400000**
	Ton Per Day (TPD)	**19394**
	TPH for two units	**730**
	TPH/unit	**365**
Ash Generation		7757.6
Fly Ash (80%)		6207
Bottom Ash (20%)		1550.6
Total Ash Generation	**TPA**	2560008
Total Ash Generation	**Million MTPA**	**2.56**

Table 10.7: Ash utilization details

Year	Estimated Quantity Generation#(LMT)	Utilization	Utilization %

		(Via different modes as per Fly Ash Notification) (LMT)	
First	25.6	25.6	100
Second	25.6	25.6	100
Third	25.6	25.6	100
Fourth	25.6	25.6	100
Fifth	25.6	25.6	100

A. Bottom Ash system

It is envisaged that the bottom ash will be collected in wet. Efforts will be made to utilize 100% bottom ash as per MoEF&CC guidelines. Unutilised bottom ash if any shall be disposed to the ash pond/filling of low lying areas. Ash collected in Bottom ash hopper (B.A + Eco Ash) shall be transported to hydrobins through jet pumps and slurry pumps. Inside the hydro-bins, water shall be removed from the slurry. In case of exigencies the bottom ash from Hydrobins shall be crushed and transferred to ash mixing tank, where fly ash and water shall be mixed with bottom ash and the resultant slurry shall be ultimately disposed to Ash Dyke via HCSD/MCSD Pumps and Pipelines. Provision shall be considered below Hydrobins for loading of ash in semi-wet/conditioned form to trucks for further disposal to Mine voids/stone quarry filling.

BA evacuation from BA hopper shall be done for 1.0 hour (per Unit) for every 4 hours (total 2 hours per Unit per shift of 8 hours). At a time only one Unit BA evacuation shall be done (i.e. Unit-1 BA evacuation followed by Unit-2 BA evacuation). 3 nos. Hydrobins shall be provided common for Two (02) Units.

B. Fly Ash system

The fly ash handling system shall be provided to remove fly ash from ESP hoppers and APH hoppers to transport fly ash to fly ash silos (main fly ash silos / HCSD/MCSD fly ash silo) via pneumatic ash pipe conveying system. From the fly ash silos, fly ash shall be transported in dry form through bulkers truck for possible utilisation. The fly ash conveying system will be sized such that fly ash collected in 8 hours shall be evacuated in 5.5 hours.

For dry ash conveying to storage silos, 6 nos. (4W+2S) compressors shall be provided common for two (02) units. To facilitate easy flow of dry fly ash, 4 nos. (3W+1S) fluidizing blowers with heaters shall be provided common for all 3 nos. fly ash silos; Dry ash will be transported to 2 nos. main storage silos of RCC construction having combined capacity of 16 hrs storage, common for two (02) units. Each main fly ash silo shall be equipped with two outlet for loading of ash in conditioned form in to open truck and two outlets for dry unloading in to closed tankers/trucks for utilization and two outlets for future use.

1 no. HCSD/MCSD fly ash silo of suitable capacity shall be provided to cater to feed the fly ash to HCSD/MCSD system for disposal of fly ash (along with bottom ash) in slurry form to Ash Dyke or in semi-wet form to load the trucks for further transportation to Mine voids, stone quarry filling/possible utilization. HCSD/MCSD fly ash silo shall be equipped with three (03) outlets for feeding fly ash to HCSD/MCSD system, One (1) outlet for loading of ash in conditioned form to open truck, one outlet for loading of ash in dry form to closed truck for utilization and one outlet for future use.

C. Ash Water System

Ash water system shall be common for two units. Ash water system consists of Ash water tank and pump house to house 3 nos. (2W+1S) HCSD LP water pumps, 2 nos. (1W+1S) HP water pumps, 3 nos. (2W+1S) LP water pumps, 2 nos. (1W+1S) Economizer water Pumps, 2 nos. (1W+1S) HP seal water pumps, 3 nos. (2W+1S) LP Seal water pumps and 1 no. HCSD/MCSD emergency water pumps. Settling and Surge Tank shall be provided for recirculation of water (i.e. BA hopper overflow water, decanted water from Hydrobins) for use in the Ash Handling system.

D. Ash Pond

All efforts shall be made to promote utilization of ash to the fullest extent. However, in case of exigencies, unutilized ash will be disposed in to Ash dyke. Ash dyke shall be provided with lining and green belt. Ash dyke envisaged would be raised in stages. A suitable Ash water recovery system shall be provided to recover and re-use the Ash water collected in Ash dyke.

Table 10.8: Ash pond & ash water recovery details

S. No.	Particular	Details
1	Area (Ha)	49.37 Ha
2	Dyke height (m)	15
5	Expected life of ash pond (number of years and months)	Capacity/life of ash dyke calculated for 20 years
6	Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining	HDPE
7	Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	HCSD / MCSD
8	Ratio of ash: water in slurry mix (1:___):	65:35
9	Ash water recycling system (AWRS):	Ash water recovery system shall be common for two units & will consist of ash water tank and pump house for recirculation for use in the Ash Handling system.
11	Details regarding dyke stability study and name of the organization who conducted the study	Ash Dyke stability study will be carried out in line to CPCB guidelines prior to commencement of plant operations.

Hazardous Waste Generation, Storage & Disposal

Table 10.9: Hazardous waste details

S. No.	Type of waste	Source of generation	Schedule as per HWM Rules, 2016	Total	Final Disposal
1	Used or spent oil	DG set operation & Machine operation	Schedule I, Category 5.1	60 TPA	Handed over to CPCB/SPCB approved recycler
2	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	Handling of hazardous chemicals and wastes	Schedule I Category 33.1	12 TPA	Collection, Storage, Transportation and disposal to authorized recycler
3	Contaminated cotton rags or other cleaning materials	Handling of hazardous	Schedule I Category 33.2	10 TPA	Collection, Storage, Transportation and

S. No.	Type of waste	Source of generation	Schedule as per HWM Rules, 2016	Total	Final Disposal
		chemicals and wastes			disposal to authorized TSDF

- Hazardous waste will be handled, stored & disposed off in line with Hazardous & Other waster (management & transboundary movement) Rules 2016, amended till date.
- Separate covered storage area with impervious flooring and catch drains connecting to WTP will be provided with Hazardous waste storage area.
- E-Waste (about 2.0 TPA), Battery waste (about 3 TPA), Bio-medical waste (about 0.02 TPA) will be handled, stored & disposed of as per applicable rules & guidelines.
- Used batteries will be given back to the supplier under buy back agreement with supplier.
- Bio-medical waste generated from medical unit will be handed over to nearest CBWTF &/or hospital having BMW disposal agreement with CBWTF.

Municipal Solid waste generation & management

Improper disposal of MSW may cause contamination of soil, ground water and surface water over time. It may lead to odour nuisance as well as increased disease vectors in the area.

Table 10.10: Municipal Solid waste generation & disposal

Particulars	Population	Basis	Quantity of waste generated (in kg/day)
Workers	275	@0.3 kg/day	82.5
Landscaping	299.3 acre	@0.2kg/acre/day	59.86
STP sludge (dry)	--	--	50
Total			**192** Approx.

- MSW generated to the tune of about 192 Kg/day will be collected, segregated at source itself using color coded bin collection system placed strategically in the plant premises.

  The organic component of MSW will be segregated and composted in Organic waste converters proposed at site. The remaining waste will be handed over to authorized vendors for recycle/reuse & disposal.

10.3 ENVIRONMENT MANAGEMENT PLAN

10.3.1 MANAGEMENT PLAN FOR CONSTRUCTION PHASE

The impact of construction activities would be temporary and will reduce gradually with the completion of the construction activities. Various mitigation measures proposed to be implemented during construction phase are described below.

Construction phase monitoring includes:

- Monitoring of accuracy of predicted impacts during EIA study
- Monitoring on likely impacts of the project particularly on biological resources.
- Monitoring occupational health and safety measures

Air Environment

Air quality around the project will be marginally impacted during the construction phase. Various activities related to construction are likely to generate dust and may adversely affect the air quality of the surrounding area of the project site. Following measures shall be taken to minimize such impacts:

- All the loose material either stacked or transported will be provided with suitable covering such as tarpaulin.
- For dust suppression due to vehicular movements, water sprinkling will be done from time to time.
- To minimize the occupational health hazard, proper mask will be provided to the workers who are engaged in activities that may lead to dust generation.

Water Environment

During the construction period, run-off from site shall not be allowed to stand (water logging) or enter the roadside or any surface drains. Adequate measures will be taken to avoid any adverse impact on surface or ground water during construction phase.

Noise Environment

- During the construction stage, an increase in ambient noise levels is expected, which will decrease with the increase in distance.
- There will be noise generation due to the traffic movement carrying construction material, which is a temporary phenomenon.
- Earmuff/earplug will be given to the workers working around and operating machinery emitting high noise levels.
- Equipment & machinery confirming to noise levels as per CPCB will be procured.

Solid Waste Management

During the construction phase, the following measures shall be taken for solid waste Management:

- All metal, wooden, paper, plastic wastes, debris and metal cuttings shall be collected from site as soon as particular construction activity is over and will be provided to authorized recyclers for recycle & disposed in suitable manner as per rules & norms.
- Municipal waste generated from plant canteens will be segregated (biodegradable & non-biodegradable), collected and handed over to contractor for final disposal in-line to SWM Rules 2016.

Table 10.11: Environment Management Plan during Construction Phase

S. No	Environmental aspect	Aspect	Management	Applicable Norms
1.	Air Environment	• Excavation for foundations and backfilling for site levelling & grading. • Civil works and plant erection / fabrication • Road laying • Vehicular movement for transportation of construction material & manpower to site • Running of DG set and operation of on-site construction machinery / equipment • Increased concentration of fugitive dust, SO_2, NOx, PM, CO and unburnt hydrocarbons in ambient air leading to: respiratory illnesses, reduced visibility, Damage to trees as	• Phase wise construction of project components. • Unloading of construction material and stockpiling of the same at the earmarked site would be provided with water sprinkling to arrest fugitive dust emission. • Wind barrier screen would be provided around stockpiles to reduce the wind speed and consequently, reduce the fugitive dust emission. • Ensuring vehicles with valid PUC certificates are used. • Regular & preventive maintenance of construction vehicles & machinery • Water sprinkling shall be carried out at the construction sites at regular intervals • No use of asbestos fibre; and • Construction site shall be barricaded and dust screens shall be placed • HSD to be used as fuel for DG Sets	Air Act (Pollution Prevention & Control), 1981

S. No	Environmental aspect	Aspect	Management	Applicable Norms
		NO_X is a phytotoxin in elevated concentration.		
2.	Noise Environment	• Vehicular movement; • Civil works such as trenching, foundation casting, steel fabrication work, mechanical works • Construction equipment operation like cranes, generators, pumps, compressors, rock drills, pneumatic tools, saws, vibrators etc. • Constant loud noise can adversely affect human & animal health	• Provision of silencers on noise generating machinery; • Major Construction/installation work will be carried out works during day hours only. • Ensuring use of PPEs like ear muffs/ear plugs by workers. • Regular & preventive maintenance of Vehicles and construction machinery. • Ensuring that DG sets are provided with acoustic enclosures and exhaust mufflers and provision of silencers on noise generating machinery; • Moveable noise barriers will be considered • Greenbelt development & plantation to be undertaken from the construction stage itself. • Construction equipment with minimum noise shall be chosen. • Construction equipment with minimum noise shall be chosen; • Vehicles and construction equipment with internal combustion engines without proper silencer shall not be allowed to operate at the site; • Regular maintenance of equipment & vehicles;	Noise Pollution (Regulation and Control) Amendment Rules, 2017

S. No	Environmental aspect	Aspect	Management	Applicable Norms
			• Ensuring deployment of silent and green portable DG sets with construction machinery – i.e. having acoustic enclosures and exhaust mufflers, etc. are recommended; and • Ear muffs shall be provided to the workers working in high noise level areas. • OSHAs recommendations followed for shift rotation in high noise areas by avoiding continuous (more than 8 hrs) exposure of workers to high noise areas. • Ensuring preventive maintenance of equipment.	
3.	Water Environment	• Water demand during civil works. • Discharge of untreated sewage generated from labour camp on land, surface water bodies. • Land clearance (the silt and soil can erode and increase sediment load in waterways), open storage of construction material, excavated earth construction waste can increase sediment load in water ways due to run-off from	• Excavation during dry season only and proper management of excavated soil through stabilized and covered stockpiling of excavated earth to be used for plantation. • Excavated earth will be backfilled within project premises for site levelling and grading. • The stockpiles of construction material will be protected with toe wall of adequate height along with garland drain & sedimentation traps to prevent uncontrolled discharge of runoffs during monsoon and reuse the collected waste water for construction purpose after primary settling.	Water Act (Pollution Prevention & Control), 1974

S. No	Environmental aspect	Aspect	Management	Applicable Norms
		construction site, excavated soil pile etc. from project premises • Storage of hazardous waste like used oil, discarded containers etc. in open on unpaved area resulting in spillage and leaching to sub-soil, water table / aquifer. • Improper collection & storage of MSW, plastic waste etc. generated from labour camp	• Provision of storm water drains with oil & grease traps and sedimentation traps as per contour & drainage pattern. • Storm water diversion channels to divert storm run-off from flowing over the construction areas. • Removal & proper disposal of all the debris from site, as soon as construction is over. • Domestic sewage generated will be disposed off to well-designed soak pits. • Storage of hazardous chemical & hazardous waste in covered room with impervious flooring. • Wash offs containing these chemicals will be drained into impervious trays / barrels for disposal as hazardous wastes.	
4.	Solid Waste	Generation of construction & demolition waste, municipal solid waste and hazardous waste	• Contractor will be informed to comply with all the applicable rules of C&D Waste Rules 2016. • Waste shall be segregated into four streams such as concrete, soil, steel, wood and plastics, bricks and mortar and waste management plan will be developed and appropriate approvals will be obtained and the concerned authorities will be informed regarding the relevant activities from the planning stage to the implementation stage	• Construction & Demolition Waste (Management & Handling) Rules, 2016 • Solid Waste Management Rules, 2016

S. No	Environmental aspect	Aspect	Management	Applicable Norms
			• All the inert construction waste including excavated soil, sand & gravel to be used within premises for levelling & grading works. • MSW management system by means of collection of wastes in different types of dust bins, temporary storage at designated area within project premises and transporting the same & disposed off through existing MSW disposal system of Municipal council through recognized agency. • Hazardous wastes generated in the project premises during construction phase will be stored in separate covered area with impervious flooring and catch drains with adequate secondary containment and labelling as per the requirements of HoW Rules; • Records of hazardous wastes generation and disposal will be maintained as per the requirements of HoW Rules	Hazardous & other waste (management & transboundary movement) Rule 2016
5.	Land/Soil	• Respiratory diseases • Decreased visibility. • Loss of fertility of land due to erosion • Excavated soil when stored in open surface in loose will lead in increase in air borne dust.	• Soil will be excavated in phased manner adopting cut and fill techniques. • Temporary stabilization of the top soil will be carried out to prevent the fertility loss • Hazardous waste like used chemical, paint containers etc. will be stored in covered designated rooms with impervious flooring before being sold off to authorized recyclers.	Construction & Demolition Waste (Management & Handling) Rules, 2016 Solid Waste Management Rules, 2016

S. No	Environmental aspect	Aspect	Management	Applicable Norms
		• Possibility of soil erosion • Change in land cover from vacant / open land to paved / built up land. • Spillage of liquid and solid / hazardous wastes resulting in contamination of soil • Improper management of Sewage generated	• Planned development with green belt & plantation in plant premises will improve the aesthetics of the area. • Sanitation facility in labour camps by means of soak pits will be ensured.	Hazardous & other waste (management & transboundary movement) Amendment rule, 2023
6.	Ecology & biodiversity	• PM & gaseous Emissions • Noise Generation • Disposal of wastewater in gardening.	• Dust generation from construction activities will primarily occur during the initial stages of the construction phase and will be minimized through measures such as road paving, surface treatments, regular water sprinkling in dust-prone areas, and the development of green spaces. • All project activities will incorporate appropriate noise mitigation measures to prevent disturbances to both human and wildlife populations in the area. • Awareness about wildlife conservation will be promoted among staff and laborers through signage, posters, and other educational materials.	Forest (Conservation) Act, 1980 with Amendments Made in 1988. Wildlife Protection Act of 1972.

S. No	Environmental aspect	Aspect	Management	Applicable Norms
7.	Socio-Economic	• Infrastructure needs • Accident and Noise problem • Employment generation	• All basic facility like sanitation, toilets, restrooms, camps shall be provided within the plant area. • Hygiene conditions shall be maintained at site. • PPE shall be given to all labour working in noisy and risky area.	Labour Act, 1970 Occupational Health and Safety Assessment Series Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996

Table 10.12: Measures To Be Implemented During Construction Phase with responsible entity

Proposed Mitigation Measures	Responsibility for Implementation	Targets to Achieve	Risks and Consequence of Failure, if any
Air Pollution Control			
Water sprinkling in vulnerable areas	Contractor	Control of fugitive dust from construction areas	Increase in PM emissions
Proper maintenance of vehicles & construction equipment	Contractor	Control of CO & NOx Emissions	Increase in gaseous pollutant
Transportation of construction material in covered trucks, wherever possible	Contractor	Control of fugitive dust during transportation.	Increase in PM emissions
Noise Pollution Control			
Proper maintenance of vehicles, equipment and machinery	Contractor	Control of ambient and site noise levels	Increase in noise levels
Provision of acoustic covers/ enclosures on equipment and machinery, wherever possible	Contractor	Control of ambient and site noise levels	Increase in noise levels
Provision of earmuffs/ earplugs to the workers in high noise areas and enforcement of its use	Contractor	Protection of workers	Health effects on individual workers
Water Pollution Control			
Channelization and construction of temporary sedimentation tanks for effluents from construction area through network of drains.	Contractor	Control of suspended solids in effluents from construction area	Increase in total suspended solids in effluents
Socio-Economic Environment			
Provision of environmentally safe camping area for the migrant laborers	Contractor	To provide clean & healthy living environment to work force	Unhealthy living conditions, spread of diseases

Proposed Mitigation Measures	Responsibility for Implementation	Targets to Achieve	Risks and Consequence of Failure, if any
Arrangements for water supply and sanitation	Contractor	To reduce stress on surrounding population	Stress on existing utilities, conflicts with local people
Solid Waste Management			
Disposal of surplus earth and construction debris	Contractor	Control of pollution	Air/ Water Pollution
Reclaiming of un-built area with appropriate vegetation/ land scaping	Contractor	Create a good visual environment. Aesthetics improvement.	Unpleasant surroundings

10.3.2 MANAGEMENT PLAN FOR OPERATIONAL PHASE

The impacts of operation phase will be long term in nature. Operational phase monitoring includes:

- Regular supervision of established infrastructure e.g., open stone lined drain, fencing, Supervision of waste management.
- Supervision of safety measures and equipment.
- Supervision of regular water supply and sanitation.

Table 10.13: Environment Management Plan during Operation Phase

S. No	Environmental aspect	Aspect	Management	Applicable Norms
1.	Air Environment	• The air pollution is mainly to due to fuel handling, storage, transportation, fuel burning, ash generation, handling storage. • The emissions are likely to raise the concentration of pollutants like PM, NOx, SO_2	• Dust extraction & suppression system in coal handling plant • Dust suppression system in ash handling • Closed loop extraction, storage & transfer of fly ash • High efficiency ESP. • Suitable counter measures to keep NOx within MoEFCC Norms. • Chimney of 275 m height with bi-flue stack.	Air Act (Pollution Prevention & Control), 1981
2.	Noise Environment	• Operation of BTG, blowers, vacuum pumps, process pumps etc. • Vehicular movement	• The proposed project will incorporate advanced technology and improved equipment aimed at enhancing energy efficiency and reducing noise levels. • Acoustic enclosure with BTG. • The noise and vibrations will be minimized by providing properly designed foundations, damping pads and providing necessary acoustic enclosures for the noise and vibration generating equipment / machinery. • Regular maintenance of all the machinery and equipment shall be done. • Regular ambient noise level checks shall be carried out at the site.	Noise Pollution (Regulation and Control) Rules,

S. No	Environmental aspect	Aspect	Management	Applicable Norms
			• Advanced technology and improved equipment aimed at enhancing energy efficiency and reducing noise levels will be adopted. • Greenbelt development will contribute attenuate noise. • Effective ear plugs will be provided and their use will be made mandatory in specified areas where noise level is high. • Workers working in high noise levels area will be made to work in shift rotation	
3.	Water Environment	• Domestic sewage generation & disposal • Trade effluent generation & disposal • Water withdrawal	• The domestic sewage will be treated in the STP and treated water to will be reused for greenbelt development • Effluent from plant will be treated in ETP & treated water will be reused in plant operation • Zero liquid discharge will be maintained. • Rain water harvesting is proposed through pond within plant premises	Water Act (Pollution Prevention & Control), 1974
4.	Solid Waste	• Hazardous waste will be generated from plant operations • Improper management causes soil contamination, contamination of water source and odour nuisance.	• Hazardous waste will be handled, stored & disposed off in line with Hazardous & Other waster (management & transboundary movement) Rules 2016, amended till date. • Used oil, discarded containers will be handed over to authorized recycler and oil soaked cotton / rags, used filters etc. will be sent to nearest TSDF.	Solid Waste Management Rules, 2016 Hazardous & other waste (management & transboundary

S. No	Environmental aspect	Aspect	Management	Applicable Norms
		• Bottom ash & fly ash generation • Improper management causes soil contamination, health issues	• Separate covered storage area with impervious flooring and catch drains connecting to ETP will be provided with Hazardous waste storage area. • Fly ash & bottom ash collection, storage & final disposal details are given in above sections. • E-Waste, Battery waste, Bio-medical waste, Plastic waste, will be handled, stored & disposed of as per applicable rules & guidelines. • Used batteries will be will be given back to the supplier under buy back agreement with supplier. • Plastic waste will be handed over to authorized recyclers and measures will be taken to avoid single use plastic in operations. • MSW generated will be collected, segregated at source itself using color coded bin collection system placed strategically in the plant premises and handed over to contractor for final disposal to municipal waste dump site.	movement) rule, 2016
5.	Land/Soil	• Major impact on the soil will be due to storage of raw materials, storage, handling and transportation of solid wastes and hazardous wastes and also	• All the storage areas will have RCC flooring after hard surface rolling and compacting. • Greenbelt development. • Proper storage & disposal of waste generated as per applicable rules. • Adequate measures to avoid spillage.	Solid Waste Management Rules, 2016 Hazardous & other waste

S. No	Environmental aspect	Aspect	Management	Applicable Norms
		on the soil of nearby land due to air pollution • Contaminate soil and subsequently ground water regime due to improper handling of hazardous waste.		(management & transboundary movement) rule, 2016
6.	Socio-Economic	• Infrastructure needs • Accident and Noise problem • Employment generation	• In addition to the plant's utility and manufacturing areas, facilities such canteen, administration building, drinking water supply, and water treatment systems will be provided within the premises. • Workers will receive training on the proper handling and transportation of hazardous materials in compliance with the Hazardous & Other Waste (Management and Transboundary Movement) Rules. • Personal Protective Equipment (PPE) will be provided to workers operating in noisy or high-risk areas, with regular inspections conducted to ensure the PPE remains in good condition • All OSHAS guidelines will be adhered to within the plant.	Labour Act, 1970 Occupational Health and Safety Assessment Series Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996

10.4 ENVIRONMENT ENHANCEMENT MEASURES

Water Saving:

- To the possible extent water is saved at each point of use by taking proper care in maintenance of drainpipe, tap etc. from leakage. There should be a display board for optimum use of water in washroom, toilet or at other appropriate locations.
- Use of recycled water, if possible, in cleaning of toilets or gardening after proper treatment and testing for its intended use.
- Use of sprinkler or drip irrigation method in garden irrigation.
- Rainwater harvesting is proposed
- Adoption of machinery– equipment, methods, if possible and economically viable, for manufacturing.
- Appropriate plantation to reduce evaporation.

Maintenance of the recharging system

Periodic maintenance is required for reliable and higher quality water supply. During raining season, the entire system to be checked before and after rains and cleaned after every dry period. Before first shower storage tanks should be cleaned and flushed of all sediments and debris. Also, the roof top will be cleaned before monsoon and coarse mesh is used to prevent debris on the entrance of the water at roof. The first shower should be flushed so the any sediment can be washed away.

Solar Power Harnessing

For harnessing solar power, Solar Street Lights will be provided. In addition, the building structures will be so designed that daylight enters the shops through roofs. Daylighting can be especially helpful in industrial environments where natural light is often non-existent, presenting a prime opportunity for implementation.

Windows and Skylights

Incorporating windows and skylights is the most popular option for introducing natural light into a building. But, for windows and skylights to be effective, they must be properly placed.

The selection and placement of windows and skylights should be determined by the amount of light needed, regional climate, security requirements and the design of the building.

Tubular Daylight Devices (TDDs)

Tubular daylighting devices are a versatile alternative to traditional skylights because they can be used to provide light to areas that are not in a direct line of sight with the sun. TDDs use a rooftop dome to capture the sun's light, which then travels through a reflective tube. TDDs are more effective than traditional skylights or windows because of the reflective tubing, delivering maximum daylight with minimal heat transfer.

10.4.1 GREENBELT DEVELOPMENT & PLANTATION PROGRAMME

Table 10.14: Details of Green Area Development Plan

Total Plot area	: 365.19 Ha.
Total Greenbelt area	: 121.13 Ha (>33 %) [0.62 ha. – included for greenbelt development]
Tree to tree distance	: 2 m
Row to row distance	: 2 m
Width of Greenbelt	: 10 m (Approx.)
Trees Calculation	: 302,825 nos. (2500 Tress/Ha.)
Trees will be provided	: 302,825 nos.

Table 10.15: List of plant species recommended for greenbelt development

S. No.	Scientific Name	Local Name
1.	*Syzygiumcumini*	Jamun
2.	*Terminalia arjuna*	Arjun
3.	*Pongamia pinnata*	Karanj
4.	*Psidium guajava*	Guvava
5.	*Mangifera indica*	Aam
6.	*Annona squamosa*	Sitaphal
7.	*Neolamarckiacadamba*	Kadamba
8.	*Mimusopselengi*	Molshree
9.	*Melia azedarach*	Bakain
10.	*Tectona grandis*	Teak

S. No.	Scientific Name	Local Name
11.	*Anogeissus pendula*	Kardhai
12.	*Butea monosperma*	Chewla/Dhak
13.	*Madhuca longifolia*	Mahua
14.	*Lagerstroemia parviflora*	Seja
15.	*Azadirachta indica*	Neem
16.	*Saracaasoca*	Ashok
17.	*Holoptelea integrifolia*	Chilbil
18.	*Ailanthus excelsa*	Mahanim
19.	*Tamarindus indica*	Imli
20.	*Ficus benghalensis*	Bargad
21.	*Ficus religiosa*	Peepal

Table 10.16: List of shrubs and herbs species recommended for greenbelt development

Shrubs		
S. No.	**Scientific Name**	**Common Name**
1.	*Bougainvillea spp.*	Bogoonbel
2.	*Hibiscus rosa-sinensis*	China Rose
3.	*Durantaerecta*	Golden Dewdrop
4.	*Thevetia peruviana*	Yellow Oleander
5.	*Ixora coccinea*	Jungle Flame
6.	*Plumbago zeylanica*	Leadwort
7.	*Ruellia tuberosa*	Minnieroot
8.	*Tecoma stans*	Yellow Bells
9.	*Tabernaemontanadivaricata*	Crape Jasmine
10.	*Codiaeum variegatum*	Croton
11.	*Acalypha wilkesiana*	Copperleaf
12.	*Nerium oleander*	Oleander
13.	*Pentas lanceolata*	Egyptian Star Cluster
14.	*Eranthemumpulchellum*	Blue Eranthemum

Herbs		
S. No.	**Scientific Name**	**Common Name**
1.	*Chrysanthemum indicum*	Chrysanthemum
2.	*Tagetes spp.*	Marigold

3.	*Petunia violacea*	Violet-flowered petunia
4.	*Zinnia elegans*	Common zinnia
5.	*Salvia splendens*	Scarlet Sage
6.	*Viola tricolor*	Pansy
7.	*Celosia cristata*	Cockscomb
8.	*Gomphrena globosa*	Bachelor's buttons
9.	*Cosmos bipinnatus*	Mexican aste
10.	*Portulaca grandiflora*	Moss rose

Table 10.17: Budget Allocations for Green Area Development

No. of trees to be planted	Greenbelt	Budget allocation for the project	Recurring cost
302,825 nos.	121.13 Ha	11.80 Cr.	2.3 Cr.

Period of greenbelt plantation: 5 years

10.5 ENVIRONMENTAL ACTION PROGRAMME

The management of "Mirzapur Thermal Energy (UP) Private Limited" is quite conscious of its responsibility for maintaining clean and a healthy environment and it will adopt a comprehensive Environmental Management Plan (EMP) which will cover several environmental protection measures, not only for abatement of environmental pollution resulting from the project, but also for the improvement in the ambient environment. The various components of the EMP are outlined in relevant sections. Adequate funds for pollution control measures are provided as a part of overall project financing to ensure the availability of proper treatment facilities before the commissioning of the unit.

10.6 BUDGET FOR IMPLEMENTATION OF ENVIRONMENTAL MANAGEMENT PLAN

M/s Mirzapur Thermal Energy (UP) Private Limited will incur the following expenditure to implement the Environmental Management Plan for the proposed 2x800 MW.

Table 10.18: EMP Budget

S. No.	Item Description	Cost (Rs. in Crores)
1	Electrostatic Precipitator	542.80
2	SCR/De-NOx System /Low NOx Burner	1638.98
3	Chimney	269.00
4	Dust extraction & suppression system	8.26
5	Cooling Tower including civil works	189.15
6	DM Plant Waste Treatment System	60.00
7	Sewerage collection, treatment & disposal	1.77
8	Ash Handling including ash water recirculation	225.38
9	Ash disposal civil work	29.50
10	Green Belt & landscaping	11.80
11	Rainwater harvesting	7.19
12	Solar power harnessing	3.19
13	Environmental Laboratory & Environmental Monitoring (Capital + Recurring)	10.03
14	CEMS, CAAQMS, EQMS monitoring system & Main gate display board	11.80
15	Wind Breaking Wall, Dry Fog System & RCC Flooring in Coal Storage Area.	3.54
Total in Rs in Crores		**3012.39 Cr.**

A separate budget Rs. 46.50 Crore has been earmarked towards CER activities.

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CHAPTER - XI
SUMMARY AND CONCLUSION

11.1 INTRODUCTION

Adani Power Limited (APL), a part of the diversified Adani Group, is the largest private thermal power producer in India. We have a power generation capacity of 18,110 MW comprising thermal power plants in Gujarat, Maharashtra, Karnataka, Tamil Nadu, Rajasthan, Chhattisgarh, Madhya Pradesh, Jharkhand.

M/s Mirzapur Thermal Energy (UP) Private Limited has proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sardar, District Mirzapur, Uttar Pradesh.

The proposal for obtaining Terms of Reference (ToR) was submitted to the Ministry of Environment, Forest & Climate Change (MoEF&CC) vide proposal no IA/UP/THE/467671/2024 dated 08.05.2024 and consequently, the Proposal was accepted & considered in its 10th Expert Appraisal Committee (Thermal Projects), MoEF&CC meeting held on 10th June '2024. The project was granted with Terms of Reference (ToR) vide File No: J-13012/12/2011-IA. II (T) dated 29 /07/2024 by the MoEF&CC, New Delhi. Copy of ToR Letter for proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) by M/s Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL).

11.2 DESCRIPTION OF THE PROJECT

The salient features of the project are given below: -

Table 11.1: Salient features of the project

Features		Details
Project Sector & Category	:	1(d), Thermal Power Plants & Category "A"
Plant Capacity	:	1600 MW (2x800) MW
Land Area		365.19 Ha.
Greenbelt Details		121.13 Ha (>33 %)
Technology	:	**Ultra Super-critical**
Coal Requirement	:	6.4 Milllion TPA
Source of Fuel	:	Coal Mines of NCL / SECL / CCL under Part B (IV) of Shakti Policy 2017 and e-auction

Coal Transportation	:	Through Rail
Project Cost		Rs. 18,300 Crores
Water Requirement	:	28 MCM per annum Water allocation vide letter no. 3613/11-27-C.0-4-174/11 dated 09.10.2011 has already been obtained from WRD Uttar Pradesh.
Seismological Information	:	Seismic Zone – III as per IS 1893: 2002

Table 11.2: Details of Environmental Setting

S. No	Particulars	Details
1.	Name of the Project	Proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sardar, District Mirzapur, Uttar Pradesh.
2.	Location	Village Dadri Khurd, Tehsil Mirzapur Sardar, District Mirzapur, Uttar Pradesh.
3.	Area	365.19 Hectare
4.	Latitude & Longitude	
6.	Toposheet No.	● Core Zone: G44W9 (63L/9) ● Buffer Zone: G4408 (63K/8), G440 12 (63K/12), G440 16 (63K/16), G44W 5 (63L/5), G44W 13 (63L/13) , G44W 6 (63L/6), G44W 10 (63L/10), G44W 14 (63L/14)
7.	Elevation (MSL)	Minimum: 169 m AMSL Maximum: 214 m AMSL Average: 193 m AMSL
8.	Nearest Habitation	

S. No.	Latitude	Longitude	S.No.	Latitude	Longitude
1	24°59'43.10"N	82°41'1.32"E	23	24°59'48.80"N	82°40'4.67"E
2	24°59'15.67"N	82°40'48.65"E	24	24°59'53.60"N	82°40'2.03"E
3	24°59'16.22"N	82°40'32.70"E	25	24°59'56.49"N	82°40'9.78"E
4	24°59'0.36"N	82°40'31.30"E	26	25° 0'1.35"N	82°40'14.57"E
5	24°58'59.94"N	82°40'21.69"E	27	25° 0'6.56"N	82°40'17.38"E
6	24°58'43.86"N	82°40'21.29"E	28	25° 0'4.58"N	82°40'23.19"E
7	24°58'44.48"N	82°40'0.15"E	29	25° 0'9.45"N	82°40'25.50"E
8	24°58'34.88"N	82°39'59.91"E	30	25° 0'10.07"N	82°40'24.11"E
9	24°58'34.59"N	82°40'10.54"E	31	25° 0'14.85"N	82°40'26.43"E
10	24°58'27.30"N	82°40'8.78"E	32	25° 0'14.09"N	82°40'28.29"E
11	24°58'14.57"N	82°39'55.42"E	33	25° 0'15.05"N	82°40'28.98"E
12	24°58'6.36"N	82°39'44.21"E	34	25° 0'9.57"N	82°40'42.06"E
13	24°58'23.71"N	82°39'48.52"E	35	25° 0'10.76"N	82°40'42.96"E
14	24°58'25.44"N	82°39'50.05"E	36	25° 0'4.33"N	82°40'49.13"E
15	24°58'33.97"N	82°39'46.94"E	37	25° 0'0.20"N	82°40'46.22"E
16	24°58'37.62"N	82°39'47.94"E	38	24°59'58.98"N	82°40'51.13"E
17	24°58'39.68"N	82°39'45.63"E	39	24°59'57.20"N	82°40'50.02"E
18	24°58'48.52"N	82°39'44.25"E	40	24°59'54.74"N	82°40'55.39"E
19	24°59'0.89"N	82°39'49.86"E	41	24°59'49.00"N	82°40'51.94"E
20	24°59'12.52"N	82°39'57.77"E	42	24°59'45.52"N	82°40'55.23"E
21	24°59'36.31"N	82°39'57.84"E	43	24°59'43.90"N	82°40'53.55"E
22	24°59'42.80"N	82°39'55.48"E			

S. No.	Habitation	Distance (Km) & Direction
1.	Garhawa	2.0 Km towards NE

		2. Ukhdand — 2.1 Km towards NNW 3. Darhiram — 2.6 Km towards NE 4. Umaria — 2.1 Km towards N ***Source: -All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.***
9.	Nearest Major Town	There is no densely populated habitation that exists near the proposed site. Mirzapur town is located at about 18 km in the NW direction.
10.	Nearest Highway	**S. No. / Highway / Distance (Km) & Direction with respect t** 1. S.H.- 5 — 1.0 km towards WSW 2. N.H.- 35 — 10 km towards NNE ***Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.***
11.	Nearest Railway Station	• Jhingura - Train Station, Imambara, Uttar Pradesh at 13.6 km towards NNW • Mirzapur Railway Station at 18 kms from the site in Northwest direction
12.	Nearest Airport	Lal Bahadur Shastri International Airport, Varanasi is 53 km in NNE direction
13.	Nearest Tourist Places	None within 10Km radius
14.	Defense Installations	None within 10 Km radius.
15.	Archaeological Sites (State Protected Monuments)	None within 10 Km radius.
16.	Eco-Sensitive Zones/Area	None within 10 Km radius
17.	Inter-state Boundary	None within 10 Km radius
18.	Reserved/ Protected Forest	

S. No.	Particulars	Distance (km)	Direction
	RF/PF		
1	Mirzapur RF	Adjoining	SE
2	Danti RF	Adjoining	N
3	R.F. (Lodhpur)	4.0	NE
4	Patehra RF	5.6	SW
5	Sarson R.F.	5.6	SE
6	Dhanuhaw Pahar	5.8	ESE
7	Chacdlewa khurd R.F.	6.8	NE
8	Danti R.F.	6.9	NW
9	Karaunda R.F.	6.9	WSW
10	Malua R.F.	7.5	SW
11	Purainiyan R.F.	7.0	SE
12	Golhanpur R.F.	7.0	E
13	R.F. (Atraura)	8.1	N
14	Matihani R.F.	9.0	ESE
15	Patehar R.F.	9.2	WSW
16	Barkachhar R.F.	9.8	NW

Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.

19.	Nearest Streams/ Rivers/ Water Bodies	**S. No**	**Particulars**	**Distance (km)** / **Direction**

		1 Unnamed Seasonal Nala — Adjacent to the site — W 2 Jogldari Nala — 1.9 — SE 3 Jamthwa Nadi — 2.2 — WSW 4 Pahiti Nadi — 3.6 — NNE 5 Kuardari Nadi — 6.0 — W 6 Amjhar Nala — 6.4 — WSW 7 Upper Khajuri Dam — 6 — W 8 Dhenkwan Dam — 6.2 — E 9 Imiliya Bandhwa — 9.82 — E ***Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.***
20.	Nearest Education and Medical Facilities.	As given below: - **Name** | **Distance & Direction** **Health care facilities** CHC, Marihan,Mirzapur - Government Hospital Danti, Uttar Pradesh | 4.6 km towards SSE **Source: - Google Earth* **Education facilities:** Ordial Institute Campus - Private educational institution, SH 5, Danti, | 1.35 Km towards SSW Rajkiya Ashram Paddhati Balika Vidhyalaya, Danti, | 2.4 Km towards S Rajkiya Ashram Paddhati Balika Vidhyalaya – School, Danti, | 2.4 km towards South Prathmik Vidyalaya Shiksha Khurd, Gaura Raja, Mahoharpur | 5.7 km towards NE Prathmik Vidyalaya Umariya Ayodhya Prasad – School, Ayodhya Prasad, Umariya, Malpur, | 2.8 km towards NNE Prathmik Vidyalaya, Bairhava - Rexa Kalan | 4.7 km towards ENE Government Primary School, Baghaila, Baghaila, Hasara | 7.4 km towards SSW Prathmik Vidyalaya, Jaraha, Mahdauri, | 5.6 Km towards NE Rajeev Gandhi South Campus, Banaras Hindu University, Barkachha | 9.3 km towards NNW
21.	Places of Worship	As given below: - **Particulars** | **Distance & Direction** Hanuman Gadi Mandir, Dadri Khurd, Umariya | 0.01 km towards West Hanuman Ji Mandir - Mirzapur, Danti | 2.2 km towards WNW Shive Shankair Mandir- Birohiya, | 2.65 km towards North Mahadev Mandir -, Ukhdand, Birohiya | 2.4 km towards North
22.	Seismic Zone	Seismic Zone – III as per IS 1893: 2002

11.2.1 Process & Methodology

The proposed project of 2 x 800 MW capacity power plant is mooted to deploy state-of-art technology and accordingly two units of 800 MW are being considered with ultra-supercritical steam parameters to attain high cycle efficiency.

MAIN TECHNICAL FEATURES OF THE PROPOSAL

Power Generating Unit	:	Two units of 800 MW turbine generator sets fed by steam from coal fired P.F. boiler operating at Ultra Super-critical range.
Cooling System	:	Closed recirculating condenser cooling system with Induced Draft Cooling Tower (IDCT).
Coal Handling System	:	Coal handling facility, which comprises receipt of coal through Rail, unloading into wagon tipplers, conveying, crushing and stacking by stacker-cum-reclaimer in the coal yard and finally feeding to the bunkers through conveyor via transfer tower.
Ash Disposal System	:	The Fly Ash will be collected in dry form in fly-ash silos before transportation through rail wagons / closed trucks to Cement Plants in nearby area for further utilization. 100% of the Fly ash generated will be utilized in Cement Industries as per Fly Ash Notification, 31.12.2021 & bottom ash utilization in reclamation of abandoned mines, manufacturing of bricks, road construction, and aggregate replacement in concrete, etc. Un-utilized Botttom ash is being / will be stored in ash dyke using high/ medium concentration slurry disposal system. MoU with Cement industries (ACC & Ambuja Cement) for utilization of fly ash is enclosed as Annexure – VI.
Ash water recovery system	:	Ash water recovery system shall be common for two units & will consists of ash water tank and pump house for recirculation for Ash Handling system
Selective Catalytic Reduction (SCR) system	:	To control NOx emission, Ultra-supercritical boilers having advanced low NOx generation system will be installed. In addition, Selective Catalytic Reduction (SCR) system will be installed.

11.2.2 Ash Handling System

For each unit, Bottom ash will be collected in wet form; while fly ash will be collected in dry form to facilitate utilization. Fly ash and bottom ash shall be disposed via High Concentration Slurry disposal (HCSD) system to Ash dyke in case of exigencies; Ash

extraction system is unitized basis and ash disposal systems will be common for Two (02) units. Provision for truck disposal of both bottom and fly ash is provided.

For the design of the Ash Handling System, the following data has been considered for each Unit. Necessary design margin shall be considered while selecting the equipment capacity.

Considering 85 % PLF		
Coal Consumption 85% PLF	**UoM**	**Proposed**
	MTPA	**6.4**
	MT Per Annum	**6400000**
	Ton Per Day (TPD)	**19394**
	TPH for two units	**730**
	TPH/unit	**365**
Ash Generation (TPD)	7757.6	
Fly Ash (80%)	6207	
Bottom Ash (20%)	1550.6	
Total Ash Generation (TPA)	2560008	
Total Ash Generation (Million MTPA)	**2.56**	

11.3 DESCRIPTION OF THE ENVIRONMENT

The baseline environmental quality of air, water, soil, noise, socio-economic status, and ecology has been assessed during the period of October to December 2024 in the study area of project site.

11.3.1 Baseline data

Ambient air quality:

Eleven ambient air quality monitoring stations were selected in and around the project site. The results of the monitored data indicate that the ambient air quality were well within the prescribed limits by CPCB.

- PM_{10}: The maximum value for PM_{10} was observed at the Near Rajiv Gandhi South Campus Banaras Hindus as 69 µg/m3 and minimum value for PM_{10} was observed at Project site as 48 µg/m3.
- $PM_{2.5}$: The maximum value for $PM_{2.5}$ observed at the Darhiram as 41 µg/m3 and minimum value for $PM_{2.5}$ at Project Site as 22 µg/m3.

- SO_2: The maximum value for SO_2 observed at the Darhiram (AAQ2) as 10.5 µg/m3 and minimum value for SO_2 at Ordial Institute Campus as 4.7 µg/m3.
- NOx: The maximum value for NOx observed at Project Site as 11.8 µg/m3 and minimum value for NOx at Dhekwah as 3.7 µg/m3.
- CO: The maximum value for CO observed at the Darhiram as 0.454 mg/m3 and minimum value for CO at Darhiram as 0.054 mg/m3.

Water quality:

The baseline water quality status in the region is established by analyzing samples at nineteen locations consisting of 19 ground water samples and seven surface water samples. It was found that both ground water and surface water quality is well within prescribed limits.

Results

Ground Water

Parameters	:	**Results**
PH	:	6.69 to 7.79
TDS	:	288 mg/l – 390 mg/l
Total Hardness	:	98 mg/l –178 mg/l
Total Alkalinity	:	62–120 mg/ l

Surface Water

Parameters	:	**Results**
PH	:	7.26 – 7.46
DO	:	4.9 mg/l – 7.3 mg/l
BOD	:	4 mg/l -8 mg/l
COD	:	10 mg/l – 23 mg/l.

Noise levels:

The observed noise levels adhere to CPCB standards, indicating acceptable noise pollution levels in the monitored locations.

Daytime Noise Level Leq(day)

Day time (Leqday) noise level is observed within the prescribed limit of 55 dB(A) except Ordial Institute Campus and Near Rajiv Gandhi South Campus Banaras Hindus

Night time noise level Leq(night)

Night time (Leq night) noise level is observed within the prescribed limit of 45 dB(A) except Ordial Institute Campus and Near Rajiv Gandhi South Campus Banaras Hindus

Soil Quality:

Samples collected from identified locations indicate that the soil is slightly alkaline with pH ranging from 7.38 to 7.71. The organic matter in the soil ranged from 10.52% to 0.70%. The texture of soil observed in the study area is mostly sandy loam.

Parameters	:	**Results**
PH	:	7.81 – 8.12 (Slightly alkaline)
Organic Carbon	:	0.80% - 0.89%
NPK	:	10.3 to 11.3 kg/hec 11.4 to 13.5 kg/hec 58 to 162 kg/hec

Biological environment:

Core Zone: Flora:

Table 11.3: List of flora in the core zone

S.No.	Scientific Name	Common/Vernacular Name	Family
1.	*Madhuca indica*	Mahua	Sapotaceae
2.	*Ficus bengalensis*	Bargad	Moraceae
3.	*Acacia leucophloea*	Reonja	Mimosaceae
4.	*Ziziphus jujuba*	Bada ber	Rhamnaceae
5.	*Butea monosperma*	Palash	Fabaceae
6.	*Albizia lebbeck*	Siris	Fabaceae
7.	*Prosopis cineraria*	Khejri	Fabaceae
8.	*Acacia nilotica*	Desi babool	Fabaceae

Buffer zone:

Flora:

Buffer zone of the project area has been reported 113 tree species, 49 shrubs, 44 herbs,26 Grasses & 28 climbers' species.

Three cereals species, ten pulses and oil species, eight fruit species and twenty vegetable species were found in buffer zone during field survey.

Fauna:

Mammalian species 24, herpetofauna 18, 18 Herpetofauna, 7 amphibians were observed in the 15 km buffer study area of the project.

Socio-Economic Environment:

Total population

In the study area, there are 21,228 households. The total population falling in the project area is 1,30,441 in 10 km radius. The total male population consists of 52.29 % and female population accounts to be 47.71 % of the total population. The sex ratio of the 10.0 km study area is 912 females over thousand males. There are approx. 5 to 6 members in a family. The 0-6 population comprises of 16.22% of the total population of the study area. The sex ratio of 0-6 population is 914 females over thousand males. Fig. 3.30 shows the sex ratio of total population.

Literacy

Persons aged ten years and above, who can both read and write with understanding in any language, are considered literate. In the study area, the literate people are 67,295 which is 51.59 % of the total population. The male literates are 60.65 % of the total male population, and female literates are 41.87 % of the total female population. In the study area, the illiterate people are 63,146 which is 48.40 % of the total population. The male illiterates are 39.54 % of the total male population, and female illiterates are 58.12 % of the total female population. Fig. 3.3 literates & illiterates within 10.0 km of the study area

Working population

The work participation in the study area is 50,541 which account to be 38.74 % of the total population. The male work participation is 47.67 % with respect to male population and female work participation accounts to be 28.95 % with respect to female population in the study area. Fig. 3.3 shows the Total work participation population over the total population.

11.4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The summary of anticipated adverse environmental impacts due to the proposed project and mitigation measures are given below.

Table 11.4: Identification of Impacts & its Mitigation Measures for Construction Phase

S. No.	Aspects	Impact identified	Mitigation Measures
A Land Environment			
1.	•Excavated soil when stored in open surface in loose will lead in increase in air borne dust. •Possibility of soil erosion	• Respiratory diseases • Decreased visibility. • Loss of fertility of land due to erosion • Higher run-off rate due to soil erosion resulting in increased sedimentation in water ways.	• Soil will be excavated in phased manner adopting cut and fill techniques. • Total cut will be backfilled within site & used for plantation. Temporary stabilization of the top soil will be carried out to prevent the fertility loss
2	Change in land cover from vacant / open land to paved / built up land.	Decrease in aesthetics of the area	Planned development with green belt & plantation 121.13 Hectare (>33%) will improve the aesthetics of the area.
B	**Air Environment**		
1	• Excavation for foundations and backfilling for site levelling & grading. • Civil works and plant erection / fabrication • Road laying • Vehicular movement for transportation of construction material & manpower to site • Running of DG set and operation of on-site construction machinery / equipment	Increased concentration of fugitive dust, SO_2, NOx, PM, CO and unburnt hydrocarbons in ambient air leading to: • respiratory illnesses, • reduced visibility, • Acidification of surface water affecting marine biodiversity and acidification of soil reducing soil micronutrients • Damage to trees as NO_X is a phytotoxin in elevated concentration. Sped up weathering of monuments /buildings /metal & concrete structures	• Phase wise construction of project components. • Unloading construction material and stockpiling of the same at the earmarked site would be provided with water sprinkling to arrest fugitive dust emission. • Wind barrier screen would be provided around stockpiles to reduce the wind speed and consequently, reduce the fugitive dust emission. • Ensuring vehicles with valid PUC certificates are used. • Regular & preventive maintenance of construction vehicles & machinery • Water sprinkling shall be carried out at the construction sites at regular intervals • No use of asbestos fibre; and • Construction site shall be barricaded and dust screens shall be placed • HSD to be used as fuel for DG Sets

2	• Vehicular movement; • Civil works such as trenching, foundation casting, steel fabrication work, mechanical works • Construction equipment operation like cranes, generators, pumps, compressors, rock drills, pneumatic tools, saws, vibrators etc.	• Constant loud noise can adversely affect human & animal health • Physical impact on health: tinnitus or deafness, Respiratory agitation, high blood pressure, headaches • Psychological impact: stress, fatigue, depression, anxiety and hysteria. • Behavioral disorder: aggressiveness & irritability • Memory and concentration affects people's ability to focus, which can lead to low performance over time	• Provision of silencers on noise-generating machinery; • Major Construction/installation work will be carried out works during day hours only. • Ensuring use of PPEs like earmuffs/ear plugs by workers. • Regular & preventive maintenance of Vehicles and construction machinery. • Ensuring that DG sets are provided with acoustic enclosures and exhaust mufflers and provision of silencers on noise generating machinery; • Moveable noise barriers will be considered • Greenbelt development & plantation to be undertaken from the construction stage itself.
C	**Water Environment**		
1	• Abstraction of ground water to fulfil Domestic water demand for workers • Water demand during civil works. • Discharge of untreated sewage generated from labour camp on land, surface water bodies. • Land clearance (the silt and soil can erode and increase sediment load in waterways), open storage of construction material, excavated earth construction waste can increase sediment load in water	• Decrease in ground water level due injudicious abstraction of water. • Risk of contamination of ground or surface water due to discharge of waste water resulting in odour nuisance and water borne diseases in animals and humans and phytotoxicity in plants / crops • Increased sediment load can affect aquatic biodiversity by making the waterway turbid and restricting the amount of sunlight entering the waterway in surface water bodies and water ways.	• Excavation during dry season only and proper management of excavated soil through stabilized and covered stockpiling of excavated earth to be used for plantation. • 100% excavated earth will be backfilled within project premises for site levelling and grading. • The stockpiles of construction material will be protected with toe wall of adequate height along with garland drain & sedimentation traps to prevent uncontrolled discharge of runoffs during monsoon and reuse the collected waste water for construction purpose after primary settling. • Provision of storm water drains with oil &

	ways due to run-off from construction site, excavated soil pile etc. from project premises • Storage of hazardous waste like used oil, discarded containers etc. in open on unpaved area resulting in spillage and leaching to sub-soil, water table / aquifer. • Improper collection & storage of MSW, plastic waste etc. generated from labour camp	• Risk of contamination of soil, ground water, surface water bodies, toxic substance accumulation by crops / plants, rendering ground water unfit for human / animal consumption and adversely impacting on human and animal health. • Contaminated ground water is extremely difficult to treat. • Odour nuisance from open storage of MSW, increase in disease vectors affecting human and animal health.	grease traps and sedimentation traps as per contour & drainage pattern. • Storm water diversion channels to divert storm run-off from flowing over the construction areas. • Removal & proper disposal of all the debris from site, as soon as construction is over. • Domestic sewage generated will be disposed off to well-designed soak pits. • Storage of hazardous chemical & hazardous waste in covered room with impervious flooring. • Wash offs containing these chemicals will be drained into impervious trays / barrels for disposal as hazardous wastes. • Water consumption during construction phase will be met through the surface water from Upper Khajuri Dam.
D. Ecology			
	Impact on Fauna	Loss of Tree Species Disruption of Forest Structure Alteration of Plant Communities Decreased Biodiversity Increased Invasive Species Soil Degradation	Reforestation and Afforestation Selective Logging and Sustainable Harvesting Restoration of Degraded Areas
	Impact on Fauna	Loss of Habitat Disruption of Food Sources Loss of Biodiversity	Habitat Conservation Reforestation and Habitat Restoration Species Monitoring and Research
E	**Demography & Socio-economics**	The social impact during the construction stage is expected to be positive. Local residents are likely to find employment opportunities, as the	Positive impacts

		construction work is labor-intensive. Contractors may prefer hiring local individuals for secondary employment based on their skills and experience. The influx of labor during construction is anticipated to boost economic activities in the surrounding areas. Additionally, the procurement of construction materials locally, such as stone chips and sand, could lead to the generation of local trading opportunities for a limited period.	
F	**Local Infrastructure**	The increased influx of labor during construction may strain existing drinking water facilities, health services, and sewerage systems. There is also a potential risk of conflicts between the labor force and residents, leading to social unrest.	Adequate facilities, including shelters and provisions for drinking water and sanitation, will be provided for laborers hired from outside.

Description of environmental impacts and mitigation measures during operational phase are given below.

11.4.1 Air Environment

PM from boilers will be controlled by the installation of ESP Dust suppression and bag filters for the coal handling systems will control PM emissions. De-NOx systems shall be provided to effectively control NOx emission levels. Ash silos will be provided for collection of fly ash in dry form for further transportation to utilities.

Mitigation measures

To control PM from TPP Stacks, Electrostatic Precipitator (ESP) is proposed. To control NOx emission, De NOx system of SCR / NSCR type with low NOx burner is proposed. With these controls, Hg emission is expected to be brought below the emission limits as measured in various other TPPs in India.

Necessary dust suppression arrangement and bag filters will be used in railway siding and coal handling plant. The top surface of coal wagons will be adequately sprinkled to reduce fugitive emissions during transportation. Belt conveyors will be covered to minimize the fugitive dust emissions. Auxiliary fuel transportation will be occasional; hence its impact will be for a limited time period. The fly ash silos will be provided with bag filters to control emission. Regular housekeeping will be done at plant roads, platforms, and storage area.

11.4.2 Water Environment

Total waste water from the project will be recycled, focusing on effluents from CW blowdown, WT plant, coal pile area runoff, and plant drains. Domestic sewage will be treated in the STP wil be utilized in greenbelt/ plantation. Total Annual Recharge to Ground Water Regime of the area through rainwater harvesting structure would be **12,15,939.15 m^3/ annum**. No groundwater extraction, ensuring minimal impact on water resources.

The water requirement of 28 MCM/Year for makeup to the closed cycle re-circulation system of condenser cooling will be drawn from River Ganga to Upper Khajuri Dam and further to plant site through pipeline of about 32.6 km in length. Water allocation from WRD Uttar Pradesh vide letter no. 3613/11-27-C.0-4-174/11 dated 09.10.2011 has already been obtained and Mirzapur TPP has optimized the water requirement to 28 MCM /annum. It is proposed to utilise the power plant wastewater for plant reuse to achieve the Zero Liquid Discharge (ZLD). It is envisaged to utilize cooling water blow down for ash handling purposes and treated wastewater will be used for plantation and gardening activities.

11.4.3 Noise Environment

- Noise reduction measures include insulation, damping pads, and acoustic enclosures.

- Regular equipment maintenance and safety gear for workers will be provided.
- Noise levels will comply with regulations, not exceeding 75 dB (A) at 1 m distance.
- Extensive oiling, lubrication, and preventive maintenance will minimize noise generation.
- Earplugs will be provided in areas where noise levels may exceed permissible limits.
- Supervisors will ensure machinery conditions and silencers are maintained.
- Adequate greenbelt will be developed within the project premises and around the plant boundary.

11.4.4 Socio-Economic Environment

The company will take various steps for social & environmental development for the villagers in more then one ways. The details of the various activities undertakto be taken by the company's CSR activities are described in detail in Chapter 8 of "Project Benefits" of the report. The company will continue to work for development of the society in future also. The additional economic opportunities for local population will create a long term positive impact in the society. Project also does not involve discharge of any pollutant and follows zero discharge, thus the environment will not be negatively impacted. All due care will also be taken to manage the odour as per present practices and the same will be improved to match the best industry practices.

11.4.5 Solid & Hazardous Waste

- Fly ash and bottom ash will be main solid waste to be generated from the plant. The details of the ash generated from the proposed power plant are given in Table 4.16. 100% utilization of fly ash as per MoEF&CC guidelines is proposed.
- The bottom ash will be collected in wet form and fly ash in dry form. Fly ash will be collected in dry form to facilitate utilization.
- Ash Dyke is proposed in 49.37 Ha, which is less than **0.1 Ha./MW** (i.e 160 Ha. for 1600 MW) allowed as per Fly Ash Notification dated 31.12.2021.
- Unutilized Fly ash and bottom ash shall be disposed via High Concentration Slurry disposal (HCSD) system to Ash dyke in case of exigencies.
- Bottom ash generated shall be supplied to the Road Mix Concrete (RMC) / brick producers / filling of low lying area / filling of mine voids as per the statutory guidelines thereby eliminating the need for separate area shall be explored.

Table 11.5: Ash generation from the Proposed Plant

S. No.	Description	Ash quantity in Million TPA	Management & disposal
1.	Fly ash	2.06	Collection in dry form, pneumatic transfer to closed silos & sent to cement manufacturing, Construction work (RMC plant, Roads, Highways), Brick Manufacturing, etc.
2.	Bottom ash	0.5	Collection in wet form & Road Mix Concrete (RMC) / brick producers / filling of low lying area / filling of mine voids
Unutilized Fly ash and bottom ash shall be disposed via High Concentration Slurry disposal (HCSD) system to Ash dyke in case of exigencies.			

IMPACT

- Improper storage, handling and disposal of solid & hazardous waste leads to contamination of soil, ground water and surface water.
- Contamination may also be caused by spillage of hazardous waste, run-off from hazardous waste storage area etc.
- Plants may take up contaminants from soil and accumulate toxic substances ultimately adversely affecting human / animal health due to ingestion.

Hazardous Waste

- Hazardous waste will be handled, stored & disposed off in line with Hazardous & Other waster (management & transboundary movement) Rules 2016, amended till date.
- Separate covered storage area with impervious flooring and catch drains connecting to WTP will be provided with Hazardous waste storage area.
- E-Waste (about 2.0 TPA), Battery waste (about 3 TPA), Bio-medical waste (0.02 TPA) will be handled, stored & disposed of as per applicable rules & guidelines.
- Used batteries will be will be given back to the supplier under buy back agreement with supplier.
- Bio-medical waste generated from medical unit will be handed over to nearest CBWTF &/or hospital having BMW disposal agreement with CBWTF.

Municipal Solid waste generation & management

Improper disposal of MSW may cause contamination of soil, ground water and surface water over time. It may lead to odour nuisance as well as increased disease vectors in the area.

Table 11.6: Municipal Solid waste generation & disposal

Particulars	**Population**	**Basis**	**Quantity of waste generated (in kg/day)**
Workers	275	@0.3 kg/day	82.5
Landscaping	299.3 acre	@0.2kg/acre/day	59.86
STP sludge (dry)	--	--	50
Total			**192 Approx.**

- MSW generated to the tune of about 192 Kg/day will be collected, segregated at source itself using color coded bin collection system placed strategically in the plant premises.

The organic component of MSW will be segregated and composted in Organic waste converters proposed at site. The remaining waste will be handed over to authorized vendors for recycle/reuse & disposal.

11.5 ANALYSIS OF ALTERNATE SITE & TECHNOLOGY

The proposed project involves a coal based Ultra Super Critical Technology Thermal Power Project (USCTPP) of 1600 (2x800) MW in Village Dadri Khurd, Tehsil Mirzapur Sardar, District Mirzapur, Uttar Pradesh. The land area requirement for the proposed project is about 365.19 Ha.

area. The land is already in possession with Mirzapur Thermal Energy (UP) Private Limited except Govt land which is under transfer and mutation.

Ultra Super Critical thermal power plants combine high efficiency, reduced emissions, and operational flexibility, making them a compelling choice for large-scale power generation projects aiming for both economic and environmental sustainability.

11.6 ENVIRONMENTAL MONITORING PROGRAMME

Environmental Management Division

Monitoring is as important as that of control of pollution since the efficiency of control measures can only be determined by monitoring. The following routine monitoring program will be implemented under the post-project monitoring as per CECB/CPCB guidelines. The major environmental considerations involved in the construction and operation of the thermal power station will be taken up by a full-fledged multi-disciplinary Environmental Management Division (EMD) with key functions of environmental, safety and occupational health for management of the entire plant and surrounding environment.

It is predicted that socio-economic impact due to the proposed project will positively increase the employment opportunities for local inhabitants. There are no resettlement and rehabilitation issues involved in this project. The project infrastructure will be of use to the people of the area. The contribution to the revenue of the State Govt. will be put in public welfare and augmented growth. The entire project area is devoid of any endangered flora and fauna. Thus, the proposed project is not likely to affect the environment or adjacent staff etc. This EMD will take up additional responsibility of environmental functions related to proposed mega power plant.

Operation Head would represent the Project's Company's interest in the operation & maintenance of the power station and would oversee the functioning of O&M Cell Company.

Green Belt:-

The greenbelt will have 3-tier plantation as per the CPCB guidelines.

EMP costing

The heads for EMP are: Electrostatic Precipitator, Chimney, Cooling Tower including civil works, Ash Handling including ash water recirculation, Ash disposal civil work, Dust

extraction & suppression system, DM Plant Waste Treatment System, Sewerage collection, treatment & disposal, Green Belt & landscaping, SCR, Rainwater harvesting, Solar power harnessing, Enhancing Environmental Laboratory & Environmental Monitoring, CEMS, CAAQMS, EQMS monitoring system & Main gate display board and Wind Breaking Wall, Dry Fog System & RCC Flooring in Coal Storage Area.

A cost provision of Rs. 3012.39 Cr. has been earmarked towards environmental measures.

11.7 ADDITIONAL STUDIES

Public Hearing: The public hearing was conducted on 11.04.2025 at Near Upper Primary School, Madihaan Market, Madihaan Tehsil and District – Mirzapur. Copy of Public Hearing Proceedings along with attendance sheet have been enclosed as **Annexure VIII.**

Risk Assessment, Hazard Analysis: Risk associated with process and raw materials (LDO/HSD) was anticipated and proper mitigation measures provided.

Hazard due to toxic release of Chlorine and Aqueous Ammonia has been assessed with the help of ALOHA software and the threat zone marked on google earth.

Within the plant: Personnel working in the plant during the operational phase.

Outside the plant: There are no major habitation within 1.0 km of project site.

However, by implementing all the possible risk mitigation measures the same could be minimized

Disaster Management Plan: On Site & Offsite Emergency Plan with levels I, II and III emergency has been prepared and detailed in chapter 7 of this EIA/ EMP report.

Water source sustainability study: it has been found that Impact due to water withdrawal is also nil as even after maximum utilization of water from the Upper Khajuri dam by different sectors, the government of Uttar Pradesh will be still left with 2.44 MCM of water per year as a whole and 95.885 MCM of water per year if we go months which can also be utilized for downstream ecology sustainability. Looking at the overall project scenario, it has been noticed that the project in totality considered environmentally safe.

Hydrogeological assessment & rainwater harvesting: The total rainwater available is 0.26 MCM, the natural recharge is computed from the rainfall infiltration factor method is 0.13 MCM. Hence, the 0.13 MCM water is available for the artificial recharge rainwater harvesting.

Ecological assessment & flora fauna (wildlife) conservation & management plan: The survey recorded 22 species of Schedule-I species of which 10 are mammals, 6 are fauna and 6 herpeto-fauna as per Indian Wildlife (Protection and Amendment) Act, 2022. No Schedule-I species was recorded from the core zone.

Need-based assessment survey & CSR action plan: The need-based community development work would be undertaken in the CSR villages as an integral part of the TPP under CSR activities. These facilities will also be available to the host population and the neighbouring community and facilitate socio-economic development of the area.

Micro watershed management plan: The project site falls in the first order streams of the watershed with medium to low drainage density. The streams are flowing towards north and north east direction. There is no significant management related to watershed needs to be developed at the present stage. The care should be taken not to dispose any waste to the streams

11.8 PROJECT BENEFITS

Adani Foundation is the CSR arm of Adani Group of companies implementing CSR projects and activities at different locations in India. A separate budget Rs. 46.50 Crore towards is earmarked as Socio (EMP) CER activities. Efforts will be made to address concerns raised after the public consultation during the final EIA ensuring responsible corporate practices.

11.9 CONCLUSIONS

The Proposed project at Mirzapur will positively increase the employment opportunities for local inhabitants. There are no resettlement and rehabilitation issues involved in this project. The project infrastructure will be of use to the people of the area. The contribution to the revenue of the State Govt. will be put in public welfare and augmented growth. The entire project area is devoid of any endangered flora and fauna. Thus, the proposed project is not likely to affect the environment or adjacent ecosystem adversely.

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CHAPTER: XII DISCLOSURE OF CONSULTANT ENGAGED

Declaration by Experts contributing to the Project: **Proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh.**

Applicant: **Mirzapur Thermal Energy (UP) Private Limited**

Disclosure of Consultants Engaged

Name of the Project: Proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh by Mirzapur Thermal Energy (UP) Private Limited.			
Nature of consultancy		**Name and address of the Consultant/expert/Agency**	**Approvals, if any from (NABL/DGMS/IBM/ NRBPT/ MOEF/CPCB/others etc.)*, Give reference**
EIA/ EMP Organization		**Gaurang Environmental Solutions Pvt. Ltd. (GESPL)** #102, SNG, Shri Ratna Apartment, Peetal factory, Bani Park, Jhotwara road, Jaipur-302016 Ph:0141-4029115 E-mail: gaurangenviro@gmail.com	Accreditation Certificate No.- NABET/EIA/23-26/RA0338 dated 16.07.2024 valid upto 07.12.2026.
	Env. Coordinator	Dr. Ratna Kumar Mudliar Mallikarjuna M Guttula - TM	
	FAE-LU	Mamta Pandey TM- Vinod Verma	
	FAE-AP	Pooja Yadav Vimal Yadav – TM	
	FAE-AQ	Jayesh Y Makwana Mallikarjuna M Guttula – FAE – B Category	
	FAE-WP	Dr. Ratna Kumar Mudliar TM- Vimal Yadav	
	FAE-EB	Srikantan Nair Dr. Mahendra Singh -TM	
	FAE-NV	S. Chandrasekhar Babu Mallikarjuna M Guttula- TM	

	FAE-SE	Gajendra Singh Rathore Puran Singh Gurjar – TM	
	FAE-HG	Mukesh Suroliya Shivam Joshi - FAA	
	FAE-RH	Dr. Sanjay Palnitkar Ginni Barotia (FAE Cat. B)	
	FAE-SHW	Pooja Yadav Ginni Barotia (FAE Cat. B)	
	FAE-GEO	Mukesh Suroliya Shivam Joshi - FAA	
	FAE-SC	Dr. Ratna Kumar Mudliar Pooja Yadav – TM	
Environmental Monitoring & analysis		Newcon Consultants & Laboratories, Uttar Pradesh.	
Hydro geological study		Mukesh Suroliya Shivam Joshi	
Rainwater Harvesting		Mukesh Suroliya	

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Chapter - XIII

Cumulative Assessment Study

13.1 INTRODUCTION

In this chapter, the proposed industry within a 15 km radius are identified and a Cumulative Study is done for the industries, existing and proposed, to check whether the proposed industry can be allowed over and above the existing industry as per Specific Terms of Reference for (Thermal Power Plants) condition no. 1.1: *"A Cumulative Environmental Impact Assessment study of all the existing and proposed projects in the 15-km radius of the proposed project shall be conducted and the same shall be included the in EIA/EMP report.* Details of industrial units present in 15 Km radius of the power plant shall be submitted."

Cumulative impacts occur when a Project activity acts together with other projects or third-party activities to impact the same environmental or social resource or receptor. The cumulative impact is defined as impacts that result from the incremental impact, on areas or resources used or directly impacted by the project, from other existing, planned or reasonably defined developments at the time the risks and impacts identification process is conducted. Significant cumulative impacts can result from individually minor but collectively major actions taking place over a period of time

Cumulative Impact Assessment (CIA) is an approach to environmental impact assessment (EIA) that aims to consider the effects of multiple actions or impacts on the environment of proposed and ongoing activities located within a given area. CIAs are conducted across the actual and potential impacts of several activities or projects that may combine over time and/or space with appropriate limitations by reference to the action being assessed and its impacts.

Unlike an Environmental and Social Impact Assessment (ESIA), a Cumulative Impact Assessment (CIA) focuses on Valued Environmental and Social Components (VECs) as receptors of impacts from different projects and activities and not on a project as a generator of impacts on various environmental and social receptors. While VECs may be directly or

indirectly affected by a specific development, they often are also affected by the cumulative effects of several developments. VECs are the ultimate recipient of impacts because they tend to be at the ends of ecological pathways.

To be included in this CIA, an environmental and social component must first be demonstrated to be valued by some identifiable stakeholder group, be it the scientific community or any group of national, regional and local stakeholders. Second, the VEC must be reasonably expected to be affected by both the projects under evaluation (here, the Power Plant) and some combination of Other Projects and External Drivers.

[1] *Cumulative Environmental Impact Assessment Industry Guide, Mineral Council of Australia, July 2015.*

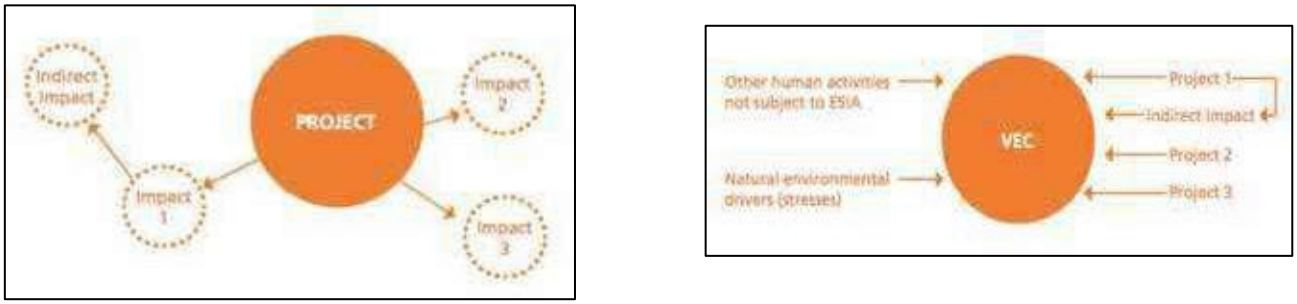


Figure 13.1: Difference in ESIA & CIA

Source: ifc.org

Other projects: The MTEUPPL Thermal power plant coming up in Mirzapur, Uttar Pradesh has mostly rural surroundings. There are no major industries in the 15 km radius area. Some stone quarries are scattered in the study area, however, carrying out cumulative assessment considering these is limiting due to non-availability of data sets. Hence cumulative impact assessment has not been carried out.

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ANNEXURE - I

सत्यमेव जयते

File No: J-13012/12/2011-IA.II (T)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division
***

Dated **29/07/2024**

To,

Sh. Santosh Kumar Singh
M/s MIRZAPUR THERMAL ENERGY (UP) PRIVATE LIMITED
Mirzapur Thermal Energy (UP) Private Limited, Adani Corporate House, Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad 382 421, Gujarat, India, Ahmedabad, AHMADABAD, GUJARAT, ACH, Shantigram, Vaishnodevi Circle, S.G Highway., 382421
E-mail: mirzapur.env@gmail.com

Subject: **Proposal of 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) at Village Dadri Khurd, Tehsil, Mirzapur Sardar, District Mirzapur, Uttar Pradesh by M/s Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL). – Grant of Terms of Reference - regarding**

Sir/Madam,

This is in reference to your application for Grant of Terms of Reference under the provision of the EIA Notification 2006-regarding in respect of project 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) at Village Dadri Khurd, Tehsil, Mirzapur Sardar, District Mirzapur, Uttar Pradesh by Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL). submitted to Ministry vide proposal number IA/UP/THE/467671/2024 dated 08/05/2024.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO24A0601UP5665287N
(ii) File No.	J-13012/12/2011-IA.II (T)
(iii) Clearance Type	TOR
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(d) Thermal Power Plants
(vi) Sector	Thermal Projects
(vii) Name of Project	2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) at Village Dadri Khurd, Tehsil, Mirzapur Sardar, District Mirzapur, Uttar Pradesh by Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL).
(viii) Name of Company/Organization	M/s MIRZAPUR THERMAL ENERGY (UP)

	PRIVATE LIMITED
(ix) Location of Project (District, State)	MIRZAPUR, UTTAR PRADESH
(x) Issuing Authority	MoEF&CC
(xii) Applicability of General Conditions	no
(xiii) Applicability of Specific Conditions	no

3. M/s Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL) has made an application online vide proposal no IA/UP/THE/467671/2024 dated 08/05/2024 in the prescribed format (Form-I) and submitted a pre-feasibility report for undertaking a detailed EIA study as per the EIA Notification, 2006 for grant of Terms of Reference (ToR) to 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) at Village Dadri Khurd, Tehsil, Mirzapur Sardar, District Mirzapur, Uttar Pradesh by M/s Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL).

4. The project/activity is covered under category A of item 1(d) 'Thermal Power Plants' of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006, as amended as the power generation capacity of proposed expansion is beyond threshold capacity of 500MW i.e. 2 x 800 MW (1600 MW) and requires appraisal at Central level.

5. The instant Proposal was considered in the 10th EAC (Thermal) meeting held on 10th June 2024. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at https://parivesh.nic.in.

Details submitted by the project proponent

6. Project Proponent along with the QCI NABET consultant M/s. Gaurang Environmental Solutions Pvt. Ltd made the detailed presentation and apprised following to the EAC:

i. Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL) is proposed to setup a coal based Ultra Super Critical Technology Thermal Power Project (USCTPP) of 1600(2X800) MW in Village Dadri Khurd, District Mirzapur, State Uttar Pradesh.

ii. Previously, M/s. Welspun Energy UP Pvt. Ltd. (WEUPPL) proposed to set up 2x660 MW Super Critical Coal based thermal power plant at Village Dadri Khurd, Tehsil Mirzapur, Uttar Pradesh. The Ministry of Environment, Forest & Climate Change (MoEFCC) had granted Environmental Clearance for 1320 (2x660) MW vide F. No: J-13012/12/2011-IA II(T) dated 21.08.2014 and subsequently, name changed to Welspun Energy UP Pvt. Ltd. (WEUPPL) to Mirzapur Thermal Energy UP Pvt. Ltd. (MTEUPPL) Vide Letter No. F. No: J-13012/12/2011-IA II(T) dated 20.12.2019.

iii. Earlier, Hon'ble NGT, Principal Bench, Delhi in their judgement dated 21.12.2016 set aside the Environmental Clearance (EC) dated 21.08.2014. Further, in Judgement dated 01.05.2017, a clarification was issued, that "the Project Proponent is at liberty to approach the MoEF&CC or any other competent authority for processing of the application for grant of EC upon making up for /rectifying the defects and deficiencies pointed out in the judgement".

iv. MTEUPPL had submitted the revised Form-I & supporting documents - Study Reports as suggested by MoEFCC for EC amendment, which was appraised by the EAC (Thermal Power) in its meetings held on 24.07.2017 and 22.02.2019. The EAC in its meeting held on 22.02.2019 recommended for EC amendment.

v. The MoEFCC vide letter no. J-13012/ 12/2011-IA.II(T) dated: 20.12.2019 suggested for providing/submitting the Stage-I Forest Clearance for further issuance of EC amendment letter. MTEUPPL had not submitted the same and the EC amendment letter was not issued. PP now submitted a fresh proposal for EC.

vi. Pre-Construction activities & Planning has been completed and construction work not started yet.

vii. Now the proposal has changed from 2x660 MW to 2x800 MW and almost 10 years have lapsed, a new reference (De Novo) is being made through this application for grant of ToR.

viii. **The salient features of the project are as under:-**
Project Details

S. No.	Particulars	Details
i.	Category of the project	A
ii.	Capacity	1600 (2 X 800) MW
iii.	Location of TPP	Village Dadri Khurd, Tehsil, Mirzapur Sardar, District Mirzapur, Uttar Pradesh
iv.	Average height	(a) TPP site: 198 m above MSL (b) Ash pond site: 195 m above MSL.
v.	Accredited Consultant and certificate no.	M/s Gaurang Environmental Solutions Pvt. Ltd. NABET Accreditation No.: NABET / EIA / 2023/SA0203
vi.	Inter- state issue involved	No
vii.	Seismic zone	Zone-III as per IS 1893.

Land Area Breakup:

Land Requirement: a) TPP Site b) Ash Pond c) Township d) Railway Siding & Others e) Raw Water Reservoir f) Green Belt g) others Total (if expansion state additional land requirement)	**365.19 ha.** 85.80 ha 49.37 ha 11.57 ha 64.14 33.18 ha 120.51 ha 0.62 Total: No additional land is required.
Status of Land Acquisition:	The land required for proposed project is already under possession except Govt. & Forest like area (Jhari)
Status of the project: If under construction phase: please specify the reasons for delay, works completed till date and balance works along with expected date of completion. If under operation phase, date of commissioning (COD) of each unit. Whether the plant was under shutdown since commissioning, details and reasons.	Proposed project is at planning stage and no construction activities have been commenced at the site.
Break-Up of land-use of TPP site: a) Total land required for project components b) Private land c) Government land Forest Land	**Total Project Land:365.19 ha** · Private Land: 364.57 ha · Forest Land: 0.62 ha (Application was submitted for same area but after the Joint inspection of DFO (Forest Office) & SDM (Revenue) was held on 03.04.2024 confirming that the above area is Non-Forest Land. This area will be used for plantation / green belt purposes only.)
Whether the project is in the Critically Polluted Area (CPA) or within 10 km of CPA. If so, the details thereof:	No, the district doesn't fall under CPA.
CRZ Clearance	Not Applicable
Whether the project is in the Critically Polluted Area (CPA)/Severally Polluted Area (SPA) or within 10 km of CPA. If so, the details thereof:	No, the district doesn't fall under CPA/SPA.

Details of fuel and Ash disposal:

Fuel to be used:	Coal and Auxiliary Fuel
Quantity of Fuel required per Annum:	Coal - 6.4 Million MTPA Auxiliary Fuel- 15000 KL per annum
Coal Linkage / Coal Block: (If Block allotted, status of EC & FC of the Block)	Coal for the Proposed project will be Domestic coal from commercial Coal Mines of NCL / SECL / CCL & Commercial Coal Mines. (Design Coal GCV of 3200-4300 KCal/kg.). Auxiliary liquid fuels, viz. LDO/HSD requirement per annum is about 15000 kilo liters.
Details of mode of transportation of coal from coal source to the plant premises along with distances	Coal shall be received from Mine to TPP through BG Rail Wagons. Total distance from the source to Rail: about 250 - 550 km.
Fly Ash Disposal System Proposed	Fly ash will be collected in dry form for utilization, while bottom ash will be collected in wet form. There would be provision for dry disposal of fly ash from storage silos to closed tankers for utilization in cement industries, abandoned mine reclamation, road construction, aggregate replacement in concrete, for manufacturing bricks, etc. as per Fly Ash Notification, 31st December' 2021 and amendments. Provision would be kept for HCSD disposal of both bottom and fly ash to ash pond in case of exigency. In this case, both bottom ash and fly ash will be disposed through HCSD system to the proposed ash dyke.
a) Ash Pond / Dyke: (Area, Location & Co-ordinates) Average height of area above MSL (m) b) Space left in ash dyke area	Area-49.37 ha 25° 0'1.67"N 82°40'33.12"E 195 m above MSL. Area- 49.37 ha
Quantity of a) Fly Ash to be generated b) Bottom Ash to be generated:	10,035 TPD 8028 TPD 2007 TPD
Fly Ash utilization percentage with details in last 5 years	No fly ash generated in last five years as this is a green field (De Novo) project
Stack Height (m) & Type of Flue	120 (m) (new) Bi Flue

ix. The estimated project cost is Rs. 18,300 Cr. Total capital cost earmarked towards environmental pollution control measures is Rs. 3012.39 Cr. and the Recurring cost (operation and maintenance) will be about Rs 3.0 Cr per annum considering EMP.

x. Total Employment will be 275 persons as direct & 25 persons as indirect. Industry proposes to allocate Rs. 48.5 Cr. towards CER (as per Ministry's OM dated 30.09.2020).

xi. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site except Reserved forests, temples and BHU (South Campus) exist within the study area from the project site. Upper Khajuri Dam is at a distance of 6.0 km in the WEST direction and few other water bodies exist within the study area from the project site.

xii. Effluent of 1080 KLD quantity will be treated through STP & ETP. The plant will be based on a Zero Liquid discharge system.

xiii. Power requirement after will be 7.5 and will be met from self-generation, i.e. AUX consumption. The existing unit has no DG sets, additionally, no DG sets are used as standby during power failure. Stack (height-movable DG sets) will be provided as per CPCB norms for the proposed DG sets.

xiv. The existing unit has no boiler. Additionally, a 585 TPH coal-fired boiler will be installed. Electrostatic precipitator (ESP), NOx Control system and Flue gas desulphurisation system (FGD) with a stack height of 120 m will be installed for controlling particulate emissions within the statutory limit of 30 mg/Nm3 for proposed boilers.

xv. Details of Solid waste/ Hazardous waste generation and its management are given below-

Name of the waste	Source	Quantity (TPA)	Mode of Disposal	Mode of Transportation
Used/Spent oil	Plant Operation	60	Registered Recyclers/ Pre-processors with SPCB	Road
Wastes or residues containing oil	Plant Operation	10	Send to authorized recyclers	Road
Empty barrels/container/ contaminated liners	Plant Operation	12	Send to authorized recyclers	Road

xvi. Ash Pond area: As per MoEF&CC Notification S.O. 5481(E) dated 31.12.2021 and amendments stipulated ash pond area for thermal power plant 0.1 hectare per Mega Watt (MW). The proposed power plant has total ash pond area 49.37 ha i.e. 13.51% of the total project area 365.19 ha which is well within the norms.

xvii. Water Requirement: Water consumption for thermal power plants as per MoEF&CC vide Notification S.O. 3305 (E) dated 07.12.2015 for all existing CT based plants reduce specific water consumption upto maximum of 3.5 m3/MWh and as per MoEF&CC stipulated norms vide Notification GSR 593 (E) dated 28.06.2018 water allocated to the thermal power plant is 3 m3/MWhr for new plants installed after the 1st January, 2017. The total water requirement for the project is 3200 m3/h, (2m3/MWh) which will be well within the stipulated norms of Notification dated 07.12.2015/28.06.2018.

xviii. The water drawl permission of 36 MCM/year is obtained from WRD Uttar Pradesh Vide letter no. 3613/11-27-C.0-4-174/11 dated 09.10.2011.

xix. Details of Coal Linkage: Coal for the Proposed project will be Domestic coal from commercial Coal Mines of NCL / SECL / CCL & Commercial Coal Mines.

xx. Status of Litigation Pending against the proposal, if any.

Court name	Bench	Case Category	Status	Orders Directions
Local Court	Local Court	WP(Civil)	Reserved for judgement	Regulatory and Non Regulatory court caes are under hearing & consideration.
NGT court Case	NGT, Principal Bench, Delhi	Appeal	Disposed Off	In December' 2016, NGT judgement set aside the EC of the 1320 MW TPP at Mirzapur and vide their judgment in May'2017, that Project proponent is at liberty to approach the MoEFCC or any other competent authority for processing of the applications for grant of EC upon making up for rectifying the defects and deficiencies pointed out in the judgment. However, the authorities concerned are at liberty to process the same in accordance with law while strictly adhering to the content of the judgment.

Deliberations of the Committee

7. The EAC noted the following:

i. The proposal is for the grant of Terms of Reference (ToR) to 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) at Village Dadri Khurd, Tehsil, Mirzapur Sardar, District Mirzapur, Uttar Pradesh by Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL). The committee noted that earlier, M/s. Welspun Energy UP Pvt. Ltd. (WEUPPL) proposed to set up a 2x660 MW Super Critical Coal-based thermal power plant and MoEF&CC granted EC for 1320 (2x660) MW vide letter no. F. No: J-13012/12/2011-IA II(T) dated 21.08.2014 and subsequently, name changed to Welspun Energy UP Pvt. Ltd. (WEUPPL) to Mirzapur Thermal Energy UP Pvt. Ltd. (MTEUPPL) vide Letter No. F. No: J-13012/12/2011-IA II(T) dated 20.12.2019.

ii. It was noted by the EAC that in 2016, Hon'ble NGT, Principal Bench, Delhi vide Judgement dated 21.12.2016 set aside the Environmental Clearance (EC) dated 21.08.2014. Further, in the Judgement dated 01.05.2017, it was clarified that "the Project Proponent is at liberty to approach the MoEF&CC or any other competent authority for the processing of the application for grant of EC upon making up for rectifying the defects and deficiencies pointed out in the judgement". Accordingly, PP applied for amendment in EC in 2019 but the same was not issued due to non-submission of the Stage-I FC.

iii. It was observed by the committee that as per the KML file, no construction work has been started yet and now PP has proposed a thermal power plant with a change in capacity from 2x660 MW to 2x800 MW for obtaining prior environmental clearance (De Novo).

iv. The Committee also deliberated on the land use and observed that previous EC was granted over an area of 354.1 Ha (875 acres as per EC dated 21.08.2014) but now the proposal is for 365.19 Ha. The EAC deliberated on land use pattern and PP informed that the area is barren land, further EAC asked PP to submit existing Land Use pattern of the Project Site. Accordingly, PP vide letter dated 10.06.2024 submitted the following:
The proposed Land area for the project is 365.19 Ha. Land as per Government of Uttar Pradesh land records and land use details are as under:

S. No.	Type of Land	Area (in ha)	Remarks
a.	Industrial Land (Private Land converted for industrial use.) Currently the land is barren and under possession.	333.19	Land use map prepared using satellite imagery and GIS is enclosed as Annexure – I. Copy of order & summary of land documents is enclosed as Annexure – II. Based on the Land allotment and Land converted for industrial purpose by order of District Magistrate, Sadar Mirzapur, Govt.of U.P Order dated: 05.11.2012.
b.	Govt. Land	31.38	Application for land allotment was submitted on dated 22.03.2024 & 22.05.2024. Copy of receipt the application is enclosed Annexure - III.
c.	Forest like area	0.62	The application was submitted for diversion of forest area (forest-like area) but after the Joint inspection of DFO (Forest Office) & SDM (Revenue) held on 03.04.2024, it was confirmed that the above area is Non-Forest Land. Copy of Joint inspection report enclosed Annexure - IV. However, as per the directions of Hon'ble committee members, this area will be used for plantation / green belt purposes only

The Committee observed that PP has reported an area of 0.62 Ha (forest land) inside the plant boundary but at the same time applied for FC over an area of 4.0123 vide proposal No FP/UP/OTHERS/470227/2024 dated 22/04/2024. Further, PP submitted that application was submitted for the same area (0.62 Ha) but after joint inspection of DFO (Forest Office) & SDM (Revenue) was held on 3.04.2024 confirming that the above area is non-forest land. In addition to this PP also reported in PFR that 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 for this vide Proposal no. FP/UP/THE/14236/2015 and the same is under due consideration with MoEF&CC. The Committee is of the view that although PP has submitted a copy of joint inspection report but for more clarity PP shall obtain a letter in this regard from concerned forest department clearly mentioning the extent of forest land involved within and outside (other activities related to plant) plant area. The EAC also suggested that while preparing the EIA/EMP report, PP shall explore the possibility of optimizing forest land requirement to the extent possible and submit a detailed note on the same at the time of EC presentation. In case of any increase in forest land PP shall obtain the amendment in ToR.
v. PP showed the KML file and Topo-Sheet of the project area. The Committee observed that as per KML the area is barren land but some water bodies/nallha passing though the project area. The Committee therefore asked the PP to submit a drainage map with contours. PP vide letter dated 10.06.2024 submitted project area drainage map with contour. The Committee is of the view that PP shall submit a plan for diversion of nallha/water body, if any, involved in the project. PP shall also obtain the permission for such diversion from the concerned authorities.

vi. The Committed observed that PP has submitted that Coal for the proposed project will be Domestic coal from commercial Coal Mines of NCL / SECL / CCL & Commercial Coal Mines. But PP has not submitted the quantity of coal that will be used for the proposed plant, accordingly, PP vide email dated 10.06.2024 submitted that the annual requirement of coal is estimated to be about 6.4 million MTPA for Ultra Super Critical Boiler based TPP (2x800 MW) Coal from Coal Mines of NCL / SECL & Commercial Coal Mines. The Coal will be transported through Rail as per the rules, regulations & terms/conditions of the Indian Railway for transportation of Coal. The Committee is of the view PP shall submit the firm coal linkage, quality of coal and propose mitigative measures in the EIA/EMP report after referring to the OMs issued by MoEF&CC in this regard.

vii. The Committee also observed that PP has submitted a PPT for expansion but it's a green field project and asked the PP to submit the revised PPT. PP vide email dated 10.06.2024 submitted the revised PPT and basic information.

viii. Further, the EAC noted that the total water requirement for the expansion project is 3200 m3/h (~2 m3 /MWh), which is well within the stipulated limits mentioned in the Notification dated 28.06.2018. The water drawl permission of 36 MCM/year is obtained from WRD Uttar Pradesh Vide letter no. 3613/11-27-C.0-4-174/11 dated 09.10.2011.

ix. Additionally, the Committee noted that total power generation will be 1600 MW (2x800 MW). Further, as per MoEF&CC Notification S.O. 5481(E) dated 31.12.2021 and amendments stipulated ash pond area for the thermal power plant is 0.1 hectare per Mega Watt (MW), which works out to be 160 Ha. The proposed power plant has a total ash pond area of 49.37 ha i.e. 13.51% of the total project area 365.19 ha which is well within the area suggested as per Notification dated 31.12.2021.

x. The Committee is also of the view that PP while preparing the EIA/EMP Report and conducting Public consultation shall take into account, the deficiency pointed out by the Hon'ble NGT Judgment 21.12.2016.

Recommendations of the Committee:

8. The EAC after detailed deliberation on the information submitted and as presented during the meeting **recommended** the proposal for grant of ToR for conducting an EIA study with Public Consultation (Public Hearing and Written submission) to the project for the construction of the 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) at Village Dadri Khurd, Tehsil, Mirzapur Sardar, District Mirzapur, Uttar Pradesh by **M/s Mirzapur Thermal Energy (UP) Private Limited** (MTEUPPL), under the provisions of the EIA Notification, 2006, as amended with the specific ToRs in addition to generic/standard ToR.

9. In accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the EAC, the Ministry hereby accords Terms of Reference (ToR) to M/s Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL) for for the construction of the 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) at Village Dadri Khurd, Tehsil, Mirzapur Sardar, District Mirzapur, Uttar Pradesh under EIA Notification, 2006 (as amended) with the specific ToRs in addition to generic/standard ToR as per **Annexure 1**.

10. The EIA/EMP report should contain the information in accordance with provisions & stipulations as given in the specific and standard ToR.

11. You are required to submit the final EIA/EMP prepared as per TORs to the Ministry within 4 years as per this Ministry's Notification vide dated 25.07.2022 for considering the proposal for environmental clearance.

12. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India/National Accreditation Board of Education and Training (QCI/NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization(s)/laboratories including their status of approvals etc.

13. The Ministry reserves the right to stipulate additional ToR, if found necessary.

14. The Terms of Reference to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project

Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

15. This issues with the approval of the Competent Authority.

Yours faithfully,

(Sundar Ramanathan)
Scientist 'E'/Additonal Director
Tel: 011- 20819378
Email- r.sundar@nic.in;

Copy To

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. The Chairman, Uttar Pradesh State Pollution Control Board, Building. No. TC-12V. Vibhuti Khand, Gomti Nagar. Lucknow-226 010
4. The Deputy Director General of Forests (C), Integrated Regional Officer, Ministry of Environment, Forest and Climate Change, Kendriya Bhawan, 5th Floor, Sector "H", Aliganj, Lucknow – 2260205.
5. The Chairman, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
6. Member Secretary, Uttar Pradesh State Pollution Control Board, PICUP Bhawan, 3rd Floor, B-Block, Vibhuti Khand, Gomti Nagar Lucknow – 226 010.
7. The Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
9. The District Collector, Mirzapur, Uttar Pradesh
10. Guard File/Monitoring File/PARIVESH Portal

Annexure 1

Specific Terms of Reference for (Thermal Power Plants)

1. [A] Environmental Management And Biodiversity Conservation

S. No	Terms of Reference
1.1	A Cumulative Environmental Impact Assessment study of all the existing and proposed projects in the 15-km radius of the proposed project shall be conducted and the same shall be included the in EIA/EMP report. Details of industrial units present in 15 Km radius of the power plant shall be submitted.
1.2	Radioactivity studies along with coal analysis to be provided (sulphur, ash percentage and heavy metals including Pb, Cr, As and Hg). Details of auxiliary fuel, if any including its quantity, quality, storage, etc should also be given.
1.3	A comparative chart shall be prepared with changes observed from the previous baseline study and present baseline study.

S. No	Terms of Reference
1.4	PP should submit the detailed plan in tabular format (year-wise for the life of the project) for concurrent afforestation and green belt development in and around the project site. The PP should submit the number of saplings to be planted, names of native species, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. In addition to this, PP should show on a surface plan (5-year interval for life of project) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided. In addition to this, plantation in the safety zone at project boundary the plantation should be planned in such a way that it should be completed within 2 years only.
1.5	Action plan for development of Three tier plantation programme (33% of total project cover area) along the periphery of the project boundary shall be provided. Plan shall be duly approved by the local forest department.
1.6	A detailed plan need to be submitted for undertaking extensive green plantation within 10 km radius of the plant focusing on water reservoir, school, hospital and other institutional area and same need to be incorporated in EIA/EMP report.
1.7	*Detailed action plan shall be prepared for maintenance of air pollution control equipment for proposed and existing units and shall be incorporated in EIA/EMP report.*
1.8	*Details of Ash management of 5-year plan for 100 % ash utilization for proposed project shall be submitted. MoU signed for ash utilization with companies shall be submitted.*
1.9	*Details of Ash handling system along with the supplementary coal handling system shall be submitted.*
1.10	*Proper protection measures like HDPE lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body (minimum 60 meters) etc. shall be planned to reduce the possibility of mixing leachate with any freshwater body for under-construction ash pond. A high-density Slurry disposal plan shall be prepared. The design of the same should as per CEA/CPCB guidelines.*
1.11	*Pond and ground water quality (10 locations within 2 km radius of the plant boundary) shall be studied and report be submitted along with EIA/EMP. Action plan for Ground water monitoring stations on all hotspots like schools/hospitals within 2 km radius of the plant boundary be submitted. Baseline Study for Heavy metals in Groundwater, Surface water and soil to be carried out and incorporated in EIA/EMP report. This is in addition to the regular baseline study of the study area.*
1.12	*Details pertaining to water source, treatment and discharge should be provided.*
1.13	*Zero Liquid Discharge plan shall be submitted.*
1.14	*PP shall submit action plan for using treated Sewage/Domestic wastewater for its operations.*

S. No	Terms of Reference
1.15	*Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*
1.16	*An action plan shall be prepared for Water shed development within a 10 km radius of the plant boundary in consultation with a reputed government institution and incorporated in the EIA/EMP report. This should include recharge of ground water in the surrounding area of the plant.*
1.17	*PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total material handled) and steps to be taken for reduction of the same. The year-wise target for reduction in the specific diesel consumption needs to be submitted. PP shall also explore the possibility of using e-vehicles/LNG/CNG-based machinery and trucks for the operation and transportation of Coal and ash.*
1.18	*PP shall submit a plan for diversion of nallha/water body if any involved in the project. PP shall also obtain the permission for such diversion from the concerned authority.*
1.19	*PP shall obtain a letter from concerned forest department clearly mentioning the extent of forest land involved within and outside (other activities related to plant) plant area.*
1.20	*While preparing the EIA/EMP report, PP shall explore the possibility of optimizing forest land requirement to the extent possible and submit a detailed note on the same at the time of EC presentation. In case of any increase in forest land PP shall obtain the amendment in ToR.*
1.21	*List of Schedule-I species needs to be authenticated by the concerned forest department.*
1.22	*PP shall submit the firm coal linkage, quality of coal and propose mitigative measures in the EIA/EMP report after referring to the OMs issued by MoEF&CC in this regard.*

2. [B] Disaster Management

S. No	Terms of Reference
2.1	A Disaster Management Plan shall be prepared and incorporated in the EIA/EMP report.

3. [D] Miscellaneous

S. No	Terms of Reference
3.1	*Plot the wind rose diagram using the typical meteorological year (TMY) data for the period considered for the study. The monitoring units shall be deployed in the field based on the coverage area ratio and direction of the wind. A mathematical model shall be developed for the local site rather than using the standard model available in software for both air & water quality modelling.*
3.2	*PP shall align its activities to one/few of the Sustainable Development Goals (SDG) and start working on the mission of net zero by 2050. PPs shall update the same to the EAC.*
3.3	*PP shall submit the EIA/EMP report after the plagiarism check using authenticated plagiarism software.*

S. No	Terms of Reference
3.4	*Detailed description of all the court cases including all directions given by the apex and currents status of them shall submit.*
3.5	*PP should provide in the EIA Report details of all the statutory clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after grant of EC.*
3.6	*The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.*
3.7	*PP should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this PP should mention the number and designation of persons to be engaged for the implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.*
3.8	*PP should submit the year-wise, activity-wise and time-bound budget earmarked for EMP, occupational health surveillance, and activities proposed to address the issues raised during the Public Hearing. The capital and recurring expenditures to be incurred need to be submitted.*
3.9	*Aerial view video of the project site and transportation route proposed for this project shall be recorded through drone and be submitted.*
3.10	*PP while preparing the EIA/EMP Report and conducting Public consultation shall take into account, the deficiency pointed out by the Hon'ble NGT Judgment 21.12.2016.*

4. [C] Socio-economic Study

S. No	Terms of Reference
4.1	*The Public Health Delivery Plan including the provisions for drinking water supply for the local population shall be in the EIA/EMP Report. The status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the needs of the labour force and local populace.*
4.2	*Public consultation (Public Hearing and Written submission) shall be conducted as per the provisions of EIA Notification, 2006 (as amended) and OMs issued in this regard by MoEF&CC.*
4.3	*As per the Ministry's OM dated 30.09.2020, to address the concern raised during the Public Hearing, the Project Proponent is required to submit the detailed activities proposed with year-wise budgetary provision (Capital and recurring) for at least 10 years. Activities proposed shall be part of EMP. Tentative no. of project-affected families (if any) shall be identified and accordingly appropriate Rehabilitation &Resettlement plan shall be prepared. The recommendation Socio-economic study may also be considered while planning the activities & budget. In addition to this issues raised during previous PH shall also be taken into account.*
4.4	*Demographic details in 10 km area shall be submitted.*

1. Statutory Compliance

S. No	Terms of Reference
1.1	The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference.
1.2	Vision document specifying prospective long term plan of the project shall be formulated and submitted.
1.3	Latest compliance report duly certified by the Regional Office of MoEF&CC for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted.

2. Details Of The Project And Site

S. No	Terms of Reference
2.1	The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted.
2.2	Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed.
2.3	Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be submitted.
2.4	The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them.
2.5	Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided.
2.6	Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided.
2.7	Present land use (including land class/kism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided.
2.8	If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided

S. No	Terms of Reference
	along with copies of relevant documents.
2.9	The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.
2.10	Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
2.11	Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted.

3. Ecology Biodiversity And Environment

S. No	Terms of Reference
3.1	A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted.
3.2	Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him.
3.3	A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted.
3.4	The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water balance diagram. Details of water balance calculated shall take into account reuse and re-circulation of effluents.
3.5	Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of proposed diversion shall be furnished duly approved by the concerned Department of the State.
3.6	It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways.
3.7	Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be

S. No	Terms of Reference
	spelt out and time bound Action Plan for its implementation shall be submitted
3.8	Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea.
3.9	Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.
3.10	Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished.In addition, wherever ground water is drawn, PP shall submit detailed plan of Water charging activity to be undertaken.
3.11	Feasibility of near zero discharge concept shall be critically examined and its details submitted.
3.12	Optimization of Cycles of Concentration (COC) along with other water conservation measures in the project shall be specified.
3.13	Plan for recirculation of ash pond water and its implementation shall be submitted.
3.14	Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area.
3.15	Hazards Characterization: Past incidents of hazard events within 10km radius of project area with detailed analysis of causes and probability of reoccurrence

4. Environmental Baseline Study And Mitigation Measures

S. No	Terms of Reference
4.1	One complete season (critical season) site specific meteorological and AAQ data (except monsoon season) as per latest MoEF&CC Notification shall be collected along with past three year's meteorological data for that particular season for wins speed analysisand the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM10, PM2.5, SO2, NOx, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration the upwind direction, pre-dominant downwind direction, other dominant directions, habitation and sensitive receptors. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur.

S. No	Terms of Reference
4.2	In case of expansion project, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs).
4.3	A list of industries existing and proposed in the study area shall be furnished.
4.4	Cumulative impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail. Details of the Model used and the input data used for modelling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should also be shown on the location map. The cumulative study should also include impacts on water, soil and socio-economics.
4.5	Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.
4.6	Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.
4.7	Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of the existing units to the said Notification shall also be submitted
4.8	Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.
4.9	For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted.
4.10	Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.

5. Environmental Management Plan

S. No	Terms of Reference
5.1	EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.
5.2	A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be prepared. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an

S. No	Terms of Reference
	accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Provision for mock drills shall be suitably incorporated to check the efficiency of the plans drawn.
5.3	The DMP so formulated shall include measures against likely Fires/Tsunami/Cyclones/Storm Surges/ Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely.
5.4	Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash along with monitoring mechanism.

6. Green Belt Development

S. No	Terms of Reference
6.1	Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary not less than 2000 tree per ha with survival rate of more than 85%shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO2 and other gaseous pollutants and hence a stratified green belt should be developed.
6.2	Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months

7. Socio-economic Activities

S. No	Terms of Reference
7.1	Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities.
7.2	Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project.
7.3	If the area has tribal population, it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.
7.4	A detailed CER plan along with activities wise break up of financial commitment shall be prepared in terms of the provisions OM No. 22-65/2017-IA.III dated 30.09.2020.CER component shall be

S. No	Terms of Reference
	identified considering need based assessment study and Public Hearing issues. Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified.
7.5	While formulating CER schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CERdetails done in the past should be clearly spelt out in case of expansion projects.
7.6	R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them.
7.7	Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared.
7.8	Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conducive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to three years shall be conducted with an excellent follow up plan of action wherever required.

8. Corporate Environment Policy

S. No	Terms of Reference
8.1	Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
8.2	Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
8.3	What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given.
8.4	Does the company has compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

9. Miscellaneous

S. No	Terms of Reference
9.1	All the above details should be adequately brought out in the EIA report and in the presentation to the Committee.
9.2	Details of litigation pending or otherwise with respect to project in any Court, Tribunal etc. shall invariably be furnished.
9.3	In case any dismantling of old plants are envisaged, the planned land use & land reclamation of dismantled area to be furnished.

10. Additional Tor For Coastal Based Thermal Power Plants Projects (Tpps)

S. No	Terms of Reference
10.1	Low lying areas fulfilling the definition wetland as per Ramsar Convention shall be identified and clearly demarcated w.r.t the proposed site.
10.2	If the site includes or is located close to marshy areas and backwaters, these areas must be excluded from the site and the project boundary should be away from the CRZ line. Authenticated CRZ map from any of the authorized agencies shall be submitted.
10.3	The soil levelling should be minimum with no or minimal disturbance to the natural drainage of the area. If the minor canals (if any) have to be diverted, the design for diversion should be such that the diverted canals not only drains the plant area but also collect the volume of flood water from the surrounding areas and discharge into marshy areas/major canals that enter into creek. Major canals should not be altered but their embankments should be strengthened and desilted.
10.4	Additional soil required for levelling of the sites should as far as possible be generated within the site itself in such a manner that the natural drainage system of the area is protected and improved.
10.5	Marshy areas which hold large quantities of flood water to be identified and shall not be disturbed.
10.6	No waste should be discharged into Creek, Canal systems, Backwaters, Marshy areas and seas without appropriate treatment. Wherever feasible, the outfall should be first treated in a Guard Pond and then only discharged into deep sea (10 to 15 m depth). Similarly, the Intake should be from deep sea to avoid aggregation of fish and in no case shall be from the estuarine zone. The brine that comes out from Desalinization Plants (if any) should not be discharged into sea without adequate dilution.
10.7	Mangrove conservation and regeneration plan shall be formulated and Action Plan with details of time bound implementation shall be specified, if mangroves are present in Study Area.
10.8	A common Green Endowment Fund should be created by the project proponents out of EMP budgets. The interest earned out of it should be used for the development and management of green cover of the area.
10.9	Impact on fisheries at various socio economic level shall be assessed.
10.10	An endowment Fishermen Welfare Fund should be created out of CER grants not only to enhance their quality of life by creation of facilities for Fish Landing Platforms / Fishing Harbour / cold

S. No	Terms of Reference
	storage, but also to provide relief in case of emergency situations such as missing of fishermen on duty due to rough seas, tropical cyclones and storms etc.
10.11	Tsunami Emergency Management Plan shall be prepared wherever applicable and Plan submitted prior to the commencement of construction work.
10.12	There should not be any contamination of soil, ground and surface waters (canals & village pond) with sea water in and around the project sites. In other words necessary preventive measures for spillage from pipelines, such as lining of Guard Pond used for the treatment of outfall before discharging into the sea and surface RCC channels along the pipelines of outfall and intake should be adopted. This is just because the areas around the projects boundaries could be fertile agricultural land used for paddy cultivation.

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Signed by
Sundar Ramanathan
Date: 29-07-2024 20:45:51
Reason: Verified and signed

ANNEXURE - II

Mirzapur Thermal Energy (UP) Private Limited

AN OVERVIEW AND VISION

Introduction

ADANI GROUP

Adani Group is a diversified organization in India with market cap of over $97.6 billion comprising 10 publicly traded companies. It has created a world class transport and utility infrastructure portfolio that has a pan-India presence. Adani Group headquartered in Ahmedabad, in the state of Gujarat, India. Over the years, Adani Group has positioned itself to be the market leader in its transport logistics and energy utility portfolio businesses focusing on large scale infrastructure development in India with O & M practices benchmarked to global standards. With four IG rated businesses, it is the only Infrastructure Investment Grade issuer in India.

Adani owes its success and leadership position to its core philosophy of 'Nation Building' driven by 'Growth with Goodness' - a guiding principle for sustainable growth. Adani is committed to increase its ESG footprint by realigning its businesses with emphasis on climate protection and increasing community outreach through its CSR programme based on the principles of sustainability, diversity and shared values.

Business Portfolio

Transport & Logistics Portfolio

- Adani Ports and Special Economic Zone Ltd.
- North Queensland Terminal
- Sarguja Rail Corridor Pvt. Ltd.

Energy & Utility Portfolio

- Adani Power Ltd.
- Adani Transmission Ltd.
- Adani Green Energy Ltd.
- Adani Total Gas Ltd

Materials Portfolio

- Ambuja Cements Ltd.
- ACC Ltd.

AEL: Incubator

- Adani Airport Holdings Ltd.

Mirzapur Thermal Energy (UP) Private Limited

- Adani Road Transport Ltd.
- Adani Water Ltd.
- Data Centre
- Defence and Aerospace

ADANI POWER LIMITED

Adani Power Limited (APL), a part of the diversified Adani Group, is the largest private thermal power producer in India. We have a power generation capacity of 15,210 MW comprising thermal power plants in Gujarat, Maharashtra, Karnataka, Rajasthan, Chhattisgarh, Madhya Pradesh, Jharkhand.

We are the world's first company to set up a coal-based Supercritical thermal power project registered under the Clean Development Mechanism (CDM) of the Kyoto protocol. Being a new entrant to power generation in 2006, we leveraged the project management skills of the Adani Group to set up our first power plant at Mundra successfully and efficiently.

The power sector in India has undergone a challenging period in the past few years, which put to test the resilience of our business model. By navigating the challenges through prudence, persistence, and discipline, we have implemented the best available technologies and practices that can serve as benchmarks for the power industry.

As we augment our generation capacity, both organically and inorganically, we also strive to make our footprints sustainable. Receiving a score of 59 for Adani Power in Corporate Sustainability Assessment by DJSI-S&P Global as compared to the world electric utilities' average of 33/100 also 3.5/5.0 in FTSE ESG rating, as compared to the world utilities average score of 2.7/5.0 and 87% in CSR Hub ESG rating, which is better than the global industry average. To promote reduced emission and promote sustainable energy, Adani Power partnered with IHI Corporation and Kowa company to explore ammonia co-firing at the Adani Power Mundra plant. The studies aim at initially de-carbonizing Adani's coal fired plants but with a larger objective to implement the technology in other coal-fired plants across India.

Mirzapur Thermal Power Plant

Project Background

Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL) is proposed to set up an coal based Ultra Super-Critical Thermal Power Project for capacity 1600 (2X800) MW. The plant is located in Village Dadri Khurd, District Mirzapur, State Uttar Pradesh, between coordinates 24°58'41.6" N to 25°0'16.8"N latitude / 82°41'03.7" E to 82°41'03.7"E longitude.

Mirzapur Thermal Energy (UP) Private Limited

M/s. Welspun Energy UP Pvt. Ltd. (WEUPPL) proposed to set up 2x660 MW Super critical Coal based thermal power plant at Village Dadri Khurd, Tehsil Mirzapur, Uttar Pradesh. Environmental Clearance (EC) was granted by MoEFCC, New Delhi vide File no. J-13012/12/2011-IA. II (T) dated 21.08.2014 Mirzapur Thermal Energy (UP) Private Limited at Mirzapur district of Uttar Pradesh.

Ministry of Environment, Forest & Climate Change (MoEFCC) had granted Environmental Clearance for 1320 (2x660) MW vide F. No: J-13012/12/2011-IA II(T) dated 21.08.2014 and name changed to Welspun Energy UP Pvt. Ltd. (WEUPPL) to Mirzapur Thermal Energy UP Pvt. Ltd. (MTEUPPL) Vide Letter No. F. No: J-13012/12/2011-IA II(T) dated 20.12.2019.
Recently, the Hon'ble Union Power Minister has emphasized the need to expand thermal power capacities in India to meet growing demand. Accordingly, Mirzapur Thermal Energy (UP) Private Limited is planning to put up a 2x800 MW Ultra Super Critical Thermal Power Plant at Mirzapur. Therefore, a fresh proposal is applied for obtaining Environment Clearance (EC) for 2x800 MW Mirzapur Thermal Power Project.

The coal requirement will be met from nearby commercial Coal Mines, water requirement will be met through the Ganga River at 32.6 Km from project site.
For auxiliaries' viz. Coal Handing, Ash Handling and Plant Water System, it is proposed to utilize the latest technology with adequate margin to ensure high availability of the Project.

The total land requirement for plants is about 365.19 Ha, out of this:

- Private Land: 333.81 Ha
- Government Land: 31.38 Ha (Land transfer & Mutation is under progress)

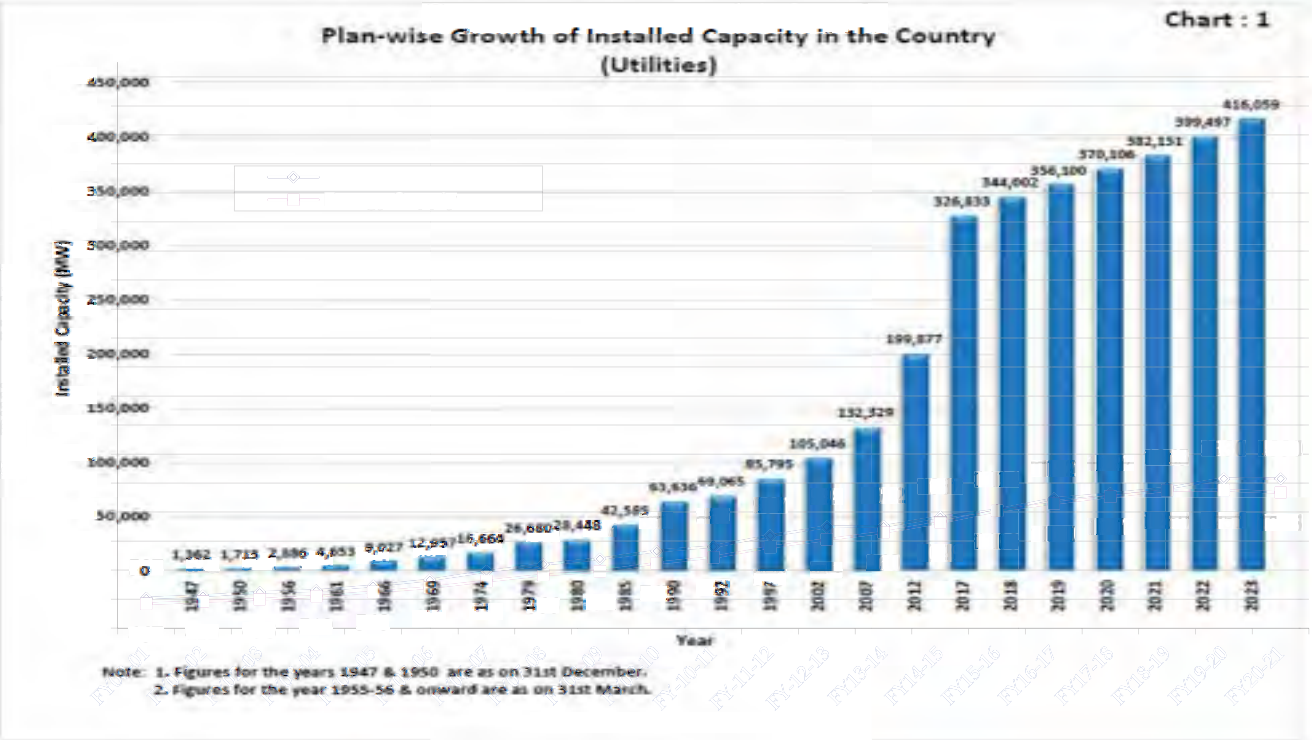
Justification of the Project

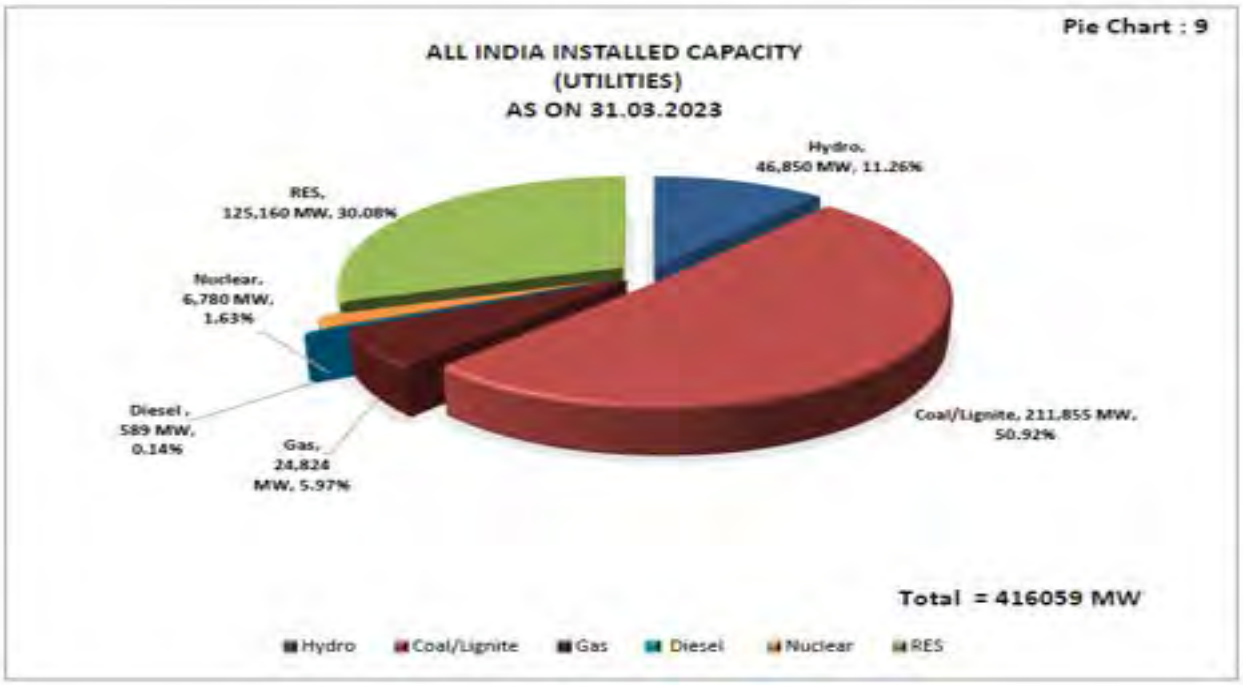
Electricity is the prime mover of growth and is vital to the sustenance of a modern economy. The projected growth of the Indian Economy depends primarily on the performance and growth of the power sector. The contribution of power sector in country's growth has grown significantly since independence. Total installed generation capacity of the country, which was 1362 MW at the time of independence, has increased to about 4,16,059 MW as on 31/03/2023. It is the endeavour of the government to ensure

uninterrupted supply of electricity at affordable rates to the following categories of consumption to sustain steady economic growth: -

a) Domestic
b) Commercial
c) Public Lighting
d) Public Water Works
e) Irrigation
f) Industrial (LT, HT less than 1 MW, HT 1 MW and above)
g) Railway Traction
h) Bulk Non-Industrial HT supply

The following graph shows the plan-wise growth of installed capacity in the country and sector wise pie-chart.

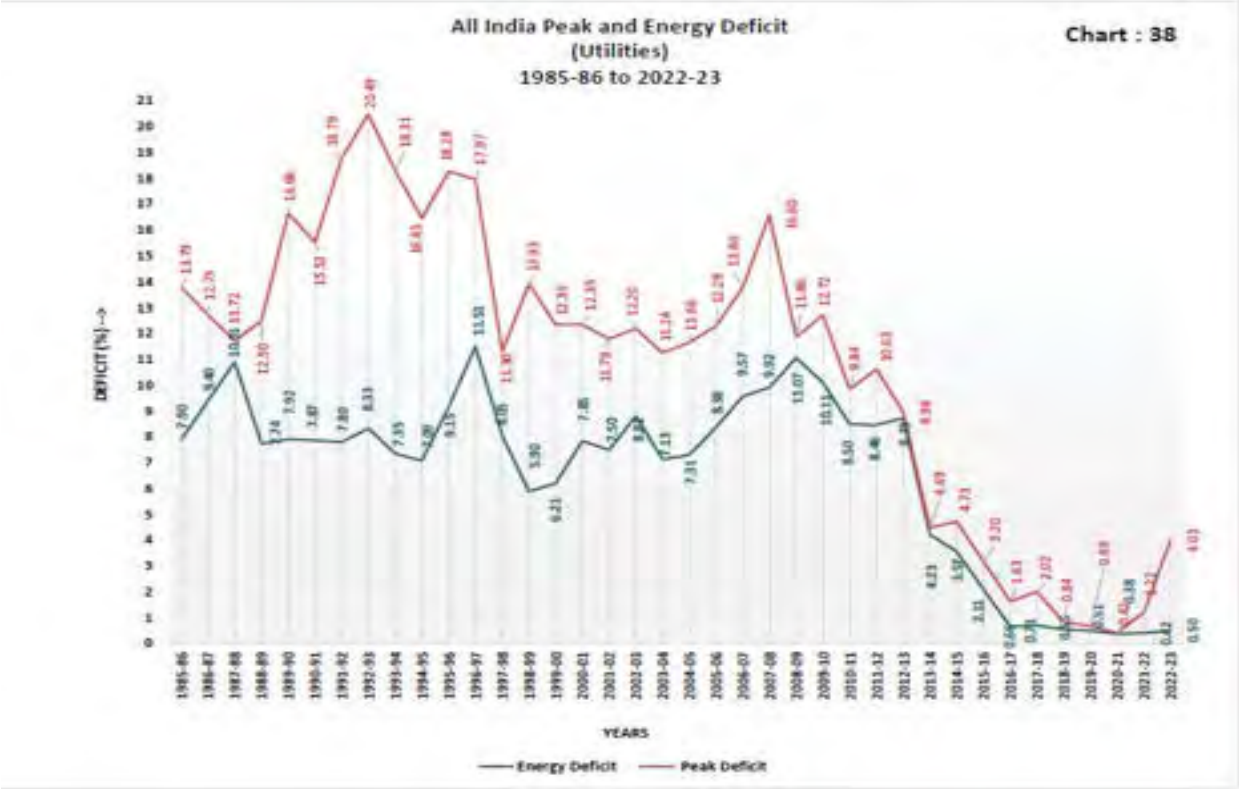




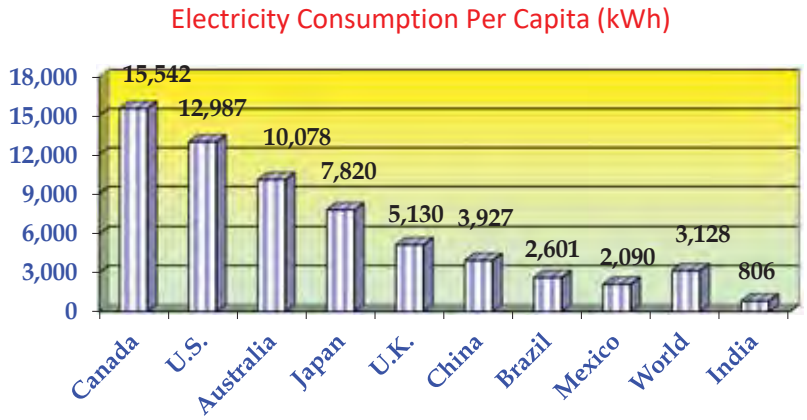
(Source: CEA Report- Growth of Electricity Sector in India from 1947-2021)

However, the power industry in India is historically being characterized by energy shortages i.e., demand for electricity far exceeding the supply. The following graph shows all India Peak demand and Deficit of energy from fiscal year 1985-86 to 2022-23.

Mirzapur Thermal Energy (UP) Private Limited



Due to inadequate generation, supply and distribution infrastructure, the per capita consumption of energy in India is extremely low in comparison to most of the developing and developed nations. The following chart shows per capita electricity consumption of energy as per the World Bank record for the year 2014 in various developed and developing countries.



As per CEA- Executive Summary on Power Sector- Dec 21 however, the per capita consumption of electricity in India during 2019-2020 stands as 1208 kWh.

Electricity is an essential requirement for all facets of our life. It is the critical infrastructure on which the socio-economic development of the country depends. Availability of reliable and quality power at competitive rates to industry would make it globally competitive and enable it to exploit the tremendous potential of employment generation.

Electricity being one of the key drivers for rapid economic growth and poverty alleviation, power sector attracts special attention of the Govt. of India (GOI) In this regard, the Govt. of India has taken many policy initiatives which have an impact on the electricity demand. Some of the major policy initiatives are provided below:

a) Power for All: Government of India had taken a joint initiative with the respective state governments/UT's to provide 24x7 power to all households/homes, industrial and commercial consumers, and adequate supply of power to agricultural consumers as per their policy. This initiative aims at ensuring uninterrupted supply of quality power to existing consumers and providing access to electricity to all un-connected consumers by the year 2019 in a phased manner. This initiative would result in higher growth of electrical energy requirement.

b) Dedicated Freight Corridor: Electricity demand on this account will be a great factor as the electricity demand will rise based on their programme of railway track electrification and expansion plan as per information provided by the Ministry of Railways/railway board.

c) Make in India: Make in India is an initiative launched by the Government of India to encourage multinational, as well as national companies to manufacture their products in India. This initiative would lead to growth in electricity demand.

In accordance with the provisions of National Electricity Policy (NEP), eminent experts of Electric Power Survey Committee (EPSC) formulated 19th Electric Power Survey report to work out All-India electricity demand forecast for the 13th plan (i.e. for the year 2016-17 to 2021-22) and project perspective year wise electricity demand for the 14th plan (i.e. 2021-22 to 2026-27) and the terminal year of 15th & 16th five-year plan i.e. year 2031-32 & 2036-37.

Power Scenario of Uttar Pradesh

As of January 2025, Uttar Pradesh (UP) is experiencing significant developments in its power sector to meet the escalating electricity demand driven by industrialization, urbanization, and expansion of electric vehicle infrastructure.

Current Power Demand & Projections

In 2024, UP's peak power demand reached unprecedented levels. On June 12, 2024, the state recorded a peak demand of 29,820 megawatts (MW), the highest ever, with electricity consumption surging to approximately 643 million units.

The Central Electricity Authority (CEA) has projected that UP's peak power demand will continue to rise, reaching 31.917 MW in the 2024-25 period, making it the second highest in the country after Maharashtra. The demand is anticipated to peak in September 2024, with monthly projections as follows:

- April 2024: 25,379 MW
- May 2024: 28,291 MW
- June 2024: 29,853 MW
- July 2024: 30,581 MW
- August 2024: 31,585 MW
- September 2024: 31,917 MW

The Uttar Pradesh Electricity Regulatory Commission (UPERC) has provided its own projections, estimating the peak power demand to be:

- 2024-25: 31,590 MW
- 2025-26: 34,434 MW
- 2026-27: 37,533 MW
- 2027-28: 40,535 MW
- 2028-29: 43,778 MW

Future Outlook

The Uttar Pradesh Power Corporation Ltd (UPPCL) anticipates receiving only 29,000 MW of power from state sources, which may be insufficient to meet the projected peak demand, especially during the high-demand months from June-September.

Configuration of Proposed Plant

For selecting the unit size of the proposed extension units, the criteria given importance are

- Cost of energy generated from the station at reduced price.
- Steady load requirement and variations in maximum demand
- Thermodynamic cycle efficiency and reduced emission
- Operating flexibility for better load cycle
- Station availability
- PLF attainable
- Specific investment requirement
- Project timeframe and manpower requirement
- Economic performance and reduced environmental aspect.

adani | Power

Mirzapur Thermal Energy (UP) Private Limited

The proposed 2x800 MW units at Mirzapur district in Uttar Pradesh, deploying ultra-supercritical steam parameters emerges as favourite as this set size is endowed with the following merits:

- Present-day technology
- High thermodynamic efficiency
- Favourable operating experience
- Load variation capability, if required.
- Availability of skilled and unskilled personnel
- Environment-friendly in terms of emission
- Easier availability of vendor's engineers.

Project Location Details

Project Authority	:	Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL)
Project	:	Coal based Ultra Super Critical Thermal Power Project (USCTPP) of 1600(2X800) MW in Village Dadri Khurd, District Mirzapur, State Uttar Pradesh.
Location	:	Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, State Uttar Pradesh.
Nearest Major Town	:	Mirzapur District Headquarters, about 25 km
Seismic Zone	:	Zone-III as per IS 1893.
Access by Road	:	SH-5 about 1.7 km away from the site & NH-17 about 23 kms from project site.
Access by Rail	:	Nearest railhead, Lusa Railway Station on BG railway line of Northern Railway, at 24 kms from the site.
Access by Sea	:	Nearest Seaport is at Haldia West Bengal.
Access by Air	:	Nearest Airport is at Varanasi at 72 kms from Project Site.

adani | Power

Mirzapur Thermal Energy (UP) Private Limited







Location	Details
Villages	Dadri Khurd
Tehsil	Mirzapur Sadar
District	Mirzapur
State	Uttar Pradesh

adani | Power

Mirzapur Thermal Energy (UP) Private Limited

General Details of the Project

Land	:	The total land requirement for the proposed unit is 365.19 Ha. • Private Land: 364.57 Ha • Forest like area 'Jhari': 0.62 Ha
Layout Features	:	2x800 MW Ultra Super-Critical Units.
Power Generating Unit	:	1600 (2X800) MW turbine generator sets fed by steam from coal fired P.F. boiler will operate at Ultra Super-Critical Technology.
Water	:	28 MCM / year
Cooling System	:	Closed recirculating condenser cooling system with induced draft cooling tower.
Main Fuel	:	Coal from Coal Mines of NCL / SECL / CCL & Commercial Coal Mines.
Fuel Transportation	:	Through BG Railway line BOXN Wagons.
Coal Handling System	:	Coal handling facility, which comprises receipt of coal from Mines through LBC system, with in-plant coal handling system and finally feeding the bunker level conveyors.
Ash Utilization	:	Fly ash will be collected in dry form in silos for all efforts will be made for 100% utilization of ash. Ash will be used for Cement manufacturing industries, abandoned mine, filling of low-lying area, manufacturing bricks, road construction, aggregate placement in concrete, etc as per Fly Ash Notification, 31st December'2021 and amendments.
Environmental Aspects	:	Elaborate arrangements for Selective Catalytic Reduction (SCR) systems complying with emission norms as per latest MoEF&CC & CPCB/MPPCB norms. Independent steel wet flue for each unit, down-stream of suitable height as per MoEF&CC guidelines and an adequately designed electrostatic precipitator with more than 99.99% efficiency are envisaged. Wastewater quality to be maintained as per MoEF&CC notification. Zero

		Plant Discharge facility shall be present since the cooling water, blow down water, wastewater and ash water would be recycled back to the system after suitable treatment.
R & R Requirement	:	The land required for proposed project is already under Possession except Govt. & Forest like area (Jhari). The application for the same is submitted.

Land for the Project

Details of land utilization in various areas of the plant are as below:

LAND REQUIREMENT		Area (In hectares)
a.	TPP Site	85.80
b.	Ash Pond	49.37
c.	Township	11.57
d.	Railway Siding & others	64.14
e.	Raw Water Reservoir	33.18
f.	Green Belt	121.13
TOTAL (in hectares)		365.19

The proposed Thermal Power Project will be built in the approximately 365.19 Ha.
Other technical aspects like wind direction, soil characteristics also have been taken into consideration while developing the proposed Plant Layout.

Technical Features of Main Plant & Equipment

Item	Main Design Parameters
Technology	
Steam Generator	Ultra-Super Critical Pressure 270 Bar Temperature 600°C
Turbo Generator	Turbine -270 Bar, 600°C, 3000 rpm Generator - 800 MW (Each unit) Generator Transformer -3 x 330 MVA
Major Auxiliary System	Boiler & Turbine Auxiliaries Pretreatment Plant Compressed Air System

	Coal and Ash Handling System CW System and Raw Water System Firefighting System Air conditioning System Ventilation System
Stack Details	
No. of Stack	1 (Bi flue)
Stack Height (meter)	275
No. of flue	Two
Additional equipment (attachment)	Electrostatic Precipitator (ESP)
Requirements	
Coal	Domestic Coal – 6.4 MMTPA (85% PLF with Design Coal GCV (Range 3200-4300 Kcal/Kg) Source: Coal from coal mines of NCL/SECL/CCL & Commercial Coal Mines. Transportation: Through Rail.
Cooling Technology	Closed recirculating condenser cooling system with induced draft cooling tower.
Total Water Requirement	3200 m3/hr (28 MCM/year)
Total Discharge	'Minimum Effluent Discharge' Norm' will be followed
Land	The total land requirement for the proposed unit is 365.19 Ha.
Project Cost	INR 18,300.00 crores (approx.)

Statutory clearances

1	Environmental Clearance	:	Environmental Clearance for 1320 (2x660) MW vide F. No: J-13012/12/2011-IA II(T) dated 21.08.2014
2	Land clearance	:	• The Land required for proposed project is already under possession except Govt. & Forest like area (Jhari) • Township will be developed and for this activity applicable permission to be obtained from concern Authority.
3	Water drawl permission	:	36 MCM/year.
4	Coal linkage	:	Domestic coal from Coal Mines of NCL / SECL / CCL & Commercial Coal Mines.

5	Consent for Establishment	:	CTE will be obtained post EC.
6	Fly Ash utilization	:	• Cement Manufacturing Industries • Abandoned Mine Back filling/Stone quarry • Fly ash bricks • Road making / paving

Pollution control measures in thermal power plant

S. No.	Section	Type of pollution	Control Equipment
1.	Coal Handling Area	Fugitive Dust	Bag Filters. Covered conveyor belt. Dust Suppression Systems.
	Coal Mill Area	Noise Levels	Acoustic Enclosures
	Coal Stockpile	Fugitive Dust	Sprinkling water
2.	Boiler Area	PM SO2 & NOx	ESP Low NOx burners 275 m Stack SCR
		Thermal	Insulation material
		Noise Levels	Acoustic Enclosures
3.	Ash Handling Area	Fly ash & Bottom ash	Pneumatic handling Ash pond
4.	Boiler blow down & Cooling blow down. Water Treatment Colony/township	Wastewater Domestic wastewater	ETP STP
5.	Transportation	Fugitive Dust	Dust extraction systems, & Dust suppression systems Water Sprinklers, Road Sweeping machine.

Rainwater Harvesting Program

The rainwater will be collected in the rainwater harvesting pits from the storm water drain running all around the project. Rainwater harvesting pits are connected at regular interval to the storm water drain. The rainwater will recharge the ground water.

Excess rainwater will flow to common collection pit from where water can be pumped for reuse in the plant.

Township facilities

Township for Mirzapur TPP will be developed as per necessity & separate Environmental Clearance (EC) & other applicable permission will be obtained from the concerned authority, MoEFCC, CECB/CPCB etc.

ANNEXURE - III

J 13012/12/2011-IA.II (T)
Government of India
Ministry of Environment, Forests and Climate Change

3rd Floor, Vayu Block,
Indira Paryavaran Bhawan, Jor Bagh Road,
Aliganj, New Delhi-110003

Dated: 21st August, 2014

To

M/s Welspun Energy UP Pvt. Ltd.,
Welspun House, 7th Floor, Kamala City,
Senapati Bapat Marg, Lower Parel,
Mumbai- 400 013.

Tel. 022-66136000, Fax: 022-24908020.

Sub: **2x660 MW super critical coal based Thermal Power Project at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh by M/s Welspun Energy UP Pvt. Ltd. - reg. Environmental Clearance**

Sir,

The undersigned is directed to refer to your letters dated 31.12.2010, 12.05.2011, 29.06.2012, 14.01.2013, 11.02.2013, 06.02.2014, 21.02.2014 and 06.05.2014 on the subject mentioned above. The Ministry of Environment & Forests has examined the application. The ToR for preparation of EIA/EMP report was accorded by MoEF on 15.06.2011.

2. It is noted that the proposal is for setting up of 2x660 MW Super critical Coal Based Thermal Power Project at village Dadri Khurd, in Tehsil Mirzapur Sadar, in District Mirzapur, in Uttar Pradesh. The proposal was earlier proposed to be set up based on domestic coal but due to non-availability of the domestic coal, it has been decided to go ahead with imported coal from Indonesia for an interim period until domestic coal is available. The land required will be 875 acres, out of which 15.63 acres will be single crop agriculture land; 853.74 acres will be barren Land; 5.44 acres will be water body; and 0.19 comprises of human settlements. The co-ordinates of the site are located within Latitude 24^{0}58'41.645" N to 25^{0}00'16.887" N and Longitude 82^{0}39'50.425" E to 82^{0}41'03.728" E. Imported Coal requirement will be 5.27 MTPA. Coal will be obtained from Indonesia. Coal supply agreement had been signed with M/s Sirdi Sai Goodearth International PTE Ltd. Ash and sulphur contents in imported coal will be 14% and 0.34% respectively. Gross Calorific value of the coal will be 4400 kcal/kg. About 0.59 MTPA of fly ash and 0.15 MTPA of bottom ash will be generated. Ash will be supplied for manufacturing of Cement and MoU have been signed with M/s ABG Cement Ltd. Ash pond area will be 180 acres and co-ordinates of the ash pond site will be within Latitude 24^{0}59'46.8" N to 25^{0}0'14.5" N and Longitude 82^{0}40'8.2" E to 82^{0}40'57.8" E. Lean concentration slurry fly ash disposal system will be adopted. Bi-flue Stack of 275m will be provided. Water requirement of 36 MCM will be sourced from the River Ganga through a pipeline at a distance of about 17 km from the project site. Irrigation Department Govt. of U.P has accorded water allocation vide its letter dated 09.09.2011. CWC has also approved the water allocation of 36 MCM from River Ganga vide its letter dated 12.10.2011.R.O System will be installed and zero discharge will be adopted as far as practically possible. Induced draft cooling system will be installed. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within ten km of the project site. Public Hearing was held on 07.04.2012. Cost of the project will be Rs.7500 Crores.

3. The project has been considered in accordance with the provisions of the EIA notification issued by the Ministry of Environment & Forests vide S.O. 1533 (E), dated September 14, 2006.

4. Based on the information submitted by you, as at Para 2 above and others and presentations made by you and your consultant viz. M/s J. M. Enviro Net Pvt. Ltd. before the Expert Appraisal Committee (Thermal Power) in its *70th, 4th* and *13th* Meetings held during *March 26, 2013, November 18-19, 2013 and March 25-26, 2014* respectively, the Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated September 14, 2006, subject to the compliance of the following Specific and General conditions:

A. Specific Conditions:

(i) Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within **six months**.

(ii) *A firm commitment/approval from Railway Authorities for transportation of imported coal shall be submitted to this Ministry and its Regional Office.*

(iii) Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.

(iv) A stack of 275 m height shall be provided with continuous online monitoring equipments for SOx, NOx and $PM_{2.5}$ & PM_{10}. Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.

(v) *Sulphur and ash contents in the imported coal to be used in the project shall not exceed 0.34 % and 14.0 % respectively at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to environmental clearance wherever necessary.*

(vi) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm^3. Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.

(vii) Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.

(viii) COC of atleast 5.0 shall be adopted.

(ix) Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall

also be undertaken and results/findings submitted along with half yearly monitoring report.

(x) A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.

(xi) No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.

(xii) Hydrogeology of the area shall be reviewed annually from an institute/ organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case any deterioration is observed specific mitigation measures shall be undertaken and reports/ data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.

(xiii) Wastewater generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB.

(xiv) Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.

(xv) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.

(xvi) Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.

(xvii) Fugitive emission of fly ash (dry or wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local Panchayat.

(xviii) Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.

(xix) A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analyzed every two year and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radio

activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.

(xx) Green Belt consisting of three tiers of plantations of native species around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 80 %.

(xxi) *The Wildlife conservation plan formulated in consultation with the Wildlife Department of the State and duly vetted by the concerned Chief Wildlife Warden shall be duly implemented. An in-built monitoring mechanism shall also be put in place.*

(xxii) CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.

(xxiii) *A minimum amount of Rs 30.0 Crores as one time capital investment shall be earmarked for activities to be taken up under CSR during construction phase of the Project. Recurring expenditure for CSR thereafter shall be Rs 6.0 Crores per annum or as per CSR guidelines of Govt. of India, whichever is more till the life of the plant.*

(xxiv) The project proponent shall also adequately contribute in the development of the neighbouring villages. Special package with implementation schedule for free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.

(xxv) For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent eternal agency. This evaluation shall be both concurrent and final.

(xxvi) An Environmental Cell comprising of at least one expert in environmental science/ engineering, ecology, occupational health and social science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures. *The environmental cell shall also work in close coordination with BHU.*

B. General Conditions:

(i) The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.

(ii) A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.

(iii) Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.

(iv) Storage facilities for auxiliary liquid fuel such as LDO/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.

(v) First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.

(vi) Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from source. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.

(vii) Regular monitoring of ambient air ground level concentration of SO_2, NOx, $PM_{2.5}$ & PM_{10} and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.

(viii) Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

(ix) The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in.

(x) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

(xi) The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB

and the SPCB. The criteria pollutant levels namely; SPM, RSPM ($PM_{2.5}$ & PM_{10}), SO_2, NO_x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.

(xii) The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.

(xiii) **The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.**

(xiv) Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six monthly basis. **Criteria pollutants levels including NO_x (from stack & ambient air) shall be displayed at the main gate of the power plant.**

(xv) Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.

(xvi) The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.

(xvii) Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry / CPCB/ SPCB who would be monitoring the compliance of environmental status.

5. The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.

6. The environmental clearance accorded **shall be valid for a period of 5 years** from the date of issue of this letter to start operations by the power plant.

7. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

8. In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.

9. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.

10. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Yours faithfully,

(Dr. Saroj)
Scientist 'F'

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. The Secretary, Department of Environment, Government of U.P.
5. The Chairman, U.P. Pollution Control Board, PICUP Bhawan, 3rd Floor, B-Block, Vibhuti Khand, Gomti Nagar, Lucknow-226010.
6. The Chief Conservator of Forests (C), Ministry of Environment and Forests, Regional Office (Central Region), Kendriya Bhavan, 5th Floor, Sector – H, Aliganj, Lucknow.
7. The Collector, District Mirzapur, U.P.
8. Guard file.

(Dr. Saroj)
Scientist 'F'

No. J-13012/12/2011-IA.II(T)
Government of India
Ministry of Environment, Forest and Climate Change

3rd Floor, Vayu Block,
Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj,
New Delhi-110003

Dated: 20.12.2019

To

The General Manager
M/s Welspun Energy UP Pvt. Ltd.
Welspun House, 7th Floor, Kamala City,
Senapati Bapat Marg, Lower Parel,
Mumbai-400013.

Tel: 01206757000; Fax: 01204128330; Email: welspunenergypvtltd@gmail.com.

Sub: **2x660 MW Super Critical Coal based Thermal Power Project at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh by M/s Welspun Energy UP Pvt. Ltd. - reg. amendment in Environmental Clearance.**

Sir,

This has reference to your online application no. IA/UP/THE/10331/2010 dated 17.06.2017 and meetings of Expert Appraisal Committee (Thermal Power) held on 24.7.2017 and 22.2.2019 for recommendation of grant of amendment in Environment Clearance for the above mentioned Project.

2. It has been noted that Environmental Clearance for establishing of 2x660 MW Super Critical coal based Thermal Power Project at Village Dadri Khurd, Tehsil Mirzapur Sadar, Dist. Mirzapur, Uttar Pradesh has been accorded by the Ministry vide letter dated 21.8.2014. Hon'ble NGT, Principal Bench, Delhi in Appeal No.79/2014 (Debadityo Sinha Vs Union of India) in their judgment dated 21.12.2016 set aside the Environmental Clearance dated 21.8.2014 and directed the Project Proponent not to carry out any developmental work at the project site, restore the area to its original condition and work of restoration is stayed for a period of two months. Further, Hon'ble NGT vide their judgment dated 1.5.2017 directed that Project Proponent to approach the MoEF&CC or any other competent authority for processing of the application for grant of EC upon making up for/rectifying the defects and deficiencies pointed out in the judgment.

3. The proposal has been appraised by the EAC (Thermal Power) in its meetings held on 24.7.2017 and 22.2.2019. The EAC in its meeting held on 22.2.2019 recommended for amendment in EC subject to certain additional conditions.

4. It has been noted that proposed project involves acquisition of forest land of 9.3681 ha (water pipeline, approach road, within the project boundary) which requires diversion under Forest (Conservation) Act, 1980.

5. Further, it has been noted that a proposal for transfer of EC vide online application dated on 16.9.2010 has been submitted by M/s Mirzapur Thermal Energy (UP) Pvt. Ltd. which is a subsidiary of M/s Adani Power Ltd. Further, it has been noted that EAC meeting held on 24.7.2017 was attended by M/s Welspun

Energy UP Pvt. Ltd. whereas the EAC meeting held on 22.2.2019 was attended by the new incumbent (M/s Welspun Energy UP Pvt. Ltd., later changed to M/s Mirzapur Thermal Energy (UP) Pvt. Ltd.) which is a subsidiary of M/s Adani Power Ltd.

6. In view of the above, a clear response clarifying the status/details of the present proponent may be provided along with Stage-I Forest Clearance for further consideration.

This issues with the approval of the Competent Authority.

Yours faithfully,

(Dr. S. Kerketta)
Director, IA.I

Copy to:-

1. The Deputy Director General of Forests (C), Ministry of Environment Forest and Climate Change, Regional Office (Central Zone), Kendriya Bhawan, 5th Floor, Sector – H, Aliganj, Lucknow-226020.
2. Guard file/Monitoring file.
3. Website of MoEF&CC.

Director, IA.I

ANNEXURE - IV

न्यायालय : - तहसीलदार
मण्डल :विन्ध्याचल , जनपद :मिर्जापुर , तहसील :सदर
कम्प्यूटरीकृत वाद संख्या:- T202216530119957
वाद संख्या:- 19957/2022
मिर्जापुर थर्मल एनर्जी यू0पी0 प्रा0 लिमिटे बनाम -
उत्तर प्रदेश राजस्व संहिता - 2006 , अंतर्गत धारा:- 34/35
अंतिम आदेश "
आदेश तिथि:- 10/10/2024

निर्णय प्रस्तुत वाद उ0प्र0 राजस्व संहिता 2006 की धारा 34 के अन्तर्गत मिर्जापुर थर्मल एनर्जी यू0पी0 प्रा0 लिमिटेड बजरिए अधिकृत हस्ताक्षरक
प्रमोद कुमार पाठक (सह प्रबंधक) द्वारा प्रस्तुत प्रार्थना पत्र दिनांक 10.05.2022 मे कहा गया है कि बेलेस्पन एनर्जी यू0पी0 प्रा0लि0 द्वारा तापीय
परियोजना की स्थापना हेतु ग्राम ददरी खुर्द तप्पा 84 परगना कंतित तहसील सदर जिला मीरजापुर की भूमि को क्रय किया गया है और संपूर्ण क्र
पर खतौनी मे वेलेस्वन एनर्जी यू0 पी0 प्रा0 लि0, पता वेलेस्पन हाउस, 7वी मंजिल कमला सिटी सेनापति बापत मार्ग लोवर परेल मुंबई महाराश्ट्र व
दर्ज है। भारत सरकार के मिनिश्ट्री आफ कार्पोरेट अफेयर्स द्वारा कम्पनीज इनकारपोरेषन रूल 2014 के नियत 29 के अंतर्गत कंपनी का नाम वे
एनर्जी यू0 पी0 प्रा0 लि0 तथा कंपनी एक्ट 2013 की धारा 13(5) के अंतर्गत कंपनी का पता वेलेस्पन हाउस 7वी मंजिल कमला सिटी सेनापति बाप
लोवर परेल मुंबई महाराश्ट्र से परिवर्तित कर नया नाम व पता मिर्जापुर थर्मल एनर्जी यू0पी0प्रा0लि0 पता अडानी हाउस 56 श्रीमाली सोसाइटी न
अहमदावाद गुजरात इंडिया 380009 कर दिया गया है, और इसके संबंध मे रजिस्टार आफ कंपनीज द्वारा दिनांक 16.08.2019 को नाम परिवर्त
प्रमाण पत्र तथा दिनांक 29.10.2020 को कंपनी का पता परिवर्तन का प्रमाण पत्र जारी किया गया है। जिसके आधार पर दिनांक 01.06.2022 को
दर्ज कर नियमानुसार प्रख्यापन पत्र जारी किया गया। जो वापस आकर संलग्न पत्रावली है। किसी के द्वारा कोई आपत्ति पत्र प्रस्तुत नही किया गया
दिनांक 14.07.2022 को साक्ष्य के अभाव मे निरस्त किया गया है। वादी द्वारा पुनस्र्थापन प्रार्थना पत्र दिनांक 14.12.2022 प्रस्तुत किया गया, जिस
वादी को सुनकर एकपक्षीय आदेष दिनांक 14.07.2022 निरस्त करते हुए वाद मूल नम्बर पर कायम किया गया है। वादी द्वारा अपने कथन के स
उध्दरण खतौनी नाम परिर्वत हेतु भारत सरकार मिनिस्ट्री आफ इण्डिया एव कम्पनी रजिस्टार द्वारा नाम परिवर्तन हेतु स्वीकृति पत्र प्रदान तथा क
एक्ट 2013 एक्ट नम्बर 18 आफ 2013 दिनांक 29.08.2013 जारी नियमावली तथा कम्पनी निगमन नियम 2014 कारपोरेट कार्य मंत्रालय अधिसू
दिल्ली 31 मार्च 2014 सलग्न किया गया है। उक्त पत्रावली मे कार्यालय तहसीलदार सदर मीरजापुर के पत्रांक 120/रा0लि0-विधिक राय/21 दिनां
27.11.2021 जिला षासकीय अधिवक्ता (राजस्व) मीरजापुर को पत्राचार कर उक्त के सम्बन्ध मे अपेक्षा की गयी है कि ग्राम ददरी खुर्द त0 84 प0
तहसील सदर जिला मीरजापुर में स्थित मेसर्स बेलस्पन इनर्जी (यू0पी0) प्रा0लि0 का नाम राजस्व अभिलेखों में परिवर्तित कर मीरजापुर थर्मल एन
(यू0पी0)प्रा0लि0 करने अथवा न करने के सम्बन्ध में अपनी विधिक राय देने का कश्ट करें, के संबंध मे जिला षासकीय अधिवक्ता (राजस्व) मीरज
द्वारा दिनांक 04.03.2022 के माध्यम से मेसर्स वेलेस्पन इनर्जी (यू0पी0) प्रा0लि0 का नाम राजस्व अभिलेखों मे परिवर्तित कर मीरजापुर थर्मल एन
(यू0पी0) प्रा0लि0 करने अथवा न करने के सम्बन्ध मे विधिक राय देने की अपेक्षा की गयी है। उक्त के सम्बन्ध में मेरे द्वारा पत्रावली पर उपलब्ध स
अभिलेखों का परिषीलन किया गया। पत्रावली मे उपलब्ध साक्ष्यांे/अभिलेखों के परीक्षण से स्पश्ट है कि उ0प्र0 राजस्व संहिता 2006 की धारा 3
अन्तर्गत नाम परिवर्तन मे कोई विधिक अडचन नही है। कार्यालय तहसीलदार सदर मीरजापुर के पत्रांक 402/रा0लि0-आख्या/2021-22 दिनाक
21.03.2022 उपनिबंधक सदर मीरजापुर को प्रेशित पत्रंक मे अपर मुख्य सचिव, उ0प्र0 षासन, राजस्व अनुभाग-1 दिनांक 11.10.2021 पर
जिलाधिकारी महोदय के पृश्ठांकित आदेष दिनांक 11.10.2021 का संदर्भ ग्रहण करने का कश्ट करें, जिसके बिन्दु सं0-2 में मेसर्स वेलस्पन एन
(यू0पी0) प्रा0लि0 का नाम राजस्व अभिलेखों मे परिवर्तित कर मीरजापुर थर्मल एनर्जी प्रा0लि0 करते हुए कराये जाने हेतु निर्देषित किया गया है,
मेसर्स वेलस्पन एनर्जी (यू0पी0) प्रा0लि0 का नाम राजस्व अभिलेखों मे विक्रय विलेख के आधार पर दर्ज हुआ है। अब राजस्व अभिलेखों मे नाम प
करने मे स्टाम्प कमी का प्रकरण बनेगा अथवा नही। के संबंध मे उपनिबन्धक सदर मीरजापुर के पत्रांक 27/उ0नि0-सदर/2021-22 दिनांक 26.
मे यह स्पश्ट किया गया कि स्टाम्प एक्अ की धारा2(6) के अनुसार विलेख पर स्टाम्प षुल्क की प्रभार्यता उस समय पैदा होती है, जब विलेख को
द्वारा निश्पादित किया जाता है। चूंकि इस प्रकरण में प्रत्यक्ष रूप से कम्पनीज अधिनियम के प्राविधानों के अन्तर्गत सिर्फ कम्पनी का नाम परिवर्त
है, एवं इस सम्बन्ध मे कोई अन्तरण/हस्तान्तरण का प्रलेख संज्ञानित नही है। अतः इस प्रकरण में उपलब्ध नाम परिवर्तन के प्रमाण-पत्र पर प्रथम
स्टाम्प देयता परिलक्षित नही होती है। उपायुक्त स्टाम्प विन्ध्याचल मण्डल, मीरजापुर के पत्रांक 112/उपायुक्त स्टाम्प-विन्ध्य0-2022 दिनांक 06
2022 के पत्रक मे स्पश्ट किया गया है कि वर्तमान मे यह समस्त भूमि अकृशक पथरीले जंगल के रूप में है जहा कोई निर्माण इत्यादि नही है। ऐस
इस समस्त भूमि हेतु मे0 मीरजापुर थर्मल एनर्जी प्रा0लि0 द्वारा कोई हस्तान्तरण पत्र कराया जाता है तो इस 467 खसरों की समस्त 327.5620हे0





3275620 वर्गमीटर भूमि का जनपद मीरजापुर की वर्तमान सर्किल दर षुची में ग्राम ददरी खुर्द हेतु अकृशक भूमि हेतु नियमानुसार 5प्रतिषत की
कुल रू0 19,65,37,200/- का स्टाम्प षुल्क देय होगा। सहायक आयुक्त स्टाम्प, मीरजापुर के पत्राक/स0आ0स्टा0-मीरजापुर/2022 दिनांक 19
2022 के माध्यम से आयुक्त स्टाम्प, उ0प्र0, षिविर कार्यालय, लखनउ मे ग्राम ददरी खुर्द तहसील सदर मीरजापुर की मेसर्स वेलस्वन एनर्जी (यू0
प्रा0लि0 के नाम दर्ज भूमि को मेसर्स मीरजापुर थर्मल एनर्जी (यू0पी0) प्रा0लि0 के नाम परिवर्तित करने की प्रार्थना की गयी है। किन्तु इसके साथ
प्रकार का कोई रजिस्ट्री लेखपत्र नही है और न ही कोई स्टाम्प षुल्क दिया गया है तहसीलदार ने यह जानना चाहा है कि क्या इस प्रकार के दाखि
खारिज प्रार्थना पत्र पर कोई स्टाम्प षुल्क देय है अथवा नही तथा कार्यालय सहायक महानिरीक्षक निबन्धन, मीरजापुर के पत्रांक 1352/स0म0नि0
मीरजापुर/2022 दिनांक 15 दिसम्बर, 2022 मे अपना मत स्पश्ट किया गया है कि स्टाम्प कमी/स्टाम्प देयता का प्रकरण बनेगा अथवा नही? मे
प्रेशित पत्रानुसार इस प्रकरण मे मेसर्स वेलस्पन एनर्जी (यू0पी0) प्रा0लि0 का नाम परिवर्तित करके मीरजापुर थर्मल एनर्जी (यू0पी0) प्रा0लि0 कि
रहा है अर्थात टाइटिल का एक विधिक व्यक्ति से दूसरे विधिक व्यक्ति के पक्ष मे परिवर्तन हो रहा है, इसलिए इस पर अवष्य ही स्टाम्प देयता बने
इसके लिए दोनों कम्पनियों के मध्य भूमि अन्तरण का कोई रजिस्टर्ड प्रलेख होना आवष्यक है। अगर स्टाम्प देयता बनेगी तो कितना स्टाम्प देय ह
स्टाम्प षुल्क का आगणन वर्तमान बाजारू मूल्य के अनुसार देय होगा तथा स्टाम्प की देयता अन्तरण के समय भूमि के क्षेत्रफल के अनुसार घट-ब
सकती है। इस सम्बन्ध मे अधोहस्ताक्षरी ने पूर्व मे आयुक्त स्टाम्प उ0प्र0 प्रयागराज के पत्र संख्या 2803/स्टाम्प विविध-22/2022 दिनांक 29.08.2
अनुपालन मे मेसर्स वेलस्पन एनर्जी (यू0पी0) प्रा0लि0 के 467 खसरों की समस्त 327.5620हे0 अर्थात 3275620 वर्गमीटर भूमि खतौनी में दर्ज है,
मूल्यांकन रू0 3,93,07,44,000/- पर 5 प्रतिषत की दर से कुल रू0 19,65,37,200/- का स्टाम्प षुल्क देय होने की सूचना प्रेशित की है। क्या उप
के द्वारा स्टाम्प षुल्क जमा कर दिया गया है? अभी तक इस तरह के अन्तरण का न ही कोई प्रलेख उप निबन्धक कार्यालय में पंजीकृत हुआ और
स्टाम्प षुल्क अदा किया गया है। कार्यालय सहायक महानिरीक्षक निबन्धन, मीरजापुर के पत्रांक 07/स0म0नि0-मीरजापुर /2023 दिनांक 05 जन
2023 के माध्यम से स्पश्ट किया गया कि आपके द्वारा इस सर्टिफिकेट को अचल सम्पत्ति के अन्तरण का प्रलेख/साक्ष्य मानते हुए दाखिल खारिज
जाता है तो ऐसी स्थिति मे यह सर्टिफिकेट अचल सम्पत्ति के अन्तरण का प्रलेख माना जायेगा एवं उस पर नियमानुसार भारतीय स्टाम्प अधिनियम
की अनुसूची 1ख के अनुच्छेद 23 के अनुसार सम्पत्ति के वर्तमान बाजारी मूल्य पर स्टाम्प षुक्ल देय है। उप निबन्धक सदर मीरजापुर के पत्रांक 2
उ0नि0-सदर/2024 दिनांक 26 जुलाई, 2024 मे स्पश्ट किया गया कि उक्त के अनुपालन मे वेलस्पन एनर्जी (यू0पी0) प्रा0लि0 की भूमि का स्थली
कर आख्या उपलब्ध कराये जाने हेतु पत्र 208/उ0नि0-सदर/2024 दिनांक 26 जून 2024 को तहसीलदार सदर महोदय को प्रेशित की गयी थी जि
अनुपालन मे तहसीलदार महोदय अपनी आख्या अधोहस्ताक्षरी को उपलब्ध कराया गया है। तहसीलदार महोदय के द्वारा प्रेशित आख्या के अनु
मीरजापुर थर्मल एनर्जी की कुल भूमि 335.272 हेक्टेयर अर्थात 3352720वर्गमीटर का मूल्यांकन वर्तमान जिलाधिकारी महोदय के मूल्यांकन सूच
अनुसार प्रारूप-2, पेज 30 क्रमाक 507 दर 1400/- प्रतिवर्ग मीटर आवासीय दर से मूल्यांकन किया जायेगा, जो निम्नवत है- मौजा ददरी खुर्द (मी
थर्मल एनर्जी) की कुल भूमि 3352720वर्गमीटर सरकारी मालियत = 3352720 1400/- =4,69,38,08,000/- गाटा संख्या 231मि0 मे निर्माण10 1
=150वर्गफीट यानि 13.940 वर्गमीटर निर्माण की मालियत=13.940 16000/- =223040/-यानि 2,24,000/- इस प्रकार निर्माण सहित भूमि की कु
मालियत =4,69,38,08,000$2,24,00/- =4,69,40,32,000/-रूपया होगा। स्टाम्प षुल्क 5 प्रतिषत से = 4694032000 5 =23,47,01,600/-रूपय
निबन्धन षुल्क = 4,69,40,320/- रूपया। जमा करने हेतु स्पश्ट किया गया है। कार्यालय तहसीलदार सदर मीरजापुर पत्रांक 566 संग्रह/स्टाम्प/
29 अगस्त 2024 के माध्यम से बेलस्पन एनर्जी (यू0पी0) प्रा0लि0 मीरजापुर/मिर्जापुर थर्मल एनर्जी यू0पी0 प्रा0लि0 मीरजापुर को राजस्व रिकार्ड
बेलस्पन एनर्जी यू0पी0 प्रा0लि0 का नाम मिर्जापुर थर्मल एनर्जी मे परिवर्तित किये जाने हेतु मु0-23,47,01,600/- रूपया भारतीय स्टेट बैंक, मुख्य
मीरजापुर में स्टाम्प षुल्क षीर्शक-0030021030200, मे जमा करते हुए चालान की प्रति अद्योहस्ताक्षरी को प्राप्त कराना सुनिष्चित करें। जिसके
एम0टी0ई0 यू0पी0 प्रा0लि0/स्टाम्प/09-30/26 दिनांक 05.09.2024 मे उपरोक्त राषि का डिमांड ड्राफ्ट भवदीय कार्यालय में जमा कराये जाने हे
तहसीलदार सदर मीरजापुर के पद नाम से निर्गत है डिमांड ड्राफ्ट का विवरण निम्नवत् हैः- क्रमाक मद ड्राफ्ट जारी करने वाले बैक का नाम ड्राप
व दिनांक राषि 1 स्टाम्प षुल्क ंगपे इंदा 044111/ 04.09.2024 23,47,01600/- जो भारतीय स्टेट बैक डंकीनगंज मीरजापुर मे दिनांक 18.09.2
स्टाम्प षुल्क षीर्शक 0030021030200 मे चालान संख्या 76079 के माध्यम से 234701600/- रूपया जमा कर चालान की एक प्रति पत्रावली सल
दिया गया है। मैने पत्रावली का सम्यक परीक्षण किया एव पत्रावली मे उपलब्ध साक्ष्यो का भलि प्रकार अवलोकन किया। पत्रावली के अवलोकन प
उपनिबधंक सदर मीरजापुर एवं जिला षासकीय अधिवक्ता व उपायुक्त स्टाम्प विन्ध्याचल मण्डल मीरजापुर व आयुक्त स्टाम्प उत्तर प्रदेष प्रयाग
सहायक आयुक्त स्टाम्प मीरजापुर व आयुक्त स्टाम्प उ0प्र0 षिविर कार्यालय लखनउ व उपनिबन्धक सदर मीरजापुर द्वारा प्रस्तुत मूल्यांकन सूची
स्पश्ट होता है कि वादी द्वारा प्रस्तुत नाम परिवर्तित किये जाने की पुश्टि होती है पत्रावली किसी आपत्ति के अभाव मे निर्विवाद है। अतः नाम परि
किया जाना आवष्यक एवं उचित प्रतीत होता है। आदेष अतः आदेष हुआ कि स्थित मौजा ददरी खुर्द तप्पा 84 परगना कंतित तहसील सदर जिल
मीरजापुर की आ0नं0 199छ रकवा 0.300हे0 व 200घ रकवा 0.2900हे0 व 22च रकवा 0.100हे0 व 56ग रकवा 0.5200हे0 व 57च रकवा 0.38
59ड0 रकवा 0.330हे0 व 45 रकवा 1.3200हे0 व 226ग रकवा 0.7100हे0 व 197ख रकवा 1.2700 व 169ड0 रकवा 0.600हे0 व 207ख रकवा
0.200हे0 व 173ड0 रकवा 0.2500हे0 व 225च रकवा 0.5000हे0 व 47ग रकवा 0.3700हे0 व 49ध रकवा 0.1800हे0 व 225ध रकवा 0.1000हे

रकवा 1.3500हे0 व 44 रकवा 1.2500हे0 व 198घ रकवा 1.0100हे0 व 231ख रकवा 1.2600हे0 व 56घ रकवा 0.7700हे0 व 65ख रकवा 0.45(
225ग रकवा 0.2000हे0 व 43छ रकवा 0.0700हे0 व 67ख रकवा 1.1700हे0 व व 225छ रकवा 0.2000हे0 व 38ख रकवा 0.8900हे0 व 72ख र
0.2000हे0 व 225ज रकवा 0.2000हे00 व 225ग रकवा 0.1020हे0 व 230ग रकवा 0.0500हे0 व 231क रकवा 1.2200हे0 व 67ग रकवा 0.200(
68 रकवा 0.9200हे0 व 184ख रकवा 0.5400हे0 व 185 रकवा 0.2200हे0 व 186ध रकवा 0.5000हे0 व 66 रकवा 0.4500हे0 व 69 रकवा 0.80
9ध रकवा 0.3300हे0 व 10ध रकवा 0.5700हे0 व 14क रकवा 0.3000हे0 व 15ध रकवा 0.1200हे0 व 8क रकवा 0.1600हे0 व 9ग रकवा 0.18(
10ग रकवा 0.3700हे0 व 11ग रकवा 0.2800हे0 व 12ग रकवा 0.300हे0 व 13ख रकवा 0.2600हे0 व 14ख रकवा 0.0100हे0 व 15ख रकवा 0.(
व 17ग रकवा 0.4500हे0 व 18ग रकवा 0.2200हे0 व 19ग रकवा 0.1900हे0 व 20ख रकवा 0.1000हे0 व 21ग रकवा 0.0600हे0 व 22क रकवा
0.2200हे0 व 24ख रकवा 0.0500हे0 व 25ग रकवा 0.0700हे0 व 26ग रकवा 0.3500हे0 व 27ग रकवा 0.0100हे0 व 28ग रकव 0.4100हे0 व 2
रकवा 0.5600हे0 व 34ग रकवा 0.0700हे0 व 35ग रकवा 0.0500हे0 व 36ग रकवा 0.1000हे0 व 37ग रकवा 0.1500हे0 व 41क रकवा 0.310हे
42ग रकवा 0.2300हे0 व 43घ रकवा 0.0600हे0 व 46ग रकवा 0.2000हे0 व 47क रकवा 0.1200हे0 व 48ख रकवा 0.0500हे0 व 49ख रकवा
0.2200हे0 व 50ख रकवा 0.1700हे0 व 51ख रकवा 0.1500हे0 व 55ख रकवा 0.4800हे0 व 56क रकवा 0.1500हे0 व 57ध रकवा 0.2400हे0 व
रकवा 0.1300हे0 व 72क रकवा 0.2500हे0 व 156 रकवा 0.2200हे0 व 157क रकवा 0.1000हे0 व 169क रकवा 0.7500हे0 व 171ग रकवा 0.
व 172ख रकवा 0.0800हे0 व 173ध रकवा 0.4100हे0 व 174ग रकवा 0.0500हे0 व 175ग रकवा 0.1100हे0 व 176क रकवा 0.0500हे0 व 177
रकवा 0.2000हे0 व 178ग रकवा 0.0600हे0 व 179ख रकवा 0.0400हे0 181ग रकवा 0.3900हे0 व 184क रकवा 0.4700हे0 व 186ग रकवा 0.
व 187ग रकवा 0.3400हे0 व 189ग्र रकवा 0.6800हे0 व 190ग रकवा 0.2200हे0 व 192ग रकवा 0.8500हे0 व 194ग रकवा 0.1500हे0 व 195ग
0.0200हे0 व 196ग रकवा 0.0400हे0 व 197ड0 रकवा 0.6000हे0 व 198ग रकवा 1.6000हे0 व 199ग रकवा 0.7000हे0 व 200ग रकवा 0.260
201ग रकवा 0.0800हे0 व 202ग रकवा 0.0500हे0 व 203ग रकवा 0.1000हे0 व 204ग रकवा 0.3000हे0 व 205ग रकवा 0.1100हे0 व 206ग र
0.2500हे0 व 209ग रकवा 0.5500हे0 व 210ग रकवा 0.0500हे0 व 211ग रकवा 0.0200हे0 व 212ग रकवा 0.0500हे0 व 214ग रकवा 0.2500
215घ रकवा 1.000हे0 व 218ख रकवा 1.4700हे0 व 222ग रकवा 0.0900हे0 व 223ख रकवा 0.4800हे0 व 224ग रकवा 0.3500हे0 व 225ग र
0.3000हे0 व 228ग रकवा 1.3700हे0 व 230ड0 रकवा 3.400हे0 व 235ख रकवा 2.6400हे0 व 237क रकवा 0.4400हे0 व 226क रकवा 0.21(
8ख रकवा 0.3600हे0 व 9ख रकवा 0.2800हे0 व 11ख रकवा 0.6000हे0 व 12ख रकवा 0.5200हे0 व 13ग रकवा 0.1800हे0 व 14ग रकवा 0.0
व 15ग रकवा 0.2000हे0 व 17ख रकवा 0.7500हे0 व 18ख रकवा 0.3800हे0 व 19ख रकवा 0.3200हे0 व 20ग रकवा 0.1700हे0 व 21ख रकव
0.1100हे0 व 22ख रकवा 0.3100हे0 व 24ग रकवा 0.0700हे0 व 25ख रकवा 0.1300हे0 व 26ख रकवा 0.5500हे0 व 27ख रकवा 0.3200हे0 व
रकवा 0.6800हे0 व 34ख रकवा 0.0800हे0 व 35ख रकवा 0.0800हे0 व 36ख रकवा 0.1200हे0 व 37ख रकवा 0.2200हे0 व 40क रकवा 0.20
42ख रकवा 0.2600हे0 व 43च रकवा 0.0400हे0 व 46ख रकवा 0.400हे0 व 49ग रकवा 0.1600हे0 व 50ग रकवा 0.1600हे0 व 51ग रकवा 0.1
व 55ग रकवा 0.8000हे0 व 56ख रकवा 0.2700हे0 व 57ख रकवा 0.5200हे0 व 59ख रकवा 0.2500हे0 व 64 रकवा 0.1000हे0 व 73 रकवा 0.
व 95क रकवा 0.060हे0 व 96ख रकवा 0.1400हे0 व 118क रकवा 0.4100हे0 व 119ख रकवा 0.1200हे0 व 157ख रकवा 0.5500हे0 व 169ख
1.1500हे0 व 171ख रकवा 0.1500हे0 व 172ग रकवा 0.1200हे0 व 173ग रकवा 0.7000हे0 व 174ख रकवा 0.0800हे0 व 175ख रकवा 0.070
176ख रकवा 0.0300हे0 व 178ख रकवा 0.2000हे0 व 184ध रकवा 0.0600हे0 व 186ड0 रकवा 0.5000हे0 व 187ख रकवा 0.5700हे0 व 188
रकवा 0.9500हे0 व 190ख रकवा 0.2500हे0 व 192ख रकवा 1.3700हे0 व 194ख रकवा 0.2200हे0 व 195ख रकवा 0.0500हे0 व 196ख रकव
0.0600हे0 व 197घ रकवा 0.3600हे0 व 198ख रकवा 2.4500हे0 व 199ख रकवा 1.2000हे0 व 200ख रकवा 0.2800हे0 व 201ख रकवा 0.10(
202ख रकवा 0.1000हे0 व 203ख रकवा 0.1500हे0 व 204ख रकवा 0.3500हे0 व 205ख रकवा 0.3000हे0 व 207ड0 रकवा 0.0200हे0 व 209
रकवा 1.2500हे0 व 212ख रकवा 0.0900हे0 व 214ख रकवा 0.4000हे0 व 215ख रकवा 2.000हे0 व 218क रकवा 2.5000हे0 व 222ख रकवा
0.1500हे0 व 223ग रकवा 0.4800हे0 व 224ख रकवा 0.4800हे0 व 225ख रकवा 1.0800हे0 व 226च रकवा 0.0500हे0 व 228ख रकवा 1.77(
235ग रकवा 2.3200हे0 व 238ग रकवा 0.900हे0 व 239क रकवा 1.9000हे0 व 7 रकवा 1.7100हे0 व 8ग रकवा 1.2500हे0 व 9क रकवा 1.04
10क रकवा 2.0400हे0 व 11क रकवा 2.390हे0 व 12क रकवा 1.980हे0 व 13क रकवा 1.5800हे0 व 14ध रकवा 0.0900हे0 व 15क रकव 0.6
व 17क रकवा 1.4000हे0 व 18क रकव 0.5000हे0 व 19क रकवा 1.4400हे0 व 20क रकव 0.6800हे0 व 21क रकवा 0.4000हे0 व 22ग रकव
1.0500हे0व 24क रकवा 0.2700हे0 व 25क रकवा 0.6800हे0 व 26क रकवा 2.000हे0 व 27क रकवा 0.3900हे0 व 28क रकव 2.1500हे0 व 2
रकवा 0.2500हे0 व 33 रकवा 0.5100हे0 व 34क रकवा 0.0300हे0 व 35क रकवा 0.4700हे0 व 36क रकवा 0.4300हे0 व 37क रकवा 0.800(
40ख रकवा 0.0500हे0 व 41ध रकवा 2.3700हे0 व 42क रकवा 3.6400हे0 व 43ग रकवा 0.1600हे0 व 46क रकवा 0.5800हे0 व 48क रकवा
0.5500हे0 व 49क रकवा 0.3300हे0 व 50क रकवा 0.2100हे0 व 55क रकवा 1.5300हे0 व 51क रकवा 0.6100हे0 व 57क रकवा 1.5200हे0
रकवा 0.0700हे0 व 61 रकवा 0.4700हे0 व 62 रकवा 0.5000हे0 व 63ख रकवा 0.4500हे0 व 65क रकवा 0.1000हे0 व 67क रकवा 1.3800हे
85ख रकवा 0.1500हे0 व 95ख रकवा 0.1400हे0 व व 169ग रकवा 2.7500हे0 व 170क. रकवा 0.2300हे0 व 172क रकवा 0.6700हे0 व 173र





2.4000हे0 व 174क रकवा 0.2700हे0 व 175क रकवा 0.2500हे0 व 177घ रकवा 0.1000हे0 व 179क रकवा 1.3900हे0 व 181ख रकवा 0.82
182 रकवा 0.6500हे0 व 183 रकवा 0.0200हे0 व 184ग रकवा 1.7100हे0 व 186ख रकवा 1.7600हे0 व 187क रकवा 2.1600हे0 व 188ख रक
0.1500हे0 व 189क रकवा 2.7500हे0 व 190क रकवा 0.8900हे0 व 192क रकवा 3.1600हे0 व 194क रकवा 0.6500हे0 व 195क रकवा 0.15
197क रकवा 3.9500हे0 व 198क रकवा 7.860हे0 व 199क रकवा 2.6000हे0 व 200क रकवा 1.0000हे0 व 201क रकवा 0.0500हे0 व 202क
0.2500हे0 व 203क रकवा 0.0500हे0 व 204क रकवा 1.1000हे0 व 205क रकवा 0.9300हे0 व 206क रकवा 1.2000हे0 व 207क रकवा 0.70
208 रकवा 2.8500हे0 व 209क रकवा 2.100हे0 व 210क रकवा 0.2500हे0 व 212क रकवा 0.2900हे0 व 213क रकवा 0.8300हे0 व 214क र
1.3000हे0 व 215क रकवा 6.9000हे0 व 218ग रकवा 0.3800हे0 व 220 रकवा 6.1700हे0 व 221 रकवा 4.1700हे0 व 222क रकवा 6.000हे0
रकवा 0.8800हे0 व 224क रकवा 1.3500हे0 व 225क रकवा 7.600हे0 व 226घ रकवा 2.000हे0 व 227क रकवा 1.3000हे0 व 228क रकवा
6.1100हे0 व 236ग रकवा 8.0600हे0 व 237ख रकवा 4.5600हे0 व 238क रकवा 5.200हे0 व 119ग रकवा 0.1300हे0 व 168 रकवा 0.4000हे
196क रकवा 0.2100हे0 व 211क रकवा 0.1200हे0 व 171क रकवा 0.9500हे0 व 10ख रकवा 0.5200हे व 177क रकवा 0.4000हे0 व 206ख
0.3300हे0 व 41ख रकवा 0.1600हे0 व 210ख रकवा 0.0800हे0 व 211ख रकवा 0.0400हे0 व 75 रकवा 0.9000हे0 व 76 रकवा 0.1200हे0 व
रकवा 0.1000हे0 व 78 रकवा 0.1600हे0 व 79 रकवा 0.2500हे0 व 70 रकवा 0.6700हे0 व 80 रकवा 0.6700हे0 व 81 रकवा 0.0800हे0 व 82
1.1000हे0 व 83 रकवा 3.2300हे0 व 84 रकवा 0.2800हे0 व 85क रकवा 0.2500हे0 व 86 रकवा 0.8000हे0 व 87 रकवा 0.3000हे0 व 88 रक
0.9000हे0 व 89 रकवा 0.6500हे0 व 90 रकवा 0.1200हे0 व 91ख रकवा 1.2400हे0 व 92 रकवा 3.2800हे0 व 93 रकवा 0.0400हे0 व 94 रक
0.5200हे0 व 96क रकवा 0.3800हे0 व 97 रकवा 0.3500हे0 व 98 रकवा 0.2100हे0 व 99 रकवा 0.0700हे0 व 100 रकवा 0.0900हे0 व 102 र
0.1500हे0 व 103 रकवा 0.1100हे0 व 104 रकवा 0.1000हे0 व 105 रकवा 0.1000हे0 व 106 रकवा 0.1100हे0 व 107 रकवा 0.0400हे0 व 10
0.0600हे0 व 109 रकवा 0.0500हे0 व 110 रकवा 0.0600हे0 व 111 रकवा 0.0600हे0 व 112 रकवा 0.1000हे0 व 113 रकवा 0.1700हे0 व 11
0.1800हे0 व 115 रकवा 0.1300हे0 व 116 रकवा 0.2000हे0व 117क रकवा 0.4700हे0 व 119क रकवा 0.3000हे0 व 121 रकवा 0.3200हे0 व
रकवा 0.1200हे0 व 165ग 0.0200हे0 व 166 रकवा 0.7700हे0 व 222ड. रकवा 0.6000हे0 व 101 रकवा 1.4200हे0 व 16क रकवा 0.2500हे0
रकवा 0.4500हे0 व 191 रकवा 1.8800हे0 व 222च रकवा 0.2600हे0 व 16ख रकवा 0.2600हे0 व 43ख रकवा 0.4500हे0 व 60 रकवा 1.7800
222छ रकवा 0.2600हे0 व 173क रकवा 1.7000हे0 व 222ज रकवा 1.3500हे0 व 55ड0 रकवा 0.3700हे0 व 57ड0 रकवा 0.0700हे0 व 204ध
0.3500हे0 व व 206(ध) रकवा 0.3600हे0 व 198ड0 रकवा 1.3100हे0 व 8ड0 रकवा 0.1900हे0 व 12ड0 रकवा 0.4500हे0 व 13ध रकवा 0.21
170ख रकवा 0.1700हे0 व 172ध रकवा 0.1400हे0 व 197ज रकवा 0.1000हे0 व 201ध रकवा 0.1200हे0 व 226ड0 रकवा 0.4600हे0 व 189च
1.0300हे0 व 197ग रकवा 0.2500हे0 व 189च रकवा 0.1800हे0 व 187ध रकवा 0.6800हे0 व 199च रकवा 0.4000हे0 व 59कमि0 रकवा 0.58
37च रकवा 0.3000हे0 व 165क रकवा 0.1400हे0 व 181ध रकवा 0.4200हे0 व 63क रकवा 1.3500हे0 व 39 रकवा 0.2500हे0 व 71 रकवा 1.
व 36ध रकवा 0.1500हे0 व 37ड. रकवा 0.2300हे0 व 178क रकवा 0.2400हे0 व 233द रकवा 0.2500हे0 व 173च रकवा 0.3000हे0 व 179ध
0.4000हे0 व 189ध रकवा 0.2200हे0 व 190ध रकवा 0.2200हे0 व 192च रकवा 0.2500हे0 व 11ध रकवा 0.4600हे0 व 12ध रकवा 0.1000हे0
रकवा 0.0100हे0 व 14ड0 रकवा 0.0200हे0 21ध रकवा 0.1300हे0 व 22ड. रकवा 0.1200हे0 व 24ध रकवा 0.1600हे0 रकवा 34ड. रकवा 0.
व 35ड. रकवा 0.0400हे0 व व 37घ रकवा 0.1200हे0 व 41ग रकवा 0.0600हे0 व 42ध रकवा 0.1700हे0 व 43ड. रकवा 0.0200हे0 व 50घ रक
0.0700हे0 व 169ध रकवा 0.3500हे0 व 171ध रकवा 0.0600हे0 व 173ज रकवा 0.0900हे0 व 174ध रकवा 0.1200हे0 व 175ड. रकवा 0.020
176ग रकवा 0.0100हे0 व 177ग रकवा 0.0100हे0 व 179ग रकवा 0.0700हे0 व 184ड. रकवा 0.0200हे0 व 186छ रकवा 0.0100हे0 व 189ड
0.1500हे0 व 192ड. रकवा 0.2700हे0 व 195ध रकवा 0.0800हे0 व 196ध रकवा 0.0700हे0 व 197छ रकवा 0.0400हे0 व 199ड. रकवा 0.10
200ड. रकवा 0.0200हे0 व 202ड. रकवा 0.0700हे0 व 203ड. रकवा 0.9600हे0 व 205ध रकवा 0.1800हे0 व 207ध रकवा 0.3600हे0 व 210
0.1700हे0 व 211ध रकवा 0.0400हे0 व 212ध रकवा 0.1700हे0 व 213ख रकवा 0.0700हे0 व 214ध रकवा 0.5500हे0 व 215ग रकवा 0.270
223च रकवा 0.0500हे0 व 224ड. रकवा 0.0900हे0 व 225ड. रकवा 0.0200हे0 व 227ध रकवा 0.5000हे0 व 229ड. रकवा 0.6500हे0 व 231
0.0300हे0 व 231ड. रकवा 2.1400हे0 व 235ध रकवा 2.5900हे0 व 236क रकवा 0.1400हे0 व 239ग रकवा 0.8500हे0 व 240 रकवा 3.4500
20ड. रकवा 0.0200हे0 व 25घ रकवा 0.2200हे0 व 29घ रकवा 0.3600हे0 व 180 रकवा 1.0100हे0 व मा0 उच्च न्यायालय इलाहाबाद मे योजित
सं0 67835/2014 नरेन्द्र कुमार बनाम उ0प्र0 राजस्व और पाच अन्य के अच्छादित आ0न0 120 रकवा 0.7500हे0 व 124 रकवा 0.1800हे0 व 12
0.1800हे0 व 126 रकवा 1.1000हे0 व 127 रकवा 1.200हे0 व 128 रकवा 0.8000हे0 व 129 रकवा 0.2200हे0 व 130 रकवा 0.6500हे0 व 131
0.4000हे0 व 133 रकवा 0.6500हे0 व 134 रकवा 0.1200हे0 व 135 रकवा 0.3700हे0 व 137 रकवा 0.2300हे0 व 138 रकवा 1.2000हे0 व 13
1.500हे0 व 140 रकवा 0.5500हे0 व 141 रकवा 0.5500हे0 व 142 रकवा 0.1500हे0 व 143 रकवा 0.4500हे0 व 144 रकवा 0.0600हे0 व 145
1.6700हे0 व 146 रकवा 0.5200हे0 व 147 रकवा 0.3000हे0 व 148 रकवा 0.2500हे0 व 149 रकवा 0.200हे0 व 150 रकवा 0.2500हे0 व 151
0.1100हे0 व 152 रकवा 0.1100हे0 व 153 रकवा 0.1000हे0 व 154 रकवा 0.2000हे0 व 155 रकवा 0.1500हे0 व 158 रकवा 0.3200हे0 व 15

0.3200हे0 व 160 रकवा 0.2000हे0 व 161 रकवा 0.0200हे0 व 162 रकवा 0.4900हे0 व 163 रकवा 0.3500हे0 व 218घ रकवा 0.8200हे0 व 2
रकवा 0.1000हे0 व 229ध रकवा 1.100हे0 व 231च रकवा 1.3800हे0 व 235क रकवा 1.4200हे0 व 238ख रकवा 1.7500हे0 व 164ख रकवा
0.2900हे0 व 164क रकवा 0.0800हे0 व 164ड रकवा 0.5000हे0 व 164ग रकवा 1.6600हे0 व 132 रकवा 0.2100हे0 व 136 रकवा 0.2800हे0
भू0 रा0 मु0 परता खाता अंकित खातेदार वेलेस्पन एनर्जी यू0पी0 प्रा0लि0 पता वेलेस्पन हाउस, 7वी मंजिल, कमला सिटी सेनापति बापत मार्ग परे
महाराश्ट्र के नाम के स्थान पर मिर्जापुर थर्मल एनर्जी यू0पी0 प्रा0लि0 पता अडानी हाउस 56 श्रीमाली सोसाइटी नवरग पुरा अहमदावाद गुजरा
इंडिया-380009 का नाम बतौर संक्रमणीय भूमिधर दर्ज कागजात माल हो। वाद अमल दरामद पत्रावली दाखिल दफ्तर हो। दिनांकः- तहसीलदा
जनपद-मीरजापुर।

Disclaimer :

उपरोक्त सूचना मात्र सूचनार्थ है तथा राजस्व न्यायालय कम्प्यूटरीकृत प्रबन्धन प्रणाली (RCCMS) में उपलब्ध अद्यतन सूचना पर आधारित है , इस सूचना की कोई विधिक मान्यता नहीं होगी। वास्तविक सूचना की पुष्टि सम्बंधित न्यायलय / न्यायालयों की पत्रावली / पत्रावलियों से की जा सकती है।"

ANNEXURE - V

संख्या-3613/11-27-सिं0-4-174(डब्लू)/11

प्रेषक,

जय विलास,
संयुक्त सचिव,
उत्तर प्रदेश शासन।

सेवा में,

प्रमुख अभियन्ता,
सिंचाई विभाग, उ0प्र0,
लखनऊ।

सिंचाई अनुभाग-4 लखनऊः दिनांकः 9 सितम्बर, 2011

विषयः मे0 वेलस्पन द्वारा जनपद मिर्जापुर में प्रस्तावित 1320 मेगावाट की तापीय विद्युत परियोजना हेतु 36 एम0सी0एम जल उपलब्ध कराये जाने के संबंध में।

महोदय,

उपर्युक्त विषयक मुख्य अभियन्ता (जल संसाधन) कार्यालय प्रमुख अभियन्ता, सिंचाई विभाग, उ0प्र0 के पत्र संख्या-236/अनिमं-8/यू0-6/पी0-20(ता0) दिनांक 05.09.11 के संदर्भ में मुझे यह कहने का निदेश हुआ है कि मे0 वेलस्पन द्वारा जनपद मिर्जापुर में प्रस्तावित 1320 मेगावाट की तापीय विद्युत परियोजना हेतु 36 एमसीएम जल उपलब्ध कराये जाने हेतु निम्नलिखित शर्तो के अधीन सैद्धान्तिक सहमति प्रदान की जाती हैः-

(1) मे0 वेलस्पन द्वारा जनपद मिर्जापुर में प्रस्तावित 1320 मे0वा0 की तापीय परियोजना हेतु 36 एम0सी0एम0 जल देने के लिए यह आवश्यक है कि अपर खजुरी जलाशय तथा गंगा नदी स्थित पम्पिंग स्टेशन के मध्य उचित स्थान पर सेटलिंग पौण्ड का निर्माण किया जाये, जिसमें गंगा नदी का जल सीधा डालने के उपरान्त पुनः पम्पिंग के द्वारा अपर खजुरी जलाशय में डाला जाये, जिससे जलाशय के अन्दर अपेक्षाकृत कम सिल्ट की मात्रा आये। इस पर होने वाला सम्पूर्ण व्यय भार विकासकर्ता द्वारा वहन किया जायेगा।

(2) गंगा नदी से जल उठाने, अपर खजुरी बांध तक लाने एवं अपर खजुरी बांध से तापीय परियोजना तक ले जाने तथा बांध के पुनर्स्थापना हेतु प्रस्तावित समस्त कार्य संबंधित समस्त पूंजीगत व्यय, परिचालन एवं अनुरक्षण व्यय विकासकर्ता द्वारा वहन किया जाना होगा।

(3) सिंचाई विभाग के शासनादेश संख्या-2953/11-27-सिं0-4-8(जल)/82, दिनांक 15-7-2011 के अनुसार अकृषि कार्य हेतु जल की रायल्टी एवं जल मूल्य की यथा संशोधित दर से देय होगा।

(4) उक्त तापीय परियोजना हेतु गंगा नदी से जल उठाये जाने के संबंध में भारत सरकार के जल संसाधन मंत्रालय, केन्द्रीय जल आयोग एवं अन्य मंत्रालयों की अनापत्ति भी विकासकर्ता द्वारा प्राप्त की जायेगी।

भवदीय,

(जय विलास)
संयुक्त सचिव।

7/2/18/UP/2008/IP (N)/ 804
Government of India
Central Water Commission
Irrigation Planning (North) Dte.

204 (S), Sewa Bhavan
R.K. Puram, New Delhi-66
Dated: 12.10.2011

To

The Special Secretary
Government of Uttar Pradesh
U. P. Sachivalaya
Lucknow - 226001

Sub: Clearance for Withdrawal of 36 MCM water from River Ganga during non-restrictive period for proposed 1320 MW Thermal Power Project to M/s Welspun Energy U.P. Pvt. Ltd. at Mirzapur, Uttar Pradesh – reg.

Ref: Govt. of UP Lr. no. no. 3763/11-27-Sin-4-174(W)/11 dated 16.09.2011.

Sir,

Please refer to Government of Uttar Pradesh letter under reference above vide which request for clearance for Water Allocation from River Ganga to M/s. Welspun Energy U.P. Pvt. Ltd. for 1320 MW Thermal Power Project at Mirzapur, Uttar Pradesh has been made. The proposal envisages storing water in Upper Khajuri Dam by pumping water from River Ganga to fulfil the requirement of proposed Thermal Power Plant.

The proposal has been examined and I am directed to convey the 'No Objection' of MoWR for allocation of 36 MCM of water for this project, to be withdrawn from River Ganga to M/s Welspun Energy U.P. Pvt. Ltd. at Mirzapur, Uttar Pradesh subject to the following conditions:

1. At present, except for Sone basin and some project - specific agreement, there is no agreement for sharing of Ganga water between co-basin States. Hence in future, if any agreement is reached for sharing of water of River Ganga, the consumptive use for this project would be counted against the share of U.P.

2. The Government of Uttar Pradesh shall ensure that there is no withdrawal of water from Ganga River during the lean season (1st January to 31st May) and there is sufficient storage available in Upper Khajuri Dam for the monsoon water to be stored for utilization during the lean season by proposed Thermal Power Project at Mirzapur.

3. Government of U.P shall ensure that during the lean season, the releases downstream of the existing dam remain unaffected.

Yours faithfully,

12/10

Director, IP (N)

Copy to:

1. Sr. Jt. Commissioner – I (Ganga), Ministry of Water Resources, Block No-11, 8th Floor, CGO Complex, Lodhi Road, New Delhi-110003 w.r.t MoWR letter no. 7/24/2010-Ganga/3821-23 dated 03.10.2011.

2. Shri M.S. Puri, Chief Engineer, TP&I Divn., Central Electricity Authority, 9th floor, Sewa Bhawan, R.K. Puram, New Delhi.

3. Welspun Energy U.P. Pvt. Ltd. 3rd Floor, PTI Building, 4, Parliament Street, New Delhi – 110001.

adani

संख्या 2123 /प्रo सo सिं o ( ) 2024

Date: 02-Apr-2024

To,

The Principal Secretary,
Irrigation and Water resource Department,
Government of Uttar Pradesh
Bapu Bhawan, Lucknow
Govt. of Uttar Pradesh

Subject: Extension of existing Water Allocation of 36 MCM from Ganga River in the name of Welspun Energy UP Private Limited (WEUPPL) to Mirzapur Thermal Energy UP Pvt Ltd (MTEUPPL).

Reference:

1. Letter No. 3613/11-27-Irr- 4-174(W)/ 11 dated 09-Sep 2011, Irrigation department GoUP.
2. Letter No.7/2/18/UP/2008/IP(N)/804 dated 12-Oct-2011, CWC IP (North).

Respected Sir,

With reference to above mentioned letters, 36 MCM of water has been allocated from River Ganga to M/s "Welspun Energy (UP) Private Limited" (WEUPPL) for 1320 MW Thermal Power Project (TPP) in year 2011.

We wish to bring to your kind notice the Company name of "Welspun Energy (UP) Private Limited" (WEUPPL) has been changed to "Mirzapur Thermal Energy (UP) Private Limited" (MTEUPPL) in year 2019. Certificate of Incorporation is enclosed for reference.

We would like to appraise you that the said Thermal Power Project (TPP) at village Dadri Khurd, Mirzapur district of Uttar Pradesh could not be implemented due to several factors which are beyond our control.

Mirzapur Thermal Energy (UP) Private Limited
(Formerly Known as Welspun Energy UP Private Limited)
Adani Corporate House
Shantigram, S G Highway
Ahmedabad 382 421
Gujarat India
CIN: U40300MH2010PTC211286

Tel +91 79 2656 7555
Fax +91 79 2555 7177
info@adani.com
www.adani.com

Registered Office: Welspun House, 7th floor, Kamala City, Senapati Bapat Marg, Lower Parel (W), Mumbai, MH. – 400013.

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As now, The union Power minister recently has emphasized the need to expand thermal power capacities in India to meet growing demand. Accordingly, Mirzapur Thermal Energy (UP) Private Limited (formerly Welspun Energy UP Private Limited) is planning to put up a 2 x 800 MW Ultra Super Critical Thermal Power Plant at Mirzapur.

Therefore, we request to extend the water allocation of 36 MCM to Mirzapur Thermal Energy (UP) Private Limited at the earliest possible.

This is for your kind information and consideration please.

Regards,

(Authorized Signatory)
Mirzapur Thermal Energy (UP) Private Limited
(Formerly Welspun Energy UP Private Limited)

Mirzapur Thermal Energy (UP) Private Limited
(Formerly Known as Welspun Energy UP Private Limited)
Adani Corporate House
Shantigram, S G Highway
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ANNEXURE - VI

IN-GJ31290643409179W

INDIA NON JUDICIAL

Government of Gujarat

Certificate of Stamp Duty

सत्यमेव जयते

Certificate No.	:	**IN-GJ31290643409179W**
Certificate Issued Date	:	19-Jul-2024 05:41 PM
Account Reference	:	IMPACC (AC)/ gj13001011/ GULBAI TEKRA/ GJ-AH
Unique Doc. Reference	:	SUBIN-GJGJ13001011803469259595 14W
Purchased by	:	ACC CEMENT LTD ACC TIKARIA
Description of Document	:	Article 5(h) Agreement (not otherwise provided for)
Description	:	MEMORANDUM OF AGREEMENT FOR FLY ASH SALE
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	MIRZAPUR THERMAL ENERGY UP PVT LTD
Second Party	:	ACC CEMENT LTD ACC TIKARIA
Stamp Duty Paid By	:	ACC CEMENT LTD ACC TIKARIA
Stamp Duty Amount(Rs.)	:	300 (Three Hundred only)

V. C. SHAH AHMEDABAD GJ13001011

HIF 0011388235

VOID VOID VOID

Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

MEMORANDUM OF AGREEMENT FOR FLY ASH SALE

BETWEEN

MIRZAPUR THERMAL ENERGY (UP) PVT LTD

AND

ACC CEMENT LTD (ACC), TIKARIA

FROM

UPCOMING 1600 MW USCTPP

Executed on
20th June 2024

Memorandum of Agreement (MOA)

This Agreement for Fly Ash Sale is made on 20th day of June 2024

by and between

M/s. Mirzapur Thermal Energy (UP) Pvt Ltd., a company validly existing under the Companies Act, 2013 (CIN No U40300GJ2010PTC117810), and having its registered office Adani Corporate House", Shantigram, Near Vaishnav Devi Circle, S. G. Highway, Khodiyar, Ahmedabad-382421, Gujarat, India (hereinafter referred to as "**APL**" which expression shall, unless excluded by or repugnant to the context or meaning thereof, be deemed to include its successors and assigns) being the party of the **FIRST PART**.

And

M/s. ACC Limited, Tikaria, a company existing under Companies Act, 1913, having a registered office at Adani Corporate House Shantigram near Vaishno devi circle, SG Highway Khodiyar, Ahmedabad, Gujrat 382421, India and its cement manufacturing units namely ACC Ltd. Tikaria Cement Works at Rae Bareli District, Uttar Pradesh (hereinafter referred to as the "Buyer") and, which expression shall, unless excluded by or repugnant to the context or meaning thereof, be deemed to include its successors and assigns) being the party of the **SECOND PART**.

Both the Seller and the Buyer may hereinafter also be referred to jointly as the '**Parties**' and severally as a '**Party**'.

WHEREAS

A. APL is planning to set up 2x800 MW coal based Thermal Power Project, in Mirzapur, Village-Dadri Khurd, Tehsil-Sadar, District-Mirzapur, Uttar Pradesh, (hereinafter referred to as "TPP") and shall be generating in process, substantial quantity of Fly Ash (hereinafter referred to as "fly ash") and wishes the fly ash to be utilized in a bonafide manner such as in manufacturing of cement or as stipulated by the MOEF&CC in its notifications

B. ACC is engaged in the manufacturing of Cement in its plants across India. In vicinity to Mirzapur, ACC operates cement units in Tikaria, Rae Bareli i.e. Uttar Pradesh region and plans for expansion at Mirzapur region and is interested in procuring fly ash from APL which will be used as a raw material at its plant in the manufacturing process of Pozzolana Portland Cement (PPC) at its various units.

NOW THIS AGREEMENT WITNESSETH AS UNDER:

1. APL will start providing fly ash generated from its TPP to ACC to the tune of Three (3) million MT per annum from the commercial date of operation for the purpose of production of cement.

2. APL will establish the infrastructure for loading of the fly ash in rakes and/or bulkers to be deployed by ACC.

3. ACC shall regularly lift fly ash from APL from the date of commercial operation of the unit(s) by APL.

4. The fly ash may be conditioned with water as per the arrangement between both the parties, depending on the type of rake placed by ACC.

5. APL & ACC shall strictly adhere to all Pollution Control norms, measures and rules as may be prescribed from time to time by the competent authority in this regard to avoid pollution while loading & transportation of fly ash. The utilization of ash shall be in strict concurrence to the regulatory guidelines only.

6. The Parties shall mutually work towards entering into detailed amendment to this Agreement by detailing the commercials worked out between the two parties. Both Parties intend to sign such required amendment before Six (6) months of commissioning of the units.

7. The sale price of ash shall be mutually decided between the parties based on the then prevailing market conditions, as decided between both the parties at the time of signing the aforesaid amendment.

8. The cost incurred for cleaning, loading & sealing of wagons, cost of tarpaulin covering, cost related to packing, operations, and maintenance costs for such loading and packing units, etc., as applicable based on the type of rakes and mode of transportation shall be to APL's account.

9. This Agreement shall be effective from the date of entering the Agreement by the Parties ("Effective Date") for a term of Three (3) years and the term shall be extendable for an additional period of Three (3) years on mutually agreed basis.

10. The Agreement shall be governed by and construed in accordance with the laws of India. The Courts of law situated in Ahmedabad; Gujarat shall have exclusive jurisdiction on any matter arising out of this Agreement. Provided in case any dispute or difference arise between the Parties as to the construction of this Agreement or as to any matter or thing of whatsoever nature arising thereunder or in connection there with, including any question regarding its existence, validity or termination, such dispute or difference shall be submitted to a sole arbitrator to be appointed by the Parties with mutual consent. The Arbitration shall be held and governed by the Arbitration and Conciliation Act, 1996 and any amendments thereto. The place of arbitration shall be Ahmedabad and the proceedings of the arbitration shall be conducted in the English language. The provisions of this clause shall survive the expiry / termination of this Agreement.

11. The failure of either Party to insist upon strict performance or enforce any provision of this Agreement shall not be construed as a waiver or limitation of that Party's right to subsequently enforce such provision of this Agreement. The Parties hereby agree that any waiver of right under this Agreement shall not be effective unless agreed in writing by the Party waiving such rights.

12. This Agreement constitutes the entire understanding between the Parties, and supersedes earlier all offers, negotiations and other agreements concerning the subject matter contained in this Agreement.





13. As on the Effective Date, each Party confirms that they have all the necessary consents, licenses, and approvals in connection with the entering into and performance of its obligations under this Agreement. Further, each Party warrants and represents that the person executing this Agreement on its behalf has the authority to enter into this Agreement. The Parties shall comply with the applicable laws in relation to this Agreement.

14. Either Party shall not be entitled to assign this Agreement or any interest herein without the prior written consent of the other Party.

15. Notices:

Any notice required by this Agreement or given in connection with it, shall be in writing and shall be given to the appropriate Party by personal delivery or by certified mail, postage prepaid, or recognized overnight delivery services.

If to: APL

Attention: Head – Ash Management
Adani Power Ltd.,
Adani Corporate House,
Adani Shantigram, Khodiyar,
Ahmedabad, India - 382 421
Email ID: satishkumar.tanwar@adani.com

If to: ACC

Attention: Chief Procurement Officer
(O&M, Services and RM Procurement - Services and O&M)
Adani Corporate House,
Adani Shantigram, Khodiyar,
Ahmedabad, India - 382 421
Email: sanjay.gupta@adani.com

16. Announcement

Neither Party shall make any public announcement or issue any circular in relation to this Agreement without the prior written approval of the other Party. The restrictions shall not apply if, and to the extent that, an announcement is required by any law, rule or regulation by any competent judicial, governmental, supervisory or regulatory body.

17. Termination

Either Party can terminate this Agreement by giving three (03) months written notice to the other Party.

18. Confidentiality

Each of the Party shall maintain the confidentiality of execution of this Agreement or any matter relating to this Agreement and shall not disclose to any third person without the consent of the other Party save and except to the authorized representatives of the Parties provided that the Parties shall ensure that the Party's authorized representatives are bound by the terms of this Agreement. Provided further that the restrictions of confidentiality shall not apply if, and to the extent that, disclosure of information is required by any law, rule or regulation by any competent judicial, governmental, supervisory or regulatory body.

19. Parties agree to defend, indemnify and keep indemnified and hold harmless the other Party and its directors, officers, employees from and against all losses or expenses or costs or claims which may be suffered by them due to contravention of applicable law or negligence or breach or acts or omissions by the other Party.

20. Amendment

This Agreement shall be modified or amended by mutual agreement of the Parties in writing.

IN WITNESS WHEREOF the Parties hereto have set their hand on the day, month and year herein first above written.

On Behalf of

For Adani Power Limited

Authorized Signatory

For ACC Cement Limited

Authorized Signatory

In the Presence of

SOURABH DADHICH
DY. MANAGER
Witness

ABHIMANYU SINGH CHAUHAN
A.G.M.
Witness

ANNEXURE - VII

adani

Undertaking
for
Coal Supply for 2x800 MW Thermal Power Project

To whomsoever it may concern,

We hereby confirm that Mirzapur Thermal Energy (UP) Private Limited (MTEUPPL) have executed the Power Supply Agreement (PSA) with U.P. Power Corporation Ltd. (UPPCL) on 16th May'2025 for Proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Plant at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh.

In accordance with this agreement, the Coal has been allocated by Coal India Limited (CIL) to UPPCL vide letter dated 12th September'2024 under the Shakti Policy from Northern Coalfields Limited (NCL) for Mirzapur Thermal Power Project.

ADANI POWER LIMITED

(R N Shukla)
Authorized Signature

Date: 21.06.2025

Mirzapur Thermal Energy (UP) Private Limited
(Formerly Known as Welspun Energy UP Private Limited)
"Adani Corporate House"
Shantigram, Near Vaishno Devi Circle,
S. G. Highway, Khodiyar,
Ahmedabad 382 421, Gujarat India
CIN: U40300GJ2010PTC117810

Tel +91 79 2656 7555

info@adani.com
www.adani.com

Registered Office: "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad - 382421

COAL INDIA LIMITED
MARKETING & SALES
Coal Bhawan, Premises No. 4 MAR, Plot no. AF-III,
Action Area 1A, New Town, Rajarhat, Kolkata - 700 156
E-mail: hodfsa.cil@coalindia.in
Phone: 033 - 2324 6617

File: CIL/M&S/FSA/B(iv)/ UP/429 Date: 12.09.2024

To,
The Chairman,
UPPCL,
Lucknow

Sub: (a)Letter no 1013/Plg/UMPP-1/4000 MW/Coal dated 22.08.2024- Request for consideration of Coal Linkage Allocation for 4000 MW capacity under Para B (iv) of Shakti Policy 2017
(b) Letter no 909/Plg/UMPP-1/1600 MW/DBFOO dated 31.08.2024-Allocation of coal for 1600 MW TPS under Shakti B(iv) to the State of UP

Dear Sir,
Kind reference is invited over the letter cited at (a) above, vide which allocation of coal from a mine closer to UP and identifying/ facilitating allocation from such mine has been requested for. Further, vide letter referred at (b) above, mine wise detail along with the quantity of coal & grade of coal have been requested..

In this regard, I have been directed to convey as under-

1. As regards letter cited at (a), in terms of MoM of the SLC (LT) meeting circulated vide letter no CPD-23014/3/2024-CPD dated 5th July, 2024, long-term linkage under Para B (iv) of Shakti policy for 4000 MW thermal capacity was recommended. As linkages are to be earmarked on long term coal availability basis, vide letter dated 02.08.2024, around 20.5 MT coal corresponding to generation of 4000 MW, has been earmarked from MCL where surplus coal is expected to be available for future deliveries. It is mentioned that based on existing commitments vis-a-vis production plan of NCL in the coming years, there may not be any surplus coal availability at NCL.
2. As regards issue cited under letter at (b), in terms of recommendation of SLC (LT) circulated vide no. CPD-23O14/1/2O24-CPD dated 28.02.2024, long term linkage for 1600 MW coal based capacity under Para B (iv) of SHAKTI Policy was granted for undertaking TBCB by State of UP. As a practice, the long term linkages to power sector are granted from subsidiaries or areas of the subsidiaries only. The mines presently under operation at NCL have varying mine life. As such, it is not possible to indicate mine wise allocation for long term linkages. However, the Sources of Coal to be offered from NCL shall be from different Railway Sidings of NCL having a distance from Chopan Station ranging from 66km to 83km(average around 74.5km). For long term linkages, including those issued under para B(i), field wise allocations are not indicated by CIL, keeping in mind long term commitments and changing production scenario. In letter no CIL/CH/4685 dated 10.08.24, coal offered is already mentioned. Further, G-10 is indicated as the normative grade of NCL.

This issues with the approval of Competent Authority.

Yours sincerely,

GM (M&S)

Copy for kind information to-

1. Joint Secretary (CPD), MoC
2. ED (Coordination), CIL
3. TS to CMD, NCL

COAL INDIA LIMITED
(Govt. of India Enterprise)
Premises No.04, MAR, Plot no.AF-III
Action Area 1A, New Town, Rajarhat,
KOLKATA - 700 156
CIN : L23109WB1973GOI028844
(महारत्न कंपनी)
(An ISO 9001:2015, ISO 14001:2015 & ISO 50001:2011 Certified Company)

No. CIL/CH/ 4685 Dtd. 10.8.2024

The Chairman
UPPCL,
Lucknow

Subject: Allocation of coal for 1600 MW TPS under Shakti -B (IV) to the State of UP.

Dear Sir,

Kindly refer to UPPCL's letter no. 690-PLG-UMPP-1/Shakti-B (IV) dated 23.07.2024 requesting for allocating the coal from NCL to UPPCL without any conditions imposed regarding the allocation to existing TPS of UPRVUNL.

In terms of the said request, the matter was reviewed and it has been decided that the offer of coal at NCL under Shakti B (IV) shall be as under:-

State	Coal Company	Plant Capacity	Quantity for pit head plant (in MT)	Quantity for non-pit head plant (in MT)
UP	NCL	1600MW	6.06	6.10

Note-The above quantities are as per CEA norms dated 08.03.2024 for representative grade of G9 of NCL.

The already earmarked linkage quantity at CCL under B (IV) shall lapse.

Further, the concerns of UPPCL/UPRVUNL communicated vide letter no. 690-PLG-UMPP-1/Shakti-B (IV) dated 23.07.2024 are noted and shall be addressed appropriately. CIL shall review the mine-wise/coal-field-wise allocation of coal based on logistical efficiency keeping in view the production plan of NCL. The review will keep in mind the distance of existing power plants while making the allocation.

Yours sincerely

R.Prasad
(P.M. Prasad) 10/08/2024
Chairman

Ph. 033-23246611/22 Fax: 033-23244023 Email: chairman.cil@coalindia.in
Web: www.coalindia.in

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ANNEXURE - VIII

उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड
UTTAR PRADESH POLLUTION CONTROL BOARD

पंजीकृत

संदर्भ सं0/Ref. No 645428/IC-2/NOC-5506/Public hearing/25

दिनाँक/Date 30-4-25

पंजीकृत

सेवा में,

सदस्य सचिव, IA-Division (Thermal),
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय,
इन्दिरा पर्यावरण भवन, जोरबाग रोड,
नई दिल्ली–110003।

विषयः **मैसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लि0 द्वारा प्रस्तावित 2x800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल मिर्जापुर थर्मल पॉवर प्लांट, ग्राम–दादरी खुर्द, तहसील–मिर्जापुर सदर, जिला–मीरजापुर, उ0प्र0 में क्षेत्रफल–365.19 हे0 में 2x800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल मिर्जापुर थर्मल पॉवर प्लांट की स्थापना के प्रस्ताव पर प्रस्तावित परियोजना की दिनांक 11.04.2025 को आहुत लोक सुनवाई की कार्यवृत्त के संबंध में।**

महोदय,

कृपया उपरोक्त विषयक का संदर्भ लेने का कष्ट करे । उक्त के संबंध में मैसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लि0 द्वारा प्रस्तावित 2x800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल मिर्जापुर थर्मल पॉवर प्लांट, ग्राम–दादरी खुर्द, तहसील–मिर्जापुर सदर, जिला–मीरजापुर, उ0प्र0 में क्षेत्रफल–365.19 हे0 में 2x800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल मिर्जापुर थर्मल पॉवर प्लांट की स्थापना हेतु प्रस्तावित परियोजना द्वारा पर्यावरणीय स्वीकृत के लिए लोक सुनवाई के संबंध में पर्यावरण अधिप्रभाव रिपोर्ट/प्रस्ताव प्राप्त हुआ था।

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार द्वारा जारी अधिसूचना संख्या–एस0ओ0–1533, दिनांक 14.09.2006 यथासंशोधित एस0ओ0–3067(ई) दिनांक 01.12.2009 के प्राविधानों के अनुसार पर्यावरणीय क्लीयरेंस हेतु अपर जिलाधिकारी (वि0–राजस्व), मिर्जापुर की अध्यक्षता में दिनांक 11.04.2025 को सम्पन्न लोक सुनवाई का कार्यवृत्त एवं अन्य प्रपत्र, लोक सुनवाई की विडियोग्राफी (पेन ड्राइव में), फोटोग्राफ्स संलग्न कर अग्रिम आवश्यक कार्यवाही हेतु प्रेषित किया जा रहा है।

भवदीय,

(संजीव कुमार सिंह)
सदस्य सचिव

संलग्नकः–उपरोक्तानुसार।

क्षेत्रीय कार्यालय
उ0प्र0 प्रदूषण नियंत्रण बोर्ड,
सोनभद्र

पत्रांकः– U0450 /PH-1668/M2P/2025 दिनांकः– 17/04/2025

सेवा में,

मुख्य पर्यावरण अधिकारी (वृत्त–2),
उ0प्र0 प्रदूषण नियंत्रण बोर्ड,
टी0सी0 12वी, विभूति खण्ड, गोमती नगर,
लखनऊ।

विषयः मेसर्स मिर्जापुर थर्मल एनर्जी (यूपी) प्राइवेट लिमिटेड के प्रस्तावित 2X800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्लांट की स्थापना हेतु पर्यावरणीय स्वीकृति सम्बन्धी सम्पन हुई लोक सुनवाई की कार्यवृत्त प्रेषित करने के सम्बन्ध में।

महोदय,

कृपया उपरोक्त विषयक का सन्दर्भ ग्रहण करने का कष्ट करें। उक्त के सम्बन्ध में आपको अवगत कराना है कि मेसर्स मिर्जापुर थर्मल एनर्जी (यूपी) प्राइवेट लिमिटेड के प्रस्तावित 2 X 800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्लांट की स्थापना के लिए पर्यावरणीय स्वीकृति के सम्बन्ध में अपर जिलाधिकारी (वि0–राजस्व) महोदय, मिर्जापुर की अध्यक्षता में दिनांक–11.04.2025 को सम्पन्न हुई। लोक सुनवाई की कार्यवृत्त, दैनिक समाचार पत्रों में प्रकाशित विज्ञप्ति की छायाप्रतियाँ, लोक सुनवाई के दौरान उपस्थित अधिकारी/जन–समुदाय की उपस्थिति की छायाप्रति लोक सुनवाई के कार्यवाही की विडियोग्राफी (पेन ड्राइव में), फोटोग्राफ्स एवं जन सामान्य द्वारा दिये गये सुझाव/शिकायत को इस पत्र के साथ 02 प्रतियों में संलग्न कर आपके अवलोकनार्थ एवं अग्रिम आवश्यक कार्यवाही हेतु सादर प्रेषित है।

भवदीय,

17/4/25

(आर0के0 सिंह)
क्षेत्रीय अधिकारी

संलग्नक–यथोपरि।

पृ0सं0 एवं दिनांक उपरोक्तानुसार।

प्रतिलिपिः– निम्नलिखित को सूचनार्थ प्रेषितः–

1. सदस्य सचिव महोदय, उ0प्र0 प्रदूषण नियंत्रण बोर्ड, टी0सी0 12वी, विभूति खण्ड, गोमती नगर, लखनऊ।
2. पर्यावरण संघात प्राधिकरण (SEIAA), डा. भीमराव अम्बेडकर पर्यावरण परिसर, विनीत खण्ड–1, गोमती नगर, लखनऊ।
3. मेसर्स मिर्जापुर थर्मल एनर्जी (यूपी) प्राइवेट लिमिटेड, ग्राम–दादरी खुर्द, मड़िहान, जनपद–मिर्जापुर।

क्षेत्रीय अधिकारी

Regional Office: H. No. 162, Uttar Mohal, Near Chandi Hotel, Sonbhadra (231216)
Phone: (05444) 222464 - Fax: 05444- 222464
Emil: rosonbhadra@uppcb.in - Web Site: www.uppcb.com

मेसर्स मिर्जापुर थर्मल एनर्जी (यूपी) प्राइवेट लिमिटेड के प्रस्तावित 2X800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्लांट की स्थापना के लिए परियोजना की पर्यावरणीय स्वीकृति के सम्बन्ध में दिनांक–11.04.2025 को अपर जिलाधिकारी (वि0–राजस्व), मिर्जापुर की अध्यक्षता में सम्पन्न हुई "लोक सुनवाई" का कार्यवृत्त।

उक्त सन्दर्भित परियोजना की पर्यावरणीय स्वीकृति प्राप्त करने विषयक **मेसर्स मिर्जापुर थर्मल एनर्जी (यूपी) प्राइवेट लिमिटेड के प्रस्तावित 2X800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्लांट की स्थापना** सम्बन्धी आवेदन–पत्र पर सम्यक् विचारोपरान्त राज्य बोर्ड के पत्रांक–एच 24458/सी–2/एन0ओ0सी0–5506/लोक–सुनवाई/25, दिनांक–20.02.2025 जो जिलाधिकारी महोदय, सोनभद्र को सम्बोधित है तथा क्षेत्रीय अधिकारी, उ0प्र0 प्रदूषण नियंत्रण बोर्ड, सोनभद्र को पृष्ठांकित है, के निर्देशों के अनुपालन में जिलाधिकारी, सोनभद्र से लोक–सुनवाई आयोजित करने सम्बन्धी दिनांक, स्थान एवं समय नियत करने हेतु क्षेत्रीय अधिकारी, सोनभद्र के अनुरोध पर जिलाधिकारी महोदय, सोनभद्र द्वारा नामित अपर जिलाधिकारी (वि0–राजस्व), मिर्जापुर की अध्यक्षता में दिनांक–**11.04.2025** को **उच्च प्राथमिक विद्यालय मड़िहान बाजार, मड़िहान, जनपद–मिर्जापुर के समीप** नियत की गयी थी। पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली द्वारा अधिसूचना संख्या एस0ओ0–1533, दिनांक 14 सितम्बर, 2006 (यथासंशोधित) अधिसूचना संख्या एस0ओ0–3067 (ई) दिनांक–01.12.2009 में वर्णित प्राविधानों के अनुसार उक्त प्रस्ताव पर पर्यावरणीय स्वीकृति के लिए आम–सूचना हिन्दी दैनिक समाचार पत्रों **अमर उजाला** एवं **दी इण्डियन एक्सप्रेस** में **दिनांक–07.03.2025** को आम–जनता से पर्यावरण सम्बन्धी आक्षेप/सुझाव/आपत्ति आदि प्रकाशन की तिथि से 30 दिन के भीतर आमंत्रित किया गया था। उक्त परियोजना का कार्यपालक सार एवं पर्यावरणीय प्रभाव ऑकलन रिपोर्ट (ई0आई0ए0) की हार्ड एवं सॉफ्ट कॉपी कार्यालय जिला अधिकारी, मिर्जापुर, कार्यालय जिला पंचायत, मिर्जापुर उपायुक्त, जिला उद्योग एवं उद्यम प्रोत्साहन केन्द्र मिर्जापुर, उ0प्र0 प्रदूषण नियंत्रण बोर्ड लखनऊ, क्षेत्रीय कार्यालय, मध्य क्षेत्र, पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार के कार्यालय में जन–साधारण के अवलोकनार्थ रखवायी गयी थी। लोक सुनवाई के प्रचार–प्रसार हेतु आवश्यक एवं निर्धारित स्थल पर बैनर लगाये गए एवं मुनादी करायी गयी। अपर जिलाधिकारी (वि0–राजस्व), मिर्जापुर की अध्यक्षता में दिनांक–11.04.2025 को **उच्च प्राथमिक विद्यालय मड़िहान बाजार, मड़िहान, जनपद–मिर्जापुर के समीप** लोक–सुनवाई का आयोजन किया गया। उक्त लोक सुनवाई में निम्नलिखित अधिकारी/जन–समूह उपस्थित हुए:–

1. श्री एस0पी0 शुक्ला, अपर जिलाधिकारी (वि0–राजस्व), मिर्जापुर।
2. श्री आर0के0 सिंह, क्षेत्रीय अधिकारी, उ0प्र0 प्रदूषण नियंत्रण बोर्ड, सोनभद्र।
3. श्री आर0एन0 शुक्ला, प्रतिनिधि, मेसर्स मिर्जापुर थर्मल एनर्जी (यूपी) प्राइवेट लिमिटेड।
4. श्री अभय कुमार सिंह, उ0प्र0 प्रदूषण नियंत्रण बोर्ड, सोनभद्र।
5. श्री अभिषेक गौतम, मेसर्स गौरांग एनवायरमेंटल सॉल्यूशंस प्राइवेट लिमिटेड, जयपुर, राजस्थान।
6. लोक सुनवाई के समय उपस्थित जन–समूह की उपस्थिति पंजिका की छायाप्रति संलग्न है।

सर्वप्रथम श्री आर0के0 सिंह, क्षेत्रीय अधिकारी, उ0प्र0 प्रदूषण नियंत्रण बोर्ड, सोनभद्र ने उपस्थित अध्यक्ष, आम जनता एवं प्रिन्ट व इलेक्ट्रानिक मीडिया के प्रतिनिधियों का स्वागत करते हुए अवगत कराया कि पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली द्वारा जारी अधिसूचना संख्या एस0ओ0–1533, दिनांक 14 सितम्बर 2006 (यथासंशोधित) एस0ओ0 3067

(ई) दिनांक–01.12.2009 में दिये गये प्राविधानों के अनुसार राज्य प्रदूषण नियंत्रण बोर्ड को प्रेषित उक्त प्रस्ताव पर लोक–सुनवाई की प्रक्रिया अपनायी जानी आवश्यक है। लोक– सुनवाई में लगभग 1600 से अधिक लोगों ने भाग लिया। पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली द्वारा जारी उक्त अधिसूचना के अनुसार राष्ट्रीय समाचार–पत्रों में प्रकाशित निर्धारित अवधि में लिखित रूप **में 01 सुझाव/शिकायत** इस कार्यालय में दिनांक–11.04.2025 को क्षेत्रीय कार्यालय को प्राप्त हुआ है **(छायाप्रति संलग्न)**। तदोपरान्त् प्रतिनिधि, उ0प्र0 प्रदूषण नियंत्रण बोर्ड, सोनभद्र द्वारा परियोजना का विस्तृत विवरण पर्यावरणीय संरक्षण एवं पर्यावरण के विभिन्न पहलुओं पर जानकारी देने हेतु परियोजना प्रस्तावक को आमंत्रित किया गया।

तत्पश्चात परियोजना प्रतिनिधि, श्री आर0एन0 शुक्ला द्वारा लोक सुनवाई में उपस्थित अपर जिला अधिकारी, मिर्जापुर, उ०प्र० प्रदूषण नियंत्रण बोर्ड के अधिकारियों/सदस्यों तथा जन सामान्य का स्वागत किया गया तथा बताया गया कि **मेसर्स मिर्जापुर थर्मल एनर्जी (यूपी) प्राइवेट लिमिटेड के प्रस्तावित 2X800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्लांट की स्थापना** के लिए परियोजना है। उक्त परियोजना की स्थापना सम्बन्धी पर्यावरण प्रभाव आंकलन के अध्ययन हेतु पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, भारत सरकार द्वारा टर्म ऑफ रिफरेन्सेज (टी०ओ०आर०) स्वीकृति पत्रांक दिनांक–29.07.2024 द्वारा प्रदान की गयी।

अनुमोदित टी०ओ०आर० की शर्तों के अनुसार परियोजना स्थल के 10 कि०मी० की परिधि क्षेत्र में भौतिक, जैविक एवं सामाजिक–आर्थिक पर्यावरणीय आधारभूत सम्बन्धी अध्ययन माह–अक्टूबर, नवंबर, दिसंबर 2024 के मध्य पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली द्वारा अनुमोदित पर्यावरण सलाहकार मेसर्स गौरांग एनवायरमेंटल सॉल्यूशंस प्राइवेट लिमिटेड के द्वारा कराया गया एवं ड्राफ्ट ई०आई०ए० रिपोर्ट एवं पर्यावरण प्रबंधन योजना बनाकर लोक–सुनवाई हेतु उ०प्र० प्रदूषण नियंत्रण बोर्ड को परियोजना प्रस्तावक द्वारा दिनांक–10.02.2025 को प्रेषित किया गया था। परियोजना के प्रस्तावक द्वारा प्रस्तावित परियोजना के सम्बंध में विस्तृत विवरण उपस्थित जन–समूह को अवगत कराया गया है, जो निम्नवत् है:–

"मेसर्स अडानी पावर लिमिटेड (एपीएल) विविधीकृत अडानी समूह की एक प्रमुख कंपनी है, जो भारत की सबसे बड़ी निजी थर्मल पावर उत्पादक कंपनी है, जिसकी कुल उत्पादन क्षमता 17,510 मेगावाट है। ए0पी0एल0 गुजरात, महाराष्ट्र, राजस्थान, कर्नाटक, तमिलनाडु, झारखंड, मध्य प्रदेश और छत्तीसगढ़ राज्यों में थर्मल पावर प्लांट का संचालन कर रही है।

परियोजना की पृष्ठिभूमि

मेसर्स मिर्जापुर थर्मल एनर्जी (यूपी) प्राइवेट लिमिटेड ने दादरी खुर्द गांव, जिला मिर्जापुर, उत्तर प्रदेश में 1600 **(2X800)** मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल तकनीकी थर्मल पावर परियोजना (यूएससीटीपीपी) स्थापित करने का प्रस्ताव रखा है।

इससे पहले, पर्यावरण एवं वन मंत्रालय, नई दिल्ली द्वारा फाइल संख्या जे–13012/12/2011–आईए.II(टी) दिनांक 21.08.2014 के तहत वेलस्पन एनर्जी यूपी प्राइवेट लिमिटेड को 1320 (2x660) मेगावाट के लिए पर्यावरणीय मंजूरी (ईसी) प्रदान की गई थी तत्पश्चात, पत्र संख्या एफ0 सं0 जे–13012/12/2011–आईए II(टी) दिनांक 20.12.2019 द्वारा नाम परिवर्तित कर **मेसर्स मिर्जापुर थर्मल एनर्जी यूपी प्राइवेट लिमिटेड** कर दिया गया। यूपी0पी0सी0बी0 ने दिनांक 13.01.2015 को स्थापना की सहमति (सी0टी0ई0) भी प्रदान की थी। अब प्रस्ताव 2x660 मेगावाट से बदलकर **2X800** मेगावाट कर दिया गया है।

लोक सुनवाई का उद्देश्य:–

- प्रस्तावित परियोजना या गतिविधि के पर्यावरणीय प्रभाव से संबंधित सुझाव/आपत्ति/आपेक्ष को स्थानीय लोगों एवं अन्य हितधारकों के साथ विचार करना और उनका समाधान करना

एवं संबंधित मुद्दों, सुविधाओं, संभावनाओं, सामाजिक, आर्थिक एवं पर्यावरणीय लाभ और प्रभावों पर स्थानीय जनता के सुझावों के लिए एक मंच प्रदान करना।

परियोजना की मुख्य विशेषताएं:

- प्रस्तावित परियोजना की विद्युत उत्पादन क्षमता **2X800** मेगावाट परियोजना का निर्माण ग्राम दादरी खुर्द, तहसील मिर्जापुर सदर, जिला मिर्जापुर, उत्तर प्रदेश में प्रस्तावित है।
- यह परियोजना विद्युत उत्पादन क्षमता के मामले में भारत में सबसे बड़ी स्थापित परियोजना में से एक है।
- परियोजना के लिए पानी की आवश्यकता गंगा नदी से ऊपरी खजूरी बांध तक तथा ऊपरी खजूरी बांध से संयंत्र स्थल तक पाइपलाइन के माध्यम से पूरी की जाएगी।
- यह संयंत्र शून्य तरल निर्वहन (ZLD) पर आधारित है।
- प्रस्तावित परियोजना के निर्माण हेतु कुल–365.19 हेक्टेयर भूमि की आवश्यकता है।
- प्रस्तावित परियोजना के निर्माण चरण में लगभग 7500 कामगारों की आवश्यकता होगी, जिससे से स्थानीय युवाओं को प्रत्यक्ष और अप्रत्यक्ष रूप से रोजगार, स्वरोजगार एवं व्यवसाय के अवसर प्राप्त होंगे।
- परियोजना के निर्माण से स्थानीय स्तर पर शिक्षा, स्वास्थ्य, पेयजल, जैसी बुनियादी सुविधाओं में स्थानीय निवासियों के जीवन स्तर में गुणात्मक सुधार होगा, जिससे परियोजना क्षेत्र में स्थानीय निवासियों के जीवन की गुणवत्ता में सुधार होगा।

परियोजना से लाभः–

उपलब्ध भौतिक अवसंरचना (जैसे संपर्क मार्ग, जल निकासी, संचार और परिवहन सुविधाएं आदि) और सामाजिक संरचना (जैसे शिक्षा और स्वास्थ्य देखभाल प्रणाली) में सुधार। परियोजना की आवश्यकता को पूरा करने के लिए क्षेत्र में सहायक और लघु उद्योगों का विकास। आस–पास के क्षेत्रों में रहने वाले लोगों को प्रत्यक्ष एवं अप्रत्यक्ष रूप से लाभ होगा। सीएसआर गतिविधियों/कार्यक्रमों के तहत आवश्यक चिकित्सा सुविधाओं का विकास किया जाएगा जो कंपनी अधिनियम के अनुसार अध्ययन क्षेत्र में रहने वाले स्थानीय लोगों के लिए फायदेमंद होगा। नए स्कूल और दुकानें खोलने जैसे अन्य विकास हो सकते हैं। ये अध्ययन क्षेत्र में रहने वाले स्थानीय लोगों के लिए फायदेमंद होंगे। इससे राज्य के साथ–साथ भारत में भी बिजली आपूर्ति की स्थिति में सुधार होगा, जो आर्थिक विकास के साथ–साथ जीवन की गुणवत्ता में सुधार के लिए महत्वपूर्ण है।

प्रस्तावित परियोजना के निर्माण चरण में पर्यावरण एवं सामाजिक परिवेश पर पड़ने वाले प्रभावों को कम करने हेतु पर्यावरण प्रबंधन योजना, वनीकरण योजना, जैव विविधता संरक्षण और वन्यजीव प्रबंधन योजना, मत्स्य विकास योजना, भूमिहीन और निर्माण स्थलों की पुनर्स्थापना, स्वच्छता और ठोस अपशिष्ट प्रबंधन योजना, सार्वजनिक स्वास्थ्य वितरण प्रणाली, ऊर्जा संरक्षण उपाय, श्रमिक स्वास्थ्य एवं सुरक्षा प्रबंधन योजना, ग्रीन बेल्ट विकास योजना, आपदा प्रबंधन योजना, स्थानीय क्षेत्र विकास योजना, प्रदूषण नियंत्रण योजना, वायु जल और ध्वनि प्रदूषण के नियंत्रण योजना, स्थानीय क्षेत्र का विकास योजना, जल ग्रहण क्षेत्र उपचार योजना एवं पर्यावरण मॉनिटरिंग कार्यक्रम के प्रस्तावित पर्यावरण प्रबंधन आदि प्रस्तावित की गयी है।

तत्पश्चात उपस्थित जन सामान्य को परियोजना प्रतिनिधि श्री आर एन शुक्ला, प्रमुख, पर्यावरण और वन द्वारा बताया गया कि पर्यावरणीय प्रबंधन योजना (EMP) के मद में **कुल रुपये 3012.39 करोड़** प्रस्तावित है।

क्षेत्रीय विकास योजना (CER) में बुनियादी सुविधाओं के विकास के अन्तर्गत **रू 45.75 करोड़** व्यय किया जाना प्रस्तावित है।"

तत्पश्चात क्षेत्रीय अधिकारी, उ०प्र० प्रदूषण नियंत्रण बोर्ड, सोनभद्र ने उपस्थित जन–सामान्य को सुझाव/आपत्ति/आक्षेप प्रकट करने हेतु आमंत्रित किया गया। लोक–सुनवाई के दौरान जन–सामान्य से निम्नलिखित मौखिक सुझाव/आपत्ति/आक्षेप के अतिरिक्त लिखित रूप से कुल 53 समर्थन पत्र MTEUPPL के पक्ष में प्राप्त हुए है, जो संलग्न है। सम्पूर्ण जन सुनवाई की वीडियोग्राफी एवं फोटोग्राफी की गई है जो संलग्न है।

तत्पश्चात् क्षेत्रीय अधिकारी, उ0प्र0 प्रदूषण नियंत्रण बोर्ड, सोनभद्र ने उपस्थित जन–सामान्य को सुझाव/आपत्ति प्रकट करने हेतु आमन्त्रित किया गया। उपस्थित जन–सामान्य द्वारा प्रस्तुत सुझाव/आपत्ति का विवरण निम्नवत है:–

क्र सं	व्यक्ति का नाम एवं पता	सुझाव/आपत्ति/टिप्पणी
1.	श्री महेंद्र सिंह, मड़िहान, जनपद–मिर्जापुर।	➢ हमारे माननीय प्रधान मंत्री कहते हैं कि जब कोई बड़ी कंपनी किसी क्षेत्र में उद्योग स्थापित करने का निर्णय लेती है, तो सबसे पहले उस क्षेत्र के विकास को प्राथमिकता दी जानी चाहिए। हमारे क्षेत्र में रोजगार के अवसर कम हैं। यहां जो उद्योग स्थापित किया जाएगा, वह लोगों को किसी महत्वपूर्ण रूप से प्रभावित नहीं करेगा, इसलिए स्थानीय लोगों को रोजगार दिया जाना चाहिए और यह बहुत अच्छा होगा यदि यह बताया जाए कि स्थानीय लोगों को कितना प्रतिशत रोजगार दिया जाएगा।
2.	श्री बाबूराम यादव, ददरा पहाड़ी, मड़िहान, जनपद–मिर्जापुर।	➢ मैं इस जनसुनवाई में उपस्थित सभी लोगों का धन्यवाद करता हूँ। मैं कंपनी प्रतिनिधियों से एक प्रश्न पूछना चाहता हूँ; पहले सोनभद्र में एक पावर प्लांट स्थापित किया गया था, लेकिन उसकी बिजली का लाभ सोनभद्र के लोगों को, विशेष रूप से मिर्ज़ापुर और विंध्याचल के लोगों को नहीं मिला। इसलिए मैं आपसे अनुरोध करता हूँ कि कृपया यह स्पष्ट करें कि उत्पन्न की जाने वाली बिजली का कितना प्रतिशत मिर्ज़ापुर को वितरित किया जाएगा। साथ ही, कृपया यह भी बताएं कि मिर्ज़ापुर के स्थानीय निवासियों को कितना रोजगार प्रदान किया जाएगा। मैं इस परियोजना का समर्थन करता हूँ क्योंकि इतनी बड़ी क्षमता की परियोजना की स्थापना क्षेत्र के विकास में महत्वपूर्ण योगदान निभाती है।
3.	श्री नंदन यादव, ददरा पहाड़ी, मड़िहान, जनपद–मिर्जापुर।	➢ हम अपने क्षेत्र में विकास देखना चाहते हैं। और यह परियोजना इस लक्ष्य को प्राप्त करने में महत्वपूर्ण भूमिका निभा सकती है। हम यह भी आशा करते हैं कि स्थानीय निवासियों को रोजगार के अवसर दिए जाएंगे, और यह पावर प्लांट आसपास के स्कूलों, सामुदायिक केंद्रों और अन्य आवश्यक सुविधाओं के सुधार में योगदान देगा।
4.	श्री दीनदयाल सिंह (एनटीपीसी रिटायर्ड), मड़िहान, जनपद–	➢ मै अदानी समूह द्वारा किए गए सीएसआर कार्यों की सराहना करता हूँ। पीने के पानी की समस्या के

	मिर्जापुर	समाधान के लिए एक बोरवेल स्थापित किया जाना चाहिए।
5.	श्री दिनेश कुमार पटेल, मड़िहान, जनपद–मिर्जापुर।	➢ परियोजना की जल आवश्यकता की पूर्ति गंगा नदी से जल लेकर की जाएगी। हालाँकि, इससे किसानों के लिए जल की कमी हो सकती है, जो क्षेत्र में कृषि और अन्य संबंधित गतिविधियों को प्रभावित कर सकती है।
6.	श्रीमती रिंकू देवी, देवरीकला, मड़िहान, जनपद–मिर्जापुर।	➢ मैं इस परियोजना के लिए अदानी समूह का समर्थन करती हूँ क्योंकि वे शिक्षा क्षेत्र में सराहनीय कार्य कर रहे हैं, जिसमें स्कूलों में स्मार्ट कक्षाओं का विकास भी शामिल है।
7.	श्री हरि शंकर पटेल, मड़िहान, मिर्जापुर।	➢ मैं इस परियोजना का समर्थन करता हूँ क्योंकि यह बिजली उत्पन्न करेगी, जो क्षेत्र के विकास में महत्वपूर्ण योगदान देगी। पहले यहां एक सीमेंट फैक्ट्री चालू थी, लेकिन अब वह बंद हो चुकी है, जिससे स्थानीय लोगों का कुल रोजगार कोई प्रमुख स्रोत नहीं बचा है। जिले का कुल क्षेत्रफल लगभग 4.5 लाख हेक्टेयर है, जिसमें से 1.6 लाख हेक्टेयर कृषि भूमि है। शेष भूमि पहाड़ी, वन क्षेत्र या आबादी वाला क्षेत्र है। भूमि अधिग्रहण अधिनियम 2013 के अनुसार, औद्योगिक प्रयोजन के लिए कृषि भूमि का अधिग्रहण नहीं किया जा सकता है। चूंकि इस परियोजना के लिए चयनित भूमि गैर–कृषि है, इसलिए हम इस परियोजना का खुले दिल से स्वागत करते हैं। ➢ मिर्जापुर, देश की विभिन्न महत्वपूर्ण गतिविधियों का केंद्र बन रहा है, और इस विद्युत संयंत्र की स्थापना इस क्षेत्र के लिए एक आशीर्वाद के रूप में देखी जा सकती है। मिर्जापुर के लोगों को रोजगार के अवसरों में प्राथमिकता दी जानी चाहिए, खासकर जब जिले की जनसंख्या 30 लाख से अधिक हो चुकी है। ➢ मैं एक सुझाव भी देना चाहता हूँ – जब इस परियोजना के लिए खजुरी डैम से पानी की आवश्यकता होगी, तब तो पानी छोड़ा ही जाएगा, लेकिन अन्य समयों में भी इसे छोड़ा जाना चाहिए, जिससे स्थानीय लोग इस जल संसाधन का बेहतर उपयोग कर सकें।
8.	श्रीमती राम दुलारी (दादरी खुर्द), मड़िहान, मिर्जापुर।	➢ मैं इस पावर प्लांट परियोजना का समर्थन करती हूँ और केवल यही अनुरोध करती हूँ कि स्थानीय निवासियों को रोजगार के अवसरों में प्राथमिकता दी जाए।
9.	श्री बैजनाथ प्रजापति, मड़िहान, मिर्जापुर।	➢ यह परियोजना मिर्जापुर के विकास में योगदान देगी और रोजगार के अवसरों को बढ़ाएगी, इसलिए मैं इसका समर्थन करता हूँ।

10.	श्री पुष्पांजलि देवी, देवरी कलाँ, मड़िहान, मिर्जापुर।	➢ मैं अदानी पावर प्लांट परियोजना का समर्थन करता हूँ क्योंकि यह रोजगार के अवसर प्रदान करेगी। इसके अतिरिक्त, यह परियोजना शिक्षा प्रणाली में सुधार और सड़क अवसंरचना को बेहतर बनाने सहित कई अन्य लाभों में भी योगदान देगी।
11.	श्री प्रवीण कुमार पांडे, मड़िहान, मिर्जापुर।	➢ उत्तर प्रदेश में रोजगार की समस्या है। यदि यह समूह स्थानीय लोगों को रोजगार प्रदान करता है, तो यह युवाओं को अपने गांवों में ही रहने और एक स्थिर व शांतिपूर्ण जीवन जीने के लिए प्रोत्साहित करेगा।
12.	श्री मनीष कुमार सिंह, पटेहरा कला, मड़िहान, मिर्जापुर।	➢ मैं अदानी पावर लिमिटेड का समर्थन करता हूँ, क्योंकि अदानी पावर प्लांट स्थानीय समुदाय के लिए सराहनीय कल्याणकारी कार्य कर रहा है, जो वास्तव में प्रशंसनीय है।
13.	श्रीमती रुकमणी, मड़िहान, मिर्जापुर।	➢ मैं अदानी पावर लिमिटेड का समर्थन करती हूँ।
14.	श्री अनिल कुमार सिंह (प्रिंसिपल शान्ति निकेतन स्कूल , गोडहोडरा)	➢ मैं इस परियोजना का वास्तव में सराहना करता हूँ। मैं पिछले 27 वर्षों से कार्यरत हूँ, और इस दौरान किसी भी निजी संस्था ने स्कूलों में एक नल तक नहीं लगाया। इसके विपरीत, इस समूह ने 40–50 स्कूलों में सोलर पैनल लगाए हैं, कॉलेजों में नवीनीकरण का कार्य किया है और खेल गतिविधियों के लिए क्रिकेट नेट प्रैक्टिस ग्राउंड भी प्रदान किया है। ➢ इस समूह ने खेल, स्वास्थ्य और पर्यावरण के क्षेत्रों में महत्वपूर्ण योगदान दिया है। उनकी मेडिकल वैन सेवा वर्तमान में चालू है, और मैं चाहता हूँ कि यह सेवा निरंतर चलती रहे। ➢ कुछ लोगों का मानना है कि जब यह प्लांट स्थापित हो जाएगा, तो सभी कल्याणकारी कार्य बंद हो जाएंगे, लेकिन ऐसा नहीं होगा। आधुनिक तकनीक के कारण इस परियोजना से प्रदूषण नहीं होगा। उचित तरीके से वृक्षारोपण किया जाएगा और राख के प्रबंधन की जिम्मेदारी संभाली जाएगा।

तत्पश्चात् मा0 विधायक मड़िहान, श्री रमा शंकर सिंह पटेल द्वारा बताया गया कि लोग भाग्यशाली हैं कि मिर्जापुर जनपद में उत्तर प्रदेश की स्थिति कोई नहीं जानता था, लेकिन आज मिर्जापुर थर्मल एनर्जी यूपी प्राइवेट लिमिटेड द्वारा लगभग 18300 करोड़ का इन्वेस्ट मिर्जापुर में हो रहा है और हमारे बगल में हो रहा है, इसके लिए मैं आपको बधाई देता हूँ। यहाँ रोजगार करने के लिए थर्मल पावर 1600 मेगावॉट का लगा रहे हैं। इस प्लांट के लगने से हमने बताया कि लोगों को रोजगार मिलेगा।

जन सामान्य को परियोजना प्रतिनिधि श्री अभिषेक गौतम, मेसर्स गौरांग एनवायरमेंटल सॉल्यूशंस प्राइवेट लिमिटेड, जयपुर, राजस्थान द्वारा बताया गया कि स्थानीय लोगों के लिए रोजगार के अवसर प्रदान करने सहित पड़ोसी क्षेत्रों के समग्र सामाजिक–आर्थिक विकास को सुनिश्चित करता है। 30 सितंबर, 2020 और 20 अक्टूबर, 2020 के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, नई

दिल्ली के कार्यालय ज्ञापन के अनुसार सार्वजनिक सुनवाई के दौरान उठाए गए मुद्दों के आधार पर सामाजिक–आर्थिक विकासात्मक गतिविधियाँ तैयार की जाएंगी, जिन्हें पर्यावरण प्रबंधन योजना (ईएमपी) में संबोधित किया जाएगा और परियोजना के चालू होने के साथ समयबद्ध तरीके से लागू किया जाएगा।

तत्पश्चात् अपर जिलाधिकारी (वि0–राजस्व), मिर्जापुर द्वारा लोक सुनवाई में अपने सुझावों को व्यक्त करने हेतु जन प्रतिनिधियों एवं उपस्थित जन सामान्य का आभार व्यक्त करते हुए बताया गया कि यह लोक–सुनवाई की कार्यवाही का मुख्य उद्देश्य प्रस्तावित परियोजना से सम्बन्धित लोगों की आपत्ति/सुझाव को लिखित रूप से दर्ज कर सक्षम स्तर पर प्रेषित किया जाना है। इस लोक सुनवाई में उपस्थित आम जनमानस द्वारा अपनी–अपनी सुझावों/आक्षेप से अवगत कराया गया। जन–मानस द्वारा जो भी सुझाव/आपत्ति/टिप्पणी रखे गये हैं, चाहे वो लिखित हो या मौखिक हो, आपके द्वारा रखे गये विचार रिकार्ड किये गये हैं। उन्हें लिपिबद्ध कर वीडियो रिकार्डिंग के साथ उच्च स्तर पर अन्तिम निर्णय लेने हेतु प्रेषित किया जायेगा। अपर जिलाधिकारी (वि0–राजस्व), मिर्जापुर द्वारा उम्मीद की गयी की जन सामान्य द्वारा परियोजना के विकास हेतु परियोजना प्रस्तावक का सहयोग करेगें तथा परियोजना प्रस्तावक द्वारा स्थानीय लोगों की मांगो एवं सुझावों को ध्यान में रखते हुए क्षेत्र के विकास पर ध्यान देंगे। साथ ही साथ अपर जिलाधिकारी (वि0–राजस्व), मिर्जापुर द्वारा परियोजना प्रतिनिधि से कहा गया कि यहाँ के स्थानीय लोगों को रोजगार के अवसर उपलब्ध कराने की कोशिश करें तथा क्षेत्र में बुनियादी सुविधाओ के विकास हेतु कार्य किये जाये।

अन्त में क्षेत्रीय अधिकारी, उ0प्र0 प्रदूषण नियंत्रण बोर्ड, सोनभद्र द्वारा सभी उपस्थित जन–सामान्य को धन्यवाद करते हुए अपर जिलाधिकारी (वि0–राजस्व), मिर्जापुर की अनुमति से लोक सुनेवाई की कार्यवाही पूर्ण करने की घोषणा की गयी।

11/4/25

(आर0के0 सिंह)
क्षेत्रीय अधिकारी,
उ0प्र0 प्रदूषण नियंत्रण बोर्ड,
जनपद–सोनभद्र

11.04.025

(एस0पी0 शुक्ला)
अपर जिलाधिकारी
(वि0–राजस्व),
जनपद–मिर्जापुर

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश **प्रदुषण** नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
1.	एस0पी0 शुक्ला	अपर जिलाधिकारी मेहरा (वि0-2) मिर्जापुर	9454417634	11.04.025
2.	आर0 के0 सिंह	द्वितीय अधिकारी, मिर्जापुर		11/4/25
3	अभय कुमार सिंह	UP PCB Sonbhadra	9793931811	11/04/2025
4.	विकेश सादेव	11	6393251559	
5.	R N SHUKLA	MTEMPPL HEAD-ESG (APL)	9426600976 rn.shukla@adani.com	
6.	Dinesh Kumar	MTE UPPL	8980842988	
7.	Arun kumar Bansal	Adani Power (MTEUPPL)	6232911421	
8.	Khushi Parekh	Adani Power Ltd. (MTEUPPL)	6355083098 khushi.parekh@adani.com	P. Khushi

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेष प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	मगरी	देवरी मड़िहान		मगरी
	उर्मिला	पटेवर मड़िहान	9935656324	उर्मिला
	शिवकुमारी	देवरीकला मड़िहान	9721928054	शिवकुमारी
	रामकुमारी	मड़िहान	8382070126	रामकुमारी
	पुनम	ददरापहाड़ी मड़िहान	7054988015	पुनम
	गीता	〃	7390836539	गीता
	रिना	〃	6352808499	रीना
	किशमती	देवरीकला मड़िहान	7985008578	किशमती
	सुनिता	〃	7985095256	सुनीता
	सपना	〃	9569490298	सपना
	रिता	मदौहा मड़िहान	8840969145	रीता
	रुबीना	देवरी मड़िहान	7018658567	रुबीना
	विद्या	〃	9120444142	वि-दा
	सरस्वती	ददरा पहाड़ी मड़िहान		सरस्वती
	सुनिता देवी	〃	8187992552	सुनीता

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	अनिता	राजापुर	9935729736	अनिता
	चमेला	"		
	चन्दावती	"		
	गुजराती	चुकुडीया		
	रेशमा	पेप्पर मड़िहान	7388918437 4	रेशमा
	सुनिता	"	7068941256	सुनिता
	रेशमा	"		रेशमा
	प्रमिला	"	9695077920	प्रमिला
	शंखि	"	8858492791	शंखि
	मालती	"		मालती
	सुमीला	"	8303219	सुमेला
	शिवकुमारी	"	8470952128	शिवकुमारी
	कैरी	"	9554722703	
	कमलावती	"		
	धन्पती	"		

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश **प्रदुषण** नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	अमरा	पटेवर मड़िहान		
	रीता	〃	8253752070	रीता
	भारती	〃	7408311790	भारती
	सोनी		8172861541	सोनी
	लालती	गंगापुर ह्नौला	9175925076	लालती
	मनिषा	पटेवर मड़िहान	9305723471	मनीषा
	ममता भारती	गंगापुर ह्नौला	9120436399	ममता भारती
	तारा	गंगापुर ह्नौला		तारा
	बुलबुली	पटेवर मड़िहान	9336056994	बुलबुली
	Amla	〃		[illegible]
	सोनी	〃		सोनी
	सुधा	〃	9328751246	सुधा
	अतवारी	〃	9519025682	अतवारी
	आशा	〃	9154846 19	आशा
	वाचिया	〃	8429785160	

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश **प्रदुषण** नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	नीलम	रमचहाँ मड़िहान	8960313093	नीलम
	राजकुमारी.	रमचहाँ "	7523942246	राजकुमारी
	राधिका	रमचहाँ "		राधिका
	पूजा	रमचहाँ "	7307686785	पूजा
	सिंघारी	राजापुर "		
	गुड्डी	राजापुर "		
	पत्ती देवी.	राजापुर "		
	उषा	राजापुर. "		
	सरपती	राजापुर "		
	सरोज	राजापुर, मड़िहान "	9120440286	सरपती सरोज
	प्रमिला	राजापुर मड़िहान "		प्रमिला
	मालती	पहाड़ी ददरा "	9198527796	
	गुड्डी.	धारा पहाड़ी. "		गुड्डी
	विद्या	ददरा पहाड़ी "		विद्या
	मालती	ददरा पहाड़ी मड़िहान		

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	विद्युती	ददरा पहाड़ी मड़िहान मो0		जीवती
	गोमती	ददरा पहाड़ी		गोमती
	कल्लो	ददरा पहाड़ी मड़िहान	9635548467	
	शान्ति	खचदाँ मड़िहान	9794312620	शान्ति
	सरिता देवी	खचदाँ "	9621356870	सरिता देवी
	अनिता	खचदाँ "	7753034638	अनीता
	साधना	खचदाँ "	9580954344	साधना
	राजकुमारी	खचदाँ "		राजकुमारी
	इन्द्रावती	भपोदा मड़िहान	9235101138	
	सन्ती	दसरा मड़िहान		
	सावित्री	दसरा "		सावित्री
	मनाजिरा	दसरा मड़िहान		
	उर्मिला	दसरा "		उर्मिलादेवी
	पूनम	खचदाँ मड़िहान	9129347262	पूनम
	सुनीता	खचदाँ "	7080277133	

(7)

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश **प्रदुषण** नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	धौलकुमारी	दसरा मडिहान		
	सुनीता	अतरैरा मडिहान	8471078282	
	बिमला	अतरैरा "		
	शालू	अतरैरा "	8954837048	
	मंत्ता	"		
	शिवमती	भदौदा मडिहान	8299768459	शिवमती
	निर्मलादेवी	भदौदा "	8528655878	निर्मलादेवी
	सुशीला	भदौदा "	7800771472	सुशीला
	रंजनादेवी	अचधाँ मडिहान	9555661569	रंजनादेवी

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	शिवकुमारी	ददरापहाड़ी मड़िहान	8853008729	शिवकुमारी
	गुंजा	〃		गुंजा
	इसरावती	〃		गुंजा
	मीरा देवी	〃		इसरावती
	सुलेखा	〃	9115087264	सुलेखा
	कुसुम देवी	ददरा मुतमके रामपुर मड़िहान	9453882216	कुसुम देवी
	हिरावती देवी	〃	〃	हिरावती
	सुगवती	〃		सुगवती
	देवी	〃		देवी
	रमती	〃		रमती
	सीमा	〃		सीमा
	अनीता	ददरा मुतमके रामपुर मड़िहान		सीमा
	राधिका	〃	6387125217	राधिका
	अनीता	〃	8081412976	अनीता
	रिमा	भदौहा मड़िहान		रीमा

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेष प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
1	रीता	मड़िहान		रीता
2	कोशिल्या	मड़िहान		कोशिल्या
3	कुमारी	जगपुर		कुमारी
4	संजू चौरसिया	जगपूर मड़िहान		संजू
5	प्रमीला	मड़िहान पहड़ी		
6	सोना	बघोरा मड़िहान		सोना
7	गुड्डी	मड़िहान		गुड्डी
8	प्रमिला	मड़िहान		प्रमिला
9	कौशिल्या	मड़िहान		कौशिल्या
10	पूजा	मड़िहान पहड़ी		पूजा
11	सुनिता	मड़िहान		सुनिता
12	बन्दना	मड़िहान		बन्दना
13	मुन्नी	मड़िहान		मुन्नी
14	सोनी	मड़िहान		सोनी
15	देवकुमारी	मड़िहान		देवकुमारी

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
16	[fingerprint]	मड़िहान	[fingerprint]	
17	रिंकी	मड़िहान		रिंकी
18	मिना	मड़िहान		मिना
19	[fingerprint]	मड़िहान		[fingerprint]
20	कमलावती	देउरी		कमलावती
21	मंजू	पचोखरा		मंजू
22	बिन्दु	पचोखरा		बिन्दु
23	सविता	पचोखरा		सविता
24	लक्ष्मी	पचोखरा	7081717579	लक्ष्मी
25	सुमनदेवी	पचोखरा मड़िहान	7668782[illegible]	सुमनदेवी
26	नेहा	मड़िहान	7607[illegible]	नेहा
27	बिन्दु	देउरी		
28	[fingerprint]	देउरी		सरस्वती
29	राधा	देउरी		राधा
30	बिन्दा	देउरी कला		बिन्दा

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
31	गीता देवी	देउरी मड़िहान		गीता देवी
32	रेखा	मड़िहान		रेखा
33	बेबी	मड़िहान		बेबी
34	लीलावती	देउरी कला		लीलावती
35		देउरीकला		
36	सुनीता	मड़िहान		सुनीता
37	जगरानी	शनीचरा		जगरानी
38	ममता	हसरा		ममता
39	मुन्नी देवी	हरिहरा/बसही		मुन्नी देवी
40	संजू	मड़िहान समुह	9219925472	संजू
41	राजकुमारी	मड़िहान/समूह	9569 507310	राजकुमारी
42	नर्मदा सिंह	मड़िहान समुह		नर्मदा सिंह
43	नजबुननिशा	मड़िहान देउरी		नजबुननिशा
44	सोनी	मड़िहान देउरी		सोनी
45				

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश **प्रदुषण** नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
46	चाँदनी	मड़िहान देवरी		चादनी
47	मेनू	मड़िहान-ममरी	9194233263	मेनू
48	आशा	भैदवहा		आशा
49	चक्रवर्ती	मड़िहान - ममरी	7388913367	चक्रवर्ती
50		मड़िहान ममरी		
51	मंजू देवी	मड़िहान ममरी	7753802915	मंजू देवी
52	अर्चना देवी	मड़िहान ममरी	6392677914	अर्चना देवी
53	नीलम देवी	मड़िहान ममरी	9935433314	नीलम देवी
54		बदेकुरी		
55	देवी	देउरी		देवी
56		मडिहान		
57	जामवन्ती देवी	देउरी		
58	सुमारी	मडिहान		
59	सीता	देवरी मडिहान		
60				

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेष प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	सुनीता	बचवा मड़िहान	9953802721	सुनीता
	कुमारी	बचवा ,, मड़िहान	9125062875	कु मारी
	सीता	बचवा मड़िहान	6306921368	सीता
	दुर्गावती	बचवा मड़िहान	8081875304	दुर्गावती
	मीरा	बचवा मड़िहान	9335608696	मीरा
	ममता	बचवा मड़िहान	7007265160	ममता
	इन्द्रावती	बचवा मड़िहान	8954940581	इन्द्रावती
	मंगरी	बचवा मड़िहान	8957181428	मंगरी
	शीला कुमारी	बचवा मड़िहान	8960316230	शीला कुमारी
	उषा	बचवा मड़िहान	8858277932	उषा
	अनसूया	बचवा मड़िहान		
	प्रमिला	बचवा मड़िहान		प्रमिला
	सोनी	बचवा मड़िहान		सोनी
	मालती	बचवा मड़िहान		मालती
	कमलावती	बचवा मड़िहान		

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	पुष्पांजली	देवरी कला मड़िहान	7318266616	Pushpanjali
	इन्दु देवी	〃	6394413444	इन्दु देवी
	सल्लो देवी	〃	6394413444	सल्लो देवी
	गिता देवी	〃	9839688940	
	Anchal Maurya	〃	9839688940	Anchal Maurya
	Anjali Maurya	〃	9839688940	Anjali
	निशा	तिसुही भवानीपुर मड़िहान	9580631295	निशा
	मनोज	खचदा मड़िहान	8957558207	मनोज
	निशा	खचदा मड़िहान	8318009232	निशा
	श्यामप्य	खचदा मड़िहान	7007068294	
	गुलाबी	खचदा मड़िहान		गुलाबी
	कृष्णावती	तिसुहीभवानी	7388792672	कृष्णावती
	पुनम	〃	8543814424	पुनम
	पुष्पा	〃		पुष्पा
	बुटे बुराली	〃	8601267242	बुराली

(15)

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेष प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	Ashok Kumar Singh	Ballihar, BJP Mandal Kashaadhyaksh	9452390777	
	राजेश्वर विंद	गोबरदहा. उमट मण्डल महामंत्री	6393561557	
	मनोज सिंह	अध्यक्ष/ पूर्व प्रधान मण्डल अध्यक्ष	8318254504	
	सविता	मडिहन तिसह	8810967956	सविता
	रामदुलारी	ग्रा0पं0 डढिया	7985742037	रामदुलारी
	प्रमिला	ग्रा0पं0 ददरा कलाम	6368245049	प्रमिला
	अनिता विश्वकर्मा	ग्रा0पं0शोभी, परसौना	7055473134	अनिता विश्वकर्मा
	अमरावती	ग्रा0पं0शोभी, परसौना		अमरावती
	चमेली	ग्रा0पं0शोभी परसौना	9918818286	चमेली
	वसन्ती	ग्रा0पं0शोभी परसौना	9918417588	वसन्ती
	बबीता देवी	ग्रा0 कोभी	7607683210	बबीता देवी
	साक्षी	ग्रा0 शोभी	7738607580	साक्षी
	Ranjana Devi	भौंरा	9580850539	R. devi
	कुसुम	पिपर	7706030656	कुसुम
	लक्ष्मी देवी	मड़िहान	8737825226	
	अमला देवी	बदरा	9129236477	अमला देवी

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेष प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	सावित्री सोनी	डेहिया मड़िहान	8112586471 18	सावित्री सोनी
	शिवकुमार	मातपुर	8402488	शिवकुमार
	Brijesh Pal	Mal/Pur	7526857458	
	उमाशंकर	डमरिया		
	गुलाब	मालपुर	8853613392	
	[illegible]	मड़िहान	[illegible]	
	शिवशंकर पाल	डमरिया मिर्जापुर	9621221276	
	SURESH	डमरिया	7862895311 सुरेश	
	देवी प्रसाद	पटवर मड़िहान	9580717732 देवी प्रसाद	

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश **प्रदुषण** नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	मीना	देवरा		मीना
	सुशीला	देवरी		सुशीला
	रोजन	देवरा		रोजन
	मुन्नी	देवरी		मुन्नी
	सुनिता	देवरी		सुनिता
	[illegible]	देवरी		[illegible]
	मदीना	गावा		मदीना
	उमेश	देवरी		उमेश
	अंकित	देवरी		अंकित
	अड़ा			अड़ा
	मीना			मीना

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	मनजु	इटरा पचदी		मंजू
	केशरी	सिसुटी		केसरी
	नीलम	विशुनपुर	9138467178	नीलम
	विद्यावती देवी	विशुनपुर	8960613411	विद्यावती देवी
	विमला देवी	विशुनपुर		विमला
	राजकुमारी	विशुनपुर		
	अनीता देवी	विशुनपुर		अनिता
	फुलमती	〃		फुलमती
	आरती देवी			आरती देवी
	निर्मला	विशुनपुर		निर्मला
	शांती	विशुनपुर		शांती
	निर्मला	विशुनपुर		निर्मला
	अंजीला	विशुनपुर		अंजीला
	धरमफुला	विशुनपुर		धरमफुला
	पमिला	विशुनपुर		पमिला

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	गुड्डी	सिंघ (मड़िहान	8953482662	गुड्डी
	रेखा	" "	7753015083	रेखा
	जानकी	" "	9598418693	जानकी
	देवी	" "	9735 [illegible]	देवी
	कन्या कुमारी	" "	74 99526 [illegible]	कन्या कुमारी
	निशा देवी	देवीकल्प (मड़िहान	8176951408	निशा देवी
	श्यामकुमारी	" "	7307460110	श्यामकुमारी
	बबिता	" "	9696313895	बबिता
	सरोज	" "	9554901573	सरोज
	उषा	" "	7206632602	उषा
	वि-दी	" "		वि-दी
	सिन्धी	" "		सिन्धी
	राधिका	" "		राधिका
	वास्मिति	" "		वास्मिति
	सविता	" "		सविता

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेष प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	गीता	पटेवर (मडिहा)		गीता
	राजकुमारी	पटेवर (॥		राजकुमारी
	रंजवती	पटेवर ॥		रंजवती
	गीता	॥ ॥		गीता
	जड़ावती	॥ ॥		जड़ावती
	अमलावती	॥ ॥		अमलावती
	गीता	॥ ॥		गीता
	मालती	॥ ॥		मालती
	रमापति	॥ ॥		रमापति
	सरेखा	॥ ॥		सरेखा
	विट्टन	॥ ॥		विट्टन
	सविता	डेयरीकलां (मडिहा)	7318206983	सविता देवी
	अन्जू सिंह देवी	॥ ॥	7887297194	अन्जू देवी
	निर्मला	॥ ॥		निर्मला
	मालती	पटेवर (मडिहा)		मालती

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	मीना	भोवा उड़ैया (मड़िहान		मीना
	शांती	〃 〃		शांती
	राधा	भैंसहा		राधा
	संगीता	भैंसहा	9345126136	संगीता
	अमरावती	चेखुड़िया (मड़िहान)	8853886934 8	अमरावती
	गीता देवी	ददरा पहाड़ी	8009492955	गीता
	रमावती	〃 〃	8400223087	रमावती
	प्रमिला	पटेहट (मड़िहान	7607866350	प्रमिला
	पुल्ला	〃	7607866350	पुल्ला
	गेना	〃	9046161518	गेना
	नगीना	ददरी	9580629230	नगीना
	हियावती	पटेहट (मड़िहा।		हियावती
	पार्वती	पटेहट (〃		पार्वती
	मंजू देवी	राजापुर (मड़िहा।	9044181899	मंजू देवी
	इंदू देवी	〃 〃		इंदू देवी

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	चन्दा	राजापुर (मड़िहान		
	गुलाबी	〃 〃		
	केवारी	〃 〃		
	शीला	〃 〃		सुशीला
	विन्दु	पहेल्या खुर्द		विन्दु
	सपना	〃		सपना
	ममता	〃		ममता
	चम्पा	〃		चम्पा
	बबिता	〃		बबिता
	सोनारी	डेवलपमेन्ट	9792826568	सोनारी
	[illegible]	बघौरा		[illegible]
	उषादेवी	बघौरा		उषादेवी
	उर्मिला	जगतपुर		उर्मिला
	शीला	जगतपुर		शीला
	राधा	मड़िहान पहड़ी		राधा

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	लालमोहम्मद	डड़िहा आवा	9277074680	लालमोहम्मद
	भगवान	〃 〃	7897846473	भगवान
	कन्हैयालाल	〃 〃	7394801347	कन्हैयालाल
	रामप्रताप	〃 〃	9559733069	रामप्रताप
	लल्ला	〃		
	कैलाश	〃	8173031092	कैलाश
	जितेन्द्र राम भारती	〃	9651712089	जितेन्द्र भारती
	लवकुश गौड	डड़िहा	9076980975	Lavkush
	नैपाल	〃	7336877726	नैपाल
	रतनलाल	आवा	9936260709	रतनलाल
	नन्हूप्रसाद	〃	8552033 15	
	यज्ञनारायन	〃	9369757719	यज्ञनारायन
	पंकजकुमार	〃	9120437988	पंकज कुमार
	निशारअहमद	〃		
	शीशंकर	राजापुर	9140909581	शीशंकर

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	वेदप्रसाद यादव	शाहपुर	9423133580	वेदप्रसाद यादव
	शिवमुरत दूबेपुलाम	11	9651485490	शिवमुरत दूबे
	प्रभु	11		
	फुलावती	11		
	राजकुमारी	मड़िहान		राजकुमारी
	मनीता	अहैया	9026269331	मनीता
	सुभागी	11	9129637165	सुभागी
	पुष्पा देवी	11	9120800945	पुष्पा देवी
	देवी	11	6392287608	
	उर्मिला देवी	11		
	मल्ली	वसन्तपुर गाता		उर्मिला देवी
	लालमनी	11	9198300915	लालमनी
	उर्मिला	अहैया	9140371318	उर्मिला
	समिरा	11	7080264293	समीरा
	गीता	11	8853108544	गीता

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	राजकुमार	डहियाँ	9325989467	
	मोहन प्रसाद पटेल	डहिया	8960820422	मोहन
	सुभावती	भदैया		सभावती
	गंगादेवी	मड़िहा कलाकुट	9511403115	गंगादेवी
	मुनिवि किट	मड़िहा मानपुर	8009751037	मुनीवि किट
	अनिल कुमार	ग्रा० प्रधान	9266434060	अनिलकुमार
	शान्तकुमारी	भदैया	9174901245	
	मनिया	11		मनीया
	भगवानी	भावा		
	प्रमीना?	राजापुर		भगमीना
	दशरथ	11		
	सोना देवी	ददरा पहाड़ी	7054043138	सोनादेवी
	दशोदा	11	7493526804	यशोदा
	रामलखन	राजापुर		रामलखन
	फुलवा	ददरा पहाड़ी		

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेष **प्रदुषण** नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
1.	राजेन्द्र	मड़िहान	9793945977	राजेन्द्र
2.	बैजनाथ प्रजापति मण्डल अध्यक्ष BJP	मड़िहान	9415634624 bvijmzp@gmail.com	
3.	अनूप कुमार जायसवाल	मण्डलअध्यक्षआभा मड़िहानविंध	9415848901	
4.	जयकिशन गोपालिया	मड़िहान	9956122819	
5	शुक्लाजी मौर्य	मड़िहान	9956 031513	
6	कि ऋ सिंह	मड़िहान	9369514012	
7.	राधाबल्लभ दुबे	मड़िहान	9451185290	
8.	अशोक सिंह	मड़िहान	7408327879	
9	राजकुमार दुबे	मड़िहान	9198331255	
10	सतीश प्रकाश	मड़िहान	6393635433	Satish Prakash
11	देवेन्द्र जायसवाल	मड़िहान	7081313103	Dev
12	प्रवीण कुमार पाण्डेय	मड़िहान	6392479502	
13	पुष्पराजगिरी (मजदूर संघ)	मड़िहान	8808977315	21-2025
14	चन्द्रदेव मौर्य	सेक्टर संयोजक ~~कर्मचारी~~ मड़िहान	9935512961	चन्द्रदेव मौर्य
15	बनारसी	मड़िहान		बनारसी

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
16	पंजदार	~~[illegible]~~ (प्रधान) मड़िहान	9984010393	पंजदार
17	Awadhesh Kuma	Rajgarh-	9793946802	
	जगतसिंह	मड़िहान	8953803524	जगतसिंह
	[illegible]	[illegible] 33		
	रंजीतकुमारप्रजापति	मड़िहान	7897294825	रंजीतकुमार प्रजापति
	अरविंद कुमार	भावां (डढ़िमा)	9140889721	अरविंदकुमार
	शम्भू मोदनवाल	~~[illegible]~~	9919070585	
	उमेश कुमार	आँवा डढ़िमा	9026984[illegible]	उमेशकुमार
	देवीलालगुप्ता	गुलालपुर मड़िहान	9918290470	देवीलालगुप्त
	रविन्द्रसिंह	मड़िहान	9919938957	रविन्द्रसिंह
	विनोदकुमार	मड़िहान	8127985[illegible]	विनोदकुमार
	रमायन मौर्य	मड़िहान	8400763973	रमायनमौर्य
	नन्दकिशोर	मड़िहान	8154840063	नन्दकिशोर
	विजयानन्दमौर्या	मड़िहान	9956691367	विजयानन्दमौर्या
	रमेशकुमार कोल	डढ़िमा (भावां)	7499355330	रमेशकुमार कोल

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	अमरजीत पटेल	ददरा खु० रामपुर	9648788948	
	आशीष कुमार	मल्लुआ	6388307696	Ashish
	संजय कुमार गुप्ता	मड़िहान पटेवर	9112313613	संजय
	जो जो बोलता है	रत्नाकर के दिशा में तब घास में के मालपु		9696766196
	दिनेश कुमार	मड़िहान	7388829	दिनेश कुमार
	अरविन्द प्रजापति	मीरत पटेवर	8718233	Arvind
	बाबुराम	मड़िहान	9936125545-9423382994	
	हासमम	परसौना	जगन्नाथपुर 9974374604	हासमम
	सोनल कुमार	जगन्नाथ	6388607509	सोनल कुमार
	श्यामकुमार	जगन्नपुर (मड़िहान)	6506795767	श्यामकुमार
	सुबाष	जगन्नपुर (मड़िहान)	6386807809	सुबाष
	सीता देवि	जगन्नपुर (मड़िहान)	6506795767	सीता
	संजय सोनकर	अदौंहा-ठाकुरगंज	8887869164	संजय
	अनिल कुमार	अदौंहा-ठा0 -	9580597494	अनिल
	Satish Maurya	Tiskhi, Mirzapur	6387488186	Satish

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेष प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	अजय कुमार	रामपुर 33	8734075668	अजय
	अखिलेश कुमार	रामपुर 33	6394977463	अखिलेश
	विजयपाल	रामपुर 33	8853467154 – विजयपाल	
	सुरेश कुमार	मड़ीहा – 20	9695287360	सुरेश
	विरेन्द्र –	मड़ीहा – 20	6392326069	विरेन्द्र
	विकास	मड़ीहा 20	6392314057	विकास
	महेश	मड़ीहा 20	8887048642 – महेश	
	अयोध्या	मड़ीहा 20	9235043385	अयोध्या
	राम प्यारे	तीलुही	चेयरमैन-127-06	राम प्यारे
	कन्हैया लाल	मड़िहान	—	कन्हैया लाल
	दिनेश पटेल	पचरुखी	9616968514	दिनेश
	Raju Patel	Chairman	9369251626	Raju

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	गुजराती	देवरी कलां मडिहान		गुजराती
	शिवकुमारी	देवरीकलां - मडिहान		शिवकु
	तारा	देवरी कलां - मडिहान	7080078575	तारा
	हसिनाबानू	देवरी कलां - मडिहान	7094915195	हसिनाबानू
	आरती	देवरीकलां - मडिहान		आरती
	गीता	देवीकलां - मडिहान		गीता
	गांगिया	देवरीकलां - मडिहान		गांगिया
	प्राभा	देवरीकलां - मडिहान		प्राभा
	उर्मिला	अदौहा - मडिहान	9956993160	उर्मिला
	अमिता	देवरीकलां - मडिहान		अमीता
	लातती	देवरीकलां - मडिहान	7270357540	लातती
	निशा	देवरीकलां - मडिहान	9935815514	निशा
	सबनम	कासोझर - मडिहान	8957653766	सबनम
	मनोरमा	पचोजरा. मडिहान	9372518317	मनोरमा
	प्रभावती	पचोजरा - मडिहान	7897641527	

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	गंगा प्रसाद	राजापुर - मड़िहान		
	उर्मिला	राजापुर - मड़िहान		
	सुगवन्ती	राजापुर - मड़िहान		
	मीरादेवी	शोभी - जमुई	7068578779	मीरा देवी
	निशा देवी	हलरा	9336004999	निशा देवी
	मनिषा	हलरा	9026905399	मनिषा
	उषा	राजापुर - मड़िहान		उषा
	आसग्रा	लालपुर - मड़िहान	7897224855	आसग्रा
	विद्यावती	राजापुर - मड़िहान	9120440286	विद्यावती
	राजकुमारी	राजापुर - मड़िहान	9120440286	राजकुमारी
	सीता	अचहा - मड़िहान	7388169985	सीता
	पार्वती	अचहा - मड़िहान	8400637021	पार्वती
	सन्तुलिया	अचहा - मड़िहान	9793251112	सन्तुलिया
	सुनिता	अचहा - मड़िहान	6307433988	सुनीता
	बिर्मला	अचहा - मड़िहान	8009210626	बिर्मला

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क्र0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
1	कलावती	लुसा	–	
2	मीरा	देवरीखला	99563400 03	
3	ज्ञानमती	देवरी कला	9956522918	ज्ञानमती
4	फुलकुमारी	देवरी कला	8318422675	फुलकुमारी
5	इसरावती	लुसा		
6	आशा	देवरी कला		आशा
7	गैना	11	85289263 09	
8	शिवकुमारी	11		
9	मनोरमा	इसरा	9793528	मनोरमा
10	शान्ती	विशुनपुर	9621753843	शान्ती
11	कलावती	विशुनपुर	9519946	कलावती
12	सविता	विशुनपुर	8303335365	सविता
13	ममता	विशुनपुरा	8127258721	
14	फुलमती	महसरा	8329479644	फुलमती
15	इन्द्रावती	अदौहा		

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
(1)	अमरावती	देवरी कलां	9219129192	अमरावती
2	अमरावती	11		अमरावती
3	शैलकुमारी	11	8173033941	शैलकुमारी
4	राहुल	अध्यापक	7054024957	राहुल
5	अनुज कुमार	पैक धोबावत	9935230685	अनुज कुमार
6	राजनाथ यादव	सुखनई	9794264941	राजनाथ यादव
7	शकुंतला	लूसा		
8	सुनीता देवी	11	9076722234	सुनिता देवी
9	संध्या देवी	लूसा	8960314354	संध्या देवी
10	सीयाती	11		
11	निर्मला	देवरी कलां	9140884633	निर्मला
12	रीता	देवरी कलां	7705333686	रीता
13	अमराती	11		
14	गुलाबी	11		
15	फूलेसरा	लूधा		

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
1	सीता	देवरी कलां	9580116530	सीता
2	किरन सिंह	जमुई बाजार	8707571675	किरन सिंह
3	भारा बेगम	जमुई बाजार	9936246805	भारा बेगम
4	सरीता	मरचा	8052316750	सरीता
5	अनीता	मड़िहान	7571985513	अनिता
6	हिरावती	मड़िहान	8299852022	हीरावती
7	रूबी पटेल	दहरा पहाड़ी बंगालिफुर	8756073913	रूबी पटेल
8	संगीता	दहरा पहाड़ी बंगालिफुर	7398214633	
9	रिंकू	देवरी कलां	-	रिंकू
10	जयकरन पाल	जमुई	9958582844	
11	गुंजा	देवरी कला	7390946615	गुंजा
12	प्रमिला	देवरी कला	6391701990	प्रमिला
13	मालती	11		मालती
14	पुष्पा	11	9360109624	पुष्पा
15	तारा	11	8953751239	तारा

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	मिन्ती देवी	मड़िहान तीसरी	6392495955	मिन्ती देवी
	विजयलक्ष्मी	मड़िहान जमुई		Vijayalaxmi
	पार्वती	मड़िहान		पार्वती
	दासी	मड़िहान	8853255834	दासी
	माधुरी देवी	दिनौरा ददरा	9793882621	माधुरी देवी
	उषा लता चौधरी	ददरा राजगढ़	9450800793	
	Kumar Bhardwaj	Dadara, Rajgarh	7054097399	
	रेखा देवी	व घोड़ा मड़िहान	7343948359	रेखा देवी
	~~Jyoti~~ Vishwakarma	Rajgarh	8080601343	Jyoti V.
	दिव्या सिंह	मड़ीहान	9455499781 7	
	हेमलता सिंह	अवानीपुर राजगढ़	7317632393	हेमलता
	रत्नु बाला	दरवान राजगढ़	6394090693	रत्नु बाला
	सोनादेवी	राजगढ़ पनिगवाँ	7839833873	सोनादेवी
	डॉ सुनीता सिंह	राजगढ़ मंडलअध्यक्ष	9455949406	डॉ सुनीता सिंह
	चन्द्रमणी सिंह	लक्तेशगढ़ मंडलअध्यक्ष	8174057072	चन्द्रमणी सिंह

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	[illegible]	[illegible]	[illegible]	[illegible]
	शिवशंकर	[illegible]	9793529098	शिवशंकर
	Shubham Singh	[illegible]	8009911093	
	सन्दीप कुमार पाठक	मझुआ	9452349927	Sandeep Pathak
	प्रभाकान्त त्रिपाठी	गाडिया (ओंवा)	8382961300	प्रभाकान्त त्रिपाठी
	[illegible]	[illegible]	9918247771	
	आनन्द सिंह पटेल	देवकुरा	9696016623	Anand
	जितेंद्र पटेल	[illegible]	8707386044	जितेंद्र
	शिवचन्द केवट	ओंवा	8382006312	शिवचन्द
	भोलानाथसिंह	ओंवा	9450756404	भोलानाथसिंह
	[illegible]	[illegible]	9621132411	
	[illegible]	[illegible]	9453544626	
	[illegible]	[illegible]	9198282277	
	Vikash Singh Patel	Gothampur	7390975836	Vikash
	Basanti Devi	पल्लोत्तर		बसन्ती

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क्र0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
(1)	रेन	भाँवा	7355624783	रेन
(2)	सैरून निशा	जमुई बाजार	"	सैरून निशा
	द्रौपदावती	डुढिया	8976469 45	द्रौपदावती
	मीना देवी	भाँवा	8353048404	मीना देवी
	शिवकुमारी	भाँवा	7309926864	शिवकुमारी
	गीता			गीता
	गुड्डी	डढिया		गुड्डी
	नुरजहाँवानो	भावाँ	7309588394	नुरजहाँवानो
	मेहरुनिशा	भावाँ	9956674462	मेहरुनिशा
	शालिमा बानो	8976474334 भावा		निशा
	सहिदन	भावाँ	8604202178	[illegible]
	[illegible]	भावाँ	9651332501	[illegible]
	रहमत	डाढ़िया		रहमत
	साजहाँ	डाढ़िया		[illegible] साजहाँ
	जैनुनिशा	डाढ़िया		जैनुनिशा

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
		रामपुर	9451301518	
		डहिमा		
		दहिमा		
		डहिमा		
		"		
		दहिमा		
		"		
	Chhaya Jaiswal	Gulalpur Mojihan	9918294018	
		गोहरा	8299114151	
		Pathar Khurd	9616962599	
			7080940981	

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
1	ARYAMAN PRATAP SINGH	AMOI	7907054010	
2	VIRAJ PRATAP SINGH	11	9415404735	
3	Raj Bahadur Singh	Shaktinagar	8707216198	
	Rinku Ushankarwar	1	9696362040	
	[illegible]	मड़िहान	9838405765	
	[illegible]	मड़िहान	8853744492	
	[illegible]	मड़िहान	7355994106	
	Arun Kumar	[illegible]	9005369559	Arun Kumar
	Ravi Prakash	Patehara	7985696915	Ravi Prakash
	Shreyash Singh	Karaunda	9695739300	
	Dhananjay Singh	Aonri	7355184865	
	Satendra Agrahari	Malua	7905636156	Agrahari
	Adarsh	Bodo	9026995529	
	Abhay Maurya	Samirapur	8400745739	Abhay S
	Vikash Singh	Rahkalan	6386726301	

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश **प्रदुषण** नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	उपकार सिंह	मड़िहान - मड़िहान	9452375087	
	[illegible]	देवपुरा मड़िहान	9453157823	
	महेंद्र सिंह	मड़िहान	7275019019	
	रमेश सिंह	मड़िहान	7985233030	
	मनोजकुमार सो	मड़िहान	8707776968	MK
	[illegible]	मड़ियान	9936120280	
	योगेश सिंह	मड़िहान	8953153524	
	Pawan Singh	मड़िहान	6393122290	
	रामेश पटेल	मड़िहान	6388918516	
	गोपाल जी त्रिपाठी	मड़िहान	8400592293	
	कृष्णा तिवारी	मड़िहान	8922002309	
	उमेश तिवारी	मड़िहान	7380701971	
	रामधनी सिंह	मड़िहान	6387274283	
	मनीष कुमार सिंह	मड़िहान	9452185985	
	विरेन्द्र कुमार	मड़िहान	9621901288 9451856676	

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	इंस पटेल	मड़िहान	9453050500	इंस पटेल
	रामबली सिंह	मड़िहान	9453761818	
	अमित सिंह	मड़िहान	9451943031	
	आलोक सिंह	पटेवर, मड़िहान	7007278335	
	धीरज सिंह	मड़िहान (मरचा)	6392892739	
	अमितपाण्डेय	मड़िहान	9598962010	
	शुभम जायसवाल	पटेरा	8172838704	
	अभिषेक	मलुआ	6306344244	
	[illegible]	मड़िहान	8318868080	
	[illegible]	मड़िहान	8318853405	
	[illegible]	मड़िहान	9455313788	
	[illegible]	मड़िहान	9792373340	
	अजीत कुमार मौर्या	कि मड़िहान	9198346699	
	प्रद्युम्न कुमार मिश्र	मड़िहान	9026090105	
	आयुष अग्रहरी	पटेहरा कलां	9235253589	

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	अंकित पाण्डेय	पटेहरा कलां	9335102752	Ankit
	विरेन्द्र कुमार	अहरौरा	9415243932	
	रोहित कुमार दुबे	मड़िहान	9415201492 8787095642	
	[illegible]	मड़िहान	9918290018	
	जितेन्द्र सिंह पटेल	मड़िहान	7897464900	
	ओमप्रकाश	मड़िहान	[illegible] 0946	
	Ranjan M—	मड़िहान	8090987901	Ranjan
	[illegible]	मड़िहान	6393156565	
	Upendra Mandal/Chaurasia	मड़िहान	8423616644	
	दिनेश कुमार दुबे	मड़िहा-धाव	9794040279	
	जितेन्द्र कुमार मिश्रा	मड़िहागाँव	6392444911	
	[illegible]	[illegible]	45	
	इन्द्र पाल सिंह	रेवी, राजगढ़, मीरजापुर सेक्टर - अध्यक्ष	9415689838	
	Omprakash singh	रेवरी/राजगढ़/मीरजापुर	9335008411	
	बाबूलाल बिन्द	धुरकर कलवारी माफी जिला मीरजापुर	9794947755	

मिश्री लाल

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	मिठ्ठीलाल	धुरेखर मड़िहान	7705770351	मिठ्ठीलाल
	सुनील कुमार मौर्य	धुरकर, मड़िहान मीरजापुर	9559589240	
	सुरेन्द्र पाल	बुलाकपुर मड़िहान मीरजापुर	7388920495	सुरेन्द्र पाल
	नीलम	दद्दरा मुतलके	9321363721	नीलम
	मन्नरा देवी	दद्दरा मुतरम मौरजोर	9335221621 95	मन्नरा देवी
	सावित्री	दद्दरा मु	91 8033153191	सावित्री
	गीता देवी	।। ददरा कुरमुर	6391174473	गीतादेवी
	शिवानी	भावॉ	6384393782	शिवानी
	कमलावती	H पटेर		कमलावती
	सकुलता	H भावॉ		सकुलता
	संगीता	भावॉ	9625641379	संगीता
	कौशिल्या	गरम भावॉ	8248382952	कौशिल्या
	कमला	ग्रम भावॉ	।।	
	राधा	ग्रम भावॉ	7752970688	राधा
	तुरन्ती	भावॉ		तुरन्ती

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
	ज्योती सिंह	भाँवा	9555629783	ज्योती
	आशा	धौरा		आशा
	मंजू	ग्रामभावाँ		मंजू
	शीला	ग्राम भांवाँ	9936260072	शीला
	दीपक सिंह	डिवरीकलाँ	7355909195	
	दीपक मौर्या	डिवरी कलाँ	9794467010	दीपक
	बुद्धुल फातिह॥	"		फातिमा
	बुद्धुल	"		

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	पूजा	मेंमौराचा मड़िहान		पूजा
	तोषिच्चा	11		
	रामन्तो	11		
	मीनाकुमारी	पटेवर मड़िहान		मीनाकुमारी
	संगीता देवी	ददरा पहाड़ी मिड़िहान	7705480488	संगीता देवी
	ममीता	ददरा पहाड़ी मड़िहान	9198333352	ममीता मौर्य
	मुन्नी बेगम	ददरा पहाड़ी मड़िहान	8853546825	मुन्नी बेगम
	पुनीता	ददरा पहाड़ी मड़िहान	9318919490	पुनीता
	बसन्ती देवी	ग्रांव	8009978499	बसन्तीदेवी
	श्याम देवी	गावॅा		
	अनिराझनी	देवपुरा पहाड़ी	9794032522	अनिराझनी
	माधवी	गावॅा	6388337829	माधवी
	उआरती	गावॅा		उआरती
		गाँवा		
	सरिता		8356900457	

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतु, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	संतरा	ददरा पहाड़ी	8173980491	
	अन्जू देवी	ददरा पहाड़ी	9005235682	
	विभा सिंह	ददरा पहाड़ी	8303275398	
	साधना देवी	तहसील मड़िहान ददरा मड़िहान		
	आशा	मड़िहान		
	अजमी	मड़िहान		
	इसरावती	गड़ीहा मड़िहान		
	रूपा	भाँवा		
	पिंकी	भाँवा		
	आशमा बेगम	ददरा मुरामपुर	8853117050	
	नजनुनीशा	ददरा मुरामपुर	9335855770	
	अनीशा बेगम	ददरा मु०रामपुर	88408224S	
	अप्साना	ददरा मुरामपुर	9935492788	
	मोनी रूकशार	ददरा मु०रामपुर	7393890687	
	प्रेमी	विद्युतपुर	7521880611	

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील–मीरजापुर सदर, जिला–मीरजापुर उत्तर प्रदेश में 1600 (2X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेष प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद–मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
	पुष्पा देवी	विशुन पुर	9766486398	पुष्पा देवी
	पुलवटी	धूला		पुलावटी
	साधनासिंह	लूसा	6388007038	साधनासिंह
	सुनीतादेवी	लूसा		सुनीतादेवी
	संगीता	लूसा		
	सुन्दरी	लूसा		
	अनकी	लूसा		
	कीरा	लूसा		
	सान्ती	लूसा		
	गुलाबचीदी	लूसा		
	शुन्नी	लूसा		मुन्नी
	इन्द्रावती	लूसा		इन्द्रावती
	प्रभा	लूसा		प्रभादेवी
	एकादशी कुसुमलता	लूसा		कुसुमलता
	एकादशी	लूसा		

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेश प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरण:–

क0सं0	नाम	पता / पदनाम एंव विभाग	ई0 मेल आई0डी0 / मो0 नं0	हस्ताक्षर
1	मनोरमा	लुसा समूह सखी राजगढ़ NRLM	6399586356	मनोरमादेवी
2	साधना देवी	लूसा सदस्य राजगढ़	736520 7652073686	साधना देवी
3	संजू देवी	लूसा राजगढ़	9120525433	संजू देवी
4	संगीता सोनी	लिसुही समूह सखी मड़िहान NRLM	8429351760	संगीता
5	सोनी	भदौहा समूहसखी मड़िहान NRLM	9651351552	सोनी
6	राधिका दालमियां	〃	8115187492	राधिका दालमियां
7	बासमती	〃		बासमती
8	तारा	〃	7061975930	तारादेवी
9	कंचन	〃	8948586519	तारादेवी
10	कंचन	भदौहा, सदस्य	6281555695	कंचन
11	सीता	लुसा		
12	गीता देवी	लुसा / अध्यक्ष	9794026516	गीता देवी
13	खुशबू	देवरी /	7054840299	खुशबू
14	इलाम	देवरीकला/मड़िहान	9415983483	इलाम
15	जयललीता	देवरी	9935112111	जयललिता

मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, ग्राम ददरी–खुर्द, तहसील– मीरजापुर सदर, जिला– मीरजापुर उत्तर प्रदेश में 1600 (2 X 800) मेगावाट की कोयला आधारित अल्ट्रा सुपर क्रिटिकल थर्मल पावर प्रोजेक्ट की स्थापना के लिए पर्यावरणीय स्वीकृति हेतू, वन व जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की अधिसूचना दिनांक 14 सितंबर 2006 (यथासंशोधित) के प्राविधानों के अंतर्गत उत्तर प्रदेष प्रदुषण नियंत्रण बोर्ड द्वारा आयोजित दिनांक 11–04–2025 पूर्वाह्न 11:00 बजे उच्च प्राथमिक विद्यालय, मड़िहान, जनपद –मीरजापुर के समीप आयोजित "लोक सुनवाई" में अधिकारियों व सामान्यगण जनता की उपस्थिति का विवरणः–

क0सं0	नाम	पता/पदनाम एंव विभाग	ई0 मेल आई0डी0/ मो0 नं0	हस्ताक्षर
16	राधा	देवरीकला	9695372054	राधा
17	निर्मला	देवरीकला	8957184826	निर्मला
18	पार्वती	देवरी कला	6392526132	पार्वती
19	समधारी	दड़िया		
20	अन्नाती	विसुनपुर	7457925857	अन्नाती
21	रमावती	विसुनपुर	9327793049	रमावती
22	मंजु	विसुनपुर		मंजु
23	शिवकुमार	भदौहा	9839636358	
24	कल्लू	भदौहा	9839636358	कल्लू
25	दिशावती	विसुनपुर	8400605724	
26	अंकिता	देवी	9250755630	
27	रेनु देवी	लुसा	8127515254	रेनु देवी
28	रम्पति	लुसा	9305385962	
29	कल्लावती	राजापुर		
30	पूजा	भदौहा	8303216658	पूजा

शिक्षकों के तबादले के लिए एक अप्रैल से शुरू होंगे आवेदन

पारस्परिक स्थानांतरण के लिए नहीं होगी सेवा अवधि की बाध्यता

प्रयागराज। बेसिक शिक्षा परिषद के विद्यालयों में कार्यरत शिक्षक/शिक्षिकाओं के ऑनलाइन पारस्परिक तबादले के लिए सेवा अवधि की बाध्यता समाप्त कर दी गई है। ऐसे में नवनियुक्त शिक्षक भी दूसरे जिले में तबादले के लिए आवेदन कर सकता है। स्थानांतरण के लिए ऑनलाइन आवेदन एक से 11 अप्रैल तक मांगेंगे किए जाएंगे।

बेसिक शिक्षा परिषद के सचिव सुरेंद्र कुमार सिंघारी की ओर से जारी निर्देश के अनुसार शिक्षकों को एक से अधिक बार तबादले का मौका दिया जाएगा। इसके लिए हाईकोर्ट में कई याचिकाएं दाखिल दी गई थीं और विभाग को दोबारा मौका देना पड़ा था। नियमों तहत स्कूल से स्कूल तबादले पर शिक्षकों ने आपत्ति की थी, जो इस ट्रांसफर में ही स्कूल से स्कूल तबादले के नियम को शामिल कर लिया गया है। इसके साथ ही प्राथमिक विद्यालय के प्रधानाध्यापक का उच्च प्राथमिक या कंपोजिट विद्यालय के सहायक अध्यापक से पारस्परिक स्थानांतरण हो सकेगा। तबादले के लिए जिला स्तर पर मुख्य विकास अधिकारी की अध्यक्षता में समिति गठित की जाएगी।

समिति में जिला शिक्षा एवं प्रशिक्षण संस्थान के प्रधानाचार्य और जिला उच्च शिक्षाधिकारी (बेसिक शिक्षा) सदस्य और जिला बेसिक शिक्षा अधिकारी सदस्य सचिव होंगे। पात्र-पात्रता का कार्य प्रगतिवत न हो, को स्थानांतरित होने शिक्षक या शिक्षिका को प्रोन्नतालीन अवकाश में कार्यभूत करते हुए नए तैनाती स्थल पर कार्यभार ग्रहण कराया जाएगा। स्थानांतरण होने के बाद शिक्षक अपना आवेदन वापस नहीं ले सकेंगे।

नवनियुक्त शिक्षक भी दूसरे जिले में तबादले को कर सकते हैं आवेदन

आवेदन की प्रक्रिया शुरू होने से पहले बेसिक शिक्षा अधिकारी 10 मार्च तक सभी मंडल मुख्यालय पर शिक्षकों के शिकायत जैसे पदस्थापन, वरिष्ठता, परिवहन संबंधी, नियुक्ति तिथि आदि विषयक मंडलीय/अंचल कार्यों। राज्य परियोजना कार्यालय की ओर से एनआईसी को 11 से 25 मार्च के बीच डाटा उपलब्ध कराया जाएगा। 11 अप्रैल तक आवेदन लिए जाने बाद 15 अप्रैल तक शिक्षक अपने ऑनलाइन आवेदन पत्र का हिंटआउट संबंधित खंडस्त कार्यालय में जमा करेंगे।

मेरठ : श्मशान घाट में जलती चिता से कुत्ते ने निकाली खोपड़ी

मेरठ। सूरजकुंड गंज मंदार कमेटी द्वारा संचालित श्मशान घाट स्थित 31 नंबर भट्टारमें पर जलती चिता से कुत्तेसिर निकाल रहे।

कुत्ता खोपड़ी को दोनाड़ता तो लोकिन किसी ने भी उसे रोकने का प्रयास नहीं किया। एक दिन पहले भी चिता से कुत्ते के हड्डी निकालने का मामला सामने आया था। कमेटी के पदाधिकारियों ने केवल टैक्स और गाड़ा ब्रह्मणों पर लगाकारी के आरोप लगाए हैं। इस पहले से बैठक कुलाई गई है। सूत्रकूड़ श्मशान घाट की यह घटना बुधवारदोपहर दोपहर 3:40 बजे की है।

एक महीने में अंसल के खेल का खुलासा करेगी कमेटी

लखनऊ। कमेटी ने एलडीए चेयरी के अलावा से एक या दो अधिकारी और शामिल किए जाएंगे। जांच कमेटी का गठन किया हो गया है। अधिकारियों के नाम भी इसमें किए गए हैं। मंडलायुक्त के निर्देश पर एलडीए कमेटी की अध्यक्षता में यह कमेटी एक महीने के अंदर जांच कर रिपोर्ट देगी, जिसे शासन को भेजा जाएगा। इस कमेटी में कई विभागों के अफसर शामिल होंगे।

जांच कमेटी के अन्य सदस्यों में जिला प्रशासन से एडीएम एस के अधिकारी, निर्माण विभाग से सब इंजीनियर, मंडलायुक्त कार्यालय से अन्य अधिकृत का नाम प्रस्तावित है।

तामराज ने रची थी आसाराम के रसोइये की हत्या की साजिश

मुजफ्फरनगर। जानसठ थाने के रसोइया अखिल पुत्र की हत्या की साजिश तामराज ने रची थी। इसके बाद उसने रोहत के गैंग्स्टर निकाले अखिल पुत्रा एक का व्यवस्था करने थे। 11 जनवरी 2015 को गांव पलाना निवा दुकान से स्कूटर पर सवार होकर अपने घर लौट रहे थे।

लजर अपने साथियों से सिग्नल एप के जरिए रोजाना करता था बातचीत

लखनऊ। कौशांबी से गिरफ्तार आतंकी संगठन खालसा टाइगर्स इंटरनेशनल के आतंकी सलाम अंसारी, दुबई, कतर और पुर्तगाल में टिकाने बनाए हुए हैं। वह उनसे सिग्नल एप के जरिए बातचीत करता था। उसके मोबाइल में लगाए आपत्तिजनक और संवेदनशील डाटा मिला है, जिसे एसटीएफ की साइबर सेल खंगाल रही है। उसकी गिरफ्तारी से पाकिस्तान से पंजाब में ड्रोन के जरिये हो रही हथियारों और मादक पदार्थों की तस्करी के कई नेटवर्क का खुलासा भी हुआ है।

- खालसा टाइगर्स इंटरनेशनल का आतंकी सलाम अंसारी मोबाइल में आपत्तिजनक और संवेदनशील डाटा मिला है
- उस पर पंजाब में लाल मुकदमे दर्ज हैं पुलिस पासपास ही खोज रही थी उसे



जीरोमी ने बताया कि इस नेटवर्क के माध्यम से आतंकी पदार्थों की आपूर्ति दिया जा रहा है। तार पंजाब में 7 मुकदमे दर्ज होने की जानकारी मिली है। वहीं अन्य मुकदमों एवं आपराधिक गतिविधियों के बारे में पहचान से ड्रोनकैप की जा रही है। उससे पूछताछ में खालसा इंटरनेशनल के एक कई अन्तरराष्ट्रीय नेटवर्क की जानकारी मिली है। उसके विदेशी कौशांबी के कोलड़ाघाट थाने में मुकदमा दर्ज कराया गया है। उसे रिमांड पर लेकर पूछताछ कर इस चारे में अधिक जानकारी जुटाई जाएगी। उसके खिलाफ पंजाब पुलिस द्वारा भी विभिन्न कार्यवाही की जा रही है। एसटीएफ की पूछताछ में लगार ने बताया कि आपूर्तका जेल से अटारा फोर्स में पंजी के दौरान उसका पाँपच मुबारका जेल में कंट एक अपराधी से हुआ, जिस पर पंजाब में पुलिस एक्ट के दो मुकदमे दर्ज थे। उसने लगार का परिचय पाकिस्तान के आईएसआई एजेंट से कराया, जिसके जरिए वह पाकिस्तान के पंजाब बॉर्डर से ड्रोन के सम्पर्क में विदेशी असलहे, ड्रोनेड, ड्रोनेन मंगाने लगा। पाकिस्तान द्वारा ड्रोन के जरिये निर्देशों हथियार भेजने की बात सामिल आतंक आपराध ने भी दुबारा जेल से प्रयागराज आने के दौरान पुलिस को दी थी।

पीलीभीत कनेक्शन खंगाल रही पुलिस

पीलीभीत। पीलीभीत पुलिस कौशांबी से पकड़े गए चन्दन खालसा इंटरनेशनल एवं आईएसआई मास्टर के संपर्क आतंकी लगा सकेंगे का जिले से कनेक्शन खंगाल रही है। पूर्व में पुलिस में यहां नए तीन खालिस्तानी आतंकियों से संबंध और फर्जी पासपोर्ट को कड़ी भी जांच में शामिल हैं। अब पासपुर्टों पर भी जांच शुरू हो गई है। 13 दिसंबर को पहले पीलीभीत और पंजाब पुलिस के संयुक्त अभियान में पुलिस बेस से हाईवे द्वारा जा रहा पूरा ये चन्दीगढ़ जाने वाले मार्ग पर तीन खालिस्तानी आतंकी एक गिरफ्त में थे। आतंकियों की पहचान पंजाब के मुक्तसर जिले के रहने वाले गुरविंदर सिंह, जसिंदर सिंह उर्फ रौबी और जसमीदर सिंह उर्फ प्रकार सिंह के रूप में हुई। तीनों आतंकवादी बाद की कार्यवाही पुलिस पीछी का ध्यान खींचने की कोशिश में पुलिस पर गोलियां चलाने लगे। पुलिस ने आतंकियों के आत्मरक्षा में जवाबी कार्यवाही की। इसमें तीनों आतंकी ढेर हो गए थे। इसके बाद से खालिस्तानी आतंकियों से संबंध के मामले में पीलीभीत पुलिस की सक्रियता बढ़ी है। इसके बाद से ही पुलिस की टीमें लगातार जांच में जुटी हैं।

कई देशों में आतंकी साथी

पूछताछ में सामने आया कि लखनऊ एवं एक अन्य बम्बर खालसा और आईएसआई के लिए काम करता है। उसे 20 वर्ष की पाक हुई थी। वह पाकी पासपोर्ट बनवाकर दुबई भाग गया है। उसका एक और साथी आतंकवादी सिखाने गुरुत्व वाला आतंकवादी है फिलहाल, जिसका खालिस्तानी आतंकियों से संबंध है। वहीं एक अन्य साथी पुर्तगाल में रहता है, जिसके पास जाने की वह फिराक में था।

प्रयागराज में आतंकियों का पहले भी बन चुका है ठिकाना

प्रयागराज। आतंकियों ने पहले भी प्रयागराज और आसपास के जिलों में अपना ठिकाना बनाया है। आतंकी गिरफ्तारी के बाद प्रयागराज कमिश्नरेट पुलिस ने सभी सीमा क्षेत्र के थाने पुरामुफ्ती, एयरपोर्ट, कडाअहमा, हनुमानगंज, जैत, उसमानगंज समेत अन्य सभी की पुलिस को अलर्ट कर दिया गया है।

मार्च 2006 में खागलाही के बैंट रिलवे स्टेशन और कचहरीचौक मंदिर में सीरियल बम धमाकों के बाद संकटा हाफ फोर्स (एसटीएफ) ने फुलपुर के कालिंजनगंज को गिरफ्तार कर उसे कड़ी सजा दिलाई थी। जांच में उस समय यह भी कि फुलपुर में कालिंजनगंज के ही निवासी पर आतंकियों ने कुछ बम तैयार करने के बाद खागलाही में धमाका किया। तब खागलाही समेत कई आतंकियों को पुलिस ने गिरफ्तार किया। वहीं, 15 साल बाद सोमवगंगा का आतंकी गतिविधियों को करार से एक बार फिर नाम उभरा। सितंबर 2021 में

मस्जिदों पर्दा डाले खागलाही के बाद तुफैल्ला तक सक्रिय



महाकुंभ मेला शुरू होने से पहले 24 सितंबर 2024 को आतंकी मुफ्तकर्ता सिंह पन्नू का धमकी भरा वीडियो सोशल मीडिया पर वायरल हुआ। धमकी के बाद महाकुंभ में सुरक्षित तंत्र का विस्तार कर मेले में सिसिटम वाली में लगभग 700 से अधिक पुलिसकर्मियों को सुरक्षित तंत्र लगाया गया। इनमें एटीएस, एसओजी, इंटेलिजेंस ब्यूरो, थाना पुलिस समेत अन्य विंग के पुलिसकर्मियों को शामिल किया गया और गोपनीय सर्किल से अलग-अलग इलाकों को टोह लेने में जुटे रहे थे।

कार्यों से दी टेररिस्ट स्क्वायड (एटीएस) ने आतंकी जौनपुर और फिर सोहनपाल उर्फ़ीर उर्फ मदनी को गिरफ्तार किया। इसके बाद इसकी दिल्ली ले जाया गया।

पहले जौनपुर और फिर शहीर मदनी की गिरफ्तारी के बाद आतंकी नेटवर्क के तेहराज से प्रयागराज संवेदनशील हो गया है। जौनपुर से पाकिस्तानी मेल से आतंकी हमली की 13 दिन की ट्रेनिंग लेकर यहां आया था। कुंभ और माघ मेला के लिए पुलिस भर में सिलसला प्रयागराज में इन दो आतंकियों की गिरफ्तारी के बाद यह शहर एटीएस और स्पेशल सेल एजेंसी (इनपुटों) के रडार पर हमेशा में रहा है। बता दें कि महाकुंभ मेले में किसी भी हमले को करने के लिए प्रयागराज पुलिस ने 11 अलग-अलग अभियान चलाए थे।

महिला दिवस पर सभी जिलों में होगा मिशन शक्ति मेला



लखनऊ। अंतरराष्ट्रीय महिला दिवस (8 मार्च) के अवसर पर प्रदेश के सभी जिलों में एक साथ मिशन शक्ति मेले का आयोजन किया जाएगा। इसके माध्यम से महिला सुरक्षा, आत्मनिर्भरता और शिक्षा को बढ़ावा देने के साथ जनसेवी स्तर पर जागरूकता और जोखिम कौशल और तेजुस्व स्तरता को भी मजबूत किया जाएगा। इस आयोजन में 980 सर्वोच्च सरोपेय और 75 जिला स्तरीय नोडल अधिकारियों के साथ ही कार्यरत सिलकों को महिला सशक्तिकरण में उत्कृष्ट योगदान के लिए सम्मानित किया जाएगा। साथ ही इस जिले में लिंग विभाग की उपलब्धियों और नयाचारों को दिखाने वाले प्रदर्शनी लगाए जाएंगे। इनमें से सर्वश्रेष्ठ प्रदर्शन करने वाली को पुरस्कृत भी किया जाएगा।

दिव्यांग पति को पीठ पर लादने के प्रकरण में तीन पर कार्रवाई

लखनऊ। एम्बुलेंस में महीला पोषण न मिलने पर दिव्यांग पति को पत्नी द्वारा पीठ पर लादकर सीएचसी कार्यालय पहुंचने के प्रकरण को डीएमओनोडी कमेल पाठक ने संज्ञान में लिया है। उन्होंने अपर निदेशक चिकित्सा स्वास्थ्य एवं परिवार कल्याण, लखनऊ मंडल को जांच के आदेश दिए। जांच में डॉक्टर समेत दो कर्मचारियों को लापरवाही उजागर हुई। उपमुख्यमंत्री के निर्देश पर सीएमओ ने तीनों पर कार्रवाई की है।

सीएमओ कार्यालय में दिव्यांग प्रमाण पत्र बनवाने पहुंचे थे। बीते दिनों एक महिला अपने दिव्यांग पति का प्रमाण पत्र बनवाने के लिए पहुंची। आरोप है कि सीएमओ कार्यालय में दिव्यांग पति को महीला लेकर नहीं पहुंची। तेरे ये पत्नी ने दिव्यांग पति को पीठ पर लाद लिया। दिव्यांग बेटों के पास्पर्ट देख हुई।

इस महीला घटना का वीडियो सोशल मीडिया में वायरल हुआ। इसका संज्ञान में लेते हुए अपमुख्यमंत्री कमेल पाठक ने अपर निदेशक चिकित्सा स्वास्थ्य एवं परिवार कल्याण, लखनऊ मंडल को जांच के आदेश दिए। आज निदेशक ने राजधानी सीएमओ डॉ. जावेद गन्दा को तीन दिन में प्रकरण की जांच के आदेश दिए। सीएमओ ने तीन सदस्यीय जांच कमेटी गठित की।

आठ साल में डिजिटल लेनदेन आठ गुना बढ़ा

लखनऊ। प्रदेश ने पांचों आर्थिकवर्ष के नेतृत्व में डिजिटल क्रांति और आर्थिक प्रगति के क्षेत्र में नया कीर्तिमान स्थापित किया है। डायरेक्ट बेनिफिट ट्रांसफर (डीबीटी) में लेकर डिजिटल लेनदेन और सफल हब योजनाओं तक, उत्तर प्रदेश ने वित्तीय समावेशन और आर्थिक वृद्धि दर्ज की गई है।

'बीते आयोग में मृतों को 'अट एस' का दर्जा दिया है। सही भारतीय रिजर्व बैंक की रिपोर्ट के अनुसार 2024-25 में राज्य की जीडीपी 11.8% रही, जो पहाड़ के बाद देश में दूसरी सर्वाधिक है। पिछले आठ वर्ष में प्रदेश में डिजिटल ट्रांजेक्शन आठ गुना से ज्यादा हो गया है।

हाईटेंशन तार में सीढ़ी फूने से दो मजदूरों की मौत, एक गंभीर

फूलपुर (प्रयागराज)। शादी समारोह में लगे टेंट को निकाले के बाद सोमवार शाम आम से दुबो सहरिया तार में सीढ़ी छूने से दो मजदूर फरोह में आ गए। दोनों की मौके पर ही मौत हो गई। जबकि एक झलस गंभीर है। उसे इलाहाबाद के निजी अस्पताल में भर्ती कराया गया है।

मेडिकल
वाह ताज कुल्फी
दालमंडी, गोदौलिया की सभी चाटों की शान का राज है
विलफ
रसगुल्ला, मिष्ठान्न भंडार
Medical Helpline
सनर्पण गैस्ट्रो एवं लिवर क्लिनिक
डॉ. शेखर पुरी
गैस्ट्रो, लिवर व पेंक्रियाटिक रोग विशेषज्ञ
पेट की जटिल एवं असाध्य रोगों के जांच एवं इलाज की संपूर्ण सुविधा उपलब्ध
OPD Timings : Mon-Sat | 10am - 4pm

क्षेत्रीय कार्यालय
उ.प्र. प्रदूषण नियंत्रण बोर्ड
162, अशर कॉलोनी (निकट पण्डी होटल), सबटरोनंज, सोनभद्र।

पर्यावरणीय अभिसूचना दि. 14.09.2006 के अन्तर्गत 'स्क्रीन सूचनाई' हेतु आम-सूचना

क्र. सं.	परियोजना का नाम व पता	परियोजना का संक्षेपण एवं विवरण	स्क्रीन सूचनाई की तिथि एवं समय	स्क्रीन सूचनाई स्थान
1	मेसर्स सिंगरौली स्पर्धा पावर्स (I) प्रा. लि.) ग्रामीण सिंगरौली, ग्रामीण सिंगरौली संदर्भ, अशिवाल, जिला- सिंगरौली (मध्य प्रदेश), राज्य- उत्तर प्रदेश, सोनभद्र।	परियोजना- 3x6 एमडब्ल्यू, कुल 21.6MW विद्युत क्षमता वाले कोयला आधारित थर्मल पावर प्लांट विद्युतीकरण सिंगरौली प्रकोप चोल पहाड़, ग्राम- दुधी खुर्द, तहसील- म्योर, सिंगरौली (M.P.)	दिनांक- 11.04.2025, पूर्वाह्न 11.00 बजे	उपर्युक्त विद्यालय परिसर ग्राम, सोनिहार, तहसील- सिंगरौली के समीप

उपरोक्त प्रदूषण नियंत्रण बोर्ड द्वारा परियोजना, जन एवं व्यावसायु सोनिहार प्रकाशन, भारत सरकार द्वारा जारी अधिसूचना संख्या एस.ओ.1533, दिनांक- 14.09.2006 की व्यवस्थाओं/प्रावधानों के अनुपालन में उपरोक्त परियोजना की लोक-सुनवाई आयोजित करने हेतु दिनांक- 01.12.2025 के अधिसूचित के अनुपालन में उपरोक्त परियोजना की लोक-सुनवाई आयोजित करने हेतु, सुनवाई हेतु आयोजन के सुझाव, विचार एवं आपत्ति के अनुसार आयोजित किया जाना प्रस्तावित है। उपरोक्त परियोजना की लोक-सुनवाई हेतु आयोजन के सुझाव, विचार एवं टिप्पणियों आदि आमंत्रित किये जाते हैं।

(1) उपायोग जिलाधिकारी, सिंगरौली (2) कार्यालय जिला पंचायत, सिंगरौली (3) उपमुख्य उपायोग, जिला उद्योग केन्द्रायन एवं पर्यावरण विभाग, सिंगरौली (4) क्षेत्रीय कार्यालय, मध्य क्षेत्र, एनसीएल, जय एवं व्यावसायु परियोजना प्रबंधक, भारत सरकार, राजस्व एवं, केन्द्रित स्वास्थ्य, पेंचवार-एवं, प्रशासन, उपायोग (3) उपायोग प्रदूषण नियंत्रण बोर्ड, रीजनीय ऑफिस, सिंगरौली खनन, उपायोग एवं (4) क्षेत्रीय कार्यालय क्षेत्रीय प्रदूषण नियंत्रण बोर्ड, 162 उत्तर मोहल्ला, सबटरोनंज, सोनभद्र।

उक्त आवेदनपत्र की प्रति उक्त परियोजना के प्रस्ताव से सम्बन्धित किसी व्यक्ति को उपरोक्त परियोजना हेतु जनसुनवाई के आयोजन से सम्बन्धित पर्यावरणीय स्वीकृति प्रदान के निवारण हेतु अधिकार लिखित, उक्त उक्त स्थान पर 'लोक सुनवाई' की कार्यवाही निर्धारित की गई है, जिसकी उपस्थिति होकर अपना सुझाव व आपत्तियां प्रस्तुत कर सकते हैं। उपरोक्त सुझाव-आपत्तियां निर्धारित कर दी गई अवधारण की तिथि से 30 दिन बाद की उपरांत से उपरोक्त परियोजना के विषय कर सकते।

(अजीत कुमार तिवारी)
क्षेत्रीय अधिकारी

अमर उजाला
स्मृतियों को संजोएं
श्रद्धा के सुमन अर्पित करें
अपने प्रियजनों का विछोह जीवन का सबसे बड़ा पल होता है। अपनी भावनाओं और सूचनाओं को आप शोक सन्देश, श्रद्धांजलि या पुण्य स्मरण के रूप में अमर उजाला के जरिये सब तक पहुंचा सकते हैं।
वाराणसी: 9692095159, जौनपुर: 7007030178, बलिया: 9415360003, मऊ: 7838356940, आजमगढ़: 8081803062, गाजीपुर: 8765738300, चंदौली: 9415456033, मिर्जापुर: 8400613161, भदोही: 8400613161, सोनभद्र: 8948000095
प्रकाशन सम्बन्धी शिकायत और सुझावों के लिए हमें 9.30 बजे तक फोन करने हैं।

कार्यालय जिला पंचायत, गाजीपुर।

संख्या : जि0/जिलापंचा/2025-26 दिनांक : 03.03.2025

पंजीकरण/नवीनीकरण की सूचना

सर्वसाधारण/जिला पंचायत के पंजीकृत ठेकेदारों/फर्मों को सूचित किया जाता है कि जिला पंचायत गाजीपुर द्वारा कराये जाने वाले निर्माण कार्यों को सम्पादित कराने हेतु वित्तीय वर्ष 2025-26 में पंजीकरण/नवीनीकरण कराने हेतु, दिनांक-10.03.2025 से दिनांक-25.03.2025 तक आनलाइन प्रस्तुत किये जायेंगे। शासनादेश संख्या-618/उ0-3-2007-100प्र0/2006, दिनांक-10 अप्रैल 2007 के क्रम में आवेदन-पत्र के साथ वांछित प्रमाण-पत्र (जिलाधिकारी द्वारा प्रदत्त), फर्म की दशा में फर्म का हैसियत प्रमाण-पत्र, आयकर प्रमाण-पत्र, जी0एस0टी0 प्रमाण-पत्र, मू0-100.00 के स्टाम्प शपथ पत्र-2, वार्षिक टर्नओवर सदस्य एवं जिला पंचायत गाजीपुर के अध्यक्ष/सदस्य एवं अधिकारी/कर्मचारी के सम्बन्धी न होने का शपथ-पत्र, फर्म का आयकर व पंजीकरण प्रमाण-पत्र तथा उपरि प्रमाण-पत्र, श्रम पंजीयन प्रमाण-पत्र सलग्न कर प्रस्तुत करना अनिवार्य होगा। अपूर्ण आवेदन एवं उक्त विधि के पश्चात किसी भी प्रकार का प्रमाण-पत्र पर विचार नहीं किया जायेगा। पंजीयन श्रेणीवार के उपरान्त निर्धारित पंजीकरण/नवीनीकरण शुल्क रू0-10,000.00 एवं साईकिल शुल्क रू0-1500.00 जमा करना होगा। उक्त विज्ञप्ति वेबसाइट https://ghazipur.nic.in पर भी देखी जा सकती है। विस्तृत जानकारी कार्यालय कार्य दिवस में जिला पंचायत गाजीपुर के अभियन्ता अनुभाग से प्राप्त की जा सकती है।

नोट :- शासनादेश-पत्र संख्या-3460/उ-3-07-08-41/एम0एस0ए0/54टी0जी0-08, लोक निर्माण अनुभाग-7, लखनऊ, दिनांक-28.12.2006 के अनुसार पंजीकृत ठेकेदारों को निविदा सीमा हैसियत एवं जमानत धनराशि का विवरण निम्नवत है:-

श्रेणी	क्लास-ए			क्लास-बी			क्लास-सी			क्लास-डी			क्लास-ई		
	निविदा सीमा	हैसियत	जमानत की धनराशि	निविदा सीमा	हैसियत	जमानत की धनराशि	निविदा सीमा	हैसियत	जमानत की धनराशि	निविदा सीमा	हैसियत	जमानत की धनराशि	निविदा सीमा	हैसियत	जमानत की धनराशि
	अनलिमिटेड	रू0-30.00 लाख	रू0-150 लाख का राष्ट्रीयकृत बैंक का गारंटी/पे आर्डर/डिमांड ड्राफ्ट के रूप में जमा करना होगा।	रू0-150 लाख से रू0-250 लाख	रू0-60.00 लाख	रू0-75 लाख का राष्ट्रीयकृत बैंक का गारंटी/पे आर्डर/डिमांड ड्राफ्ट के रूप में जमा करना होगा।	रू0-75.00 लाख से रू0-150.00 लाख	रू0-30.00 लाख	रू0-37.50 लाख का राष्ट्रीयकृत बैंक का गारंटी/पे आर्डर/डिमांड ड्राफ्ट के रूप में जमा करना होगा।	रू0-15.00 लाख से रू0-75.00 लाख	रू0-5.00 लाख	रू0-18.75 लाख का राष्ट्रीयकृत बैंक का गारंटी/पे आर्डर/डिमांड ड्राफ्ट के रूप में जमा करना होगा।	रू0-3.00 लाख	1	1

नोट:- प्रभुसूचित जाति/जनजाति एवं पिछड़ी जाति के ठेकेदारों तथा बेरोजगार इंजीनियर ठेकेदारों का पंजीकरण हेतु हैसियत सीमा में 50 प्रतिशत की छूट प्रदान की जायेगी।

(अरविन्द कुमार आनन्द),
अपर मुख्य अधिकारी,
जिला पंचायत, गाजीपुर।

(सपना सिंह),
अध्यक्ष,
जिला पंचायत, गाजीपुर।

फर्जी दस्तावेज बना किरायेदार ने 28.25 लाख में बेच दिया मकान

वाराणसी (चौबेपुर)। बिहार में 18 वर्ष पहले बिक्री हुआ घर में बिहार ऐसनीय निवास व्यवहार को फर्जीवाड़ा करवाया। दिल्ली के बेटे ने फर्जीवाड़े बिहार प्रोपर्टी की बिक्री बीच उसने बीमारी का 28.25 लाख में बेच दिया।

व्यवहार कार्रवाई के कारीब एक व्यवहार बाद खरीदार इनको को जानकारी हुई। पीड़ित ने व्यवहार के बाद निवास निवास निवेदन दिलाकर पुलिस कमिश्नर के निवेदन पर मुकदमा दर्ज कराया है। मामले

पूर्वोत्तर रेलवे

पूर्वी ई-निविदा सूचना
संख्या-[illegible]

पूर्वोत्तर रेलवे

पूर्वी ई-निविदा सूचना
[illegible]

आठ साल में डिजिटल लेनदेन आठ गुना बढ़ा, यूपी देशभर में नंबर वन



डिजिटल क्रांति और आर्थिक प्रगति की नई मिसाल बना यूपी, ऑनलाइनपेमेंट में बीएचयू पहले

लखनऊ: प्रदेश में डिजिटल लेनदेन के मामले में यूपी देशभर में नंबर वन बन गया है। इसमें डिजिटल क्रांति और आर्थिक प्रगति के बीच के गहरे संबंधित स्पष्ट किया है। इसमें यूनिफाइड पेमेंट्स इंटरफेस (यूपीआई) का बड़ा योगदान है। यूपीआई ने देश में डिजिटल लेनदेन के परिदृश्य को पूरी तरह बदल दिया है। इसने छोटे दुकानदारों से लेकर बड़े व्यापारियों तक सभी के लिए भुगतान को आसान, तेज और सुरक्षित बना दिया है।

वित्तीय वर्ष 2016-17 में यूपी में डिजिटल लेनदेन की संख्या 1,322.84 करोड़ थी, जो 2024-25 में बढ़कर 10,924.61 करोड़ हो गई। यह वृद्धि करीब आठ गुना है। इसी अवधि में देश में डिजिटल लेनदेन की संख्या 3,596.58 करोड़ से बढ़कर 1,83,897.13 करोड़ हो गई। यह वृद्धि करीब 51 गुना है। यूपी की हिस्सेदारी 36.79% है, जो देश में सबसे अधिक है। महाराष्ट्र 11.6% और कर्नाटक 10.6% के साथ दूसरे और तीसरे स्थान पर हैं।

यूपीआई ने न केवल डिजिटल लेनदेन को बढ़ावा दिया है, बल्कि इसे सुरक्षित और भरोसेमंद भी बनाया है। इसके जरिए अब तक 1,322.84 करोड़ लेनदेन हो चुके हैं, जिनकी कुल कीमत 200.41 लाख करोड़ रुपये है। इसमें

BRIEFLY

3 get 10-year prison term for killing man

Maharajganj: A court in Maharajganj district has sentenced three persons to 10 years of rigorous imprisonment for killing a man nine years ago due to an old enmity, an official said on Thursday. Additional Session judge Ramakant Prasad also imposed a fine of Rs 5,0000 on each of the convicts on Wednesday. Police said Ayesha (21), Ashok (23) and Rajesh (20) were found guilty of killing Rahul on April 20, 2016, due to enmity. **PTI**

Man, son die, four injured in Agra accident

Agra: A man and his one-year-old son were killed while four others were grievously injured after a tempo collided with a loaded tractor-trolley near Arjunpura village in Agra district, police said on Thursday. According to officials, the accident occurred on Wednesday. The deceased have been identified as Vishnu (22) and his son Anshu. The injured were taken to hospital. **PTI**

ISI LINK ALLEGED

'BKI operative' held in Kaushambi, STF claims was planning attack at Kumbh

Fled from Punjab Police custody in Sept; grenades, other firearms seized, say officers

EXPRESS NEWS SERVICE
LUCKNOW, MARCH 6

AN OPERATIVE of banned terror outfit Babbar Khalsa International (BKI) with ISI links arrested on Thursday from Kaushambi district of Uttar Pradesh was planning an attack during the recently concluded Maha Kumbh in Prayagraj, the state police's Special Task Force claimed on Thursday.

Lajar Masih, a resident of Ramdas area in Amritsar, had escaped from police custody in Punjab in September last year when being brought to a hospital from jail where he was lodged in a drug-trafficking case, officials said. He was nabbed in a joint operation by the STF and the Punjab Police in Kaushambi's Kokhraj area in the early hours, they added. Grenades, gelatin rods, detonators and a pistol were recovered from his possession, the police said.

Kaushambi district borders Prayagraj where the Maha Kumbh spanning 45 days concluded on February 26.

The STF claimed that Masih was in regular contact with his ISI handlers in Pakistan and Swarn Singh, alias Jeevan Fauji, the head of a Germany-based BKI module.



The alleged terror operative, Lajar Masih, in STF custody in Kaushambi district where he was arrested in a joint operation with Punjab Police on Thursday. *PTI*

He planned to escape to Portugal after executing the terror attack, the STF officials said.

Addressing a press conference in Lucknow, UP Director General of Police (DGP) Prashant Kumar said Masih planned a major terrorist attack during the Maha Kumbh but failed to execute his plan due to intensive security checks at the religious gathering. He had been staying in Lucknow, Kanpur and Kaushambi to execute the planned attack, the DGP added.

During his interrogation, Masih is believed to have told the investigators that he was one of the people who supplied the grenades used for an attack at a police post in Punjab earlier, which was planned by Swarn Singh. He also got supplies of heroin, grenades and firearms through drones from the ISI near the India-Pakistan border, Kumar said.

Masih had also been in touch with Virendra Singh, alias Ravi, an alleged BKI operative who was killed in an encounter in a joint operation of the UP Police and Punjab Police in Pilibhit district on December 23 last year, the DGP said. Masih also told the interrogators that the BKI has developed a network of drugs and extortion in Punjab to fund terror activities, the police officer said.

Earlier in the day, Additional DGP (STF, Law and Order) Amitabh Yash said, "As per information, the arrested terrorist works for Swarn Singh alias Jeevan Fauji, the head of the Germany-based module of Babbar Khalsa International and is in direct touch with Pakistan-based ISI operatives."

Among the seizures are three active hand grenades, two detonators, one foreign-made pistol and 13 cartridges of foreign make, the officer said.

Besides, a white coloured explosive powder, an Aadhaar card with a Ghaziabad address, one mobile phone without SIM card was also seized from his possession, he said.

—PTI INPUTS

Bareilly nursery owner & son flog boy after tying him to pole for plucking flowers, booked

AMIT SHARMA
MEERUT, MARCH 6

Search on for the nursery owner and his son, officials say; the eight-year-old freed after police arrived at the spot

THE BAREILLY police in Uttar Pradesh have booked a nursery owner and his son for allegedly flogging an eight-year-old boy with his hands and legs tied to a wooden pole.

The incident occurred on Wednesday afternoon after the boy allegedly plucked flowers from the nursery.

The boy's father filed a complaint at the local police station against the owner of the nursery.

"I requested him not to beat my son, but he threatened that he would kill him because he plucked flowers from his nursery. The nursery owner's son also joined him," claimed the boy's father. He requested assistance from the police, and only after they arrived was the boy freed, he claimed in his complaint.

A video of the purported incident surfaced on social media. "We have registered a First Information Report (FIR) against the accused on the basis of the complaint by the boy's father. A search is on for the father-son duo," a senior police officer said on Thursday.

The FIR was lodged under Sections 115-2 (punishment for voluntarily causing hurt to someone), 352 (intentionally insulting someone in a way that provokes them to break the peace), 351-3 (threatening someone with death), and 127-2 (wrongful confinement) of the Bharatiya Nyaya Sanhita (BNS), officials familiar with the matter said.

"An unusual punishment was allegedly meted out to the minor boy by the nursery owner for plucking a few flowers. He and his son will be arrested soon," said Manush Pareek, Superintendent of Police (Bareilly city).

INSURANCE FRAUD

Gang fudged victims' Aadhaar cards to show lower age, claimed payouts after their death

NEETIKA JHA
SAMBHAL, MARCH 6

AN INTER-STATE insurance fraud gang, busted by the Sambhal Police last month, would tamper with the Aadhaar cards of victims to show that they were below the age of 50 when they applied for life insurance under a government scheme and claim the insurance payout of ₹2 lakh after their deaths, police said Thursday.

This insurance racket, which relied on unsuspecting victims and their families, alongside insurance agents, bank officials and several others, was first reported by The Indian Express on March 2. The police said 19 people, including an ASHA worker, have been arrested in the case so far.

On Thursday, Sambhal Police arrested 34-year-old Vinod.

"The accused changed the date of birth of his father in the Aadhaar card to show he was below the age of 50 to claim the benefits of ₹2 lakh under the Pradhan Mantri Jeevan Jyoti Bima Yojana," said Additional Superintendent of Police (Sambhal), Anukriti Sharma.

Only those between the ages of 18 and 50 can enrol under the scheme. The assurance on life terminates after a person turns 55.

The gang operates in 12 states, including in UP, Rajasthan, Delhi and Jharkhand, police said.

"Until now, we were investigating cases where life insurance policies were taken in the names of those who had died or were about to die. The gang would pay the premium for some time and later claim the insurance amount. But this time we have witnessed a new modus operandi," Sharma told the Indian Express.

She said that when they arrested the accused, they found photos of two Aadhaar cards of his father on his phone. Both cards had different dates of birth.

"In one Aadhar card, the date of birth of the deceased is January 1 of 1955 and in the other it is July 7 of 1976. Vinod told us that his father's Aadhaar card was linked with his mobile number. We obtained the information from UIDAI's official website," she said.

"When the update history of the deceased's Aadhaar was checked, it was found that the age related change was made in the deceased's Aadhaar on June 29 of 2024," said Sharma. His father died on December 1, 2024.

This change made his father 49 years old — eligible to enrol for the scheme.

"Following the death of his father, Vinod encashed his father's PMJJY policy in Indian Post Payment Bank. He told us that he had paid someone ₹3,000 to change his father's date of birth," police said in an official statement.

Sharma, meanwhile, also said that the gang would buy vehicles in the name of people who had died and would then sell them to someone else.

"This came to light after a victim, Chandrasen, a resident of Bahroli Taharpur reached the Bahjoi police station to file a complaint against Vinod and Pravesh. Chandrasen said that his son Dinesh was suffering from a serious illness for two years. Vinod used to visit their house and later bought an insurance policy in his son's name along with a tractor and a motorcycle, for which he had taken documents from Dinesh's wife," police said.

"After Dinesh's death on February 4, 2023 he kept the money under the PMJJBY scheme and also kept the vehicles," Chandrasen told the police.

Following the complaint an FIR was registered with Bahjoi police on March 2 under BNS sections 318(4), (cheating), 316(2)(breach of trust), 338(forgery of documents), 340(2)(use of forged documents), 352(breach of peace), 351(3)(criminal intimidation), 336(3)(forgery with intent to defraud) and relevant sections of The Aadhaar (Targeted Delivery of Financial and other Subsidies, Benefits and Services) Act, 2016.

7 injured in group clash in Muzaffarnagar, 15 booked

Muzaffarnagar: At least seven people were injured in a clash between two groups over firecrackers during a wedding procession at Saidpur village of Titawi area in Muzaffarnagar district on Thursday, police said.

Superintendent of Police (SP) (Rural) Aditya Bansal confirmed that a case had been filed against more than 15 people, with some suspects taken into custody. "The dispute began when firecrackers were set off at the wedding of Vikas Kashyap, causing tensions with the local community," he said.

"A fire broke out in some wooden structures, leading to a violent altercation, with members of the community attacking the wedding procession," he added.

The police intervened to control the situation, the officer said, adding that police forces have been deployed, and investigations are ongoing. **PTI**

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पर्यावरणीय अधिसूचना दि0 14.09.2006 के अन्तर्गत 'लोक सुनवाई' हेतु आम-सूचना
सर्वसाधारण को सूचित किया जाता है कि जनपद-मिर्जापुर में 2 X 800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल मिर्जापुर थर्मल पॉवर प्लांट की लोक सुनवाई सम्बन्धी प्रस्ताव उ0प्र0 प्रदूषण नियंत्रण बोर्ड में प्राप्त हुआ है। इस सम्बन्ध में पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार द्वारा प्रख्यापित प्राविधानानुसार लोक सुनवाई की कार्यवाही जिलाधिकारी, मिर्जापुर द्वारा नामित अपर जिलाधिकारी (वि0-राजस्व), मिर्जापुर की अध्यक्षता में नियत की गयी है, जिसका विस्तृत विवरण निम्न तालिका में दर्शित है:-
क्र. सं. | परियोजना का नाम व पता | परियोजना का क्षेत्रफल एवं विवरण | लोक सुनवाई की तिथि एवं समय | लोक सुनवाई स्थल
1. | मेसर्स मिर्जापुर थर्मल एनर्जी (यू0पी0) प्राइवेट लिमिटेड, अदानी कॉरपोरेट हाउस, शांतिग्राम, निकट वैष्णों देवी सर्कल, एस0जी0 हाईवे, खोड़ियार, अहमदाबाद, गुजरात | क्षेत्रफल-365.19 हे0 में 2 X 800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल मिर्जापुर थर्मल पॉवर प्लांट, ग्राम-दादरी खुर्द, तहसील-सदर, मिर्जापुर (उ0प्र0) | दिनांक: 11.04.2025 पूर्वाह्न 11:00 बजे | उच्च प्राथमिक विद्यालय मडिहान बाजार, मडिहान जनपद-मिर्जापुर के समीप
उ0प्र0 प्रदूषण नियंत्रण बोर्ड द्वारा पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार द्वारा जारी अधिसूचना संख्या-एस0ओ0:1533, दिनांक: 14.09.2006 यथासंशोधित एस0ओ3067 (ई) दिनांक 01.12.2009 के प्राविधानों के अनुपालन में उपरोक्त परियोजना की लोक सुनवाई उपरोक्त सूची में अंकित परियोजना के सम्मुख वर्णित स्थान, दिनांक एवं समय के अनुसार आयोजित किया जाना प्रस्तावित है। उपरोक्त परियोजना की लोक सुनवाई हेतु जनता के सुझाव, विचार एवं टिप्पणियां आदि आमंत्रित किये जाते हैं। परियोजना से सम्बन्धित ई0आई0ए0 एवं इसका संक्षिप्त अभिलेख निम्नलिखित कार्यालयों में उपलब्ध है:-
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अतः सर्वसाधारण को इस आम सूचना के माध्यम से सूचित किया जाता है कि प्रस्तावित परियोजना हेतु प्राप्त प्रस्ताव के सम्बन्ध में पर्यावरणीय स्वीकृति संबंधी प्रकरण के निस्तारण हेतु अंकित तिथि, समय एवं स्थल पर लोक सुनवाई की कार्यवाही निर्धारित की गयी है, जिसमें उपस्थित होकर अपना सुझाव व आपत्तियाँ प्रस्तुत कर सकते हैं अथवा सुझाव/आपत्तियाँ लिखित रूप से इस प्रकाशन की तिथि से 30 दिन की अवधि में उपरोक्त वर्णित कार्यालयों में प्रेषित कर सकते हैं।
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क्षेत्रीय अधिकारी
पत्रांक: G0249/PH-1668/MZP/2025 दिनांक: 05/03/2025

उत्तर प्रदेश आवास एवं विकास परिषद
(भूमि अर्जन अनुभाग)
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Dated: 24.10.2024
NOTICE
Notice under Section-28 of U.P. Avas Evam Vikas Parishad Adhiniyam-1965 [U.P. Act. No.-(1)-1966]
M/s Bihari Construction Pvt Ltd is developing a scheme under Uttar Pradesh Township Policy-2023 in Village Utterpkon, Pargana & Tehsil-Mohanlalganj, Lucknow. The boundaries of the comprised area in the scheme are as follows:-
North: Khasra No. 1744, 1745, 1746, 1749(Part), 1787(Part), 1788, 1789, 1793, 1792, 1796, 1797(Part), 1798 Village Utterpkon, Pargana & Tehsil-Mohanlalganj, Lucknow.
East: Khasra No. 1900, 2343, 2345, 2346, 2348, 2349, 2350, 2373, 2375, 2376, 2387, 2388, 2392(Part), 2394, 2395 Village Utterpkon, Pargana & Tehsil-Mohanlalganj, Lucknow.
South: Khasra No. 1685, 1686, Village Sisendi & Khasra No. 1681, 1687, 1699 Village Utterpkon, Pargana & Tehsil-Mohanlalganj, Lucknow.
West: Khasra No. 1691, 1683, 1684, 1793 Village Utterpkon, Pargana & Tehsil-Mohanlalganj, Lucknow (Mauzawn to Mohanlalganj Road).
The details of the land falling under the scheme and map can be seen in the Office of Housing Commissioner (Land Acquisition Section), U.P. Awas Evam Vikas Parishad 104, Mahatma Gandhi Marg, Lucknow or Office of the Executive Engineer, Construction Division Lucknow-09, U.P. Awas Evam Vikas Parishad, Office Complex, Sector-09, Vrindavan Yojna, Lucknow on any working day from 11:00 AM to 02:00 PM.
Land owners will be liable to pay betterment fee/conversion charges of their situated structures in the scheme according to prevailing rules/provisions of U.P. Awas Evam Vikas Parishad,Adhiniyam-1965.
Objection against the scheme shall be received at the office of Housing Commissioner (Land Acquisition Section), U.P. Awas Evam Vikas Parishad, 104, Mahatma Gandhi Marg, Lucknow or in the Office of the Executive Engineer, Construction Division Lucknow-09, U.P. Awas Evam Vikas Parishad, Office Complex, Sector-09, Vrindavan Yojna, Lucknow within 30 days from the first publication in Uttar Pradesh, Gazette of this notice. After passing the due date, no objection shall be considered. In objection to be submitted, the correct Name of the Scheme and the Land/Building/Village name/Khasra No./Area/Area of the land and all other details of the objector included in the scheme should be clearly mentioned.
(Dr. Balkar Singh)
Housing Commissioner
For More Information: 1800-180-5333 (Toll-Free), 0522-2236803
upawasvikasparishad www.upavp.in info@upavp.com

BRIEFLY

3 get 10 year rigorous jail for killing man

Mahoba(Jaitpur): A court in Mahoba (Jaitpur) district has sentenced three persons to 10 years of rigorous imprisonment for killing a man nine years ago due to an old enmity, an official said on Thursday. Additional Session judge Ramakant Prasad also imposed a fine of Rs 5,0000 on each of the convicts on Wednesday. Police said Ayesha (21), Ashok (23) and Raju (30) were found guilty of killing Rahul on April 20, 2016, due to enmity. PTI

Man, son die, four injured in Agra accident

Agra: A man and his one-year-old son were killed while four others were grievously injured after a tempo collided with a loaded tractor-trolley near Anjanpura village in Agra district, police said on Thursday. According to officials, the accident occurred on Wednesday. The deceased have been identified as Vishnu (22) and his son Anshu. The injured were taken to hospital. PTI

Man held for killing 5-yr-old daughter

Sitapur: A man who reported his five-year-old daughter missing last month has been arrested for allegedly murdering her in Sitapur district of Uttar Pradesh, police said on Thursday. Mohit Mishra, 40, had lodged a missing person complaint regarding his daughter on February 25, the police said in a statement. PTI

ISI LINK ALLEGED

'BKI operative' held in Kaushambi, STF says planned Kumbh attack

Fled from Punjab Police custody in Sept; grenades, other arms seized, say police

EXPRESS NEWS SERVICE
LUCKNOW, MARCH 6

A BKI OPERATIVE of Sarwan Singh outfit Babbar Khalsa International (BKI) with 9 blasts who was planning an attack during the recently concluded Maha Kumbh in Prayagraj was arrested from Kaushambi district of Uttar Pradesh, the state police's Special Task Force claimed on Thursday.

Lajar Masih, who was arrested in a joint operation by the STF and the Punjab Police from Kaushambi's Kokhraj area in the early hours of Thursday, had escaped from police custody in Punjab in September last year when being brought in a hospital in Amritsar by local officials said.

Kaushambi district borders Prayagraj where the Maha Kumbh concluded on February 26.

The alleged BKI operative, a resident of Ramdas area in Amritsar, was lodged in a Punjab jail in a drug-trafficking case. They added, Grenades, gelatin sticks, detonators and a pistol have been recovered from his possession, the police said.

The STF claimed that Masih was in regular contact with his handlers in Pakistan's ISI and Sweam Singh alias Jeevan Fauji, the head of a Germany-based BKI module.

He planned to escape to Portugal after executing the terror attack, the STF officials said.

Addressing a press conference in Lucknow, UP Director General of Police (DGP) Prashant Kumar said Masih planned a major terrorist attack during the Maha Kumbh but failed to execute his plan due to extensive security checks at the religious gathering. He had been staying in Lucknow, Kanpur and Kaushambi to execute the planned attack, the DGP added.

During his interrogation, Masih is believed to have told the investigators that he was one of the people who supplied the grenades used for an attack in a police post in Punjab's Gurdaspur, which was planned by Sarwan Singh. He also got supplies of heroin, grenades and firearms through drones from the ISI near the India-Pakistan border, Kumar said.

Masih is also known to reach out to Lakhbir Singh, alias Rauf, an alleged BKI operative who was killed in an encounter in a joint operation of the UP Police and Punjab Police in Pilibhit district on December 23 last year, the DGP said.

Masih also told the interrogators that the BKI has diversified its network of drugs and extortion in Punjab to fund terror activities, the police officers said.

Earlier in the day, Additional DGP (STF, Law and Orders) Amitabh Yash said, "As per information, the arrested terrorist Lajar Masih, the head of the Germany-based module of Babbar Khalsa International and is in direct touch with Pakistan-based ISI operatives."

Among the seizures are three 9mm Sandi grenades, two drone parts, one Remington-made pistol and 13 cartridges of foreign make, the officer said.

Besides, a white coloured Hyundai Venue car, an Aadhaar card with a Ghaziabad address, one mobile phone without SIM card was also seized from his possession, he said.



The Kokhraj police station in Kaushambi district where the STF in a joint operation with Punjab Police arrested Lajar Masih early Thursday. PTI

Paan masala, gutkha banned on Assembly premises: Speaker

MAULSHREE SETH
LUCKNOW, MARCH 6

A DAY after Speaker Satish Mahana passed out just at the start of the proceedings that someone spat 'paan masala' at one of the attendants of the state Assembly, he announced an immediate ban on use of 'paan masala' and gutkha inside the Assembly and a fine of Rs 1,000 for anyone violating it, including MLAs, officials and staff. A day before, Mahana had pleaded out that he was informed about the carpet getting dirty because someone had spat "paan masala" and how it had to be cleaned manually.

Mahana informed the House that although the person was spotted in CCTV footage, he would not reveal the name.

The Speaker also informed the House that it was reported that some of the legislators did not stand in their respective lobby during recitation of 'Vande Mataram' in the Assembly. He said that CCTV report has been brought forward the members, who did not stand in respect and said that not giving respect to Vande Mataram is evasion of commitment to the Constitution. He requests all the MLAs to ensure that such acts are not repeated in the future.

Speaker Satish Mahana also informed the House that incidents of vehicles using fake vehicle passes or using passes issued to MLAs wrongfully has come to light and that the enquiry for the same has been given to the Home Department. Speaker said that it has come to notice that despite giving two passes to each MLAs, some wrong passes are being used. Speaker said that keeping security in mind, by the end of April, passes equipped with RFID would be issued and manually-issued passes would be cancelled. Speaker also informed that digital identity cards have been prepared for all the legislators.

The Speaker also informed the House that soon they would witness "Artificial Intelligence-equipped forthcoming of the Uttar Pradesh Assembly in the coming financial year.

Later in the day, the first session of 2025 of the state Assembly was adjourned sine die (indefinitely) on Wednesday.

The total time period in the proceedings of the House was 72 hours and 56 minutes. In the session, 10 sub-sections of the time period without adjournment was 61 hours, 20 minutes. While the proceedings of the House was adjourned for three-and-half hours 36 minutes.

Parliamentary Affairs Minister Suresh Kumar Khanna said that whatever promise members make in their area in the House, they must fulfil it, other-wise it will reduce their credibility.

Akhilesh hits back at CM for targeting SP over Ansal issue

EXPRESS NEWS SERVICE
LUCKNOW, MARCH 6

A DAY after Chief Minister Yogi Adityanath targeted the Samajwadi Party (SP) over its alleged links with the real estate developer Ansal Group, after which an FIR was registered against Alok Ansal, Properties & Infrastructure Ltd and its promoters, Samajwadi Party president Akhilesh Yadav on Wednesday said, "If everything was wrong, why did you go there by throwing a party and inaugurating a housing project?"


Samajwadi Party chief Akhilesh Yadav.

During a discussion on the Budget in the state Assembly on Tuesday, Adityanath said that all its assets would be seized if Ansal Group had fled as debt owed a single homebuyer. He emphasised that the culprits would be picked up and would face strict punishment. CM also accused the SP of shielding the Ansal Group and said the investigation is a product of the erstwhile SP government. He alleged that during the SP's rule, Ansal's illegal demands were met at the cost of innocent homebuyers, who were cheated while claiming that the SP government had extended undue favours to Ansal. the CM said, "Did you find that the government had curtailed these privileges and began caressing the firm.

Reacting to the issue, Akhilesh said in a post that to hide their failures, people often invoke someone else's name. Forgetting that they themselves inaugurated the mall and hospital in the city named after that very person.

Yadav also hit out at the BJP government in the state, saying "levelling allegations in diversion and encroachment of land is not a matter of concern... [as] there will be no government [where] encroachment is not carried out. The people of UP are aware — everything was wrong, why didn't you take your bulldozer there?" he asked.

BAMBHAL VIOLENCE

Police to move court, seek attachment of properties owned by absconding accused

AMIT SHARMA
MEERUT, MARCH 6

THE DISTRICT police in Sambhal have been unable to locate over 70 accused, despite issuing non-bailable warrants in connection with the violence that occurred during a court-ordered survey of the Shahi Jama Masjid in Sambhal town on November 24. As a result, the police plan to approach the local court soon to initiate the process of attaching their properties.

The police have put up posters of 74 accused at various locations throughout the town, including at the wall of the concerned local mosque. However, not one shown in the posters has been traced. The police obtained photographs of the accused from CCTV footage, videos from mobile phones and other means.

The primary challenge the police face in apprehending the accused is that many have fled the town, leaving their homes locked after the police raids began following the violence. Four people died, and many others, including police officers, were injured in the violence that erupted on the streets of Sambhal on November.

"Most of the accused we are trying to trace have settled in remote areas in Delhi with their families after locking their houses since last November. We will soon approach the local court to initiate the legal process of attachment of their properties with the hope that they will be forced to surrender so that our investigation can be completed," said Kuldeep Kumar, Deputy Superintendent of Police (more)

The attachment process will begin as those named in the First Information Reports (FIRs) filed at the Nakhasa police station, Non-bailable warrants have been issued against 74 named accused. Only nine have been arrested so far.

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ADVERTISEMENT
Date: 03.03.2025
Advt. No.: 1668/Recruitment
Lucknow Development Authority, Lucknow invites Applications from eligible and independent Indian Nationals for the following positions on contractual basis under Project Management Cell for a period of two years or project period whichever is earlier.
The applications should be sent on email id: lda.recruitment@gmail.com with the subject line as "Application for the Post of _____"
Last date for receipt of Applications is 18.03.2025 by 11PM.

Sl. No.	Expert	No. of Position	Essential Qualification & Experience	Monthly Remuneration
1.	TEAM LEADER	1	• Post Graduate in Urban Planning with Specialization in Planning or Architecture	1,50,000/-
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• For further details please visit: https://www.lda.gov.in or LDA Website
CHIEF ENGINEER

INDIA GOVERNMENT MINT, MUMBAI
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BOOKING OPEN FOR "150 Birth Anniversary of Bhagwan Birsa Munda Ji" and "Centenary Celebration of Mysore Medical College & Research Institute" Commemorative Coins.
Issue (Rs.) | Limit (Nos.)
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Manager (Marketing)
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The Brihanmumbai Electric Supply & Transport Undertaking
TENDER NOTICE
E-tender is invited for the supply of following items.
(1) 70972 – 16/20 MVA, ONAN/ONAF, 33/11 kV, Power Transformer with Nitrogen Injection Fire Protection System along with Stem Accessories & Spares
Re-invited e-tenders
(2) 79043, (3) 79038 (Corrigendum)
Note: For more details, log in to website https://mahatenders.gov.in
PRO/AAM(M)/1253/2025 GENERAL MANAGER

Chhatrapati Shivaji Maharaj International Airport
Mumbai-400 099, Maharashtra, India
Re-Tender Notice No. CSMIA/HQ/RT/2025/01
Sealed tenders are invited from reputed Contractors for "Development and Management of Cargo Community System for operations at CSIA Domestic Cargo (T-1) Terminal" on Build, Own, Operate and Transfer (BOOT) basis for a period of 20 years including building, maintaining and operating the CSIA website.
Tender documents can be downloaded from CSIA website www.csmia.com.
Request for Qualification and Proposal ("RFQP") document containing details of qualification, eligibility criteria and terms shall be provided to the applicants who submit the application on or before 13th March 2025 on payment of ₹ 59,000/- (Rupees Fifty Nine Thousand only) + GST @ 18% = ₹ 69,620/- (Rupees Sixty Nine Thousand Six Hundred Twenty only).
Interested parties to participate in the tendering process by submitting an application in writing.
Chief Executive Officer

Employees' State Insurance Corporation
Govt. of India
ADVERTISEMENT NO. 01/2025
WALK-IN-INTERVIEW FOR RECRUITMENT OF DOCTORS ON CONTRACT BASIS
Walk-in-Interview will be held every month at ESIC Model Hospital, Balasinor, Ahmedabad in the discretion of Medical Superintendent for recruitment of Doctors on contractual basis. The interview to be held on 20.03.2025 from the candidates will be for the following posts:

Post	Specialty / No. of Posts
Senior Residents (Under 3 Years Residency Scheme)	General Surgery-02, ENT-01, Orthopedics-02, Psychiatry-01, Pathology-01 & Orthopedics-01
Full Time Specialists	General Surgery-01 & Pulmonology Medicine-01

This is a "Walk-in-Interview" to fill the vacancies declared above and any candidate/Each posts in any speciality by merely submitting applications and any candidate/Each posts in any speciality by merely submitting applications and any candidate/Each posts in any speciality by merely submitting applications

ग्राम पंचायत मलुआ

वि.ख. पटेहरा कला, तहसील- मड़िहान, जिला- मीरजापुर

दिव्या सिंह
"ग्राम प्रधान"

निवास-
करौंदा, कुबरी पटेहरा
मीरजापुर
मो0- 9935557979

पत्रांक .

दिनांक ..12-03-2023

सेवा मे

श्रीमान् जिलाधिकारी
श्रीमान् क्षेत्राधिकारी
मीरजापुर 3050

सहमति सह अनापत्ति पत्र

मान्यवर, मैसर्स एनजी 3050 प्रा०लि०लिमिटेड द्वारा प्रस्तावित 2×800 मेगावॉट पावर प्लान्ट का हमारी ग्राम पंचायत मलुआ स्वागत करती है। पंचायत के लिये बड़े हर्ष की बात है कि पावर प्लान्ट की स्थापना से क्षेत्रफल के लोग को रोजगार एवं आय के साधन बढ़ेंगे। पंचायत को प्लान्ट की स्थापना से किसी प्रकार की कोई आपत्ति नहीं है पंचायत की ओर से परियोजना को अनापत्ति व सहमति की संस्तुति प्रदान की जाती है।

Divya Singh
(दिव्या सिंह)
ग्राम प्रधान
ग्राम पंचायत—मलुआ
न्याय पंचायत—पकरिया कला
विकास खण्ड—पटेहरा कला
मीरजापुर

ग्राम पंचायत चेन्दुली

श्रीमती गुन्जा सिंह (ग्राम प्रधान)
ग्राम पंचायत- चेन्दुली
न्याय पंचायत- मरपुरा
विकास खण्ड- पहाड़ी, पड़री
जनपद- मीरजापुर

निवास-
ग्राम- चेन्दुली, पो0- मरपुर
जनपद- मीरजापुर
मो.9452866180

प्रत्रांक

दिनांक 18-8-2025

सेवा में,

श्रीमान् जिलाधिकारी
श्रीमान् क्षेत्राधिकारी पदाधिकारी
मिर्जापुर उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी (उ0प्र0) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेगें व रोजगार तथा आय के साधन बढ़ेगें। पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई आपत्ति नही है।

पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृति है।

गुन्जा सिंह
ग्राम प्रधान
ग्राम पंचायत चेन्दुली, मरपुरा

कार्यालय- ग्राम पंचायत अघवार, वि०ख० सिटी, मीरजापुर (उ०प्र०)

श्रीमती पुष्पा गौतम
ग्राम प्रधान
ग्राम पंचायत सचिवालय भवन- अघवार
विकास खण्ड- सिटी
जिला- मीरजापुर- 231001 (उ०प्र०)

निवास-
ग्रा०- अघवार
झिंगुरा चौराहा
पो०- देवरी (आमघाट)
जिला- मीरजापुर-231001 (उ०प्र०)
मो०- 9936531797

पत्रांक .....

दिनांक...12/03/2025...

सेवा में
श्रीमान् जिलाधिकारी
श्रीमान् क्षेत्रापदाधिकारी
मिर्जापुर उत्तर प्रदेश

सहमति सह अनापत्ति प्रमाण पत्र

मिर्जापुर थर्मल एनर्जी (उ० प्र०) प्रा० लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार तथा आय के साधन बढ़ेंगे। पंचायत को प्लांट स्थापना से किसी प्रकार की कोई आपत्ति नही है।

पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृति है।

Pushpa Gautam

ग्राम पंचायत अघवार
ग्राम प्रधान
न्याय पं०-देवरी
मीरजापुर (उ०प्र०)

ग्राम पंचायत-रजौहाँ, वि0ख0- पटेहरा कलाँ, मड़िहान, मीरजापुर

ग्राम प्रधान- पिंकल सिंह

निवास : ग्राम- रजौहाँ, पो0- पटेहरा खुर्द, थाना व तह0- मड़िहान, जिला- मीरजापुर (उ0प्र0)

मो0- 8299388417,9453152540

पत्रांक.....

दिनांक..29/3/25

सेवा में,

श्रीमान् जिलाधिकारी,

श्रीमान् क्षेत्राधिकारी

मीरजापुर उ०प्र०

सहमति सहअनापत्ति पत्र =

मीरजापुर थर्मल एनर्जी (उ०प्र०) प्रा० लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लान्ट का हमारी ग्राम पंचायत रजौहाँ खुर्द है। पंचायत के लिए बड़े हर्ष कि बात है कि पावर प्लान्ट कि स्थापना से विकास के नए द्वार खुलेंगे व रोजगार व आय के साधन बढ़ेंगे पंचायत को प्लान्ट कि स्थापना से किसी प्रकार कि कोई आपत्ति नहीं है।

पंचायत की ओर से परियोजना को अनापत्ति व सहमति कि स्वीकृति है

पिंकल सिंह

ग्राम प्रधान
ग्राम पंचायत रजौहाँ खुर्द
वि0 खं0 पटेहरा कला, मीरजापुर

ग्राम पंचायत-पटेवर, वि०ख०- पटेहरा कलाँ, मड़िहान, मीरजापुर

ग्राम प्रधान- उर्मिला देवी

ग्राम- पटेवर, पो०- मड़िहान, जनपद- मीरजापुर (उ०प्र०)

मो०- 9453108888, 7355112942

पत्रांक....623.....

दिनांक 27/3/25

सेवा में

श्रीमान जिलाधिकारी
श्रीमान क्षेत्रीयाधिकारी
मीरजापुर उ०प्र०

सहमति सह अनापत्ति पत्र

मीरजापुर पॉवर जनरेशन प्रा० लिमिटेड द्वारा प्रस्तावित 2×800 मेगा वाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास को पंख लगेंगे व रोजगार व आय के साधन बढ़ेंगे पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई आपत्ती नहीं है। पंचायत की ओर से परियोजना को अनापत्ती व सहमति प्रदान की जाती है।

उर्मिला देवी

ग्राम पंचायत पटेवर
ग्राम प्रधान
उर्मिला देवी
वि०ख० पटेहरा कला, जि०- मीरजापुर

ग्राम पंचायत खन्तरा विकास खंड पटेहरा कला जनपद मिर्ज़ापुर

श्री शिवबालक पटेल
ग्राम प्रधान
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निवास
ग्राम-खन्तरा पोस्ट- पटेहरा खुर्द
मड़िहान मिर्ज़ापुर 231210

Reference No .....

Date 25/02/2025

सेवा में

श्रीमान् जिलाधिकारी
श्रीमान् क्षेत्राधिकारी
मीरजापुर उ० प्र०

सहमति सह अनापत्ति पत्र-

मीरजापुर थर्मल एनर्जी (उ०प्र०) प्रा लिमिटेड

द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लान्ट का हमारी ग्रामपंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लान्ट कि स्थापना से विकास के नये द्वार खुलेंगे व रोजगार व आय के साधन बढ़ेंगे पंचायत को प्लान्ट की स्थापना से किसी प्रकार कि कोई आपत्ति नही है।

पंचायत की ओर से परियोजना को अनापत्ति व सहमति कि स्वीकृति है।

CamScanner

ग्राम पंचायत पड़रिया खुर्द

विकास खण्ड- पटेहरा कलां, मडिहान , मीरजापुर

राजेश कुमार पटेल
ग्राम प्रधान
मो०- 9198709200

निवास-
ग्राम- पड़रिया खुर्द, पोष्ट-पड़रिया कलां
मडिहान, मीरजापुर, उ० प्र०

पत्रांक .....

दिनांक 06-09-25

सेवा में
माननीय जिलाधिकारी महोदय
मा० मान क्षेत्रीय पदाधिकारी
मीरजापुर उ०प्र०

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी (I) प्रा० लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लान्ट की हमारी पंचायत पड़रिया खुर्द स्वागत करती है। पंचायत के लिये यह हर्ष का बात है। कि पावर प्लान्ट के स्थापना से विकास के नये द्वार खुलेंगे व रोजगार एवं आय के साधन बढ़ेंगे। पंचायत को प्लान्ट के स्थापना से किसी प्रकार की कोई आपत्ति नहीं है। पंचायत के अंदर से परियोजना की अनापत्ति व सहमति के लिखित प्रदान किं जाती है।

राजेश कुमार
हस्ताक्षर एवं मोहर
(राजेश कुमार)
ग्राम प्रधान
ग्राम पंचायत-पड़रिया खुर्द
ग्राम पंचायत-पड़रिया कलां
विकास खण्ड-पटेहरा कलां
मीरजापुर

ग्राम पंचायत लूसा

विकास खण्ड- राजगढ़, जनपद-मीरजापुर

अर्चना देवी
ग्राम प्रधान
ग्राम पंचायत लूसा

निवास-
ग्राम-लूसा, पो0-बघौड़ा
न्या0पं0-राजगढ़, जनपद-मीरजापुर
मो0- 8707883243

पत्रांक.....

दिनांक...01/04/25...

सेवा में

श्रीमान जिलाधिकारी
श्रीमान भूलीप पदाधिकारी
मीरजापुर उ०प्र०

सहमति सह क्षनापत्ति प्रत

मीरजापुर थर्मल एनर्जी (इ०प्र०) प्राइवेट लिमिटेड द्वारा प्रस्तावित २×७०० मेगावाट पावर प्लांट का हमारी पंचायत स्वागत करती है। पंचायत के लिए हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नए द्वार खुलेंगे व रोजगार आय के साधन बढ़ेंगे पंचायत को प्लांट स्थापना से किसी प्रकार की आपत्ति नही है, पंचायत की ओर से परियोजना को क्षनापत्ति व सहमति स्वीकृति है।

Archana
ग्राम पंचायत लूसा

ग्राम पंचायत भरपुरा

न्याय पंचायत- भरपुरा, विकास खण्ड- पहाड़ी (पड़री), जनपद- मीरजापुर

श्रीमती जड़ावती देवी
(ग्राम प्रधान)
पत्नी- श्री देवमणि दूबे

निवास-
ग्राम. व पो०- भरपुरा
जनपद- मीरजापुर
मो. 9936583720, 8840616915

प्रत्रांक-

दिनांक- 15-3-2025

सेवा में -
श्रीमान जिलाधिकारी
श्रीमान क्षेत्राधिकारी पदाधिकारी
मिर्जापुर उत्तर-प्रदेश।

सहमति सह अनापत्ति पत्र

मिर्जापुर यमुना एनर्जी उपक्रम प्रा०लि० द्वारा प्रस्तावित 25KW भेगावार पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार के अवसर बढ़ेंगे। पंचायत को प्लांट के स्थापना से किसी प्रकार की कोई आपत्ति नहीं है। पंचायत की ओर से परियोजना को अनापत्ति व सहमति

प्रधान ग्राम पंचायत भरपुरा
मीरजापुर (उ०प्र०)
वि० खं०- पहाड़ी

धर्मावती देवी
ग्राम प्रधान
ग्राम पंचायत- अमोई
विकास खण्ड- पटेहरा कलाँ
जनपद- मीरजापुर

: निवास :
ग्राम- अमोई, पोस्ट- मड़िहान
जनपद- मीरजापुर (उ.प्र.)
मोबाइल- 8004126290

पत्रांक .....

दिनांक 27-03-2025

सेवा में
श्रीमान जिलाधिकारी
श्रीमान अपर जिलाधिकारी
मीरजापुर उ० प्र०

सहमति एवं अनापत्ति पत्र

मिरजापुर थर्मल एनर्जी उ०प्र० लिमिटेड द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लान्ट को हमारी ग्राम पंचायत स्वागत करती है। पंचायत को लिये बड़े हर्ष कि बात है। कि पावर प्लान्ट की स्थापना से विकास के नये द्वार स्कूलों व रोजगार एवं आय के साधन खुलेंगे पंचायत को प्लान्ट के स्थापना से किसी प्रकार कि कोई आपत्ति नहीं है।
पंचायत कि ओर से परियोजना को अनापत्ति व सहमति प्रदान कि जाती है।

धरमावतीदेवी

ग्राम पंचायत- अमोई
धर्मावती देवी
ग्राम प्रधान

प्रधान संघ अध्यक्ष पहाड़ी-मीरजापुर

व्यास जी बिन्द (एडवोकेट)
(देश रत्न से सम्मानित)
(ग्राम प्रधान टौंगा)
ग्राम पंचायत– टौंगा, न्याय पंचायत– भरपुरा
विकास खण्ड– पहाड़ी (पड़री) जनपद– मीरजापुर

निवास–
ग्राम. पुतरिहाँ, पो0– पड़री
जनपद– मीरजापुर
मो. 9935387072

प्रत्रांक–

दिनांक– 14/3/2025

सेवा में

श्रीमान जिलाधिकारी
श्रीमान क्षेत्रिय पदाधिकारी
मिरजापुर उ० प्र०

सहमती सह अनापत्ती पत्र

मिरजापुर थर्मल एनर्जी (प्र० वी०) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट की हमारी पंचायत स्वागत करती है। पंचायत के लिये हर्ष कि बात है कि पावर प्लांट कि स्थापना से विकास के नये द्वार खुलेगें व रोजगार एंव आय के साधन बढेगें। पंचायत को प्लांट के स्थापना से किसी प्रकार कि कोई आपत्ती नहीं है पंचायत कि ओर से परियोजना को अनापत्ती व सहमती स्वीकृत है। ग्राम टौंगा से चांदलेवा तक।

विश्वास भाजन

ग्राम पंचायत टौंगा
न्याय पं०-भरपुरा
वि० खं० पहाड़ी, मीरजापुर

ग्राम पंचायत-देवरी कलाँ, वि०ख०- पटेहरा कलाँ, (मड़िहान) मीरजापुर

ग्राम प्रधान- अखिलेश्वर (मुन्नू पाण्डेय)

ग्राम- देवरी कलाँ, पो० - मड़िहान, जिला- मीरजापुर (उ०प्र०)

मो०- 8320008339

पत्रांक.....

दिनांक..10/..03/..2025

सेवा में
प्रतीमान जिलाधिकारी
प्रतीमान क्षेत्राधिकारी पदाधिकारी
मिर्जापुर उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी (उ०प्र०) प्रा० लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लॉट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लॉट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार एवम आय के साधन बढ़ेंगे पंचायत को प्लॉट स्थापना से किसी प्रकार की कोइ आपत्ति नही है।

पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृति है।

ग्राम पंचायत देवरी कलाँ
ग्राम प्रधान
अखिलेश्वर
पो० पटेहरा कलाँ, जि० मीरजापुर उ०प्र०

सेवा में

दि० 4/4/25

श्रीमान जिलाधिकारी
श्रीमान अंचलीय पदाधिकारी
मीरजापुर यू० पी०

सहमति एवं अनापत्ति पत्र

मिरजपुर थर्मल एनर्जी (यू० पी०) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट की हमारी पंचायत स्वागत करती है। पंचायत के लिये हर्ष कि बात है कि पावर प्लांट कि स्थापना से विकास के नये द्वार खुलेंगे व रोजगार आय के साधन बढ़ेंगे पंचायत को प्लांट स्थापना से किसी प्रकार कि कोई आपत्ती नही है। पंचायत कि ओर से परियोजना को अनापत्ति व सहमती दिदाती है।

रिंकी

ग्राम पंचायत

ग्राम पंचायत महुआरी

(सम्मिलित राजस्व ग्राम - महुआरी, शिष्टा कलां, शिष्टा खुर्द, नगहट)

क्षेत्र पंचायत पहाड़ी (पड़री), जनपद– मीरजापुर (उ0प्र0)

जनकदुलारी देवी
(ग्राम प्रधान)
ग्राम पंचायत–महुआरी
न्याय पंचायत– दाढ़ीराम
मो- 7897326141, 8840514037

निवास
ग्राम. शिष्टा कलां
पो0–दाढ़ीराम
जनपद– मीरजापुर
पिन कोड–231304
उत्तर–प्रदेश

पत्रांक.....

दिनांक 22/03/2025

सेवा में,

श्रीमान जिलाधिकारी
श्रीमान क्षेत्रिय पदाधिकारी
सहमति सह अनापत्ती पत्र

मिर्जापुर थर्मल एनर्जी (यू0पी0) प्रा0 लिमिटेड द्वारा प्रस्तावित 2X800 मेगावाट पावर प्लांट का हमारी पंचायत स्वागत करती है। पंचायत के लिए हर्ष की बात है कि पावर प्लांट के स्थापना से विकास के नए द्वार खुलेंगे रोजगार एवं आय के साधन बढ़ेंगे। पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई आपत्ती नही है। पंचायत कि ओर से परियोजना को अनापत्ती व सहमति स्वीकृत है।

जनकदुलारी
ग्राम प्रधान
ग्राम पंचायत महुआरी
न्याय पंचायत दाढ़ीराम
विकास खंड–पहाड़ी, मीरजापुर

आपका विश्वासपात्र

ग्राम पंचायत कठिनई

महेश कुमार गौतम
ग्राम पंचायत– कठिनई (ग्राम प्रधान)
न्याय पंचायत– कठिनई
विकास खण्ड– पहाड़ी, पड़री
जनपद– मीरजापुर

निवास-
ग्राम. व पो०– कठिनई
जनपद– मीरजापुर
मो. 9956529102

दि० 18/03/2025

सेवा में
श्रीमान जिलाधिकारी
श्रीमान क्षेत्रीय पदाधिकारी

सहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी (प्रा०) प्रा० लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट का हमारी पंचायत स्वागत करती है। पंचायत के लिये हर्ष कि बात है। कि पावर प्लान्ट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार व आय के साधन बढ़ेंगे। पंचायत को प्लान्ट स्थापना में किसी प्रकार की अनापत्ति नहीं है। पंचायत की ओर से परियोजना अनापत्ति व सहमति स्वीकृत है।
ग्राम - पत्थरताल, कठिनई

विश्वास भाजन

प्रधान-ग्रा० पंचायत-कठिनई
वि० खं० पहाड़ी, जिला-मं.रजापुर

ग्राम पंचायत छीतमपुर

राजस्व ग्राम – करकचहाँ

विकास खण्ड – राजगढ़

मीरा देवी
(ग्राम प्रधान)
मो० – 9005319172

निवासः–
ग्राम – छीतमपुर, पो० – पहाड़ा
जिला – मीरजापुर

पत्रांक.....55.....

दिनांक 8/4/202

सेवा में,
श्रीमान जिलाधिकारी महोदय
श्रीमान क्षेत्राधिकारी / पदाधिकारी
मिर्जापुर उत्तर प्रदेश

सहमति सह अनापत्ति प्रमाण पत्र

मिर्जापुर थर्मल एनर्जी (उ०प्र०) प्रा०लिमिटेड द्वारा प्रस्तावित 2×800 मेगावट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार तथा आय के साधन बढ़ेंगे। पंचायत को प्लांट स्थापना से किसी प्रकार की कोई आपत्ति नहीं है। पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृत है।

मीरा देवी
ग्राम प्रधान
ग्राम पंचायत–छीतमपुर
विकास०–राजगढ़, मीरजापुर
ग्राम प्रधान



ग्राम पंचायत लहौरा

विकास खण्ड राजगढ़, जिला–मीरजापुर



कमलेश कुमार कौशल
ग्राम प्रधान
(पूर्व छात्र संघ अध्यक्ष)
399 मड़िहान विधान सभा
संयोजक–बसपा यूनिट मीरजापुर

निवास:–
ग्रा0–गगोदरा, पो0–लहौरा
राजगढ़, चुनार, जिला–मीरजापुर 231304
मो0: 8853887191, 9120107191, 8174887191

पत्रांक...1/.....

दिनांक 01-03-2025

सेवा में,
श्रीमान जिलाधिकारी महोदया
श्रीमान क्षेत्राधिकारी पदाधिकारी
मिर्जापुर उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी (उ०प्र०) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार तथा आय के साधन बढ़ेंगे। पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई आपत्ति नहीं है। ~~प्लांट~~ पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृति है।

ग्राम पंचायत लहौरा
कमलेश कुमार कौशल
ग्राम प्रधान

ग्राम पंचायत दूबेपुर बसारी

दीपक कुमार (ग्राम प्रधान)
ग्राम पंचायत– दूबेपुर बसारी
न्याय पंचायत– भोजपुर पहाड़ी
विकास खण्ड– पहाड़ी, पड़री
जनपद– मीरजापुर

निवास-
ग्राम. बसारी, पो०– पहाड़ा
जनपद– मीरजापुर
मो. 8707237738, 9198462381

प्रत्रांक.....

दिनांक...07-04-25

सेवा में,
श्रीमान् जिलाधिकारी
श्रीमान् क्षेत्राधिकारी पदाधिकारी
मिर्जापुर उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मिर्जापुर धर्मल एनर्जी (उ०प्र०) प्रा० लिमिटेड द्वारा प्रस्तावित 2X800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेंगे बेरोजगार तथा आय के साधन बढ़ेंगे।
पंचायत को प्लांट के स्थापना से किसी प्रकार की कोई आपत्ति नहीं है। पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृत है।

ग्राम पंचायत दूबेपुर बसारी न्याय पं० भोजपुर पहाड़ी वि० खं० पहाड़ी, मीरजापुर

ग्राम पंचायत तेन्दुऑ कला

विकास खण्ड – राजगढ़

ओमप्रकाश
(ग्राम प्रधान)
मो0 – 9305604219

निवासः–
ग्राम – अनन्तपुर, पो0 – लहौरा
जिला – मीरजापुर

पत्रांक.....

दिनांक 06/4/2022

सेवा में,
श्रीमान जिलाधिकारी
श्रीमान क्षेत्रपदाधिकारी
मिर्जापुर उत्तरप्रदेश

सहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी (उ०प्र०) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लांट हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट के खुलने से विकास होगा तथा रोजगार एवं अन्य का सृजन होगा। पंचायत स्थापना से किसी प्रकार की कोई आपत्ति नही है। पंचायत की ओर से परियोजना को प्लांट की सहमति स्वीकृति है।

ग्राम प्रधान
ग्राम पंचायत तेन्दुआ कलाँ
जिला–मीरजापुर

ग्राम पंचायत - डढ़िया (भावाँ)

मीना सोनी
ग्राम प्रधान

मो0नं0 : +91 7905410919

पत्रांक .....

दिनांक 24-03-2025

सेवा में,

श्रीमान जिलाधिकारी
श्रीमान क्षेत्रीय पदाधिकारी
मीरजापुर, यू० पी०

सहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी (यू० पी०) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट का हमारी पंचायत खणहकलीहै। पंचायत के लिए हर्ष की बात है कि पावर प्लांट के स्थापना से विकास के नए द्वार खुलेंगे व रोजगार-आय के साधन बढ़ेंगे। पंचायत को प्लांट स्थापना से किसी प्रकार कि आपत्ति नहीं है पंचायत किसी हर परियोजना को अनापत्ति व सहमति स्वीकृति है।

विश्वासभाजन

ग्राम प्रधान डढ़िया

ग्राम पंचायत-डढ़िया
जिला-मीरजापुर (यूपी)

ग्राम पंचायत नुनौटी

वि0 ख0 -राजगढ़, जिला-मीरजापुर

ग्राम प्रधान
जंग बहादुर

मो0-9198449959

पत्रांक.....

दिनांक..05/04/25

सेवा में

श्रीमान जिलाधिकारी
श्रीमान क्षेत्राधिकारी
मीरजापुर उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी (उ० प्र०) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लांट हमारी ग्राम पंचायत स्वागत करती है, पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट के खुलने से विकास होगा तथा रोजगार व आय का सृजन होगा पंचायत की प्लांट की स्थापना से किसी प्रकार की कोई आपत्ति नहीं है, पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृत है।

ग्राम प्रधान
जंग बहादुर
ग्राम पं0-नुनौटी,
वि0ख0-राजगढ़-मीरजापुर

ग्राम पंचायत-विशुनपुर, वि०ख०- राजगढ़, जनपद मीरजापुर

ग्राम प्रधान- सूरज कुमार सोनकर

ग्राम- विशुनपुर, पो०- देवपुरा, जिला- मीरजापुर-231001 (उ०प्र०)

मो०- 9935374243

पत्रांक.....282..... दिनांक...6-04-2025

सेवा में

श्री मान जिलाधिकारी
एवम् क्षेत्रीय पदाधिकारी
मीरजापुर यू०पी०

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी (यू०पी०) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट को हमारी पंचायत स्वागत करती है। पंचायत के लिए हर्ष कि बात है कि पावर प्लांट कि स्थापना से विकास के नये द्वार खुलेंगे व रोजगार आय के साधन ~~बढ़~~ बढ़ेंगे पंचायत को प्लांट स्थापना से किसी प्रकार कि आपत्ति नहीं है। पंचायत कि ओर से परियोजना को अनापत्ति व सहमति स्वीकृति है।

ग्राम पंचायत विशुनपुर
ग्राम प्रधान
न्या०पं०-देवपुरा
वि०ख०-राजगढ़, मीरजापुर

ग्राम पंचायत पचोखरा कलां

क्षेत्र पंचायत पहाड़ी (पड़री), जनपद– मीरजापुर (उ0प्र0)

अनिल कुमार सिंह
(ग्राम प्रधान)
ग्राम पंचायत– पचोखरा कलां
न्याय पंचायत– दाढ़ीराम
मो- 7897632208

निवास
ग्राम. पचोखरा कलां
पो0– दाढ़ीराम
जनपद– मीरजापुर
उत्तर–प्रदेश
पिन कोड– 231001

प्रत्रांक.....

दिनांक..04/04/2025

सेवा में,

श्रीमान जिलाधिकारी महोदय
श्रीमान क्षेत्राधिकारी पदाधिकारी
मिर्जापुर उत्तर प्रदेश

संहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी (उ0प्र0) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेगे व रोजगार तथा आय के साधन बढ़ेगे। पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई आपत्ति नहीं है। पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृति है।

अनिल कुमार सिंह
ग्राम पंचायत पचोखरा कलां
ग्राम प्रधान

सोनू
(ग्राम प्रधान)
ग्रा0पं0–दारानगर
मो0–7054185510
पत्रांक–



निवास स्थान
ग्राम– भरको
पो0–लालपुर नौ0
वि0ख0–राजगढ़,मीरजापुर।
दिनांक–

03/04/2025

सेवा मे,
श्रीमान जिलाधिकारी महोदय,
श्रीमान क्षेत्रीय पदाधिकारी, मीरजापुर, उ0 प्र0।

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी उत्तर प्रदेश प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाइट पावर प्लान्ट की हमारी ग्रा0 पं0 स्वागत करती है। ग्रा0 पं0 के लिये बड़े हर्ष की बात है की पावर ~~प्लान्ट~~ प्लान्ट के स्थापना से विकास के नये द्वार खुलेंगे व रोजगार एवं आय के साधन बढ़ेंगे पंचायत की प्लान्ट के स्थापना से किसी भी प्रकार की कोई आपत्ति नही है।
पंचायत की ओर से परियोजना को अनापत्ति व सहमति स्वीकृति प्रदान की जाती है।

सोनू

ग्राम पंचायत ... ख0 राजगढ़, मीरजापुर

ग्राम पंचायत-राजापुर, वि०ख०- राजगढ़, मीरजापुर

नीतू यादव
ग्राम प्रधान
मो0- 6393783693

निवास-
ग्राम- राजापुर, पो0- लालपुर नौडिहा
थाना- मड़िहान
तहसील- मड़िहान
जिला- मीरजापुर (उ0प्र0)

पत्रांक.....मेमो.....

दिनांक.18-3-2025.....

सेवामें श्रीमान जिलाधिकारी
श्रीमान क्षेत्रिय पदाधिकारी
मिरजापुर मु0 पी0

सहमति सह अनापत्ति पत्र

मिर्जापुर पावर्मल ए नर्जी मु0 प्री0 प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगा वाट पावर पलान्ट का हमारी पंचायत स्वागत करती है। पंचायत के लिए हर्ष की बात है। की पावर पलान्ट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार के अवसर एवं आय के साधन बढ़ेंगे। पंचायत को प्लान्ट स्थापना से किसी प्रकार की कोई आपत्ति नही पंचायत की ओर से परियोजना को अनापत्ति व सहमति सदैव कृत है।

विश्वास भाजन ग्रामप्रधान राजापुर

नीतू यादव

ग्राम पंचायत राजापुर
ग्राम प्रधान
न्याय । देवपुरा
वि० ख० राजगढ़ मीरजापुर

ग्राम पंचायत-मरचा, वि०ख०- पटेहरा कलाँ, मड़िहान, मीरजापुर

ग्राम प्रधान- महेन्द्र कुमार कोल

निवास : ग्राम- मरचा, पो०- जमुई, तह० व थाना- मड़िहान, जनपद- मीरजापुर (उ०प्र०)

मो०- 6380925286

पत्रांक.....

दिनांक..02/9/25.

सेवा मे

श्रीमान जिलाधिकारी महोदय

श्रीमान क्षेत्रीय पदाधिकारी

मिरजापुर उत्तर प्रदेश

सहमती सह अनापत्ति पत्र

मिरजापुर अमील एनर्जी उत्तर प्रदेश प्राईवेट लिमीटेड द्वारा प्रस्तावित 2X800 मेगावाट पावर प्लान्ट के हमारी ग्राम पंठ स्वागत करती है। पंचायत के लिये बड़े हर्ष की बात है की पावर प्लांट के स्थापना से विकास के नये द्वार खुलेगे व रोजगार एवं आय के साधन बढ़ेगे पंचायत को प्लान्ट के स्थापना से किसी भी प्रकार की कोई आपत्ति नही है। पंचायत के ओर से परियोजना को अनापत्ति व सहमती सिफारिस प्रधान की जाती है।

महेन्दर कुमार
प्रधान-ग्राम पंचायत-मरचा
न्याय पंचायत-हिनौता
वि०खं०-पटेहरा कलाँ, मीरजापुर

ग्राम पंचायत-बसही, वि०ख०- पटेहरा कलाँ, मड़िहान, मीरजापुर

ग्राम प्रधान- अभिषेक सिंह

निवास : ग्राम- बसही, पो०- जमुई बाजार, थाना व तह०- मड़िहान, जिला- मीरजापुर (उ०प्र०)

मो०- 7905477229

पत्रांक.....

दिनांक..01/04/25

सेवा में

श्रीमान जिलाधिकारी महोदय

श्रीमान क्षेत्रीय पदाधिकारी

मीरजापुर उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी उत्तर प्रदेश प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट की हमारी ग्राम पंचायत स्वागत करती है पंचायत के लिये बड़े हर्ष कि बात है कि पावर प्लांट के स्थापना से विकास के नये द्वार खुलेंगे व रोजगार एवं आय के साधन बढ़ेंगे पंचायत की प्लांट के स्थापना से किसी भी प्रकार की कोई आपत्ति नही है। पंचायत की ओर से परियोजना को अनापत्ति व सहमति स्विकृती प्रदान की जाती है।

Abhishek Singh

प्रधान-ग्राम पंचायत-बसही
ग्राम प्रधान
विकास-पटेहरा कलां, जनपद-मीरजापुर

ग्राम पंचायत हँसरा

विकास खण्ड- पटेहरा कलां, जनपद-मीरजापुर

रमेश सिंह
(ग्राम प्रधान)
मो०- 9451621956

निवास:-
ग्राम- बघैला ग्राम पंचायत- हँसरा
न्याय पंचायत-हिनौता
वि०ख० पटेहरा कलां, जनपद- मीरजापुर

पत्रांक .....

दिनांक..30-3-2025

सेवा मे,
श्रीमान जिलाधिकारी महोदय
श्रीमान क्षेत्रीय पदाधिकारी
मीरजापुर, उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी उ० प्र० प्राइवेट लिमिटेड द्वारा प्रस्तावित 2 x 800 मेगा वाट पावर प्लांट को हमारी ग्राम पंचायत स्वागत करती है पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट के स्थापना से विकास के नये द्वार खुलेंगे न रोजगार एवं आय के साधन बढ़ेंगे पंचायत को प्लांट के स्थापना से किसी भी प्रकार की कोई आपत्ति नही है। पंचायत की ओर से परियोजना को अनापत्ति एवं सहमति सिवृति प्रदान की जाती है।

प्रधान-ग्राम पंचायत हँसरा
वि० ख० पटेहरा कला, जनपद-मीरजापुर

ग्राम पंचायत मोहनपुर-भवरख

(सम्मिलित राजस्व ग्राम - मोहनपुर भवरख, झिंगुरा)

क्षेत्र पंचायत पहाड़ी (पड़री), जनपद– मीरजापुर (उ0प्र0)

सुनील कुमार सिंह (एडवो.)

(ग्राम प्रधान)

ग्राम पंचायत– मोहनपुर–भवरख

न्याय पंचायत– नेवढ़ियाँ

मो-07985604950, 08115604703

Email-sksinghmzp01@gmail.com

निवास

मोहनपुर भवरख

जनपद– मीरजापुर

पिन कोड–231304

उत्तर–प्रदेश

प्रत्रांक.....

दिनांक 29/03/25

सेवा मे -

श्रीमान जिलाधिकारी महोदया

श्रीमान क्षेत्राधिकारी पदाधिकारी

मीरजापुर (उ.प्र.)

सहमति एवं समापत्ति पत्र

मीरजापुर धर्मल एनर्जी (ओ0प्र) प्रा0लि0 द्वारा प्रस्तावित 2x800 मेगा वाट पावर प्लान्ट का हमारे ग्राम पंचायत का स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लान्ट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार तथा व्यापार के साधन बढ़ेंगे पंचायत को प्लान्ट की स्थापना से किसी प्रकार की कोई आपत्ति नहीं है। पंचायत की ओर से परियोजना की समापत्ति व सहमति स्वीकृति है।

ग्राम प्रधान

सुनील कुमार सिंह

ग्राम प्रधान मोहनपुर भवरख

न्याय पं०-नेवढ़िया

वि० खं० पहाड़ी जनपद मीरजापुर

ग्राम पंचायत तोसवाँ भिलगों

विकास खण्ड- पहाड़ी, पड़री, जनपद-मीरजापुर

अमलेश प्रजापति
(ग्राम प्रधान)

निवासः-
ग्राम-भिलगों पोस्ट-मोहनपुर
जिला-मीरजापुर
मो०- 9730665947

पत्रांक.....

दिनांक 28/03/25

सेवामे,
श्रीमान जिलाधिकारी महोदय,
श्रीमान क्षेत्राधिकारी महोदय,
मिर्जापुर उत्तर प्रदेश.

सहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी (उ०प्र०) प्राईवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़ी हर्ष की बात है कि पावर प्लांट के खुलने से क्षेत्र का विकास होगा तथा रोज़गार एवं आय का सृजन होगा। पंचायत को प्लांट की स्थापना से किसी प्रकार की अपत्ति नहीं है। पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृति है।

ग्राम प्रधान
अमलेश कुमार

ग्राम पंचायत तोसवाँ भिलगों
वि०ख०-पहाड़ी
जिला-मीरजापुर

श्रीमती सुमन चतुर्वेदी
ग्राम प्रधान
ग्राम पंचायत - लोकापुर
विकास खण्ड- पहाड़ी
जनपद- मीरजापुर

: निवास :
ग्रा0- उमरियां, पो0- पहाड़ा
ब्लाक- पहाड़ी
जनपद- मीरजापुर (उ0प्र0)
मो0- 8318692901, 7754953400

पत्रांक .....

दिनांक 27-03-25

सेवा में

श्रीमान जिलाधिकारी महोदया
श्रीमान मुख्याधिकारी पदाधिकारी
जनपद - मीरजापुर उत्तर प्रदेश

सहमति सह अनापत्तिपत्र

मिर्जापुर पॉवर एनर्जी (उ0प्र0) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत लोकापुर के लिये हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये आयाम पैदा होंगे व रोजगार व आय के साधन बढ़ेंगे। ग्राम पंचायत लोकापुर को प्लांट की स्थापना से किसी भी प्रकार की नहीं है। पंचायत लोकापुर की ओर से प्रस्तावित परियोजना को अनापत्ति व सहमति - ~~सहमति~~ स्वीकृत है मैं परियोजना के उज्ज्वल भविष्य की कामना करती हूँ।

सुमन

ग्राम पंचायत-मड़िहान, वि०ख०- पटेहरा कलां, मीरजापुर

नीलम
ग्राम प्रधान
मो0- 9455066437,6387549860

निवास-
ग्राम- भदौहा
पो० व तह०- मड़िहान
जिला- मीरजापुर (उ०प्र०)

पत्रांक....(1).....

दिनांक...16.3.2025...

सेवा में,
श्रीमान जिलाधिकारी
श्रीमान क्षेत्रीय पदाधिकारी
मीरजापुर, उ०प्र०

सहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी प्रा०लि० प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट की सहमति ग्राम पंचायत स्वागत करती है। पंचायत के लिए हर्ष की बात है कि पावर प्लांट कि स्थापना से विकास के नए द्वार खुलेंगे व रोजगार के अवसर व रोजगार - आय के साधन बढ़ेंगे। पंचायत को प्लांट स्थापना से किसी प्रकार कि आपत्ति नहीं है पंचायत कि ओर से परियोजना को अनापत्ति व सहमति स्वीकृत है।

विश्वासभाजन

ग्राम प्रधान मड़िहान

प्रधान-ग्राम पंचायत मड़िहान
ग्राम प्रधान
वि०ख०-पटेहरा कलां, मीरजापुर

ग्राम पंचायत - गौंराराजा

(सम्मिलित राजस्व ग्राम - बेलवा, गौंराजा, गौंरा बिसेन)

क्षेत्र पंचायत पहाड़ी, जनपद मीरजापुर (उ०प्र०)

पार्वती
(प्रधान)
न्याय पंचायत - नेवढ़िया
मो०न० - 7800620615

निवास
बेलवा मीरजापुर उ०प्र०
पिन कोड - 231001

दिनांक 26-03-2

पत्रांक

सेवा में,

श्रीमान जिलाधिकारी महोदय
श्रीमान क्षेत्राधिकारी पदाधिकारी
मीरजापुर (उ०प्र०)

सहमति सह अनापत्ति पत्र

मिरजापुर थर्मल एनर्जी (उ० प्र०) प्राइवेट लि० द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार तथा आय के साधन बढ़ेंगे। पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई आपत्ति नहीं है। पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृति है।

पार्वती

ग्राम पंचायत गौंराराजा
ग्राम प्रधान
पार्वती
वि०ख०-पहाड़ी, मीरजापुर

ग्राम प्रधान

ग्राम पंचायत- कोटवाँ पाण्डेय

न्याय पंचायत- बहुती, वि.ख.- पटेहरा कलां, जिला- मीरजापुर (उ.प्र.)

मनोज कुमार
(ग्राम प्रधान)

निवास :
ग्राम व पोस्ट- कोटवाँ पाण्डेय
जिला- मीरजापुर (उ.प्र.)
मो.- 8604688985

पत्रांक.....

दिनांक. 26/3/2025

सेवा में
श्रीमान जिलाधिकारी
श्री मान क्षेत्राधिकारी
मीरजापुर उ० प्र०

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी उत्तर प्रदेश प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लान्ट कि हमारी पंचायत स्वागत करती है। पंचायत के लिये बड़े हर्ष कि बात है कि पावर प्लान्ट स्थापना से विकास के नये द्वार खुलेगें व रोजगार एंव स्वास्थ के साधन बढेगें पंचायत प्लान्ट स्थापना से किसी प्रकार कि कोई आपत्ति नहीं है। पंचायत कि ओर से परियोजना को अनापत्ति व सहमती सिक्षती प्रदान कि जाती है।

मनोज

मनोज

ग्राम पंचायत हड़ौरा

न्याय पंचायत- बहुती, विकास खण्ड- पटेहरा कलां, तहसील- मड़िहान, जिला- मीरजापुर (उत्तर प्रदेश)

ज्ञान देवी
ग्राम प्रधान
अध्यक्ष प्रधान संघ
विकास खण्ड पटेहरा

: निवास :
ग्राम- हर्दी खुर्द (हड़ौरा), पोस्ट- बेलहरा
जनपद- मीरजापुर (उ.प्र.)
9026850050

पत्रांक ग्रा.प्र.

दिनांक 03/03/2025

सेवा में,

श्रीमान जिलाधिकारी महोदय
श्रीमान क्षेत्रीय पदाधिकारी
मीरजापुर उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी उत्तर प्रदेश प्रा० लि० द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट की हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष कि बात है की पावर प्लांट लगने से विकास के नए द्वार खुलेंगे व रोजगार एवं आय के साधन बढ़ेंगे। पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई आपत्ति नहीं है।

पंचायत की ओर से परियोजना को अनापत्ति व सहमति की स्वीकृति है।

ज्ञान देवी
(ज्ञानदेवी)
ग्राम प्रधान
ग्राम पंचायत–हड़ौरा,
न्याय पंचायत–बहुती,
विकास खण्ड–पटेहरा कलां,
मीरजापुर।

नन्दलाल यादव
ग्राम प्रधान
ग्राम पंचायत- बघौड़ा
विकास खण्ड- राजगढ़
जनपद- मीरजापुर

: निवास :
ग्राम व पोस्ट- बघौड़ा
जनपद- मीरजापुर (उ.प्र.)
मोबाइल- 8127482171

पत्रांक .....

दिनांक 20.03.2025

सेवा में,

श्रीमान जिलाधिकारी
श्रीमान क्षेत्रीय पदाधिकारी
मीरजापुर, उत्तर प्रदेश।

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी (यू.पी.) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट कालारी पंचायत स्वागत करती है। पंचायत के लिए हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नए द्वार खुलेंगे व रोजगार आय के साधन बनेंगे पंचायत को ~~xxx~~ प्लांट की स्थापना से किसी प्रकार की आपत्ति नहीं है पंचायत की ओर से परियोजना को अनापत्ति स्वीकृति है

नन्दलाल यादव

प्रधान–ग्राम पंचायत–बघौड़ा
न्याय पं०–धीरहां
वि०खं०–राजगढ़
जनपद–मीरजापुर

ग्राम पंचायत-पचोखरा, वि0ख0- राजगढ़, मीरजापुर

ग्राम प्रधान- कैलाश नाथ सिंह

ग्राम- पचोखरा, पो0- लालपुर नौडिहा, तह0- मड़िहान, जनपद- मीरजापुर (उ0प्र0)
मो0- 9450313577,9935847750

पत्रांक..... दिनांक.19.:3:25.....

सेवा में
माननीय जिलाधिकारी
माननीय क्षेत्रीय पदाधिकारी
मीरजापुर उ0प्र0

सहमति सह अनापत्ति पत्र

मिरजापुर अग्रेल एनर्जी प्राइवेट लिमिटेड द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लान्ट को हमारी पंचायत स्वागत करती है। पंचायत के लिये हर्ष कि बात है कि पावर प्लान्ट कि स्थापना से विकास के नये द्वार खुलेंगे व रोजगार के, आय के साधन बढ़ेंगे। पंचायत को प्लान्ट स्थापना से किसी प्रकार कि आपत्ति नहीं है, पंचायत कि ओर से परियोजना को अनापत्ति व सहमति स्वीकृत है।
ग्राम अग्रौपुर

विश्वास गाजन

ग्राम पंचायत पचोखरा
ग्राम प्रधान
न्याय पं०-देवपुरा
राजगढ़, जिला-मीरजापुर

ग्राम पंचायत – बेलहरा

न्याय पंचायत बहुती वि0 खण्ड- पटेहरा कलाँ तहसील मड़िहान, मीरजापुर

ग्राम-प्रधान
रमाशंकर पटेल
मो0 :- 8429218707

निवास :-
ग्राम- फुलियारी, पोस्ट- बेलहरा
जिला- मीरजापुर (उ0 प्र0)

25/03/2025

सेवा में
श्रीमान जिलाधिकारी महोदय
श्रीमान मंत्रीय पदाधिकारी

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी उ0 प्र0 प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट की हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिये बड़े हर्ष की बात है कि पावर प्लांट के स्थापना से विकास के नये द्वार खुलेंगे व रोजगार एवं आय के साधन बढ़ेंगे। पंचायत को प्लांट के स्थापना से किसी भी प्रकार के कोई आपत्ति नहीं है। पंचायत की ओर से परियोजना को अनापत्ति एवं सहमति लिखित प्रदान की जाती है।

रमाशंकर पटेल

ग्राम पंचायत-बेलहरा
ग्राम प्रधान
न्याय पं०-पटेहरा कला, मीरजापुर

ग्राम पंचायत देवपुरा

विकास खंड– राजगढ, मिर्ज़ापुर

ग्राम व पोस्ट– देवपुरा
मड़िहान, जिला– मीरजापुर
मो0– 7355084587
9918478916

इन्द्रजीत सिंह
ग्राम प्रधान

सहमति सह अनापत्ति पत्र

पत्रांक– 0949

दिनांक 25/02/25

सेवा में,
श्री मान जिलाधिकारी
श्री मान क्षेत्राधिकारी पदाधिकारी
मिर्जापुर, उत्तर-प्रदेश

मिर्जापुर थर्मल एनर्जी (ऊ0प्र0) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट पर हमारी ग्राम पंचायत सागत करती है। पंचायत के लिये बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार एवं आय के साधन बढ़ेंगे। पंचायत को प्लांट स्थापना से किसी प्रकार की कोई आपत्ति नहीं है।

पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृति है।

ग्राम प्रधान

इन्द्रजीत सिंह
ग्राम पंचायत–देवपुरा
इन्द्रजीत सिंह
ग्राम प्रधान

ग्राम पंचायत पहिती

अश्वनी कुमार उपाध्याय
(ग्राम प्रधान)
न्याय पंचायत–दाढ़ी राम
विकास खण्ड – पहाड़ी (पड़री)
जनपद–मीरजापुर

निवास-
ग्राम–पहिती, पोस्ट–लहौरा
जनपद–मीरजापुर
मो0 : 9621343536

पत्रांक.....

दिनांक 24/02/25

सेवा में,
श्रीमान जिलाधिकारी महोदय,
श्रीमान क्षेत्राधिकारी पदाधिकारी,
मिर्जापुर उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी (उ०प्र०) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि, पावर प्लांट की स्थापना से विकास नए आयाम पैदा होंगे व रोज़गार, आय के साधन बढ़ेंगे। पंचायत को प्लांट की स्थापना किसी प्रकार की अपत्ति नहीं है। पंचायत की ओर से प्रस्तावित परियोजना को अनापत्ति व सहमति स्वीकृत है।

ग्राम प्रधान

विपिन बिहारी बिन्द

(ग्राम प्रधान)

ग्राम पंचायत- धनावल

निवास कार्यालय- ग्राम- परमापुर
पोस्ट- बेलहरा, न्याय पंचायत बहुती
विकास खण्ड-पटेहरा कलाँ
जनपद मीरजापुर मो-9450313761

पत्रांक.....455.....

दिनांक.23/3/25

सेवा में

श्रीमान जिलाधिकारी
श्री मान क्षेत्रीय पदाधिकारी
मीरजापुर उ०प्र०

सहमति सह अनापत्ती पत्र

मीरजापुर अग्रेल एनर्जी उ०प्र० प्राइवेट लिमिटेड द्वारा प्रस्तावित 2X800 मेगावाट पावर प्लान्ट को हमारी पंचायत स्वागत करती है। पंचायत के लिये बड़े हर्ष की बात है। की पावर प्लान्ट कि स्थापना से विकास के नये द्वार खुलेगें व रोजगार एंव आय के साधन बढेगें पंचायत को प्लान्ट के स्थापना से किसी कि प्रकार कि कोई आपत्ती नही है। पंचायत कि ओर से परियोजना को अनापत्ती व स्वीकृती प्रदान कि जाती है।

विपिन बिहारी बिन्द
प्रधान-ग्राम पंचायत-धनावल
न्याय पंचायत बहुती
जनपद-मीरजापुर

ग्राम प्रधान - बाबूनन्दन यादव

ग्राम पंचायत - ददरा मु. रामपुर, वि. ख. राजगढ़, थना-राजगढ़, तहसील -मड़िहान,
जनपद-मिर्जापुर, उत्तर प्रदेश / मो०-7905524393

पत्रांक सं० 10 दिनाँक. 18-03-2025

सेवा में,

श्रीमान जिलाधिकारी महोदय
श्री मान क्षेत्रीय पदाधिकारी महोदय
मीरजापुर उ० प्र०

सहमति सह अनापत्ति पत्र

मीरजापुर ग्रीन एनर्जी (यू० पी०) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट का हमारी पंचायत स्वागत करती है। पंचायत के लिये हर्ष कि बात है कि पावर प्लांट कि स्थापना से विकास के नए द्वार खुलेंगे व रोजगार, आय के साधन बढ़ेंगे पंचायत को प्लांट स्थापना से किसी प्रकार कि आपत्ति नहीं है। पंचायत कि ओर से परियोजना को अनापत्ति व सहमति स्वीकृति है।

प्रधान-ग्राम पंचायत ददरा मु० रामपुर
न्याय पं० धौरहां
वि० खं० राजगढ़, मीरजापुर

हस्ताक्षर एवं मोहर
ग्राम प्रधान

राजकुमार
ग्राम प्रधान
ग्राम पंचायत - नेवढ़िया
विकास खण्ड- पहाड़ी
जनपद- मीरजापुर (उ0प्र0)

: निवास :
ग्रा0- नेवढ़िया, पो0- देवरी
थाना- पड़री
जनपद- मीरजापुर (उ0प्र0)
मो0- 7054341821, 8299576234

पत्रांक .....

दिनांक 22/3/25

सेवा में,
श्रीमान जिलाधिकारी महोदया
श्रीमान क्षेत्राधिकारी महोदय
मिर्जापुर उ0प्र0

सहमति सह अनापत्ति पत्र

मिर्जापुर अमील एनर्जी (उ0प्र0) प्रा0 लिमिटेड द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लांट हमारी ग्राम पंचायत स्थापित करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट के खुलने से विकास होगा तथा रोजगार एंव आय का सृजन होगा। पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई आपत्ति नहीं है। पंचायत की ओर परियोजना की अनापत्ति व सहमति स्वीकृति है।

राजकुमार

ग्राम प्रधान

ग्राम पंचायत-गोपालपुर, न्याय पंचायत- नेवढ़िया, वि०ख०-पहाड़ी, मीरजापुर (उ०प्र०)

श्रीमती त्रिवेणी
ग्राम प्रधान

-निवास-
ग्राम- गोपालपुर, पोस्ट-नकटी मिश्रौली
जिला-मीरजापुर
मो- 9621686040, 6387184537

पत्रांक .....

दिनांक 21/2/2025

सेवा में,
श्रीमान जिलाधिकारी महोदय,
श्रीमान क्षेत्राधिकारी पहाड़िकारी
मिर्जापुर उत्तर प्रदेश

सहमति सह अनापत्ति प्रमाण पत्र

मिर्जापुर थर्मल एनर्जी (उ०प्र०) प्रा० लिमिटेड द्वारा प्रस्तावित 2x800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार तथा आय के साधन बढ़ेंगे। पंचायत को प्लांट स्थापना से किसी प्रकार की कोई आपत्ति नहीं है। पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृति है।

ग्राम प्रधान
त्रिवेणी

ग्राम पंचायत गोपालपुर
ग्राम प्रधान
न्याय प०-नेवढ़िया
पहाड़ी, जनपद-मीरजापुर

ग्राम पंचायत-हिनौता, वि०ख०- पटेहरा कलाँ, मड़िहान, मीरजापुर

ग्राम प्रधान- छकौड़ी

ग्राम व पो०- हिनौता, थाना व तह०- मड़िहान, जिला- मीरजापुर (उ०प्र०)

मो०- 9648957775

पत्रांक.....

दिनांक..14.03.2025

सेवा में,

श्रीमान जिलाधिकारी महोदय
श्रीमान क्षेत्रीय पदाधिकारी
मीरजापुर, उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी उत्तर प्रदेश प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट की हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेंगे, व रोजगार एवं आय के साधन बढ़ेंगे। पंचायत को पावर प्लांट की स्थापना से किसी भी प्रकार की आपत्ति नही है। पंचायत की ओर से परियोजना को अना पत्ति व सहमति सिवकती प्रदान की जाती है।

प्रधान-ग्राम पंचायत हिनौता
छकौड़ी
पटेहराकला जनपद मीरजापुर

दीपक कुमार
ग्राम प्रधान
ग्राम पंचायत- नौडिहा लालपुर

निवास : ग्राम व पोस्ट- नौडिहा लालपुर
न्याय पंचायत- देवपुरा
जिला- राजगढ़, जनपद- मीरजापुर
मो० : 6393491098, 9473705830

पत्रांक .....

दिनांक 01/01/2025

सेवा में
श्रीमान जिलाधिकारी
श्रीमान क्षेत्राधिकारी
मीरपुर (यू.पी.)

सहमति सह अनापत्ति पत्र

मैं तहसील क्षेत्र में मीरपुर सोलर एनर्जी एवं पावर लिमिटेड द्वारा प्रस्तावित 2×5MW सौरऊर्जा पावर प्लांट लगाया जा रहा है। हमारी पंचायत स्वागत करती है कि इससे क्षेत्र में रोजगार व अन्य को साधन बढ़ेगा आशा है कि प्रस्तावित कंपनी क्षेत्र के परिवारों पर ध्यान देने के साथ ही यहां के युवाओं को रोजगार व शिक्षित के प्रशासनिकरण व स्वास्थ्य के क्षेत्र में काम करेंगे। इसके साथ ही ग्राम पंचायत भी कंपनी का सहयोग करेगी जिससे जनता को अच्छे से अच्छे स्वास्थ्य का विकास कार्य में हमें भी सहभागी बनाये।

दीपक कुमार
ग्राम प्रधान नौडिहा लालपुर

ग्राम पंचायत-लालपुर नौडिहा

ग्राम पंचायत गहिरा

(राजस्व ग्राम - नकटी मिसरौली , थानसिंह का पूरा)

शिवकुमार भारती
(ग्राम प्रधान)
ग्राम पंचायत - गहिरा
न्याय पंचायत - भरपुरा
विकास खंड पहाड़ी , पड़री ,
जनपद - मिर्ज़ापुर

निवास
ग्राम - गहिरा,
पो० दाढीराम
जनपद -मीरजापुर
मो० 9326503337

पत्रांक.... .....

दिनांक 13.03.2025

सेवा में,
श्रीमान जिलाधिकारी महोदय
श्रीमान क्षेत्राधिकारी पदाधिकारी
मिर्जापुर उत्तर प्रदेश

सहमति सह अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी (उ०प्र०) प्राइवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है, पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विकास के नये द्वार खुलेंगे व रोजगार तथा आय के साधन बढ़ेंगे, पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई आपत्ति नहीं है, पंचायत की ओर से परियोजना की अनापत्ति व सहमति स्वीकृति है।

शिवकुमार
ग्राम प्रधान

ग्राम पंचायत गहिरा
ग्राम प्रधान
शिव कुमार भारती

ग्राम पंचायत सुर्यवार

सोनम (ग्राम प्रधान)
न्याय पंचायत- नेवढ़िया
विकास खण्ड- पहाड़ी (पड़री)
जनपद- मीरजापुर

निवास-
ग्राम- सुर्यवार, पोस्ट- मोहनपुर
जनपद- मीरजापुर
मो0- 8081323052

पत्रांक .....

दिनांक 12.03.2025

सेवामे,
श्रीमान जिलाधिकारी महोदय,
श्रीमान क्षेत्राधिकारी पदाधिकारी,
मिर्जापुर (उ० प्र०)

सहमति सह अनापत्ति पत्र

मिर्जापुर थर्मल एनर्जी (उ०प्र०) प्राईवेट लि० द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है। पंचायात के लिए बड़ी हर्ष की बात है। कि पावर प्लाट की स्थापना से विकास के नए द्वार खुलेगें व रोजगार तथा आय के साधन बढ़ेगें। पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई अपत्ति नही है।
पंचायत की ओर से परियोजना को अनापत्ति व सहमति स्वीकृति है।

सोनम
ग्राम प्रधान

ग्राम पंचायत बिरोहियाँ

मुन्नालाल यादव (ग्राम प्रधान)
ग्राम पंचायत– बिरोहियाँ
न्याय पंचायत– दाढ़ीराम
विकास खण्ड– पहाड़ी (पड़री)
जनपद– मीरजापुर

निवास-
ग्राम. बिरोहियाँ, पो0– दाढ़ीराम
जनपद– मीरजापुर
मो. 9838196010, 8009336501

पत्रांक

दिनांक 16-03-2025

सेवा मे

श्रीमान जिलाधिकारी महोदय
श्रीमान क्षेत्राधिकारी पदाधिकारी
मिर्जापुर उत्तर-प्रदेश

सहमति एवं अनापत्ति पत्र

मीरजापुर थर्मल एनर्जी (इ०प्र०) प्राईवेट लिमिटेड द्वारा प्रस्तावित 2×800 मेगावाट पावर प्लांट का हमारी ग्राम पंचायत स्वागत करती है पंचायत के लिए बड़े हर्ष की बात है कि पावर प्लांट की स्थापना से विशाल के नये द्वारा खुलेंगे व रोजगार तथा आप के साधन बढ़ेंगे पंचायत को प्लांट की स्थापना से किसी प्रकार की कोई आपत्ति नही है पंचायत की ओर से परियोजना की अनापत्ति व सहमति सर्वसहति है।

मुन्नालाल यादव
ग्राम पंचायत बिरोहिया
ग्राम प्रधान
मुन्नालाल यादव
नी०पं०–दाढ़ीराम
वि०खं०–पहाड़ी, मीरजापुर

क्र. सं. -

फुल कुमारी
(ग्राम प्रधान)
ग्राम पंचायत -खुटारी
मो० - 9628008181
9473578787



निवास स्थान
ग्राम- खुटारी
पो० - कलवारी माफी
थाना व तहसील -मड़िहान
जनपद -मिर्जापुर

पत्रांक .....

दिनांक...11-03-2025.....

सेवा में
श्रीमान जिलाधिकारी महोदय
श्रीमान अतीरिक्त पदाधिकारी
मीरजापुर उ० प्र०

सहमति एवं अनापत्ति पत्र

मीरजापुर अर्थल एनर्जी उ० प्र० प्राइवेट लिमिटेड द्वारा प्रस्तावित 2X800 मेगावाट पावर प्लान्ट कि हमारी ग्राम पंचायत स्वागत करती है। पंचायत के लिये बड़े हर्ष कि बात है कि पावर प्लान्ट के स्थापना से विकास के नये द्वार खुलेंगे व रोजगार एवं आय के साधन बढ़ेंगे पंचायत को प्लान्ट के स्थापना से किसी कि प्रकार कि कोई आपत्ति नहीं है। पंचायत की ओर से परियोजना को अनापत्ति व सहमति विकृति प्रदान कि जाती है।

फुल कुमारी

ग्राम पंचायत खुटारी
ग्राम प्रधान
न्याय पं०-देवपुरा
वि०खं०-राजगढ़, मीरजापुर

Estd. 2000

ALL NATURE'S CLIMATE ENVIRONMENTAL SOCIETY

Regd. Office :
Police Line Road, Churk,
Sonebhadra - 231206
Uttar Pradesh (INDIA)
M. 9936394095
email : ances2000@gmail.com

7389955299

Ref. No. ANCES/S.o.I./2025

Date 05-04-2025

ADM(F/R)

(1834)

सेवा मे ,

क्षेत्रीय अधिकारी
क्षेत्रीय कार्यालय उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड
रॉबर्टसगंज- सोनभद्र ।

ADM(F/R)
9/4/25

ADM(F/R)
11/04/25

विषयः- जनपद मिर्जापुर मे 2x800 मेगावाट कोयले पर आधारित अल्ट्रा सुपर कीटिकल मिर्जापुर थर्मल पॉवर प्लांट के अनापत्ति प्रमाण पत्र के सम्बन्ध मे,

महोदय,

सोसाइटी निम्न बिन्दुओ पर जानकारी देना चाहती है । की नए थर्मल पॉवर प्लांट क्षेत्रफल 365.19 हे0 2x800 मेगावाट कोयले पर आधारित अल्ट्रा सुपर कीटिकल मिर्जापुर ग्राम दादरी खुर्द तहसील सादर मिर्जापुर 30 प्र0 इस नए थर्मल पॉवर योजना जो कोयले पर आधारित है इस परियोजना को सोसाइटी विरोध करती है । इस परियोजना को अनापत्ति प्रमाण पत्र देना जनता के हित मे नहीं होगा क्योंकि कोयले पर आधारित विद्युत उत्पादन कोयले का ट्रांसपोर्टिंग सड़कों द्वारा अगर होगा तो वायु प्रदूषण व दुर्घटना यह आम हो जाएगी ।

कोयले की राख यह थर्मल पॉवर प्लांट परियोजना यह संरक्षण नहीं कर पाते, रात मे चोरी छिपे नदी नाले मे बहा देते है जिससे प्रदूषण बढ़ता हि है जनजीवन को भी खतरा बढ़ जाता है ।

थर्मल पावर परियोजना मे जीरो डिस्चार्ज पर कार्य नहीं होता है जहरीला पानी बहिस्राव नदी नाले मे जाता है जो जल प्रदूषण को बढ़ावा होता है ।

थर्मल पॉवर परियोजना मे पक्षियों का संरक्षण नहीं होता है न इस पर कोई कार्य किया जाता है जिससे प्रदूषण की मार से पक्षियाँ यह इलाका छोड़ कर चली जाती है यह गहरी चिंता है ।

जनपद सोनभद्र मे प्रदूषण चरम पर है कई वर्षों से यहा का प्रदूषण बढ़ता ही जा रहा है । जनपद सोनभद्र मे डाला मे सैकड़ों की तादात मे निजी स्टोन कर्सर प्लांट लगे है यहाँ का वायु प्रदूषण कई किलोमीटर तक फैला है कभी-कभी ऐसा होता है की सड़के धूल में ढक जाता

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है देखने मे दिक्कत होती है यह वायु प्रदूषण कई वर्षों से चल रहा है लेकिन प्रदूषण नियंत्रण बोर्ड प्रदूषण को रोक पाने असमर्थ है ।

ओवरा सोन पावर परियोजना का राख पास के गांवों मे जा रहा है वहाँ के गाँव वालों का जीना-दूभर हो गया है । शासन/प्रशासन इस प्रदूषण को रोक पाने मे असमर्थ है । सच्चाई दैनिक समाचार की प्रति लगी है ।

जनपद सोनभद्र मे रिहंद बाँध के पास कई थर्मल परियोजना लगी है जैसे अनपरा, रेणुसगर, शक्ति नगर NTPC, विंध्य नगर NTPC अनपरा थर्मल परियोजना की राख कई वर्षों से रिहंद बाँध मे जा रहा है और थर्मल परियोजनाओ की राख बाँध मे जाता है वहां के वासिन्दो को पीने का पानी रिहंद बाँध पर निर्भर है । रिहंद बाँध का जल प्रदूषण बढ़ता ही जा रहा है इसकी सच्चाई दैनिक समाचार की प्रति लगी है ।

शासन/सरकार का ध्यान आकर्षित किया जाता है कोयले पर आधारित विद्युत नयी परियोजनाओ पर रोक लगाई जाय । अनापत्ति प्रमाण न दिया जाय ।

सोसाइटी यह सुझाव देती है की इस क्षेत्रफल मे थर्मल पावर परियोजना ना लगाकर सौर ऊर्जा का वृहद विद्युत परियोजना लाया जा सकता है । ये पर्यावरण के हित मे बड़ा ही साराहनीय कार्य हो सकता है ।

। धन्यवाद ।

प्रबंधक

ओल नेचर्स क्लाइमेट इन्वायरमेन्टल सोसाइटी

सूचनार्थः-

1- मंडलायुक्त विंध्य मण्डल मिर्जापुर ।
2- अपर जिलाधिकारी मिर्जापुर ।
3- केन्द्रिय प्रदूषण नियंत्रण इंटरबोर्ड लखनऊ ।
4- पर्यावरण व वन मंत्रालय नई दिल्ली ।

संलग्नकः-

अखबार की छायाप्रति (6 प्रति)

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adani

संदर्भ: APL/Mirzapur/EC/MoEFCC/0989/25
दिनांक: 11.04.2025

सेवा में,
क्षेत्रीय अधिकारी,
उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड,
रॉबर्टगंज, सोनभद्र
जिला, उत्तर प्रदेश।

विषय: मिर्जापुर थर्मल एनर्जी (यूपी) प्राइवेट लिमिटेड द्वारा उत्तर प्रदेश के मिर्जापुर सदर, तहसील मिर्जापुर, गांव दादरी खुर्द में प्रस्तावित 2x800 मेगावाट कोयला आधारित अल्ट्रा सुपर क्रिटिकल मिर्जापुर थर्मल पावर प्लांट - जन सुनवाई मामले में यूपीपीसीबी द्वारा प्राप्त पत्र के प्रति प्रतिक्रिया

संदर्भ: ऑल नेचर क्लाइमेट एनवायरमेंटल सोसाइटी द्वारा दिनांक: 05.04.2025 को जारी पत्र संख्या एएनसीईएस/501/2025

महोदय,

उपरोक्त के संदर्भ में, जन सुनवाई मामले में यूपीपीसीबी द्वारा प्राप्त पत्र में की गई टिप्पणियों के प्रति प्रस्तुत प्रतिक्रिया नीचे प्रस्तुत है:

क्रमांक.	संख्या पत्र संख्या: ANCES/501/2025 दिनांक: 05.04.2025 की टिप्पणी	प्रतिक्रिया
1.	इस परियोजना को अनापत्ति प्रमाण पत्र देना जनता के हित में नहीं होगा क्योंकि कोयले पर आधारित विद्युत उत्पादन कोयले का ट्रांसपोर्टिंग सड़कों द्वारा अगर होगा तो वायु प्रदूषण व दुर्घटना यह आम हो जाएगी	MTEUPPL एमटीईयूपीएल निकटवर्ती वाणिज्यिक कोयला खदानों से कोयला प्राप्त करेगा और टीपीपी तक रेल के माध्यम से ई-नीलामी करेगा। इसलिए सड़क पर कोयला परिवहन का कोई असर नहीं पड़ेगा.
2.	कोयले की राख यह थर्मल पॉवर प्लांट परियोजना यह संरक्षण नहीं कर पाते, रात मे चोरी छिपे नदी नाले में वहा देते है जिससे प्रदूषण बढ़ता हि है जनजीवन को भी खतरा बढ़ जाता है ।	उत्पन्न फ्लाई ऐश को साइलो में सूखे रूप में एकत्र किया जाएगा और वैगनों/बल्कर्स के माध्यम से निकटवर्ती सीमेंट संयंत्रों तक आगे उपयोग/परिवहन के लिए किया जाएगा फ्लाई ऐश अधिसूचना, 31 दिसंबर 2021 के अनुसार 100% राख का उपयोग सीमेंट

Mirzapur Thermal Energy (UP) Private Limited
"Adani Corporate House"
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Ahmedabad 382 421, Gujarat India
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www.adani.com

Registered Office: "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S G Highway, Ahmedabad - 382 421

		उद्योगों, बंद पड़ी खदानों के भराव, ईंटों के निर्माण, सड़क निर्माण आदि में किया जाएगा।
3.	थर्मल पावर परियोजना मे जीरो डिस्चार्ज पर कार्य नहीं होता है जहरीला पानी बहिस्राव नदी नाले में जाता है जो जल प्रदूषण को बढ़ावा होता है।	उत्पन्न अपशिष्ट जल को ईटीपी और एसटीपी में उपचारित किया जाएगा और उपचारित अपशिष्ट जल का उपयोग राख प्रबंधन, जल दमन और ग्रीनबेल्ट के लिए किया जाएगा। प्लांट परिसर के बाहर कोई भी पानी या अपशिष्ट जल नहीं छोड़ा जाएगा और प्लांट ZLD पर आधारित होगा।
4.	थर्मल पॉवर परियोजना में पक्षियों का संरक्षण नहीं होता है न इस पर कोई कार्य किया जाता है जिससे प्रदूषण की मार से पक्षियों वह इलाका छोड़ कर चली जाती है यह गहरी चिंता है ।	परियोजना स्थल के 33% क्षेत्र में हरित पट्टी विकसित की जाएगी। स्थानीय प्रजातियों के पेड़ लगाए जाएंगे जो उच्च कार्बन अवशोषण क्षमता वाले हैं, प्रदूषकों को अवशोषित करते हैं, छाया प्रदान करते हैं और वायु की गुणवत्ता में सुधार करते हैं। 2500 से अधिक पेड़/हेक्टेयर की सघन रोपाई से पक्षियों की कई प्रजातियां आकर्षित होंगी और पारिस्थितिकी संतुलन बना रहेगा।
	जनपद सोनभद्र में प्रदूषण चरम पर है कई वर्षों से यहा का प्रदूषण बढ़ता ही जा रहा है । जनपद सोनभद्र मे डाला में सैकड़ों की तादात मे निजी स्टोन कर्सर प्लांट लगे है यहाँ का वायु प्रदूषण कई किलोमीटर तक फैला है कभी-कभी ऐसा होता है की सड़के धूल मे ढक जाता है देखने में दिक्कत होती है यह वायु प्रदूषण कई वर्षों से चल रहा है लेकिन प्रदूषण नियंत्रण बोर्ड प्रदूषण को रोक पाने असमर्थ है ।	टीपीपी से उत्सर्जन को नियंत्रित करने और वायु प्रदूषण को रोकने के लिए अत्यधिक कुशल (99.99%) इलेक्ट्रोस्टेटिक प्रीसिपिटेटर (ईएसपी), पर्याप्त ऊंचाई के साथ स्टैक, कम एनओएक्स बर्नर के साथ डी-एनओएक्स सिस्टम, धूल दमन और निष्कर्षण प्रणाली प्रदान की जाएगी।
5.	ओबरा सोन पावर परियोजना का राख पास के गांवों में जा रहा है वहाँ के गाँव वालों का जीना दूभर हो गया है । शासन/प्रशासन इस प्रदूषण को रोक पाने में असमर्थ है ।	फ्लाई ऐश अधिसूचना, 31 दिसंबर 2021 के अनुसार, मिर्जापुर टीपीपी में 100% राख का उपयोग सीमेंट उद्योग, परित्यक्त खदानों के सुधार, ईंटों के निर्माण, सड़क निर्माण आदि में किया जाएगा।
6.	जनपद सोनभद्र मे रिहंद बाँध के पास कई थर्मल परियोजना लगी है जैसे अनपरा, रेणुसगर, शक्ति नगर NTPC, विंध्य नगर NTPC अनपरा थर्मल परियोजना की राख कई वर्षों से रिहंद बाँध मे जा रहा है और	मिर्जापुर टीपीपी के लिए रिहंद बांध से पानी नहीं लिया जाएगा और बिजली संयंत्र जीरो लिक्विड डिस्चार्ज (जेडएलडी) पर आधारित है। इसलिए, रिहंद बांध पर टीपीपी के संचालन के कारण कोई प्रभाव नहीं पड़ेगा।

Mirzapur Thermal Energy (UP) Private Limited
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	थर्मल परियोजनाओ की राख बाँध मे जाता है वहां के वासिन्दो को पीने का पानी रिहंद बाँध पर निर्भर है । रिहंद बाँध का जल प्रदूषण बढ़ता ही जा रहा है ।	

हम प्रदूषण नियंत्रण एवं इसकी रोकथाम के लिए प्रतिबद्ध हैं तथा सभी लागू पर्यावरण नियमों एवं विनियमों को बनाए रखना सुनिश्चित करते हैं।

धन्यवाद,
आपका सादर

मिर्जापुर थर्मल एनर्जी (यूपी) प्राइवेट लिमिटेड



(आर एन शुक्ला)
प्रमुख - पर्यावरण एवं वन

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11 April 2025

To,

1. The Member Secretary,
   Uttar Pradesh Pollution Control Board,
   Govt. of Uttar Pradesh

2. The Commissioner-Mirzapur
   Govt. of Uttar Pradesh

3. The District Magistrate-Mirzapur,
   Govt. of Uttar Pradesh

4. The Deputy Director General of Forests (C)
   Integrated Regional Office, Lucknow
   Ministry of Environment, Forest & Climate Change
   Govt. of India

5. The Secretary (EF&CC)
   Ministry of Environment, Forest & Climate Change
   Govt. of India

Subject: Complaint/ Objection Regarding 'Illegal' Public Hearing Conducted by Mirzapur Thermal Energy (U.P.) Pvt. Ltd. in Violation of EIA Notification, 2006 on today 11 April 2025

Dear Sir/Madam,

It has come to my notice that a *Public Hearing* is being conducted today by Mirzapur Thermal Energy (U.P.) Pvt. Ltd. for the purpose of environmental clearance the EIA Notification, 2006, for the proposed 2x800 MW Coal based Ultra Super Critical Thermal Power Project (TPP) at Village Dadri Khurd, Tehsil, Mirzapur Sardar, District Mirzapur, Uttar Pradesh.

At the outset, I wish to raise the following serious concerns regarding the legality and transparency of this process:

1. Lack of Proper Public Intimation: There has been no prior public notice or outreach about the scheduled public hearing as required under the law. As a result, affected individuals and stakeholders have been deprived of the opportunity to participate meaningfully or submit objections/suggestions.

2. Non-Availability of EIA Report in Public Domain: As of 11th April 2025, 10:00 AM, the Draft EIA Report and Executive Summary are not available on the websites of:
   - Uttar Pradesh Pollution Control Board,
   - Ministry of Environment, Forest and Climate Change (MoEFCC), or
   - Mirzapur District Administration

In the absence of these critical documents in the public domain, the fundamental purpose of the public hearing — enabling informed public participation — is entirely defeated. There exists no scope for critically examining the project proposal or submitting objections based on its environmental impact.

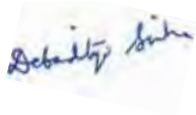
I would also like to bring to your attention that I am the original petitioner in the matter Debadityo Sinha v. Union of India (Appeal No. 79/2014), wherein the Hon'ble National Green Tribunal (NGT) had set aside the Environmental Clearance dated 21st August 2014, previously granted to Welspun Energy U.P. Pvt. Ltd. for a thermal power plant at the same site. The Hon'ble NGT had made serious observations on the deficiencies in the public hearing conducted for that project.

Furthermore, I wish to inform you that a separate matter regarding the violation of the EIA Notification, 2006 — specifically, undertaking construction without an environmental clearance — is already pending before the Hon'ble Tribunal. I also called the District Administration today morning including Commissioner-Mirzapur and District Magistrate- Mirzapur on their landline their secretaries informed me they were busy in meeting and should call on mobile. The mobile number of Commissioner weas received by their secretary who informed they are busy in meeting and cannot speak now. The mobile phone of District Magistrate was switched off.

Considering the above, I strongly urge that the public hearing being held today be suspended immediately, as it fails to meet the legal requirements under the EIA Notification, 2006. Proceeding with the public hearing in the current manner would not only violate the EIA Notification, 2006 but also undermine the judgment of the Hon'ble National Green Tribunal.

Annexure- Photo of the public hearing from today 11 April 2025

Yours sincerely,



Debadityo Sinha,

Vindhya Bachao Secretariat,
Vindhyan Ecology and Natural History Foundation
36/30, Shivpuri Colony, Station Road
Mirzapur-231001

Mobile- 9540857338 Email- debadityo@vindhyabachao.org

Ref: APL/Mirzapur/PH/7898/25
Date: 11.04.2025

To,
The Member Secretary,
Uttar Pradesh Pollution Control Board,
TC-12V Vibhuti Khand, Gomti Nagar
Lucknow- 226010

Sub: Public Hearing for proposed 1600 (2x800) MW Coal based Ultra Super Critical Thermal Power Project (TPP) at Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh by Mirzapur Thermal Energy (UP) Private Limited.

Ref: Letter from Vindhya Bachao Secretariat dated 11 April 2025.

Dear Sir,

Mirzapur Thermal Energy (UP) Private Limited propose to set up a coal based Ultra Super Critical Technology Thermal Power Project (USCTPP) of 1600 (2x800) MW in village Dadri Khurd, District Mirzapur, State Uttar Pradesh.

The Public hearing was conducted near Upper Primary School, Near Madihan Bazaar, Madihan, District-Mirzapur at 11:00 AM dated 11.04.2025 .

The Point-wise response towards the letter received is as below:

Sr. No	Concerns	Point-wise Reply
1.	Lack of Proper Public Intimation: There has been no prior public notice or outreach about the scheduled public hearing as required under the law. As a result, affected individuals and stakeholders have been deprived of the opportunity to participate meaningfully or submit objections/suggestions.	As per Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India's Notification No. S.O-1533 dated 14.09.2006 (as amended) and S.O 3067(E) dated 01.12.2009 and subsequent amendments, the Uttar Pradesh Pollution Control Board (UPPCB) published notice for public hearing 30 days before in the local daily newspapers, Amar Ujala and The Indian Express on 07.03.2025. Newspaper

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		cuttings are already submitted to UPPCB RO Office, Sonbhadra.
2.	Non-Availability of EIA Report in Public Domain: As of 11th April 2025, 10:00 AM, the Draft EIA Report and Executive Summary are not available on the websites of: • Uttar Pradesh Pollution Control Board, • Ministry of Environment, Forest and Climate Change (MoEFCC), or • Mirzapur District Administration	Mirzapur Thermal Energy (UP) Private Limited had submitted the Draft EIA & EMP Report with Executive Summary (English & Hindi) in Hard & Soft copies to UPPCB for conducting Public Hearing and also submitted to MoEFCC, Sarpanch Offices of Villages, District Industries Centre, District Panchayat Office, District Magistrate, Janpad Panchayat, Mirzapur as per the EIA notification 2006 & subsequent amendments. Acknowledgement copies of the same are already submitted to UPPCB RO Office, Sonbhadra.

We are committed to pollution control and prevention and ensure to maintain all applicable environmental rules and regulations.

Thank you,

Yours sincerely

for, Mirzapur Thermal Energy (UP) Private Limited

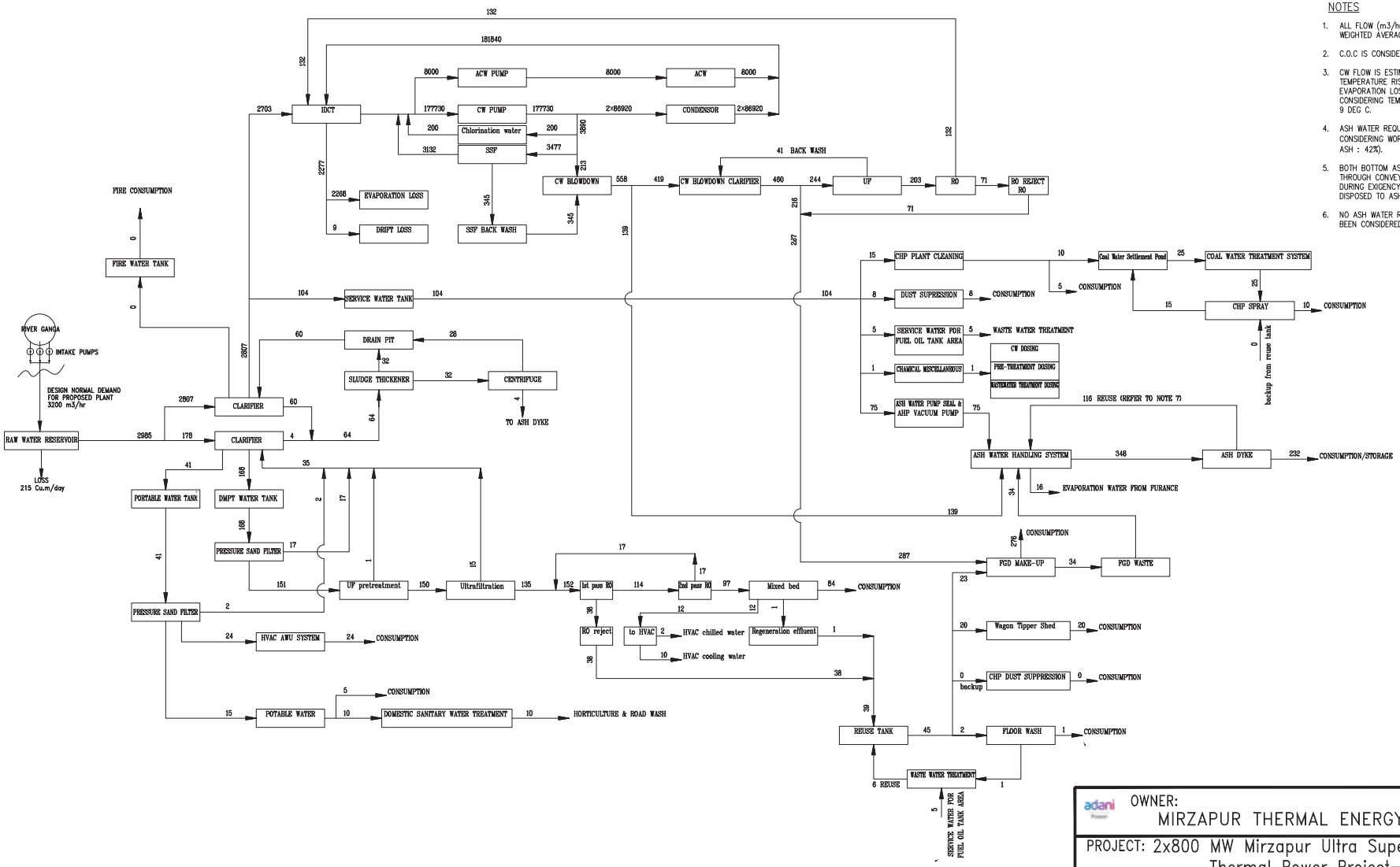


(R N Shukla)
Head Environment & Forests

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ANNEXURE - IX



RAW WATER REQUIREMENT

a> WATER REQUIRED/2x800 MW UNITS : 3200 m^3/hr
b> SPECIFIC WATER CONSUMPTION : 2.00m^3/hr/MWh.

NOTES

1. ALL FLOW (m3/hr) INDICATED IN THIS DRAWING ARE WEIGHTED AVERAGE FIGURE AND FOR 2x800 MW UNITS.
2. C.O.C IS CONSIDERED AS 5.
3. CW FLOW IS ESTIMATED AT VWO CONDITION CONSIDERING TEMPERATURE RISE ACROSS THE CONDENSER AS 9 DEG C. EVAPORATION LOSS IS ESTIMATED AS PER CTI GUIDELINES CONSIDERING TEMPERATURE RISE ACROSS CONDENSER AS 9 DEG C.
4. ASH WATER REQUIREMENT HAS BEEN ESTIMATED CONSIDERING WORST COAL (GCV: 3200 KCAL/KG AND ASH : 42%).
5. BOTH BOTTOM ASH AND FLY ASH WILL BE DISPOSED THROUGH CONVEYOR SYSTEM TO MINE VOID FILLING AREA. DURING EXIGENCY, BOTH BOTTOM AND FLY ASH WOULD BE DISPOSED TO ASH POND THROUGH HCSD MODE.
6. NO ASH WATER RECOVERY FROM ASH DYKE AREA HAS BEEN CONSIDERED.

OWNER:
MIRZAPUR THERMAL ENERGY (UP) PVT. LTD.

PROJECT: 2x800 MW Mirzapur Ultra Supercritical Thermal Power Project–Uttar Pradesh

TITLE: WATER BALANCE DIAGRAM

PREPARED		JOB NO.	
CHECKED		SCALE	
APPROVED		DATE	
DWG. NO.	MIR1-E-EPC-SPE-TM-T-I-002		

REV

SHEET 1 OF 1

DWG. NO.

REV

FILE LOCATION:
PLOT DATE:

A3 [420x297]

ANNEXURE - X

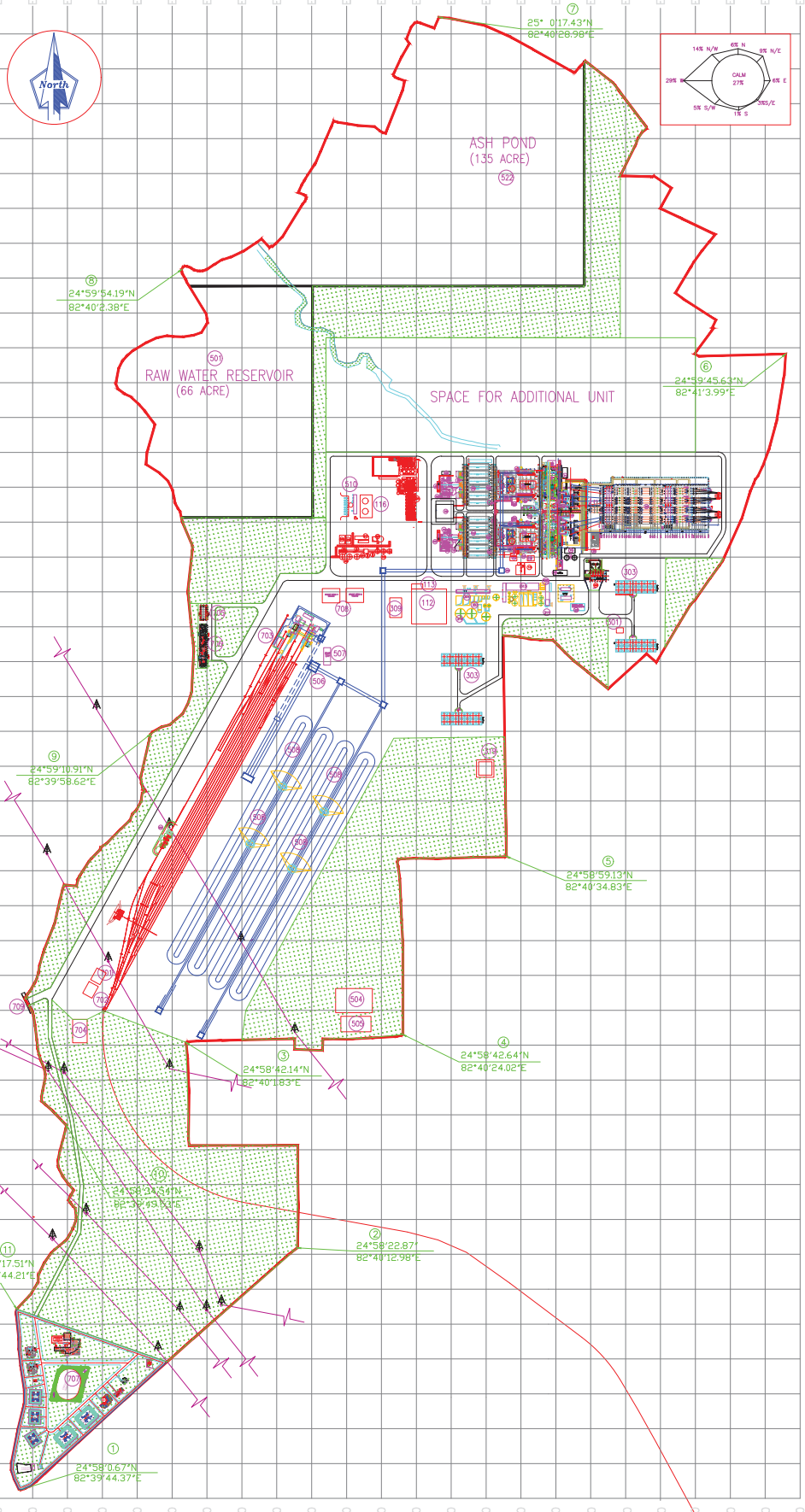


TABLE OF BUILDINGS AND STRUCTURES

ITEM NO.	DESCRIPTION
101	TG BUILDING
102	BOILER UNITS
103	ELECTROSTATIC PRECIPITATOR
104	INDUCED DRAFT FAN
105	FLUE GAS DUCT AND CHIMNEY
106	CENTRAL CONTROL ROOM
107	ESP/FGD SWITCHGEAR& CONTROL ROOM– 40Mx50M (COMMON FOR BOTH UNITS)
108	CONDENSATE TANK
109	MILL BAY
110	EMERGENCY DG BUILDING
111	PLANT AIR/ ASH/ MRHS COMPRESSOR HOUSE & ELECTRICAL CUM CONTROL ROOM– AHP ER1
112	ANHYDROUS AMMONIA UNLOADING/PUMPING/STORAGE AREA
113	MCC AND CONTROL ROOM OF ANHYDROUS AMMONIA AREA
114	AIR WASHER UNIT
115	PA FAN & FD FAN AREA
116	FUEL OIL TANK FARM AREA
117	NOT USED
118	NOT USED
201	TRANSFORMER YARD
202	765kV AIS
203	SWITCH YARD CONTROL ROOM
204	NOT USED
301	SWITCH GEAR ROOM
302	RAW WATER PUMP HOUSE MCC CUM RIO ROOM
303	COOLING TOWER
304	CLARIFIED & DM WATER STORAGE TANK & PH
305	C.W. PUMP HOUSE
306	C.W. SIDE STREAM FILTRATION
307	RAW WATER PRE-TREATMENT PLANT
308	ACID AND ALKALI STORAGE AREA
309	S.T.P.(HOLD)
310	C.T. ELECTRICAL ROOM & DCS RIO ROOM
311	E.T.P./CMB
312	C.W. CHLORINATION
313	DM WATER TREATMENT, WWTP & CW BLOWDOWN
314	UNIT DRAIN TANK
315	WTP ELECTRICAL CUM CONTROL ROOM (COMMON FOR PT/RO/DM/CWT/ETP)
316	HRSCC
317	C.W. DOSING ROOM
318	C.W. ELECTRICAL CUM CONTROL ROOM (INCL. DCS PANEL ROOM FOR CW/ACW SYSTEM, CW CHLORINATION & CWSSF SYSTEM.)
319	RAIN WATER HARVESTING POND (HOLD)
401	LIMESTONE UNLOADING AND STORAGE
402	LIMESTONE SILO/MILL/SLURRY TANK AREA
403	GYPSUM PROCESSING BUILDING
404	GYPSUM STORAGE YARD
405	ABSORBER
406	CEMS
407	SLURRY CIRCULATION PUMP ROOM
408	LIME STONE/GYPSUM/FGD BOP SWITCHGEAR CUM DCS RIO/PLC ROOM
501	RAW WATER RESERVOIR
502	NOT USED
503	TRANSFER TOWER
504	BULLDOZER SHED
505	COAL SETTLING POND
506	CRUSHER HOUSE
507	CHP CONTROL/MCC ROOM (CHP–ER1,CHP–ER2,CHP–ER3)
508	COAL STOCK PILE
509	HCSD FLY ASH SILO
510	F.O.P.H.
511	MILL REJECT SILO
512	BA SLURRY PUMP HOUSE
513	BA HYDROBINS
514	MAIN FLY ASH SILOS
515	HCSD MIXING TANKS
516	HCSD PUMP HOUSE
517	ASH WATER PUMP HOUSE
518	BA SETTLING TANK & SURGE TANK
519	ASH WATER & HCSD ELECTRICAL MCC & CONTROL ROOM (AHP ER2)
520	ASH WATER RECOVERY/TREATMENT FACILITY
521	MAIN FLY ASH SILOS
522	ASH POND
601	HYDROGEN GENERATION PLANT INCLUDING CYLINDER STORAGE
701	FIRST AID CENTER
702	FIRE STATION
703	LOCO SHEED
704	ADMIN. BUILDING
705	CANTEEN (PEB)
706	SITE OFFICE CONSTRUCTION (PEB)
707	TOWNSHIP
708	PEB STORE AND LAYDOWN AREA DEVELOPMENT
709	MAIN GATE

NOTES:–

1. ALL RLs SHOWN IN THE PLOT PLAN ARE FINISHED GRADE LEVELS. ALL FINISHED GRADE LEVELS ARE IN METRES ABOVE MEAN SEA LEVEL.
2. FINISHED FLOOR LEVELS OF DIFFERENT AREAS/BUILDINGS ARE AS FOLLOWS
   A. BOILER AREA:RL.....M
   B. TRANSFORMER YARD:RL.....M
   C. ALL OTHER BUILDINGS: 500mm ABOVE ADJACENT FINISHED GRADE LEVEL
3. GREEN FIELD DEVELOPEMENT IN PLANT AREA IS INDICATIVE.

SR.NO	NORTHING	EASTING
1	24°58'0.67"N	82°39'44.37"E
2	24°58'22.87"N	82°40'12.98"E
3	24°58'42.14"N	82°40'1.83"E
4	24°58'42.64"N	82°40'24.02"E
5	24°58'59.13"N	82°40'34.83"E
6	24°59'45.63"N	82°41'3.99"E
7	25° 0'17.43"N	82°40'28.98"E
8	24°59'54.19"N	82°40'2.38"E
9	24°59'10.91"N	82°39'58.62"E
10	24°58'34.54"N	82°39'49.53"E
11	24°58'17.51"N	82°39'44.21"E

SN	Details	(Land Area in Acre) 2x800MW
1	Plant Area (Considering Future Expansion)	220
2	Reservoir	66
3	Coal Stock Yard	160
4	Ash Dyke	135
5	Township	29
6	Green Belt	301
7	Total (Sum of '1' to '6')	911

OWNER	MIRZAPUR THERMAL ENERGY (UP) PVT LTD 2x800MW
TITLE	PLOT PLAN
DRAWN : AM	CHECKED : RR
REVIEWED : RR	APPROVED : RR
SCALE : NTS	DATE : 19-03-2024
JOB NO. : –	
OWNER'S DRG. NO.:	–

ANNEXURE - XI

çekki= VSdu a vkbZMh/Certificate Tracking ID : 2502053
tkjh djusdh frfFk/Date of Issue : 09-May-2025
çekki= Øekad/Certificate Sr.No.: ULR-TC1170325000000033F

TC-11703

Radioanalytical Laboratory

RADIOACTIVITY TEST CERTIFICATE

Ref : BRIT/RAL/DOM/05-08/MISC/01-04/25-26

To :
M/S.MIRZAPUR THERMAL ENERGY (UP) POWER LIMITED
DADRI KHURD MIRZAPUR SADAR
BHARUHANA MIRZAPUR UP-231001

This is regarding the sample of "COAL" sent for radioactivity analysis vide your letter Ref. MTUPP/ENV/BRIT/03/25 dt. 28.03.2025 which as per above letter is drawn from consignment with the following markings, as shown in italics:

NAME & ADDRESS OF COMPANY : M/S. MIRZAPUR THERMAL ENERGY PVT.LTD. DISTRICT : MIRZAPUR, STATE : UTTAR PRADESH, PIN CODE : 231 001.

Sr. No	SAMPLE NO	TYPE OF SAMPLE	PLACE	DATE OF SAMPLE	WEIGHT (IN KG)
1	SAMPLE-01	COAL	MIRZAPUR	19/03/2025	01

DATE OF RECEIPT OF SAMPLE: 08.04.2025 **DATE OF COMPLETION OF TEST: 08.05.2025**

The Samples provided were analysed for U-238 ,Th-232,Ra-226 &K-40 radioactivity content by HPGe gamma spectrometry and the values obtained are as follows :

Sr. No	SAMPLE NAME	U-238 (Bq/Kg)	Th-232 (Bq/Kg)	Ra-226 (Bq/Kg)	K-40(Bq/Kg)
1	COAL	41.8 ± 1.9	68 ± 3.2	28.1 ± 3.0	166 ± 8.0

Opinion: The measurement values are below the clearance level for radionuclides of natural origin in bulk solid materials, as per AERB directive 01/2010 (table-3) dated 26/11/2010.

Note: (i) The report pertains to the given sample only. (ii) The sample will be retained in this laboratory for a period of 1 month from certificate date and thereafter it will be disposed off. (iii) This report shall not be reproduced except in full, without written approval of the laboratory. (iv) The sampling is not done by this laboratory.

Checked by:
GANPAT B NAKTI
Assistant

Authorized Signatory:
AJAY NANA THAMKE
OIC, RAL

********** End of Report **********

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ANNEXURE - XII

Mirzapur Thermal Energy (UP) Private Limited

Ash Management Plan for 5 years

Mirzapur Thermal Energy (UP) Private Limited commits to utilize 100% Ash from commissioning of the plant and will follow fly ash utilization as per MoEF&CC Notification dated 31.12.2021 and its subsequent amendments. A MoU has been signed between MTE(UP)PL and ACC Cement Ltd (Tikaria) for utilization of Fly ash and Gypsum for the proposed 1600 (2x800) MW. Details of ash generation and its utilization of 5-year plan is as follows:

Year	Estimated Quantity Generation* (LMT)	Utilization (Via different Modes as per Fly Ash Notification) (LMT)	Utilization %
First	25.6	25.6	100
Second	25.6	25.6	100
Third	25.6	25.6	100
Fourth	25.6	25.6	100
Fifth	25.6	25.6	100

*Considering PLF @85% PLF

*LMT- Lakh Metric Tonnes

ANNEXURE - XIII

NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
Kavi Nagar Industrial Area, Ghaziabad - 201002, Uttar Pradesh, INDIA

TEST REPORT

Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant

SAMPLING DETAIL

Sample Drawn By	:	M/S Mirzapur Thermal Energy (UP) Pvt. Ltd.
Sample Description	:	Ambient Air
Sampling Time	:	24 Hrs
Sampling Instrument Used	:	Ambient Air
Monitoring Period	:	Oct 2024 to Dec 2024
Sampling Location		Sugapankh , Latitude (N)-24.8949 , Longitude (E)-82.639892
Equipment Used		Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment
Sampling Done By		Mr. Ravinder

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo
1	Sugapankh	03/10/2024	59	25	0.107	4.1	8.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		07/10/2024	63	27	0.115	4.8	4.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		10/10/2024	61	26	0.11	4.4	4.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		14/10/2024	66	28	0.123	5.6	4.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		17/10/2024	58	35	0.13	6.1	5.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		21/10/2024	65	33	0.147	6.8	6.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		24/10/2024	61	31	0.135	6.5	6.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		28/10/2024	62	31	0.187	8.3	5.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		29/10/2024	64	33	0.215	9.6	8.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		05/11/2024	61	32	0.206	9.3	5.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/11/2024	59	31	0.195	8.9	6.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		12/11/2024	64	37	0.181	7.9	6.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/11/2024	60	31	0.162	6.6	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/11/2024	62	35	0.167	6.9	4.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/11/2024	59	30	0.198	8.5	5.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/11/2024	56	28	0.191	8.1	6.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/11/2024	53	37	0.172	7.4	5.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		03/12/2024	48	32	0.158	6.3	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		06/12/2024	57	30	0.161	5.4	5.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		10/12/2024	60	33	0.163	6.5	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		13/12/2024	63	31	0.179	6.9	6.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		17/12/2024	55	28	0.203	7.1	8.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		20/12/2024	54	32	0.162	5.4	6.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		24/12/2024	59	34	0.161	6.1	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		27/12/2024	52	23	0.17	6.5	5.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)		24.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		31/12/2024	49	34	0.194	7.5	6.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)		25.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		66.00	37.00	0.22	9.60	8.70					26.3			
	Min		48.00	23.00	0.11	4.40	4.20					20.7			
	Average		58.85	31.04	0.17	6.83	5.95					23.8			

BDL = BELOW DETECTION LIMIT

****End of Report****

JITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES



Authorized Signatory

1. The test report refers only to the particular sample/s submitted for testing and listed parameters.
2. Endorsement of the same is neither inferred nor implied.
3. Laboratory shall maintain the confidentiality of all information related to the samples & test reports.
4. Complaints about this report should be communicated within 10 days of the issue date of this report.
5. The report is not to be produced wholly or in part without prior permission of the Managing Partner. All disputes subject to Ghaziabad Jurisdiction.

NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
Kavi Nagar Industrial Area, Ghaziabad - 201002, Uttar Pradesh, INDIA

TEST REPORT

Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**

SAMPLING DETAIL

Sample Drawn By	:	**M/S Mirzapur Thermal Energy (UP) Pvt. Ltd.**
Sample Description	:	**Ambient Air**
Sampling Time	:	**24 Hrs**
Sampling Instrument Used	:	**Ambient Air**
Monitoring Period	:	**Oct 2024 to Dec 2024**
Sampling Location		Project Site , Latitude (N)-25.021276 , Longitude (E)-82.603195
Equipment Used		**Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment**
Sampling Done By		**Mr. Ravinder**

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo
1	Project Site	01/10/2024	44	29	0.132	5.6	11.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		05/10/2024	48	31	0.143	5.7	10.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/10/2024	45	25	0.167	7.8	10.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		12/10/2024	40	28	0.192	4.8	10.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/10/2024	42	26	0.168	5.9	10.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/10/2024	41	22	0.227	5.8	4.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/10/2024	46	23	0.24	5.6	8.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/10/2024	42	26	0.292	6.3	4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/10/2024	45	30	0.452	6.8	5.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	29.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		02/11/2024	40	22	0.397	7.8	6.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	28.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		06/11/2024	48	28	0.337	7.6	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		09/11/2024	45	27	0.32	5.9	6.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		13/11/2024	40	31	0.288	7.4	7.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/11/2024	40	28	0.305	7.3	6.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		20/11/2024	48	32	0.298	6.6	5.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/11/2024	40	32	0.279	7.2	8.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		27/11/2024	48	32	0.289	4.8	10.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/11/2024	40	25	0.269	5.9	8.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		07/12/2024	43	30	0.24	5.8	7.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/12/2024	44	25	0.292	5.6	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	29.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		14/12/2024	42	27	0.452	6.3	5.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	28.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		18/12/2024	40	24	0.397	5.8	11.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		21/12/2024	42	22	0.337	6.8	7.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		25/12/2024	45	22	0.32	5.8	11.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		28/12/2024	43	23	0.288	5.9	7.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		48.00	32.00	0.45	7.80	11.80					29.3			
	Min		40.00	22.00	0.14	4.80	4.00					20.6			
	Average		43.24	26.80	0.28	6.27	7.86					24.52			

BDL = BELOW DETECTION LIMIT

****End of Report****

JITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

HASHI SOLANKI
NCL
Authorized Signatory

1. The test report refers only to the particular sample/s submitted for testing and listed parameters.
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3. Laboratory shall maintain the confidentiality of all information related to the samples & test reports.
4. Complaints about this report should be communicated within 10 days of the issue date of this report.
5. The report is not to be produced wholly or in part without prior permission of the Managing Partner. All disputes subject to Ghaziabad Jurisdiction.

NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
Kavi Nagar Industrial Area, Ghaziabad - 201002, Uttar Pradesh, INDIA

TEST REPORT

Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant

SAMPLING DETAIL

Sample Drawn By	:	M/S Mirzapur Thermal Energy (UP) Pvt. Ltd.
Sample Description	:	Ambient Air
Sampling Time	:	24 Hrs
Sampling Instrument Used	:	Ambient Air
Monitoring Period	:	Oct 2024 to Dec 2024
Sampling Location		Patehra , Latitude (N)-24.923489 , Longitude (E)-82.583591
Equipment Used		Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment
Sampling Done By		Mr. Ravinder

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo
1	Patehra	03/10/2024	58	29	0.095	5.2	8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		07/10/2024	61	31	0.105	5.8	4.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/10/2024	60	34	0.11	6.2	4.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		14/10/2024	62	33	0.116	5.2	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		17/10/2024	61	32	0.12	5.2	5.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		21/10/2024	62	32	0.125	5.3	6.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		24/10/2024	62	32	0.13	5.2	3.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		31/10/2024	62	28	0.285	6.2	5.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	27.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		04/11/2024	63	33	0.217	7.6	3.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		07/11/2024	62	34	0.24	7.5	4.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		11/11/2024	45	31	0.21	7.9	4.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		14/11/2024	52	35	0.18	6.7	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/11/2024	46	36	0.19	7	4.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		21/11/2024	60	32	0.2	7.5	5.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		25/11/2024	54	34	0.16	5.8	6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		28/11/2024	45	33	0.167	6.1	4.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/11/2024	53	34	0.175	6.5	4.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		02/12/2024	58	29	0.2	7.5	5.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		05/12/2024	57	31	0.16	5.8	4.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/12/2024	60	35	0.167	6.1	4.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		12/12/2024	59	32	0.178	6.5	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/12/2024	62	30	0.202	7.5	8.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/12/2024	59	31	0.162	5.8	6.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/12/2024	62	35	0.165	6.1	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/12/2024	62	32	0.173	6.5	6.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/12/2024	61	36	0.198	7.5	5.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		63.00	36.00	0.29	7.90	8.90					27.3			
	Min		45.00	28.00	0.11	5.20	3.40					20.5			
	Average		58.00	32.46	0.17	6.39	5.35					23.75			

BDL = BELOW DETECTION LIMIT

****End of Report****

FOR NEWCON CONSULTANTS & LABORATORIES

JITENDER
Section Incharge
Checked by

HASHI SOLANKI
NCL
Authorized Signatory

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NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
Kavi Nagar Industrial Area, Ghaziabad - 201002, Uttar Pradesh, INDIA

TEST REPORT

Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**

SAMPLING DETAIL

Sample Drawn By	:	**M/S Mirzapur Thermal Energy (UP) Pvt. Ltd.**
Sample Description	:	**Ambient Air**
Sampling Time	:	**24 Hrs**
Sampling Instrument Used	:	**Ambient Air**
Monitoring Period	:	**Oct 2024 to Dec 2024**
Sampling Location		Ordial Institute Campus, Latitude (N)-24.957343 , Longitude (E)-82.657154
Equipment Used		**Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment**
Sampling Done By		**Mr. Ravinder**

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo
1	Ordial Inst. Campus	04/10/2024	52	28	0.128	10.3	8.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		08/10/2024	54	29	0.138	5.1	9.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/10/2024	59	34	0.156	5.8	8.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		15/10/2024	68	37	0.187	5.8	10.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		18/10/2024	53	35	0.169	6.8	10.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		22/10/2024	65	32	0.218	8.8	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		25/10/2024	54	22	0.232	10.2	8.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		29/10/2024	59	35	0.278	9.9	4.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		31/10/2024	50	38	0.436	4.8	8.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	28.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		05/11/2024	56	30	0.282	9.8	10.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/11/2024	58	35	0.282	8.8	7.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		12/11/2024	59	33	0.295	8.6	3.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		15/11/2024	56	31	0.287	8.4	3.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/11/2024	57	29	0.265	10.4	9.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		22/11/2024	59	30	0.28	8.5	4.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/11/2024	62	28	0.269	8.1	7.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/11/2024	68	37	0.262	6.2	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		03/12/2024	63	32	0.156	6.5	7.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		06/12/2024	58	28	0.163	6.2	6.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		10/12/2024	59	35	0.165	6.3	8.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		13/12/2024	60	33	0.178	6.7	9.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		17/12/2024	56	26	0.205	7.3	8.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		20/12/2024	59	31	0.161	4.7	6.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		24/12/2024	58	30	0.162	6.4	8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		27/12/2024	62	26	0.171	6.7	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		31/12/2024	60	32	0.192	7.9	8.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		68.00	38.00	0.44	10.40	10.70					28.9			
	Min		50.00	22.00	0.14	4.70	3.70					20.7			
	Average		58.62	31.38	0.22	7.50	7.48					23.45			

BDL = BELOW DETECTION LIMIT

****End of Report****

FOR NEWCON CONSULTANTS & LABORATORIES

JITENDER
Section Incharge
Checked by

HASHI SOLANKI
NCL
Authorized Signatory

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NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
Kavi Nagar Industrial Area, Ghaziabad - 201002, Uttar Pradesh, INDIA

TEST REPORT

Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant

SAMPLING DETAIL

Sample Drawn By	:	M/S Mirzapur Thermal Energy (UP) Pvt. Ltd.
Sample Description	:	Ambient Air
Sampling Time	:	24 Hrs
Sampling Instrument Used	:	Ambient Air
Monitoring Period	:	Oct 2024 to Dec 2024
Sampling Location		Near Rajiv Gandhi South Campus Banaras Hindu University, Latitude (N)-25.056345 , Longitude (E)-82.599593
Equipment Used		Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment
Sampling Done By		Mr. Ravinder

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo
1	Near Rajiv Gandhi South Campus Banaras Hindu University	05/10/2024	65	37	0.147	6.3	4.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		08/10/2024	69	38	0.158	5.7	4.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		12/10/2024	67	34	0.188	8.3	8.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		15/10/2024	60	30	0.162	6.2	5.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/10/2024	53	31	0.167	6.8	5.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		22/10/2024	56	33	0.18	7.6	7.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/10/2024	62	36	0.196	8.9	8.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		31/10/2024	52	34	0.278	5.6	5.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		02/11/2024	58	37	0.293	10.2	7.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	27.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-

															0.1)
		05/11/2024	54	35	0.285	6.3	6.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/11/2024	60	32	0.26	9.7	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		12/11/2024	53	37	0.215	8.4	4.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/11/2024	66	38	0.226	8.9	4.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/11/2024	54	35	0.203	7.9	4.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/11/2024	61	38	0.22	8.7	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/11/2024	52	34	0.203	8.1	4.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/11/2024	55	30	0.254	9.4	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		69.00	38.00	0.29	10.20	8.90					**27.4**	BDL(DL-1.0)		
	Min		52.00	30.00	0.16	5.60	4.40					**21.2**	BDL(DL-1.0)		
	Average		58.65	34.65	0.21	7.82	5.76					**24.24**	BDL(DL-1.0)		

BDL = BELOW DETECTION LIMIT

****End of Report****

JITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

SHASHI SOLANKI
Lab Head
NCL
Authorized Signatory

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NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
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TEST REPORT

Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**

SAMPLING DETAIL

Sample Drawn By	:	**M/S Mirzapur Thermal Energy (UP) Pvt. Ltd.**
Sample Description	:	**Ambient Air**
Sampling Time	:	**24 Hrs**
Sampling Instrument Used	:	**Ambient Air**
Monitoring Period	:	**Oct 2024 to Dec 2024**
Sampling Location		**Marihan ,** Latitude (N)-24.93577 , Longitude (E)-82.690996
Equipment Used		**Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment**
Sampling Done By		**Mr. Ravinder**

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo
1	Marihan	01/10/2024	55	35	0.136	4.8	9.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		05/10/2024	58	34	0.141	4.9	7.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/10/2024	61	36	0.162	4.9	9.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/10/2024	66	37	0.19	5.7	5.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/10/2024	65	37	0.169	4.8	5.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/10/2024	62	34	0.224	5.2	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/10/2024	66	37	0.245	5.6	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/10/2024	61	36	0.228	6.2	5.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/10/2024	65	35	0.442	5.1	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	28.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		02/11/2024	57	34	0.398	6.8	6.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	28.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		06/11/2024	57	35	0.335	5.8	4.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	27.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		09/11/2024	54	36	0.318	5.1	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		13/11/2024	59	34	0.289	8.2	5.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/11/2024	58	34	0.305	9.2	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		20/11/2024	55	35	0.294	5.5	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/11/2024	52	36	0.272	5.8	5.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		27/11/2024	53	35	0.284	5.9	5.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/11/2024	55	34	0.27	5.2	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		07/12/2024	51	35	0.242	5	5.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/12/2024	55	36	0.294	5.4	5.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	29.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		14/12/2024	52	35	0.45	6.1	5.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	28.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		18/12/2024	48	34	0.395	4.9	5.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		21/12/2024	51	35	0.335	5.1	5.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		25/12/2024	47	34	0.318	5.2	5.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		28/12/2024	50	35	0.284	9.9	5.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		66.00	37.00	0.45	9.90	9.80					29.2			
	Min		47.00	34.00	0.14	4.80	4.80					20.4			
	Average		56.52	35.12	0.28	5.85	5.86					24.54			

BDL = BELOW DETECTION LIMIT

****End of Report****

JITENDER
Section Incharge
Checked by

FOR NEWGEN CONSULTANTS & LABORATORIES

HASHI SOLANKI
Authorized Signatory

1. The test report refers only to the particular sample/s submitted for testing and listed parameters.
2. Endorsement of the same is neither inferred nor implied.
3. Laboratory shall maintain the confidentiality of all information related to the samples & test reports.
4. Complaints about this report should be communicated within 10 days of the issue date of this report.
5. The report is not to be produced wholly or in part without prior permission of the Managing Partner. All disputes subject to Ghaziabad Jurisdiction.

NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
Kavi Nagar Industrial Area, Ghaziabad - 201002, Uttar Pradesh, INDIA

TEST REPORT

Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**

SAMPLING DETAIL

Sample Drawn By	:	M/S Mirzapur Thermal Energy (UP) Pvt. Ltd.
Sample Description	:	Ambient Air
Sampling Time	:	24 Hrs
Sampling Instrument Used	:	Ambient Air
Monitoring Period	:	Oct 2024 to Dec 2024
Sampling Location		Kotwa , Latitude (N)-25.019839 , Longitude (E)-82.603069
Equipment Used		Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment
Sampling Done By		Mr. Ravinder

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo
1	Kotwa	01/10/2024	57	28	0.125	5.3	18.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		07/10/2024	59	30	0.138	6.1	19.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/10/2024	59	34	0.156	5.5	19.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		12/10/2024	62	36	0.187	5.3	20.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/10/2024	62	35	0.164	5.8	20.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/10/2024	61	32	0.215	6.8	21.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/10/2024	58	36	0.232	8.2	21.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/10/2024	61	35	0.278	8.9	22.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/10/2024	60	31	0.436	6.8	38.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	28.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		02/11/2024	62	36	0.389	7.2	35.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	27.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		06/11/2024	58	33	0.324	8.1	33.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/11/2024	62	34	0.312	9.8	32.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		13/11/2024	50	36	0.282	7.6	30.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/11/2024	55	23	0.295	8.6	31.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		20/11/2024	55	31	0.287	9.1	30.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/11/2024	60	29	0.265	7.4	28.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		27/11/2024	54	30	0.28	8.5	29.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/11/2024	58	36	0.262	8.2	24.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		07/12/2024	62	30	0.24	6.1	36.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/12/2024	54	25	0.292	7.6	34.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	29.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		14/12/2024	57	29	0.452	7.8	32.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	28.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		18/12/2024	50	24	0.397	6.8	31.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		21/12/2024	56	34	0.337	4.3	32	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		25/12/2024	59	35	0.32	8.6	31.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		28/12/2024	55	23	0.288	8.9	28.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)		24.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		62.00	36.00	0.45	9.80	38.60					28.4			
	Min		50.00	23.00	0.14	4.30	19.30					20.4			
	Average		57.84	31.40	0.28	7.33	28.24					23.55			

BDL = BELOW DETECTION LIMIT

****End of Report****

JITENDER
Section In charge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

TASHI SOLANKI
Authorized Signatory

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NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
Kavi Nagar Industrial Area, Ghaziabad - 201002, Uttar Pradesh, INDIA

TEST REPORT

Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**

SAMPLING DETAIL

Sample Drawn By	:	**M/S Mirzapur Thermal Energy (UP) Pvt. Ltd.**
Sample Description	:	**Ambient Air**
Sampling Time	:	**24 Hrs**
Sampling Instrument Used	:	**Ambient Air**
Monitoring Period	:	**Oct 2024 to Dec 2024**
Sampling Location		**Gogdara ,** Latitude (N)-25.016822 , Longitude (E)-82.755547
Equipment Used		**Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment**
Sampling Done By		**Mr. Ravinder**

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo
1	Gogdara	03/10/2024	61	36	0.11	4.3	3.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		07/10/2024	65	38	0.12	5.1	4.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/10/2024	62	36	0.112	4.9	4.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		14/10/2024	58	39	0.128	5.8	4.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		17/10/2024	50	31	0.136	6.4	3.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		21/10/2024	57	34	0.152	7.1	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		24/10/2024	47	34	0.152	7.2	4.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		28/10/2024	43	32	0.14	6.7	4.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		31/10/2024	59	33	0.192	7.6	7.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		04/11/2024	56	34	0.22	7.9	3.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		07/11/2024	62	32	0.21	8.5	3.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/11/2024	60	31	0.192	8.1	4.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		14/11/2024	65	28	0.184	8.2	5.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/11/2024	61	31	0.157	6.2	5.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		21/11/2024	58	33	0.162	6.5	5.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		25/11/2024	57	25	0.192	8.3	4.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		28/11/2024	55	30	0.186	7.9	4.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/11/2024	54	35	0.168	7.2	5.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		02/12/2024	58	29	0.202	7.3	5.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		05/12/2024	57	30	0.162	5.2	5.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/12/2024	60	32	0.165	6.3	5.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		12/12/2024	63	24	0.177	6.7	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/12/2024	59	26	0.201	7.2	5.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/12/2024	57	25	0.16	5.1	4.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		23/12/2024	58	31	0.163	6.1	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/12/2024	58	30	0.171	6	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/12/2024	54	32	0.196	7.1	6.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		65.00	39.00	0.22	8.50	7.90					26.7			
	Min		43.00	24.00	0.11	4.90	3.80					20.9			
	Average		57.56	31.52	0.17	6.70	4.91					23.94			

BDL = BELOW DETECTION LIMIT

****End of Report****

Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

Lab Head
Authorized Signatory

SHASHI SOLANKI
NCL

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NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
Kavi Nagar Industrial Area, Ghaziabad - 201002, Uttar Pradesh, INDIA

TEST REPORT

Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant

SAMPLING DETAIL

Sample Drawn By	:	M/S Mirzapur Thermal Energy (UP) Pvt. Ltd.
Sample Description	:	Ambient Air
Sampling Time	:	24 Hrs
Sampling Instrument Used	:	Ambient Air
Monitoring Period	:	Oct 2024 to Dec2024
Sampling Location		Dhekwah, Latitude (N)-24.97318 , Longitude (E)-82.731559
Equipment Used		Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment
Sampling Done By		Mr. Ravinder

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo
1	Dhekwah	01/10/2024	64	34	0.109	6.9	3.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		05/10/2024	58	36	0.09	9.2	3.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/10/2024	52	32	0.094	8.2	4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/10/2024	56	35	0.118	7.2	3.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/10/2024	60	30	0.092	7.4	4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/10/2024	57	34	0.124	6.4	4.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/10/2024	58	34	0.098	7.8	3.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		26/10/2024	60	36	0.099	7.9	4.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/10/2024	58	28	0.18	7.2	4.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		01/11/2024	64	31	0.186	9.8	4.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		06/11/2024	58	30	0.172	9.2	3.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/11/2024	54	28	0.108	9.5	3.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		13/11/2024	62	34	0.165	7.9	3.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/11/2024	64	29	0.158	8.8	4.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		23/11/2024	61	35	0.16	8.5	4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		20/11/2024	64	30	0.12	8.9	4.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		27/11/2024	62	24	0.09	7.9	4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		04/12/2024	51	30	0.241	7.3	4.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		07/12/2024	50	25	0.26	8.2	3.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/12/2024	53	28	0.25	6.9	3.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		14/12/2024	52	26	0.24	7.6	3.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		18/12/2024	51	24	0.23	10.1	3.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		21/12/2024	50	24	0.25	10.2	3.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		25/12/2024	50	25	0.224	9.7	7.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		64	36	0.26	10.2	7.4					**26.8**			
	Min		50	24	0.09	6.4	3.7					**20.1**			
	Average		57.0	30.08	0.16	8.3	4.1					**23.47**			

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****End of Report****

JITENDER
Section Incharge

Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

SHASHI SOLANKI
Lab In Charge
NCL

Authorized Signatory

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NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
Kavi Nagar Industrial Area, Ghaziabad - 201002, Uttar Pradesh, INDIA

TEST REPORT

Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**

SAMPLING DETAIL

Sample Drawn By	:	M/S Mirzapur Thermal Energy (UP) Private Limited
Sample Description	:	Ambient Air
Sampling Time	:	24 Hrs
Sampling Instrument Used	:	Ambient Air
Monitoring Period	:	Oct 2024 to Dec2024
Sampling Location		Darhiram(Latitude (N)-25.087564 , Longitude (E)-82.704585)
Equipment Used		Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment
Sampling Done By		Mr. Ravinder

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo (a) Pyrene
1	Darhiram	03/10/2024	65	34	0.089	14.9	19.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		08/10/2024	58	38	0.090	15.2	20.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/10/2024	52	40	0.094	16.2	21.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		14/10/2024	56	35	0.088	13.2	19.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		17/10/2024	60	40	0.092	17.4	20.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		21/10/2024	57	34	0.081	16.4	19.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		24/10/2024	58	44	0.098	17.8	22.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		27/10/2024	60	46	0.099	16.4	21.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		30/10/2024	58	58	0.180	26.8	40.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		03/11/2024	64	41	0.086	19.5	23.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		07/11/2024	58	39	0.072	17.5	22.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		10/11/2024	54	36	0.068	14.8	19.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		13/11/2024	62	34	0.065	15.9	18.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/11/2024	64	32	0.058	14.8	18.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/11/2024	61	35	0.060	16.1	19.0	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		22/11/2024	64	30	0.062	14.9	18.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/11/2024	62	28	0.054	13.6	18.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		09/12/2024	51	30	0.241	15.3	36.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		12/12/2024	48	25	0.293	15.4	34.0	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	29.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		16/12/2024	54	28	0.454	16.1	32.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	27.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/12/2024	53	26	0.399	23.6	31.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		23/12/2024	52	24	0.335	21.6	32.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/12/2024	47	19	0.318	20.8	31.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		30/12/2024	50	20	0.284	19.7	28.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		03/10/2024	65	34	0.089	14.9	19.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	29.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		63	36	0.29	9.3	9.3					**27.2**			
	Min		50	26	0.14	4.7	4.1					**20.9**			
	Average		57.28	31.48	0.21	7.5	5.7					**23.55**			

BDL = BELOW DETECTION LIMIT

****End of Report****

JITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

SHASHI SOLANKI
Lab Head
NCL

Authorized Signatory

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NEWCON CONSULTANTS & LABORATORIES

A-1/156,Sector-17,Swadeshi Compound,
Kavi Nagar Industrial Area, Ghaziabad - 201002, Uttar Pradesh, INDIA

TEST REPORT

Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, Uttar Pradesh
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant

SAMPLING DETAIL

Sample Drawn By	:	M/S Mirzapur Thermal Energy (UP) Private Limited
Sample Description	:	Ambient Air
Sampling Time	:	24 Hrs
Sampling Instrument Used	:	Ambient Air
Monitoring Period	:	Oct 2024 to Dec2024
Sampling Location		Bharpura (Latitude (N)-25.087564 , Longitude (E)-82.704585)
Equipment Used		Respirable Dust Sampler (PM 10) + Fine Particulate Sampler (PM 2.5) With Gaseous Attachment
Sampling Done By		Mr. Ravinder

TEST RESULT

S. No.	Location	Date of Monitoring	PM10	PM2.5	CO	SO2	NO2	Lead	Nickel	Arsenic	Mercury	Ozone	Ammonia	Benzene	Benzo (a) Pyrene
1	Bharpura	04/10/2024	62	35	0.14	4.7	4.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	20.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		08/10/2024	63	27	0.154	5.5	4.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		11/10/2024	63	32	0.182	8	8.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		15/10/2024	63	28	0.156	5.9	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	21.6	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		18/10/2024	57	29	0.162	6.5	5.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		22/10/2024	54	31	0.176	7.3	7.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		25/10/2024	50	35	0.19	8.6	9.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		01/11/2024	57	36	0.29	6.3	7.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	27.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		05/11/2024	52	34	0.28	7.1	6	BDL(DL-	BDL(DL-	BDL(DL-	BDL(DL-				

								0.05)	5.0)		1.0)				0.1)
		08/11/2024	58	30	0.252	9.3	7.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.7	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		12/11/2024	59	34	0.197	7.5	4.8	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		15/11/2024	55	30	0.183	6.8	5.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		19/11/2024	62	26	0.207	8.1	5.4	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.0	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		22/11/2024	57	30	0.23	9.2	4.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		26/11/2024	55	36	0.213	8.7	7.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.5	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		29/11/2024	63	32	0.265	9.3	5.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		3/12/2024	59	34	0.218	8.2	4.2	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	26.1	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		6/12/2024	57	31	0.226	8.4	4.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		10/12/2024	56	30	0.208	7.3	4.9	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		13/12/2024	54	30	0.214	6.5	4.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.9	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		17/12/2024	57	34	0.231	8.2	9.3	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		20/12/2024	55	32	0.218	7.8	4.1	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	23.4	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)

		24/12/2024	53	34	0.234	7.6	4.7	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	25.3	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		27/12/2024	52	29	0.247	7.2	4.5	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	22.8	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
		31/12/2024	59	28	0.229	7.5	5.6	BDL(DL-0.05)	BDL(DL-5.0)	BDL(DL-1.0)	BDL(DL-1.0)	24.2	BDL(DL-20.0)	BDL(DL-1.0)	BDL(DL-0.1)
	Max		63	36	0.29	9.3	9.3					**27.2**			
	Min		50	26	0.14	4.7	4.1					**20.9**			
	Average		57.28	31.48	0.21	7.5	5.7					**23.55**			

BDL = BELOW DETECTION LIMIT

****End of Report****

JITENDER
Section In-Charge
Checked by

FOR NEVACON CONSULTANTS & LABORATORIES

SHASHI SULANKI
Lab Head
NCL
Authorized Signatory

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-049/09/01/25	**ULR No.: TC1262125000000127F** **DATE OF REPORT:15/01/2025**
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur**
Site Coordinates	Latitude (N)-25.056345 , Longitude (E)-82.599593

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	15/01/2025
Analysis Start Date	09/01/2025	Sample ID No.	NCL/EP-049/09/01/25
Date of Sampling	08/01/2025	Sample Receipt Date	09/01/2025
Time of Sampling	--	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Chakulia	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.79	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	390	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	178	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	37.6	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	20.4	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	98	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	88	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	1.7	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	16.4	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.19	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.15	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.10	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-049/09/01/25

FOR NEWCON CONSULTANTS & LABORATORIES

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Checked by Section Incharge

Authorized Signatory

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Laboratory : A-1/156, Sector-17, (Swadeshi Compound) Kavi Nagar Industrial Area, GHAZIABAD - 201 002 (U.P.)
Mobile : 9810430345, 9205501788 | **Website :** www.newconlab.in
E-mail : newconlab@gmail.com, newconlabfinance@gmail.com

TEST REPORT

25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-049/09/01/25

Rajeev Kumar Singh
Sr. Analyst
Checked by

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-047/09/01/25	**ULR No.: TC1262125000000125F** **DATE OF REPORT:15/01/2025**
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur**
Site Coordinates	Latitude (N)-25.056345 , Longitude (E)-82.599593

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	15/01/2025
Analysis Start Date	09/01/2025	Sample ID No.	NCL/EP-047/09/01/25
Date of Sampling	08/01/2025	Sample Receipt Date	09/01/2025
Time of Sampling	--	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Shashikala Shikshan Sanstha	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.61	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	317	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	146	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	38.4	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	12.1	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	74	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	90	250	1000
12	Nitrate ()as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	1.4	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	13.4	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.14	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.11	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.07	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-047/09/01/25

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25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

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EP-047/09/01/25

Rajeev Kumar Singh
Sr. Analyst

Checked by

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-048/09/01/25	ULR No.: TC1262125000000126F DATE OF REPORT:15/01/2025
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village – Dadri Khurd, Tehsil – Mirzapur Sardar, District – Mirzapur, Uttar Pradesh
Name of Project	Proposed 4X800 MW Coal based Ultra-Super Critical Thermal Power Plant
Site Coordinates	Latitude (N)-25.056345 , Longitude (E)-82.599593

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	15/01/2025
Analysis Start Date	09/01/2025	Sample ID No.	NCL/EP-048/09/01/25
Date of Sampling	08/01/2025	Sample Receipt Date	09/01/2025
Time of Sampling	--	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Ukhdand	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	6.69	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	318	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	122	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	32.8	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	9.7	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	80	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	88	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	1.3	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	12.8	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.16	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.14	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.10	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-048/09/01/25

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E-mail : newconlab@gmail.com, newconlabfinance@gmail.com

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25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-048/09/01/25

Rajeev Kumar Singh
Sr. Analyst

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-053/09/01/25	ULR No.: TC1262125000000131F DATE OF REPORT:15/01/2025
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur**
Site Coordinates	Latitude (N)-25.056345 , Longitude (E)-82.599593

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	15/01/2025
Analysis Start Date	09/01/2025	Sample ID No.	NCL/EP-053/09/01/25
Date of Sampling	08/01/2025	Sample Receipt Date	09/01/2025
Time of Sampling	-	Environmental Condition	27+2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	FARMHOUSE NEAR PROJECT SITE	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value		IS : 3025 (P-11)	7.69	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	338	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	152	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	35.2	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	15.6	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	85	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	66	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	1.6	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	8.8	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.18	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.13	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.09	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-053/09/01/25

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TEST REPORT

25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

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EP-053/09/01/25

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-052/09/01/25	ULR No.: TC1262125000000130F DATE OF REPORT:15/01/2025
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur**
Site Coordinates	Latitude (N)-25.056345 , Longitude (E)-82.599593

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	15/01/2025
Analysis Start Date	09/01/2025	Sample ID No.	NCL/EP-052/09/01/25
Date of Sampling	08/01/2025	Sample Receipt Date	09/01/2025
Time of Sampling	–	Environmental Condition	27+2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	FARMHOUSE NEAR PROJECT SITE	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.64	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	308	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	140	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	34.4	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	13.1	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	88	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	68	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	1.2	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	10.5	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.12	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.09	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.06	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-052/09/01/25

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TEST REPORT

25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-052/09/01/25

Rajeev Kumar Singh
Sr. Analyst

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-051/09/01/25	**ULR No.: TC1262125000000129F** **DATE OF REPORT:15/01/2025**
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur**
Site Coordinates	Latitude (N)-25.056345 , Longitude (E)-82.599593

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	15/01/2025
Analysis Start Date	09/01/2025	Sample ID No.	NCL/EP-051/09/01/25
Date of Sampling	08/01/2025	Sample Receipt Date	09/01/2025
Time of Sampling	–	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Kastoorba Gandhi Girls College	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.66	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	370	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	152	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	40	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	12.6	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	68	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	56	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	1.1	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	8.6	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.16	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.19	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.14	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-051/09/01/25

Checked by SONU Section Incharge

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25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-051/09/01/25

Rajeev Kumar Singh
Sr. Analyst
Checked by

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-050/09/01/25	ULR No.: TC1262125000000128F DATE OF REPORT:15/01/2025
Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur
Site Coordinates	Latitude (N)-25.056345 , Longitude (E)-82.599593

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	15/01/2025
Analysis Start Date	09/01/2025	Sample ID No.	NCL/EP-050/09/01/25
Date of Sampling	08/01/2025	Sample Receipt Date	09/01/2025
Time of Sampling	–	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Rajkiya Ashram PaddhatiBalikaVidhyalaya	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.63	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	357	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	140	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	35.2	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	12.6	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	89	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	79	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	1.8	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	15.4	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.18	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.16	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.15	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-050/09/01/25

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TEST REPORT

25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End of Report****

BDL – BELOW DETECTION LIMIT

EP-050/09/01/25

Rajeev Kumar Singh
Sr. Ahalyst

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-026/24/12/24	ULR No.: TC1262124000001590F DATE OF REPORT:30/12/2024
Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur
Site Coordinates	Latitude (N)-24.957343 , Longitude (E)-82.657154

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	30/12/2024
Analysis Start Date	24/12/2024	Sample ID No.	NCL/EP-026/24/12/24
Date of Sampling	22/12/2024	Sample Receipt Date	24/12/2024
Time of Sampling	–	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Ordial Institute Campus	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.60	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	327	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	104	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	33.6	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	4.9	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	90	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	76	250	1000
12	Chemical Oxygen Demand (COD)	mg/L	IS : 3025 (P-58)	4	Not Specified	Not Specified
13	Biochemical Oxygen Demand (BOD)	mg/L	IS : 3025 (P-44)	BDL(DL-2.0)	Not Specified	Not Specified
14	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	3.8	45	No Relaxation
15	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	19.2	200	400
16	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
17	Fluoride (as F)	mg/L	APHA 4500-F-D	0.19	1.0	1.5
18	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
19	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
20	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
21	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
22	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
23	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
24	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.16	1.0	No Relaxation

EP-026/24/12/24

Checked by Section Incharge

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TC-12621

TEST REPORT

25	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.12	5.0	15.0
26	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0
27	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
28	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
29	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
30	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
31	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
32	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
33	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
34	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
35	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
36	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
37	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
38	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
39	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
40	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
41	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
42	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
43	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
44	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
45	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
46	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
47	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-026/24/12/24

Rajeev Kumar Singh
Sr. Analyst

Checked by

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Authorized Signatory

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Laboratory : A-1/156, Sector-17, (Swadeshi Compound) Kavi Nagar Industrial Area, GHAZIABAD - 201 002 (U.P.)
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Newcon Consultants & Laboratories

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-017/24/12/24	ULR No.: TC1262124000001580F	DATE OF REPORT:30/12/2024
Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.	
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur	
Site Coordinates	Latitude (N)-25.021276 , Longitude (E)-82.603195	

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	30/12/2024
Analysis Start Date	24/12/2024	Sample ID No.	NCL/EP-017/24/12/24
Date of Sampling	22/12/2024	Sample Receipt Date	24/12/2024
		Environmental Condition	27+2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Project Site	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.48	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	388	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	160	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	42	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	13.4	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	90	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	72	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	5.4	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	18	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.14	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.09	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.10	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-017/24/12/24

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TEST REPORT

25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End of Report****

BDL – BELOW DETECTION LIMIT

EP-017/24/12/24

Rajeev Kumar Singh
Sr. Analyst

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-018/24/12/24	ULR No.: TC1262124000001581F DATE OF REPORT:30/12/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur**
Site Coordinates	Latitude (N)-25.019839 , Longitude (E)-82.603069

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	30/12/2024
Analysis Start Date	24/12/2024	Sample ID No.	NCL/EP-018/24/12/24
Date of Sampling	22/12/2024	Sample Receipt Date	24/12/2024
		Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Kotwa	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.63	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	374	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	155	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	36.0	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	15.8	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	100	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	82	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	2.9	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	14.8	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.16	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.14	1.0	No Relaxation

EP-018/24/12/24

FOR NEWCON CONSULTANTS & LABORATORIES

SONU
Sec Incharge
Checked By

SHASHI SHANKAR
Authorized Signatory
NCL

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TEST REPORT

23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.08	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0
25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End of Report****

BDL – BELOW DETECTION LIMIT

EP-018/24/12/24

Rajeev Kumar Singh
Sr. Analyst
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-019/24/12/24	ULR No.: TC1262124000001582F DATE OF REPORT:30/12/2024
Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur
Site Coordinates	Latitude (N)-24.93577 , Longitude (E)-82.690996

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	30/12/2024
Analysis Start Date	24/12/2024	Sample ID No.	NCL/EP-019/24/12/24
Date of Sampling	22/12/2024	Sample Receipt Date	24/12/2024
		Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Marihan	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.35	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	296	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	172	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	48.0	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	12.6	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	120	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	54	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	3.8	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	12	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.18	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.11	1.0	No Relaxation

EP-019/24/12/24

SONU
Checked by Section Incharge

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24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0
25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-019/24/12/24

Rajeev Kumar Singh
Sr. Analyst

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-020/24/12/24	ULR No.: TC1262124000001583F DATE OF REPORT:30/12/2024
Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur
Site Coordinates	Latitude (N)-24.97318 , Longitude (E)-82.731559

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	30/12/2024
Analysis Start Date	24/12/2024	Sample ID No.	NCL/EP-020/24/12/24
Date of Sampling	22/12/2024	Sample Receipt Date	24/12/2024
Time of Sampling	–	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Dhekwah	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.68	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	380	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	152	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	38.4	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	13.6	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	90	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	74	250	1000
12	Nitrate ()as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	4.2	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	16.4	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.17	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.13	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.10	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-020/24/12/24

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Section Incharge
Checked By

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Lab Head

Authorized Signatory

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Mobile : 9810430345, 9205501788 | **Website :** www.newconlab.in
E-mail : newconlab@gmail.com, newconlabfinance@gmail.com

TEST REPORT

25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-020/24/12/24

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-021/24/12/24	ULR No.: TC1262124000001584F DATE OF REPORT:30/12/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur**
Site Coordinates	Latitude (N)-25.024815 , Longitude (E)-82.699913

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	30/12/2024
Analysis Start Date	24/12/2024	Sample ID No.	NCL/EP-021/24/12/24
Date of Sampling	22/12/2024	Sample Receipt Date	24/12/2024
Time of Sampling	–	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Darhiram	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.69	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	357	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	150	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	36.0	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	14.6	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	82	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	74	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	3.5	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	13.3	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.18	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.16	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.12	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-021/24/12/24

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TEST REPORT

25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-021/24/12/24

Rajeev Kumar Singh
Sr. Analyst

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-022/24/12/24	ULR No.: TC1262124000001585F DATE OF REPORT:30/12/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	Proposed 4X800 MW Coal based Ultra-Super Critical Thermal Power Plant
Site Coordinates	Latitude (N)-24.923489 , Longitude (E)-82.583591

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	30/12/2024
Analysis Start Date	24/12/2024	Sample ID No.	NCL/EP-024/24/12/24
Date of Sampling	22/12/2024	Sample Receipt Date	24/12/2024
Time of Sampling	–	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Patehra	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.39	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	344	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	130	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	34.0	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	10.9	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	76	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	88	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	4.3	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	14.6	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.14	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.1	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.07	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-022/24/12/24

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TEST REPORT

25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-022/24/12/24

Rajeev Kumar Singh
Sr. Analyst

Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

Authorized Signatory

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-023/24/12/24	ULR No.: TC1262124000001586F DATE OF REPORT:30/12/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur**
Site Coordinates	Latitude (N)-25.016822 , Longitude (E)-82.755547

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	30/12/2024
Analysis Start Date	24/12/2024	Sample ID No.	NCL/EP-023/24/12/24
Date of Sampling	22/12/2024	Sample Receipt Date	24/12/2024
Time of Sampling	—	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Gogdara	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.51	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	356	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	140	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	35.2	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	12.6	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	85	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	68	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	3.5	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	15.8	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500 F D	0.14	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.12	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.08	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-023/24/12/24

SONU
Checked by
Section Incharge

FOR NEWCON CONSULTANTS & LABORATORIES

Authorized Signatory

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25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-023/24/12/24

Rajeev Kumar Singh
Sr. Analyst
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

SHAMIL SOLANKI
NCL
Authorized Signatory

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-024/24/12/24	ULR No. TC1262124000001587F DATE OF REPORT:30/12/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur**
Site Coordinates	Latitude (N)-24.8949 , Longitude (E)-82.639892

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	30/12/2024
Analysis Start Date	24/12/2024	Sample ID No.	NCL/EP-024/24/12/24
Date of Sampling	22/12/2024	Sample Receipt Date	24/12/2024
Time of Sampling	–	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Sugapankh	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.63	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	355	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	148	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	36.8	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	13.6	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	68	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	85	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	4.4	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	18.2	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.18	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.15	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.12	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-024/24/12/24

FOR NEWCON CONSULTANTS & LABORATORIES

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Checked by Section Incharge

Lab Head
Authorized Signatory

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Mobile : 9810430345, 9205501788 | **Website :** www.newconlab.in
E-mail : newconlab@gmail.com, newconlabfinance@gmail.com

TEST REPORT

25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-024/24/12/24

Rajeev Kumar Singh
Sr. Analyst

Checked by

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-025/24/12/24	**ULR No.: TC1262124000001588F** **DATE OF REPORT:30/12/2024**
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	Proposed 4X800 MW Coal based Ultra-Super Critical Thermal Power Plant
Site Coordinates	Latitude (N)-25.087564 , Longitude (E)-82.704585

SAMPLING DETAIL

Sample Name	Ground Water	Analysis End Date	01/05/2024
Analysis Start Date	30/11/2024	Sample ID No.	NCL/EP-025/24/12/24
Date of Sampling	28/11/2024	Sample Receipt Date	30/11/2024
Time of Sampling	--	Environmental Condition	27±2°C
Sample Done By	Mr. Ravinder	Sampling Protocol	IS : 17614 (Part-1)
Sampling Description	Ground Water		
Sampling Location	Bharpura	Sampling Quantity	5 + 1 Litre
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result	Drinking Water Standards/Limit (IS:10500)	
					Desirable Limit	Permissible Limit
1	Colour	Hazen	IS : 3025 (P-4) Clause-4	BDL(DL-1.0)	5.0	15.0
2	Odour	-	IS : 3025 (P-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS : 3025 (P-8)	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	IS : 3025 (P-10)	BDL(DL-1.0)	1.0	5.0
5	pH Value	-	IS : 3025 (P-11)	7.32	6.5-8.5	No Relaxation
6	Total Dissolved Solids	mg/L	IS : 3025 (P-16)	288	500	2000
7	Total Hardness (as CaCO3)	mg/L	IS : 3025 (P-21)	98	200	600
8	Calcium (as Ca)	mg/L	IS : 3025 (P-40)	25.6	75	200
9	Magnesium (as Mg)	mg/L	IS : 3025 (P-46) Clause-6	8.3	30	100
10	Total Alkalinity (as CaCO3)	mg/L	IS : 3025 (P-23)	70	200	600
11	Chloride (as Cl)	mg/L	IS : 3025 (P-32) Clause-2	72	250	1000
12	Nitrate (as NO3)	mg/L	IS : 3025 (P-34) Clause 3.3	3.3	45	No Relaxation
13	Sulphate (as SO4)	mg/L	IS : 3025 (P-24) Sec-1 Clause-5	15.2	200	400
14	Sulphide (as H2S)	mg/L	IS : 3025 (P-29)	BDL(DL-0.01)	0.05	No Relaxation
15	Fluoride (as F)	mg/L	APHA 4500-F-D	0.16	1.0	1.5
16	Free Residual Chlorine (As Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	0.2	1.0
17	Chloramines (as Cl2)	mg/L	IS : 3025 (P-26) Clause-7	BDL(DL-0.1)	4.0	No Relaxation
18	Phenolic Compound (as C6H5OH)	mg/L	IS : 3025 (P-43) Sec-1 Clause-4	BDL(DL-0.0005)	0.001	0.002
19	Cyanide (as CN)	mg/L	IS : 3025 (P-27) Sec-1 Clause-4	BDL(DL-0.02)	0.05	No Relaxation
20	Anionic Surfactant (as MBAS)	mg/L	IS : 3025 (P-68)	BDL(DL-0.1)	0.2	1.0
21	Ammonia (As Total Ammonia)	mg/L	IS : 3025 (P-34) Clause-2.4	BDL(DL-0.2)	0.5	No Relaxation
22	Iron (as Fe)	mg/L	IS : 3025 (P-65)	0.11	1.0	No Relaxation
23	Zinc (as Zn)	mg/L	IS : 3025 (P-65)	0.07	5.0	15.0
24	Boron (as B)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.5	1.0

EP-025/24/12/24

SONU
Sect Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

SHASHI SHARMA
Lab Head
Authorized Signatory
NCL

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E-mail : newconlab@gmail.com, newconlabfinance@gmail.com

TEST REPORT

25	Nickel (as Ni)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.02	No Relaxation
26	Manganese (as Mn)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.1	0.3
27	Lead (as Pb)	mg/L	IS : 3025 (P-65)	BDL(DL-0.005)	0.01	No Relaxation
28	Selenium (as Se)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	No Relaxation
29	Arsenic (as As)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.01	0.1
30	Cadmium (as Cd)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.003	No Relaxation
31	Copper (as Cu)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.05	1.5
32	Molybdenum (as Mo)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.07	No Relaxation
33	Chromium (as Cr)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.05	No Relaxation
34	Aluminium (as Al)	mg/L	IS : 3025 (P-65)	BDL(DL-0.01)	0.03	0.2
35	Silver (as Ag)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.1	No Relaxation
36	Barium (as Ba)	mg/L	IS : 3025 (P-65)	BDL(DL-0.001)	0.7	No Relaxation
37	Mineral Oil	mg/L	IS : 3025 (P-39) Clause 6	BDL(DL-0.0005)	0.5	No Relaxation
38	Poly Chlorinated Biphenyls (PCB)	mg/L	APHA 6431 B	BDL(DL-0.00005)	0.0005	No Relaxation
39	Polynuclear Aromatic Hydrocarbon (PAH)	mg/L	APHA 6440	BDL(DL-0.00005)	0.0001	No Relaxation
40	Bromoform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
41	Dibromochloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.1	No Relaxation
42	Bromodichloromethane	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.06	No Relaxation
43	Chloroform	mg/L	NCL/SOP/INST/112	BDL(DL-0.01)	0.2	No Relaxation
44	Mercury	mg/L	IS 3025 (P-65): 2022	BDL (DL-0.0005)	0.001	No Relaxation
45	E-Coli	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified
46	Total Coliform	cfu/100 ml	IS : 15185	Absent	Shall not be detectable in any 100 ml	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-025/24/12/24

SONU
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

SHAMBHU SONI
Authorized Signatory
NCL

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-039/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village Dadri-Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24.996593 , Longitde (E)-82.598601

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	15/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-039/10/10/24
Time of Sampling	–	Sample Receipt Date	10/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Surface Water		
Sampling Location	Upper Khajor Dam		
Sampling Protocol	IS : 17614 (Part-1)	Sampling Quantity	5 + 1 Ltr
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Result	Test Method	As Per CPCB, 1979 & BIS, 1982
1	pH	–	7.67	IS : 3025 (P-11)	6.0-8.5
2	Turbidity	NTU	2.2	IS : 3025 (P-10)	Not Specified
3	Total Suspended Solids (TSS)	mg/L	BDL(DL-1.0)	IS : 3025 (P-17)	Not Specified
4	Total Hardness (as CaCO3)	mg/L	128	IS : 3025 (P-21)	Not Specified
5	Total Alkalinity (as CaCO3)	mg/L	60	IS : 3025 (P-23)	Not Specified
6	Chlorides (as Cl)	mg/L	88	IS : 3025 (P-32) Clause-2	NMT 600
7	Sulphate (as SO4)	mg/L	7.3	IS : 3025 (P-24) Sec-1 Clause-5	NMT 1000
8	Nitrate (as NO3)	mg/L	1.2	IS : 3025 (P-34) Clause 3.3	Not Specified
9	Fluoride (as F)	mg/L	0.24	APHA-4500F-D-	Not Specified
10	Biochemical Oxygen Demand (BOD)	mg/L	6	IS : 3025 (P-58)	Not Specified
11	Chemical Oxygen Demand (COD)	mg/L	27	IS : 3025 (P-44)	Not Specified
12	Phenolic Compounds (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-43) Sec-1 Clause-4	Not Specified
13	Lead (as Pb)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
14	Iron (as Fe)	mg/L	0.20	IS : 3025 (P-65)	Not Specified

EP-039/10/10/24-1

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Mobile : 9810430345, 9205501788 | **Website :** www.newconlab.in
E-mail : newconlab@gmail.com, newconlabfinance@gmail.com

TEST REPORT

15	Arsenic (as As)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
16	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
17	Total Chromium (as Cr)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
18	Mercury (as Hg)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-65)	Not Specified
19	Copper (as Cu)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
20	Zinc (as Zn)	mg/L	0.15	IS : 3025 (P-65)	Not Specified
21	Selenium (as Se)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
22	Oil & Grease	mg/L	BDL(DL-1.0)	IS : 3025 (P-39)	Not Specified
23	Colour	Hazen	20	IS : 3025 (P-4) Clause-4	Not Specified
24	Dissolved Solids	mg/L	330	IS : 3025 (P-15)	NMT 2100
25	Residual Free Chlorine	mg/L	BDL(DL-0.1)	IS : 3025 (P-26) Clause-7	Not Specified
26	Boron (as B)	mg/L	BDL(DL-0.01)	IS : 3025 (P-65)	Not Specified
27	Calcium (as Ca)	mg/L	33.6	IS : 3025 (P-40)	Not Specified
28	Magnesium (as Mg)	mg/L	10.7	IS : 3025 (P-46) Clause-6	Not Specified
29	Dissolved Oxygen	mg/L	4.1	IS : 3025 (P-38)	NLT 3
30	Nitrogen	mg/L	BDL(DL-0.5)	IS : 3025 (P-34) Clause 2.5	Not Specified
31	Ammonia	mg/L	BDL(DL-02)	IS : 3025 (P-34) Clause 2.4	Not Specified
32	Phosphorus	mg/L	BDL(DL-0.1)	IS : 3025 (P-31)	Not Specified
33	E-Coli	cfu/100ml	IS : 15185	5	Not Specified
34	Total Coliform	cfu/100ml	IS : 15185	180	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-039/10/10/24-2

Rajeev Kumar Singh
Sr. Analyst

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-040/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village Dadri-Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	15/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-040/10/10/24
Time of Sampling	–	Sample Receipt Date	10/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27+2°C
Sampling Description	Surface Water		
Sampling Location	JamthwaNadi (Upstream)		
Sampling Protocol	IS : 17614 (Part-1)	Sampling Quantity	5 + 1 Ltr
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Result	Test Method	As Per CPCB, 1979 & BIS, 1982
1	pH	-	7.75	IS : 3025 (P-11)	6.0-8.5
2	Turbidity	NTU	1.4	IS : 3025 (P-10)	Not Specified
3	Total Suspended Solids (TSS)	mg/L	BDL(DL-1.0)	IS : 3025 (P-17)	Not Specified
4	Total Hardness (as CaCO3)	mg/L	120	IS : 3025 (P-21)	Not Specified
5	Total Alkalinity (as CaCO3)	mg/L	52	IS : 3025 (P-23)	Not Specified
6	Chlorides (as Cl)	mg/L	74	IS : 3025 (P-32) Clause-2	NMT 600
7	Sulphate (as SO4)	mg/L	7.9	IS : 3025 (P-24) Sec-1 Clause-5	NMT 1000
8	Nitrate (as NO3)	mg/L	1.5	IS : 3025 (P-34) Clause 3.3	Not Specified
9	Fluoride (as F)	mg/L	0.18	APHA-4500F-D-	Not Specified
10	Biochemical Oxygen Demand (BOD)	mg/L	5	IS : 3025 (P-58)	Not Specified
11	Chemical Oxygen Demand (COD)	mg/L	24	IS : 3025 (P-44)	Not Specified
12	Phenolic Compounds (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-43) Sec-1 Clause-4	Not Specified
13	Lead (as Pb)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
14	Iron (as Fe)	mg/L	0.17	IS : 3025 (P-65)	Not Specified

EP-040/10/10/24-1

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TEST REPORT

15	Arsenic (as As)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
16	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
17	Total Chromium (as Cr)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
18	Mercury (as Hg)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-65)	Not Specified
19	Copper (as Cu)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
20	Zinc (as Zn)	mg/L	0.13	IS : 3025 (P-65)	Not Specified
21	Selenium (as Se)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
22	Oil & Grease	mg/L	BDL(DL-1.0)	IS : 3025 (P-39)	Not Specified
23	Colour	Hazen	15	IS : 3025 (P-4) Clause-4	Not Specified
24	Dissolved Solids	mg/L	297	IS : 3025 (P-15)	NMT 2100
25	Residual Free Chlorine	mg/L	BDL(DL-0.1)	IS : 3025 (P-26) Clause-7	Not Specified
26	Boron (as B)	mg/L	BDL(DL-0.01)	IS : 3025 (P-65)	Not Specified
27	Calcium (as Ca)	mg/L	32.0	IS : 3025 (P-40)	Not Specified
28	Magnesium (as Mg)	mg/L	9.7	IS : 3025 (P-46) Clause-6	Not Specified
29	Dissolved Oxygen	mg/L	4.3	IS : 3025 (P-38)	NLT 3
30	Nitrogen	mg/L	BDL(DL-0.5)	IS : 3025 (P-34) Clause 2.5	Not Specified
31	Ammonia	mg/L	BDL(DL-02)	IS : 3025 (P-34) Clause 2.4	Not Specified
32	Phosphorus	mg/L	BDL(DL-0.1)	IS : 3025 (P-31)	Not Specified
33	E-Coli	cfu/100ml	IS : 15185	20	Not Specified
34	Total Coliform	cfu/100ml	IS : 15185	450	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-040/10/10/24-2

Rajeev Kumar Singh
Sr. Analyst

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TC-12621

TEST REPORT

`TEST REPORT NO. NCL/EP-041/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village Dadri-Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	15/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-041/10/10/24
Time of Sampling	--	Sample Receipt Date	10/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27+2°C
Sampling Description	Surface Water		
Sampling Location	JamthwaNadi (Dnstream)		
Sampling Protocol	IS : 17614 (Part-1)	Sampling Quantity	5 + 1 Ltr
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Result	Test Method	As Per CPCB, 1979 & BIS, 1982
1	pH	-	7.47	IS : 3025 (P-11)	6.0-8.5
2	Turbidity	NTU	2.0	IS : 3025 (P-10)	Not Specified
3	Total Suspended Solids (TSS)	mg/L	BDL(DL-1.0)	IS : 3025 (P-17)	Not Specified
4	Total Hardness (as CaCO3)	mg/L	144	IS : 3025 (P-21)	Not Specified
5	Total Alkalinity (as CaCO3)	mg/L	85	IS : 3025 (P-23)	Not Specified
6	Chlorides (as Cl)	mg/L	92	IS : 3025 (P-32) Clause-2	NMT 600
7	Sulphate (as SO4)	mg/L	12.2	IS : 3025 (P-24) Sec-1 Clause-5	NMT 1000
8	Nitrate (as NO3)	mg/L	1.7	IS : 3025 (P-34) Clause 3.3	Not Specified
9	Fluoride (as F)	mg/L	0.22	APHA-4500F-D-	Not Specified
10	Biochemical Oxygen Demand (BOD)	mg/L	8	IS : 3025 (P-58)	Not Specified
11	Chemical Oxygen Demand (COD)	mg/L	32	IS : 3025 (P-44)	Not Specified
12	Phenolic Compounds (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-43) Sec-1 Clause-4	Not Specified
13	Lead (as Pb)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
14	Iron (as Fe)	mg/L	0.18	IS : 3025 (P-65)	Not Specified

EP-041/10/10/24-1

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15	Arsenic (as As)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
16	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
17	Total Chromium (as Cr)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
18	Mercury (as Hg)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-65)	Not Specified
19	Copper (as Cu)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
20	Zinc (as Zn)	mg/L	0.15	IS : 3025 (P-65)	Not Specified
21	Selenium (as Se)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
22	Oil & Grease	mg/L	BDL(DL-1.0)	IS : 3025 (P-39)	Not Specified
23	Colour	Hazen	20	IS : 3025 (P-4) Clause-4	Not Specified
24	Dissolved Solids	mg/L	344	IS : 3025 (P-15)	NMT 2100
25	Residual Free Chlorine	mg/L	BDL(DL-0.1)	IS : 3025 (P-26) Clause-7	Not Specified
26	Boron (as B)	mg/L	BDL(DL-0.01)	IS : 3025 (P-65)	Not Specified
27	Calcium (as Ca)	mg/L	35.2	IS : 3025 (P-40)	Not Specified
28	Magnesium (as Mg)	mg/L	13.6	IS : 3025 (P-46) Clause-6	Not Specified
29	Dissolved Oxygen	mg/L	4.4	IS : 3025 (P-38)	NLT 3
30	Nitrogen	mg/L	BDL(DL-0.5)	IS : 3025 (P-34) Clause 2.5	Not Specified
31	Ammonia	mg/L	BDL(DL-02)	IS : 3025 (P-34) Clause 2.4	Not Specified
32	Phosphorus	mg/L	BDL(DL-0.1)	IS : 3025 (P-31)	Not Specified
33	E-Coli	cfu/100ml	IS : 15185	35	Not Specified
34	Total Coliform	cfu/100ml	IS : 15185	970	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-041/10/10/24-1

Rajeev Kumar Singh
Sr. Analyst

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TC-12621

TEST REPORT

`TEST REPORT NO. NCL/EP-042/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village Dadri-Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	15/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-042/10/10/24
Time of Sampling	--	Sample Receipt Date	10/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Surface Water		
Sampling Location	JogidariNala (Upstream)		
Sampling Protocol	IS : 17614 (Part-1)	Sampling Quantity	5 + 1 Ltr
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Result	Test Method	As Per CPCB, 1979 & BIS, 1982
1	pH	-	7.38	IS : 3025 (P-11)	6.0-8.5
2	Turbidity	NTU	1.2	IS : 3025 (P-10)	Not Specified
3	Total Suspended Solids (TSS)	mg/L	BDL(DL-1.0)	IS : 3025 (P-17)	Not Specified
4	Total Hardness (as CaCO3)	mg/L	116	IS : 3025 (P-21)	Not Specified
5	Total Alkalinity (as CaCO3)	mg/L	70	IS : 3025 (P-23)	Not Specified
6	Chlorides (as Cl)	mg/L	84	IS : 3025 (P-32) Clause-2	NMT 600
7	Sulphate (as SO4)	mg/L	9.6	IS : 3025 (P-24) Sec-1 Clause-5	NMT 1000
8	Nitrate (as NO3)	mg/L	2.1	IS : 3025 (P-34) Clause 3.3	Not Specified
9	Fluoride (as F)	mg/L	0.18	APHA-4500F-D-	Not Specified
10	Biochemical Oxygen Demand (BOD)	mg/L	5	IS : 3025 (P-58)	Not Specified
11	Chemical Oxygen Demand (COD)	mg/L	29	IS : 3025 (P-44)	Not Specified
12	Phenolic Compounds (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-43) Sec-1 Clause-4	Not Specified
13	Lead (as Pb)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
14	Iron (as Fe)	mg/L	0.16	IS : 3025 (P-65)	Not Specified

EP-042/10/10/24-1

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E-mail : newconlab@gmail.com, newconlabfinance@gmail.com

TEST REPORT

15	Arsenic (as As)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
16	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
17	Total Chromium (as Cr)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
18	Mercury (as Hg)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-65)	Not Specified
19	Copper (as Cu)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
20	Zinc (as Zn)	mg/L	0.12	IS : 3025 (P-65)	Not Specified
21	Selenium (as Se)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
22	Oil & Grease	mg/L	BDL(DL-1.0)	IS : 3025 (P-39)	Not Specified
23	Colour	Hazen	10	IS : 3025 (P-4) Clause-4	Not Specified
24	Dissolved Solids	mg/L	283	IS : 3025 (P-15)	NMT 2100
25	Residual Free Chlorine	mg/L	BDL(DL-0.1)	IS : 3025 (P-26) Clause-7	Not Specified
26	Boron (as B)	mg/L	BDL(DL-0.01)	IS : 3025 (P-65)	Not Specified
27	Calcium (as Ca)	mg/L	28.8	IS : 3025 (P-40)	Not Specified
28	Magnesium (as Mg)	mg/L	10.7	IS : 3025 (P-46) Clause-6	Not Specified
29	Dissolved Oxygen	mg/L	4.3	IS : 3025 (P-38)	NLT 3
30	Nitrogen	mg/L	BDL(DL-0.5)	IS : 3025 (P-34) Clause 2.5	Not Specified
31	Ammonia	mg/L	BDL(DL-02)	IS : 3025 (P-34) Clause 2.4	Not Specified
32	Phosphorus	mg/L	BDL(DL-0.1)	IS : 3025 (P-31)	Not Specified
33	E-Coli	cfu/100ml	IS : 15185	20	Not Specified
34	Total Coliform	cfu/100ml	IS : 15185	570	Not Specified

BDL – BELOW DETECTION LIMIT

****End Of Report****

EP-042/10/10/24-2

Rajeev Kumar Singh
Sr. Analyst

Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

Authorized Signatory

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-043/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village Dadri-Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	15/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-043/10/10/24
Time of Sampling	—	Sample Receipt Date	10/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27+2°C
Sampling Description	Surface Water		
Sampling Location	JogidariNala (Dnstream)		
Sampling Protocol	IS : 17614 (Part-1)	Sampling Quantity	5 + 1 Ltr
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Result	Test Method	As Per CPCB, 1979 & BIS, 1982
1	pH	-	7.35	IS : 3025 (P-11)	6.0-8.5
2	Turbidity	NTU	1.1	IS : 3025 (P-10)	Not Specified
3	Total Suspended Solids (TSS)	mg/L	BDL(DL-1.0)	IS : 3025 (P-17)	Not Specified
4	Total Hardness (as CaCO3)	mg/L	130	IS : 3025 (P-21)	Not Specified
5	Total Alkalinity (as CaCO3)	mg/L	75	IS : 3025 (P-23)	Not Specified
6	Chlorides (as Cl)	mg/L	82	IS : 3025 (P-32) Clause-2	NMT 600
7	Sulphate (as SO4)	mg/L	12.3	IS : 3025 (P-24) Sec-1 Clause-5	NMT 1000
8	Nitrate (as NO3)	mg/L	2.2	IS : 3025 (P-34) Clause 3.3	Not Specified
9	Fluoride (as F)	mg/L	0.17	APHA-4500F-D-	Not Specified
10	Biochemical Oxygen Demand (BOD)	mg/L	4	IS : 3025 (P-58)	Not Specified
11	Chemical Oxygen Demand (COD)	mg/L	21	IS : 3025 (P-44)	Not Specified
12	Phenolic Compounds (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-43) Sec-1 Clause-4	Not Specified
13	Lead (as Pb)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
14	Iron (as Fe)	mg/L	0.13	IS : 3025 (P-65)	Not Specified

EP-043/10/10/24-1

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TEST REPORT

15	Arsenic (as As)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
16	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
17	Total Chromium (as Cr)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
18	Mercury (as Hg)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-65)	Not Specified
19	Copper (as Cu)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
20	Zinc (as Zn)	mg/L	0.1	IS : 3025 (P-65)	Not Specified
21	Selenium (as Se)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
22	Oil & Grease	mg/L	BDL(DL-1.0)	IS : 3025 (P-39)	Not Specified
23	Colour	Hazen	10	IS : 3025 (P-4) Clause-4	Not Specified
24	Dissolved Solids	mg/L	350	IS : 3025 (P-15)	NMT 2100
25	Residual Free Chlorine	mg/L	BDL(DL-0.1)	IS : 3025 (P-26) Clause-7	Not Specified
26	Boron (as B)	mg/L	BDL(DL-0.01)	IS : 3025 (P-65)	Not Specified
27	Calcium (as Ca)	mg/L	36.8	IS : 3025 (P-40)	Not Specified
28	Magnesium (as Mg)	mg/L	9.2	IS : 3025 (P-46) Clause-6	Not Specified
29	Dissolved Oxygen	mg/L	4.5	IS : 3025 (P-38)	NLT 3
30	Nitrogen	mg/L	BDL(DL-0.5)	IS : 3025 (P-34) Clause 2.5	Not Specified
31	Ammonia	mg/L	BDL(DL-02)	IS : 3025 (P-34) Clause 2.4	Not Specified
32	Phosphorus	mg/L	BDL(DL-0.1)	IS : 3025 (P-31)	Not Specified
33	E-Coli	cfu/100ml	IS : 15185	30	Not Specified
34	Total Coliform	cfu/100ml	IS : 15185	720	Not Specified

BDL – BELOW DETECTION LIMIT

****End Of Report****

EP-043/10/10/24-2

Rajeev Kumar Singh
Sr. Analyst

Checked by

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TC-12621

TEST REPORT

`TEST REPORT NO. NCL/EP-044/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village Dadri-Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	15/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-044/10/10/24
Time of Sampling	–	Sample Receipt Date	10/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Surface Water		
Sampling Location	PahitiNadi (Upstream)		
Sampling Protocol	IS : 17614 (Part-1)	Sampling Quantity	5 + 1 Ltr
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Result	Test Method	As Per CPCB, 1979 & BIS, 1982
1	pH	-	7.26	IS : 3025 (P-11)	6.0-8.5
2	Turbidity	NTU	BDL(DL-1.0)	IS : 3025 (P-10)	Not Specified
3	Total Suspended Solids (TSS)	mg/L	BDL(DL-1.0)	IS : 3025 (P-17)	Not Specified
4	Total Hardness (as CaCO3)	mg/L	125	IS : 3025 (P-21)	Not Specified
5	Total Alkalinity (as CaCO3)	mg/L	62	IS : 3025 (P-23)	Not Specified
6	Chlorides (as Cl)	mg/L	84	IS : 3025 (P-32) Clause-2	NMT 600
7	Sulphate (as SO4)	mg/L	7.9	IS : 3025 (P-24) Sec-1 Clause-5	NMT 1000
8	Nitrate (as NO3)	mg/L	1.7	IS : 3025 (P-34) Clause 3.3	Not Specified
9	Fluoride (as F)	mg/L	0.14	APHA-4500F-D-	Not Specified
10	Biochemical Oxygen Demand (BOD)	mg/L	3	IS : 3025 (P-58)	Not Specified
11	Chemical Oxygen Demand (COD)	mg/L	17	IS : 3025 (P-44)	Not Specified
12	Phenolic Compounds (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-43) Sec-1 Clause-4	Not Specified
13	Lead (as Pb)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
14	Iron (as Fe)	mg/L	0.16	IS : 3025 (P-65)	Not Specified

EP-044/10/10/24-1

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Section Incharge

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TEST REPORT

15	Arsenic (as As)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
16	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
17	Total Chromium (as Cr)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
18	Mercury (as Hg)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-65)	Not Specified
19	Copper (as Cu)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
20	Zinc (as Zn)	mg/L	0.10	IS : 3025 (P-65)	Not Specified
21	Selenium (as Se)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
22	Oil & Grease	mg/L	BDL(DL-1.0)	IS : 3025 (P-39)	Not Specified
23	Colour	Hazen	5	IS : 3025 (P-4) Clause-4	Not Specified
24	Dissolved Solids	mg/L	294	IS : 3025 (P-15)	NMT 2100
25	Residual Free Chlorine	mg/L	BDL(DL-0.1)	IS : 3025 (P-26) Clause-7	Not Specified
26	Boron (as B)	mg/L	BDL(DL-0.01)	IS : 3025 (P-65)	Not Specified
27	Calcium (as Ca)	mg/L	28.0	IS : 3025 (P-40)	Not Specified
28	Magnesium (as Mg)	mg/L	13.4	IS : 3025 (P-46) Clause-6	Not Specified
29	Dissolved Oxygen	mg/L	4.2	IS : 3025 (P-38)	NLT 3
30	Nitrogen	mg/L	BDL(DL-0.5)	IS : 3025 (P-34) Clause 2.5	Not Specified
31	Ammonia	mg/L	BDL(DL-02)	IS : 3025 (P-34) Clause 2.4	Not Specified
32	Phosphorus	mg/L	BDL(DL-0.1)	IS : 3025 (P-31)	Not Specified
33	E-Coli	cfu/100ml	IS : 15185	10	Not Specified
34	Total Coliform	cfu/100ml	IS : 15185	210	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-044/10/10/24-2

Rajeev Kumar Singh
Sr. Analyst

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TC-12621

TEST REPORT

`TEST REPORT NO. NCL/EP-045/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village Dadri-Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N) 24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	15/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-045/10/10/24
Time of Sampling	-	Sample Receipt Date	10/10/2024
Sample Done By	Mr. Ravinder	Environmental Condition	27+2°C
Sampling Description	Surface Water		
Sampling Location	PahitiNadi (Dnstream)		
Sampling Protocol	IS : 17614 (Part-1)	Sampling Quantity	5 + 1 Ltr
Packing Condition	Sealed	Packed in	PVC Cane

TEST RESULT

S.No.	Parameter	Unit	Result	Test Method	As Per CPCB, 1979 & BIS, 1982
1	pH	-	7.46	IS : 3025 (P-11)	6.0-8.5
2	Turbidity	NTU	1	IS : 3025 (P-10)	Not Specified
3	Total Suspended Solids (TSS)	mg/L	BDL(DL-1.0)	IS : 3025 (P-17)	Not Specified
4	Total Hardness (as CaCO3)	mg/L	135	IS : 3025 (P-21)	Not Specified
5	Total Alkalinity (as CaCO3)	mg/L	76	IS : 3025 (P-23)	Not Specified
6	Chlorides (as Cl)	mg/L	84	IS : 3025 (P-32) Clause-2	NMT 600
7	Sulphate (as SO4)	mg/L	9.8	IS : 3025 (P-24) Sec-1 Clause-5	NMT 1000
8	Nitrate (as NO3)	mg/L	1.5	IS : 3025 (P-34) Clause 3.3	Not Specified
9	Fluoride (as F)	mg/L	0.15	APHA-4500F-D-	Not Specified
10	Biochemical Oxygen Demand (BOD)	mg/L	4	IS : 3025 (P-58)	Not Specified
11	Chemical Oxygen Demand (COD)	mg/L	23	IS : 3025 (P-44)	Not Specified
12	Phenolic Compounds (as C_6H_5OH)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-43) Sec-1 Clause-4	Not Specified
13	Lead (as Pb)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
14	Iron (as Fe)	mg/L	0.15	IS : 3025 (P-65)	Not Specified

EP-045/10/10/24-1

SONU
Section Incharge
Checked by

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TEST REPORT

15	Arsenic (as As)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
16	Cadmium (as Cd)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
17	Total Chromium (as Cr)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
18	Mercury (as Hg)	mg/L	BDL(DL-0.0005)	IS : 3025 (P-65)	Not Specified
19	Copper (as Cu)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
20	Zinc (as Zn)	mg/L	0.11	IS : 3025 (P-65)	Not Specified
21	Selenium (as Se)	mg/L	BDL(DL-0.001)	IS : 3025 (P-65)	Not Specified
22	Oil & Grease	mg/L	BDL(DL-1.0)	IS : 3025 (P-39)	Not Specified
23	Colour	Hazen	10	IS : 3025 (P-4) Clause-4	Not Specified
24	Dissolved Solids	mg/L	318	IS : 3025 (P-15)	NMT 2100
25	Residual Free Chlorine	mg/L	BDL(DL-0.1)	IS : 3025 (P-26) Clause-7	Not Specified
26	Boron (as B)	mg/L	BDL(DL-0.01)	IS : 3025 (P-65)	Not Specified
27	Calcium (as Ca)	mg/L	30.0	IS : 3025 (P-40)	Not Specified
28	Magnesium (as Mg)	mg/L	14.6	IS : 3025 (P-46) Clause-6	Not Specified
29	Dissolved Oxygen	mg/L	4.2	IS : 3025 (P-38)	NLT 3
30	Nitrogen	mg/L	BDL(DL-0.5)	IS : 3025 (P-34) Clause 2.5	Not Specified
31	Ammonia	mg/L	BDL(DL-02)	IS : 3025 (P-34) Clause 2.4	Not Specified
32	Phosphorus	mg/L	BDL(DL-0.1)	IS : 3025 (P-31)	Not Specified
33	E-Coli	cfu/100ml	IS : 15185	25	Not Specified
34	Total Coliform	cfu/100ml	IS : 15185	540	Not Specified

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-045/10/10/24-2

Rajeev Kumar Singh
Sr. Analyst

Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

SHASHI SOLANKI
Lab Head
NCL

Authorized Signatory

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-032/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-25.021202 , Longitude (E)-82.603282

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	15/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-032/10/10/24
Time of Sampling	-	Sample Receipt Date	10/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Soil	Sampling Protocol	Bis & Apha Methods
Sampling Location	Project Site	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	78
3	Silt	%	NCL/STP/SOIL/04	12.4
4	Clay	%	NCL/STP/SOIL/04	9.6
5	pH	-	IS : 2720 (P-26)	7.81
6	Electrical Conductivity	µS/cm	IS : 14767	172
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.2
8	Potassium	mg/kg	IS : 11260	156
9	Sodium	mg/kg	STP/NCL/SOIL/02	84
10	Calcium	mg/kg	STP/NCL/SOIL/03	268
11	Phosphorus	mg/kg	ISO : 11262	12.8
12	Magnesium	mg/kg	STP/NCL/SOIL/10	120
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.08
14	Water Holding Capacity	%	IS : 14765	16.4
15	Porosity	%	STP/NCL/SOIL/08	26
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	42.6
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.84
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	10.6

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-032/10/10/24

FOR NEWCON CONSULTANTS & LABORATORIES

SONU
Section Incharge
Checked by

Arvind Chaudhary
Sr. Analyst

SHASHI SONI
Lab Head
Authorized Signatory
NCL

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-033/10/10/24	DATE OF REPORT:15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-25.019843 , Longitude (E)-82.603073

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	16/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-033/10/10/24
Time of Sampling	-	Sample Receipt Date	10/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Soil	Sampling Protocol	Bis & Apha Methods
Sampling Location	Kotwa	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	74
3	Silt	%	NCL/STP/SOIL/04	21.4
4	Clay	%	NCL/STP/SOIL/04	4.6
5	pH	-	IS : 2720 (P-26)	7.78
6	Electrical Conductivity	µS/cm	IS : 14767	176
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.1
8	Potassium	mg/kg	IS : 11260	159
9	Sodium	mg/kg	STP/NCL/SOIL/02	89
10	Calcium	mg/kg	STP/NCL/SOIL/03	232
11	Phosphorus	mg/kg	ISO : 11262	12.2
12	Magnesium	mg/kg	STP/NCL/SOIL/10	120
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.2
14	Water Holding Capacity	%	IS : 14765	17.8
15	Porosity	%	STP/NCL/SOIL/08	25
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	42.4
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.85
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	10.5

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-033/10/10/24

FOR NEWCON CONSULTANTS & LABORATORIES

Checked by
Section Incharge

Arvind Choudhary
Sr. Analyst

Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-034/10/10/24	DATE OF REPORT:15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24.93576 , Longitude (E)-82.691004

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	15/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-034/10/10/24
Time of Sampling	-	Sample Receipt Date	10/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27+2°C
Sampling Description	Soil	Sampling Protocol	Bis & Apha Methods
Sampling Location	Marihan	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	77
3	Silt	%	NCL/STP/SOIL/04	13.5
4	Clay	%	NCL/STP/SOIL/04	9.5
5	pH	-	IS : 2720 (P-26)	7.81
6	Electrical Conductivity	µS/cm	IS : 14767	174
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.4
8	Potassium	mg/kg	IS : 11260	158
9	Sodium	mg/kg	STP/NCL/SOIL/02	90
10	Calcium	mg/kg	STP/NCL/SOIL/03	242
11	Phosphorus	mg/kg	ISO : 11262	11.9
12	Magnesium	mg/kg	STP/NCL/SOIL/10	130
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.1
14	Water Holding Capacity	%	IS : 14765	18.2
15	Porosity	%	STP/NCL/SOIL/08	26
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	41.8
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.88
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	10.3

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-034/10/10/24

FOR NEWCON CONSULTANTS & LABORATORIES

Checked by
Section Incharge

Arvind Choudhary
Sr. Analyst

Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-035/10/10/24	DATE OF REPORT:15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24.973183 , Longitude (E)-882.731567

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	15/10/2024
Date of Sampling	08/10/2024	Sample ID No.	NCL/EP-035/10/10/24
Time of Sampling	-	Sample Receipt Date	10/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Soil	Sampling Protocol	Bis & Apha Methods
Sampling Location	Dhekwah	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	76
3	Silt	%	NCL/STP/SOIL/04	18.2
4	Clay	%	NCL/STP/SOIL/04	5.8
5	pH	-	IS : 2720 (P-26)	7.90
6	Electrical Conductivity	µS/cm	IS : 14767	180
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.3
8	Potassium	mg/kg	IS : 11260	161
9	Sodium	mg/kg	STP/NCL/SOIL/02	94
10	Calcium	mg/kg	STP/NCL/SOIL/03	246
11	Phosphorus	mg/kg	ISO : 11262	12.3
12	Magnesium	mg/kg	STP/NCL/SOIL/10	126
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.2
14	Water Holding Capacity	%	IS : 14765	19.8
15	Porosity	%	STP/NCL/SOIL/08	28
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	43.1
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.80
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	11.2

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-035/10/10/24

SONU
Section In Charge
Checked by

Arvind Choudhary
Sr. Analyst

FOR NEWCON CONSULTANTS & LABORATORIES

Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-074/15/11/24	DATE OF REPORT:19/11/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24.923502 , Longitude (E)-82.583581

SAMPLING DETAIL

Analysis Start Date	15/11/2024	Analysis End Date	19/11/2024
Date of Sampling	13/11/2024	Sample ID No.	NCL/EP-074/15/11/24
Time of Sampling	-	Sample Receipt Date	15/11/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Soil	Sampling Protocol	Bis & Apha Methods
Sampling Location	Patehra	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	75
3	Silt	%	NCL/STP/SOIL/04	18
4	Clay	%	NCL/STP/SOIL/04	7
5	pH	-	IS : 2720 (P-26)	7.88
6	Electrical Conductivity	µS/cm	IS : 14767	178
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.1
8	Potassium	mg/kg	IS : 11260	158
9	Sodium	mg/kg	STP/NCL/SOIL/02	88
10	Calcium	mg/kg	STP/NCL/SOIL/03	270
11	Phosphorus	mg/kg	ISO : 11262	12.3
12	Magnesium	mg/kg	STP/NCL/SOIL/10	125
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.1
14	Water Holding Capacity	%	IS : 14765	19.6
15	Porosity	%	STP/NCL/SOIL/08	26
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	42.3
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.88
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	10.4

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-074/15/11/24

FOR NEWCON CONSULTANTS & LABORATORIES

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Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-075/15/11/24	DATE OF REPORT:19/11/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-25.016836 , Longitude (E)-82.755777

SAMPLING DETAIL

Analysis Start Date	15/11/2024	Analysis End Date	19/11/2024
Date of Sampling	13/11/2024	Sample ID No.	NCL/EP-075/15/11/24
Time of Sampling	-	Sample Receipt Date	15/11/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27+2°C
Sampling Description	Soil	Sampling Protocol	Bis & Apha Methods
Sampling Location	Gogdara	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	80
3	Silt	%	NCL/STP/SOIL/04	12.7
4	Clay	%	NCL/STP/SOIL/04	7.3
5	pH	-	IS : 2720 (P-26)	8.12
6	Electrical Conductivity	µS/cm	IS : 14767	168
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.2
8	Potassium	mg/kg	IS : 11260	162
9	Sodium	mg/kg	STP/NCL/SOIL/02	89
10	Calcium	mg/kg	STP/NCL/SOIL/03	274
11	Phosphorus	mg/kg	ISO : 11262	13.5
12	Magnesium	mg/kg	STP/NCL/SOIL/10	24
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.1
14	Water Holding Capacity	%	IS : 14765	19.3
15	Porosity	%	STP/NCL/SOIL/08	28
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	42.6
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.80
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	11.3

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-075/15/11/24

Checked by
Section Incharge

Arvind Choudhary
Sr. Analyst

FOR NEWCON CONSULTANTS & LABORATORIES

Lab Head

Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-076/15/11/24	DATE OF REPORT:19/11/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24.892583 , Longitude (E)-82.641696

SAMPLING DETAIL

Analysis Start Date	15/11/2024	Analysis End Date	19/11/2024
Date of Sampling	13/11/2024	Sample ID No.	NCL/EP-076/15/11/24
Time of Sampling	-	Sample Receipt Date	15/11/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Soil	Sampling Protocol	Bis & Apha Methods
Sampling Location	Sugapankh	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	78
3	Silt	%	NCL/STP/SOIL/04	16.6
4	Clay	%	NCL/STP/SOIL/04	5.4
5	pH	-	IS : 2720 (P-26)	7.93
6	Electrical Conductivity	µS/cm	IS : 14767	158
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.0
8	Potassium	mg/kg	IS : 11260	88
9	Sodium	mg/kg	STP/NCL/SOIL/02	67
10	Calcium	mg/kg	STP/NCL/SOIL/03	212
11	Phosphorus	mg/kg	ISO : 11262	11.4
12	Magnesium	mg/kg	STP/NCL/SOIL/10	120
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.2
14	Water Holding Capacity	%	IS : 14765	19.2
15	Porosity	%	STP/NCL/SOIL/08	27
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	42.5
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.86
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	10.8

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-076/15/11/24

FOR NEWCON CONSULTANTS & LABORATORIES

SONU
Checked by
Section In-charge

Arvind Choudhary
Sr. Analyst

SHASHI BHUSHAN
Lab Head
Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-077/15/11/24	DATE OF REPORT:19/11/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-25.021715 , Longitude (E)-82.685946

SAMPLING DETAIL

Analysis Start Date	15/11/2024	Analysis End Date	19/11/2024
Date of Sampling	13/11/2024	Sample ID No.	NCL/EP-077/15/11/24
Time of Sampling	-	Sample Receipt Date	15/11/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Soil	Sampling Protocol	Bis & Apha Methods
Sampling Location	Darhiram	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	76
3	Silt	%	NCL/STP/SOIL/04	16.7
4	Clay	%	NCL/STP/SOIL/04	7.3
5	pH	-	IS : 2720 (P-26)	7.87
6	Electrical Conductivity	µS/cm	IS : 14767	184
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.4
8	Potassium	mg/kg	IS : 11260	162
9	Sodium	mg/kg	STP/NCL/SOIL/02	92
10	Calcium	mg/kg	STP/NCL/SOIL/03	270
11	Phosphorus	mg/kg	ISO : 11262	12.4
12	Magnesium	mg/kg	STP/NCL/SOIL/10	126
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.1
14	Water Holding Capacity	%	IS : 14765	18.8
15	Porosity	%	STP/NCL/SOIL/08	27
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	41.9
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.86
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	11.2

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-077/15/11/24

FOR NEWCON CONSULTANTS & LABORATORIES

Checked by
Section Incharge

Arvind Choudhary
Senior Analyst

Lab Head

Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-147/07/10/24	DATE OF REPORT:14/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	07/10/2024	Analysis End Date	14/10/2024
Date of Sampling	05/10/2024	Sample ID No.	NCL/ED-147/07/10/24
Time of Sampling	-	Sample Receipt Date	07/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Soil	Sampling Protocol	Bis&Apha Methods
Sampling Location	Bharpura	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	76
3	Silt	%	NCL/STP/SOIL/04	19.8
4	Clay	%	NCL/STP/SOIL/04	4.2
5	pH	-	IS : 2720 (P-26)	7.82
6	Electrical Conductivity	µS/cm	IS : 14767	151
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.6
8	Potassium	mg/kg	IS : 11260	155
9	Sodium	mg/kg	STP/NCL/SOIL/02	88
10	Calcium	mg/kg	STP/NCL/SOIL/03	198
11	Phosphorus	mg/kg	ISO : 11262	12.4
12	Magnesium	mg/kg	STP/NCL/SOIL/10	108
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.2
14	Water Holding Capacity	%	IS : 14765	18.8
15	Porosity	%	STP/NCL/SOIL/08	25
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	42.6
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.88
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	10.6

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-147/07/10/24

FOR NEWCON CONSULTANTS & LABORATORIES

SONU
Section Incharge
Checked by

Arvind Choudhary
Sr. Analyst

Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-148/07/10/24	DATE OF REPORT:14/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	07/10/2024	Analysis End Date	14/10/2024
Date of Sampling	05/10/2024	Sample ID No.	NCL/ED-148/07/10/24
Time of Sampling	-	Sample Receipt Date	07/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Soil	Sampling Protocol	Bis & Apha Methods
Sampling Location	OrdialInsitute Campus	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	75
3	Silt	%	NCL/STP/SOIL/04	17.3
4	Clay	%	NCL/STP/SOIL/04	7.7
5	pH	-	IS : 2720 (P-26)	7.79
6	Electrical Conductivity	µS/cm	IS : 14767	134
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.3
8	Potassium	mg/kg	IS : 11260	157
9	Sodium	mg/kg	STP/NCL/SOIL/02	93
10	Calcium	mg/kg	STP/NCL/SOIL/03	253
11	Phosphorus	mg/kg	ISO : 11262	14.1
12	Magnesium	mg/kg	STP/NCL/SOIL/10	134
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.2
14	Water Holding Capacity	%	IS : 14765	18.6
15	Porosity	%	STP/NCL/SOIL/08	27
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	42.7
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.87
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	11.2

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-148/07/10/24

FOR NEWCON CONSULTANTS & LABORATORIES

Checked by
Section Incharge

Arvind Choudhary
Analyst

Lab Head

Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-149/07/10/24	DATE OF REPORT:14/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	07/10/2024	Analysis End Date	14/10/2024
Date of Sampling	05/10/2024	Sample ID No.	NCL/ED-149/07/10/24
Time of Sampling	-	Sample Receipt Date	07/10/2024
Sampling Done By	Mr. Ravinder	Environmental Condition	27±2°C
Sampling Description	Soil	Sampling Protocol	Bis & Apha Methods
Sampling Location	Near Rajiv Gandhi South Campus Banaras Hindu University	Sampling Quantity	1 Kg
Packing Condition	Sealed	Packed In	Zip Pouch

TEST RESULT

S.No.	Parameter	Unit	Test Method	Result
1	Texture	-	NCL/STP/SOIL/04	Sand
2	Sand	%	NCL/STP/SOIL/04	78
3	Silt	%	NCL/STP/SOIL/04	12.8
4	Clay	%	NCL/STP/SOIL/04	9.2
5	pH	-	IS : 2720 (P-26)	7.91
6	Electrical Conductivity	µS/cm	IS : 14767	168
7	Cation Exchange Capacity	meq/100gm	IS : 2720 (P-24)	2.1
8	Potassium	mg/kg	IS : 11260	162
9	Sodium	mg/kg	STP/NCL/SOIL/02	96
10	Calcium	mg/kg	STP/NCL/SOIL/03	268
11	Phosphorus	mg/kg	ISO : 11262	12.2
12	Magnesium	mg/kg	STP/NCL/SOIL/10	132
13	Sodium Absorption Ratio	meq/L	STP/NCL/SOIL/09	1.2
14	Water Holding Capacity	%	IS : 14765	17.9
15	Porosity	%	STP/NCL/SOIL/08	28
16	Zinc (as Zn)	mg/kg	STP/NCL/SOIL/04	41.9
17	Lead (as Pb)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
18	Mercury (as Hg)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
19	Arsenic (as As)	mg/kg	STP/NCL/SOIL/04	BDL(DL-0.05)
20	Organic Matter	%	IS : 2720 (P-22)	0.89
21	Total Kjehdahl Nitrogen	mg/kg	IS : 14684	10.9

****End Of Report****

BDL – BELOW DETECTION LIMIT

EP-149/07/10/24

FOR NEWCON CONSULTANTS & LABORATORIES

Arvind Choudhary
Sr. Analyst

SONU
Checked by
Section Incharge

SHISHIR SOLANKI
Lab Head
NCL
Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-005/18/11/24	DATE OF REPORT: 21/11/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	18/11/2024	Analysis End Date	18/11/2024
Date Of Monitoring	15/11/2024	Monitoring Done By	Mr. Pankaj
Monitoring Duration	30 min.	Equipment Used	Lutron SL 4010
Sampling Protocol	CBCB Method PCLS/O6/2000-01	Category Of Area	RESIDENTIAL AREA
Sampling Location	Bharpura	Time of Monitoring	10:55 AM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	50.2	43.0
2	L_{10}	dB(A)	51.9	44.6
3	L_{50}	dB(A)	49.9	42.6
4	L_{90}	dB(A)	48.2	40.9
5	L_{max}	dB(A)	52.2	45.6
6	L_{min}	dB(A)	44.9	40.4
7	Average	dB(A)	50.0	42.7

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-005/18/11/24

JITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

SHIVANI SOLANKI
Lab Head
NCL
Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-048/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-MirzapurSadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24.979352 , Longitude (E)-82.663005

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	10/10/2024
DateOf Monitoring	08/10/2024	Monitoring Done By	Mr. Pankaj
Monitoring Duration	30 Min.	Equipment Used	Lutron SL
Sampling Protocol	CBCB Method PCLS/O6/2000-01	Category Of Area	4010INDUSTRIAL AREA
Sampling Location	Project Site	Time of Monitoring	10:00 AM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	52.5	43.4
2	L_{10}	dB(A)	56.4	46.8
3	L_{50}	dB(A)	53.1	42.1
4	L_{90}	dB(A)	51.1	40.6
5	L_{max}	dB(A)	58.8	46.5
6	L_{min}	dB(A)	50.5	40.2
7	Average	dB(A)	52.3	43.2

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-048/10/10/24

JITENDER
Section Incharge
Checked by

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TEST REPORT

TEST REPORT NO. NCL/EP-049/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	M/S Mirzapur Thermal Energy (UP) Private Limited Village-Dadri Khurd, Tehsil-MirzapurSadar, District-Mirzapur, Uttar Pradesh.
Name of Project	Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant
Site Coordinates	Latitude (N)-24.93576 , Longitude (E)-82.691004

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	10/10/2024
Date Of Monitoring	08/10/2024	Monitoring Done By	Mr. Pankaj
Monitoring Duration	30 Min.	Equipment Used	Lutron SL4010
Sampling Protocol	CBCB Method PCLS/O6/2000-01	Category Of Area	RESIDENTIAL AREA
Sampling Location	Kotwa	Time of Monitoring	11:05 AM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	49.4	43.7
2	L_{10}	dB(A)	51.7	46.2
3	L_{50}	dB(A)	49.1	45.7
4	L_{90}	dB(A)	46.8	39.6
5	L_{max}	dB(A)	52.3	52.2
6	L_{min}	dB(A)	46.2	38.5
7	Average	dB(A)	49.2	43.5

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-049/10/10/24

Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

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TEST REPORT

TEST REPORT NO. NCL/EP-050/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24.93576 , Longitude (E)-82.691004

SAMPLING DETAIL

Analysis Start Date	10/10/2024	**Analysis End Date**	10/10/2024
Date Of Monitoring	08/10/2024	**Monitoring Done By**	Mr. Pankaj
Monitoring Duration	30 Min.	**Equipment Used**	Lutron SL4010
Sampling Protocol	CBCB Method PCLS/O6/2000-01	**Category Of Area**	RESIDENTIAL AREA
Sampling Location	Marihan	**Time of Monitoring**	8:35 AM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	51.1	42.9
2	L_{10}	dB(A)	53.9	45.7
3	L_{50}	dB(A)	50.4	48.5
4	L_{90}	dB(A)	48.4	39.7
5	L_{max}	dB(A)	55.1	48.7
6	L_{min}	dB(A)	46.8	39.2
7	Average	dB(A)	50.9	42.7

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-050/10/10/24

JITENDER
Section In-charge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

Lab Incharge
Authorized Signatory

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TEST REPORT

TEST REPORT NO. NCL/EP-051/10/10/24	DATE OF REPORT: 15/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24.973183 , Longitude (E)-82.731567

SAMPLING DETAIL

Analysis Start Date	10/10/2024	Analysis End Date	10/10/2024
Date Of Monitoring	08/10/2024	Monitoring Done By	Mr. Pankaj
Monitoring Duration	30min.	Equipment Used	Lutron SL4010
Sampling Protocol	CBCB Method PCLS/O6/2000-01	Category Of Area	RESIDENTIAL AREA
Sampling Location	Dhekwah	Time of Monitoring	12:00PM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	50.7	43.4
2	L_{10}	dB(A)	52.6	46.2
3	L_{50}	dB(A)	50.5	43.3
4	L_{90}	dB(A)	48.7	40.2
5	L_{max}	dB(A)	53.4	46.9
6	L_{min}	dB(A)	48.4	39.8
7	Average	dB(A)	50.5	43.2

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-051/10/10/24

JITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

SHAILESH SHANKI
Lab Head
NCL
Authorized Signatory

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-070/15/11/24	DATE OF REPORT: 19/11/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-25.021715 , Longitude (E)-82.685946

SAMPLING DETAIL

Analysis Start Date	15/11/2024	**Analysis End Date**	15/11/2024
Date Of Monitoring	13/11/2024	**Monitoring Done By**	Mr. Pankaj
Monitoring Duration	30min.	**Equipment Used**	Lutron SL4010
Sampling Protocol	CBCB Method PCLS/O6/2000-01	**Category Of Area**	RESIDENTIAL AREA
Sampling Location	Darhiram	**Time of Monitoring**	01:25 PM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	49.7	42.2
2	L_{10}	dB(A)	51.3	43.9
3	L_{50}	dB(A)	48.5	41.9
4	L_{90}	dB(A)	47.8	39.8
5	L_{max}	dB(A)	51.7	44.7
6	L_{min}	dB(A)	47.3	39.3
7	Average	dB(A)	49.5	41.9

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-070/15/11/24

JITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES
SHASHI SOLANKI
Lab Head
NCL
Authorized Signatory

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-071/15/11/24	DATE OF REPORT: 19/11/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-DadriKhurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24.923502 , Longitude (E)-82.583581

SAMPLING DETAIL

Analysis Start Date	15/11/2024	**Analysis End Date**	15/11/2024
Date Of Monitoring	13/11/2024	**Monitoring Done By**	Mr. Pankaj
Monitoring Duration	30min.	**Equipment Used**	Lutron SL4010
Sampling Protocol	CBCB Method PCLS/O6/2000-01	**Category Of Area**	RESIDENTIAL AREA
Sampling Location	Patehra	**Time of Monitoring**	04:50 PM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	50.9	40.4
2	L_{10}	dB(A)	52.8	42.1
3	L_{50}	dB(A)	50.5	40.2
4	L_{90}	dB(A)	48.6	34.2
5	L_{max}	dB(A)	53.6	42.5
6	L_{min}	dB(A)	48.2	44.7
7	Average	dB(A)	50.6	40.2

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-071/15/11/24

SITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

Lab Head
Authorized Signatory

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-073/15/11/24	DATE OF REPORT: 19/11/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24.892583 , Longitude (E)-82.641696

SAMPLING DETAIL

Analysis Start Date	15/11/2024	**Analysis End Date**	15/11/2024
Date Of Monitoring	13/11/2024	**Monitoring Done By**	Mr. Pankaj
Monitoring Duration	30min.	**Equipment Used**	Lutron SL4010
Sampling Protocol	CBCB Method PCLS/O6/2000-01	**Category Of Area**	RESIDENTIAL AREA
Sampling Location	Sugapankh Khurd	**Time of Monitoring**	11:40AM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	50.1	41.4
2	L_{10}	dB(A)	40.3	39.2
3	L_{50}	dB(A)	49.0	41.2
4	L_{90}	dB(A)	47.7	38.8
5	L_{max}	dB(A)	50.7	43.8
6	L_{min}	dB(A)	47.3	38.3
7	Average	dB(A)	49.6	41.1

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-073/15/11/24

JITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

Authorized Signatory

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-072/15/11/24	DATE OF REPORT: 19/11/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-25.96836 , Longitude (E)-82.755777

SAMPLING DETAIL

Analysis Start Date	15/11/2024	Analysis End Date	15/11/2024
Date Of Monitoring	13/11/2024	Monitoring Done By	Mr. Pankaj
Monitoring Duration	30min.	Equipment Used	Lutron SL4010
Sampling Protocol	CBCB Method PCLS/O6/2000-01	Category Of Area	RESIDENTIAL AREA
Sampling Location	Gogdara	Time of Monitoring	05:40 PM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	49.6	43.3
2	L_{10}	dB(A)	51.2	44.9
3	L_{50}	dB(A)	49.6	43.1
4	L_{90}	dB(A)	47.7	41.0
5	L_{max}	dB(A)	51.6	45.6
6	L_{min}	dB(A)	47.2	40.5
7	Average	dB(A)	49.4	43.0

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-072/15/11/24

TENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-022/28/11/24	DATE OF REPORT: 30/11/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	28/11/2024	**Analysis End Date**	30/11/2024
Date Of Monitoring	26/11/2024	**Monitoring Done By**	Mr. Pankaj
Monitoring Duration	30 min.	**Equipment Used**	Lutron SL 4010
Sampling Protocol	CBCB Method PCLS/O6/2000-01	**Category Of Area**	-
Sampling Location	Ordial Institute Campus	**Time of Monitoring**	11:25 AM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	50.8	44.2
2	L_{10}	dB(A)	51.5	45.6
3	L_{50}	dB(A)	49.4	44.1
4	L_{90}	dB(A)	47.8	42.3
5	L_{max}	dB(A)	51.9	46.2
6	L_{min}	dB(A)	47.4	41.9
7	Average	dB(A)	50.6	44.0

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-022/28/11/24

JITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

Lab Head
Authorized Signatory

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TC-12621

TEST REPORT

TEST REPORT NO. NCL/EP-184/23/10/24	DATE OF REPORT: 28/10/2024
Name and Address of Customer	**M/S Mirzapur Thermal Energy (UP) Private Limited** Village-Dadri Khurd, Tehsil-Mirzapur Sadar, District-Mirzapur, Uttar Pradesh.
Name of Project	**Proposed 2x800 MW Coal based Ultra Super Critical Mirzapur Thermal Power Plant**
Site Coordinates	Latitude (N)-24°59'43.10" , Longitude (E)-82°41',32"

SAMPLING DETAIL

Analysis Start Date	23/10/2024	**Analysis End Date**	23/10/2024
Date Of Monitoring	21/10/2024	**Monitoring Done By**	Mr. Pankaj
Monitoring Duration	30 min.	**Equipment Used**	Lutron SL 4010
Sampling Protocol	CBCB Method PCLS/O6/2000-01	**Category Of Area**	-
Sampling Location	Patehra	**Time of Monitoring**	10:50 AM

TEST RESULT

SL.NO	PARAMETER	UNIT	Result Day Time	Result Night Time
1	Leq	dB(A)	50.9	40.4
2	L_{10}	dB(A)	52.8	45.1
3	L_{50}	dB(A)	50.5	43.2
4	L_{90}	dB(A)	48.6	41.2
5	L_{max}	dB(A)	43.6	45.5
6	L_{min}	dB(A)	48.2	40.7
7	Average	dB(A)	50.6	40.2

Specification as per Noise Pollution Control act 2000.

Area Category	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day Time is reckoned in between 06:00 AM and 10:00 PM
Night Time is reckoned in between 10:00 PM and 06:00 AM

****End of Report****

EP-184/23/10/24

JITENDER
Section Incharge
Checked by

FOR NEWCON CONSULTANTS & LABORATORIES

SHASHI SOLANKI
Lab Head
NCL
Authorized Signatory

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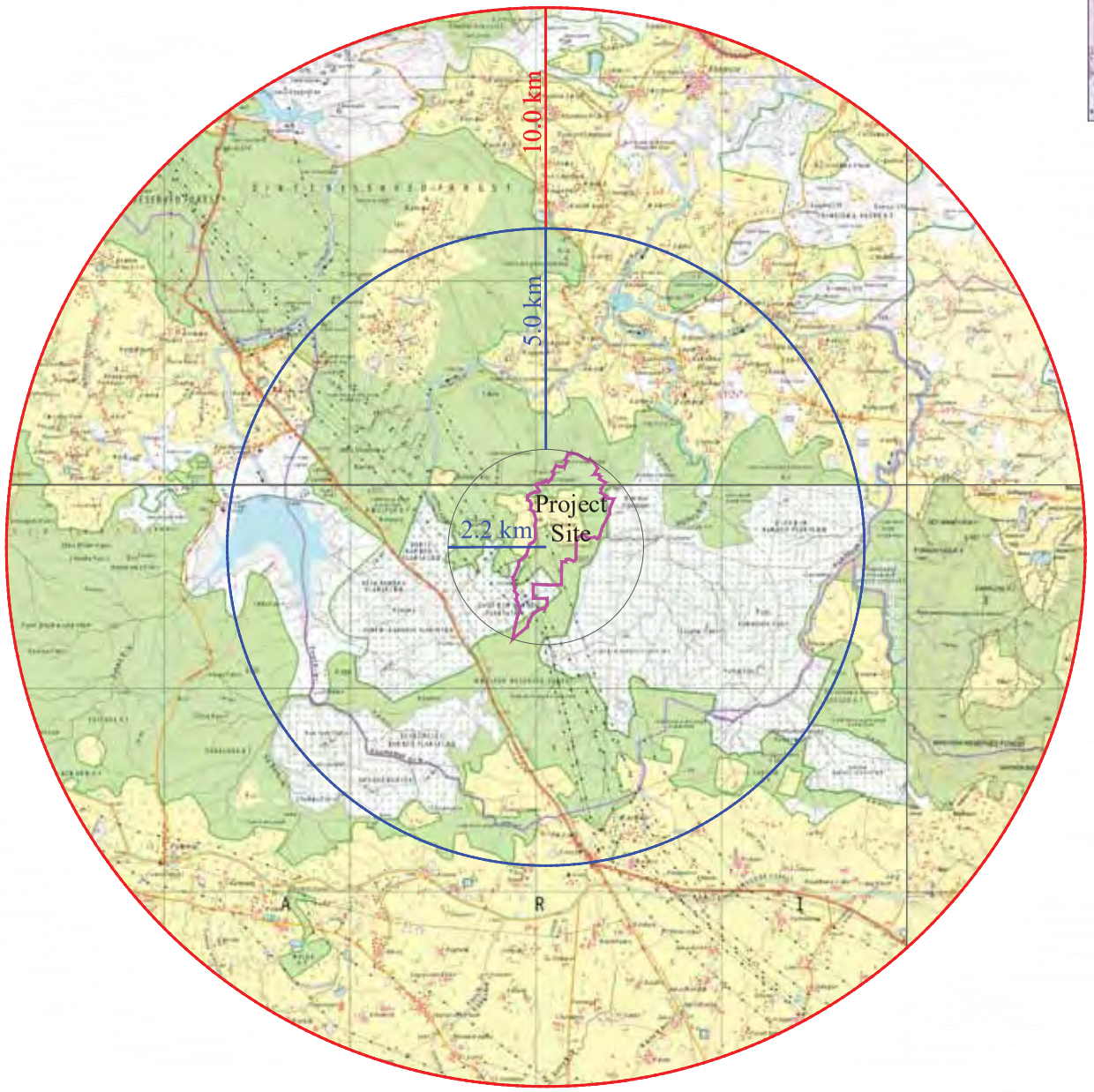
ANNEXURE - XIV

Mirzapur Thermal Energy (UP) Private Limited

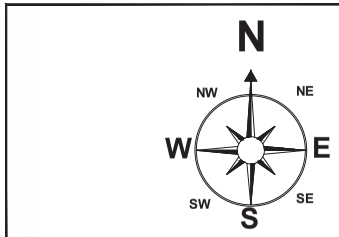
Details of Court Cases

Sl. No.	Name of the Court/Tribunal	Name of the specific Court/ Bench	Case Category	Status of court case	Orders/Directions of the court, if any, and its relevance with the proposed project
Court cases related to Environment & Forest					
1	National Green Tribunal	NGT, Principal Bench, New Delhi	Tribunal	The next date of hearing: 15.07.2025	Same as present status & next hearing date 15.07.2025
2	National Green Tribunal	NGT, Principal Bench, New Delhi	Tribunal	The next date of hearing: 15.07.2025	Same as present status & next hearing date 15.07.2025
3	National Green Tribunal	NGT, Principal Bench, New Delhi	Tribunal	-	The case has been disposed off
General Court Cases					
4	District Court of Mirzapur	Additional sub divisional officer Court, Mirzapur	Civil	The next date of hearing: 28.07.2025	Same as present status & next hearing date 28.07.2025
5	District Court of Mirzapur	Civil Judge Junior Division 6th, Mirzapur	Civil	The next date of hearing: 23.07.2025	Same as present status & next hearing date 23.07.2025
6	District Court of Mirzapur	Civil Judge Junior Division, Mirzapur	Civil	The next date of hearing: 21.07.2025	Same as present status & next hearing date 21.07.2025
7	District Court of Mirzapur	Civil Judge Junior Division, Mirzapur	Civil	The next date of hearing: 21.07.2025	Same as present status & next hearing date 21.07.2025
8	District Court of Mirzapur	Civil Judge Junior Division, Mirzapur	Civil	The next date of hearing: 21.07.2025	Same as present status & next hearing date 21.07.2025
9	C.J.M.-Mirzapur	Chief Judicial Magistrate of Mirzapur	Criminal	The next date of hearing: 09.09.2025	Same as present status & next hearing date 09.09.2025
10	CJ /FTC Court, Mirzapur	CJ/FTC Court, Mirzapur	Criminal	The next date: 24.07.2025	Same as present status & next hearing date 24.07.2025
11	High Court Allahabad	High Court Allahabad	Criminal	Next date of hearing awaited	Same as present status & next hearing date awaited
12	High Court Allahabad	High Court Allahabad	Civil	Next date of hearing awaited	Same as present status & next hearing date awaited
13	High Court Allahabad	High Court Allahabad	Civil	Next date of hearing awaited	Same as present status & next hearing date awaited
14	High Court Allahabad	High Court Allahabad	Civil	Next date of hearing awaited	Same as present status & next hearing date awaited

ANNEXURE - XV







Legend

Project Site



SCALE
0 2.0 4.0 5.0 Km

SOURCE: OSM NO.
63K12, 63K16, 63L9 & 63L13

TOPOGRAPHICAL MAP OF 10 KM RADIUS

Project name: Proposed 1600 (2x800) MW Ultra Super Critical Thermal Power Plant at Village Dadri Khurd of Mirzapur district of Uttar Pradesh by Mirzapur Thermal Energy (UP) Private Limited

ANNEXURE - XVI

कार्यालय अधिशासी अभियन्ता
मीरजापुर नहर प्रखण्ड, मीरजापुर

पत्रांक :– /मी0न0प्र0मी0/विलस्पन (मीरजापुर थर्मल)/दिनांक .2025

विषयः—Certification for HFL from a Seasonal stream of Jamthua River

R.N. Shukla Head Environment & Forest,
Mirzapur Thermal Energy (UP) Private Limited

कृपया उपरोक्त विषयक अपने पत्र संख्या—APL/ Mirzapur/ TPP/ WRD/ 1030/ 2025 एनजी का अवलोकन करने का अवलोकन करने की कृपा करें, जिसके द्वारा Certification for HFL from a Seasonal stream of Jamthua River की वांछना की गयी है। उक्त के क्रम में अवगत कराना है कि जमथुआ नाले पर कोई गेज स्टेशन उपलब्ध नही है।

अतः वांछित सूचना दिया जाना सम्भव नही है।

अधिशासी अभियन्ता
मीरजापुर नहर प्रखण्ड,
मीरजापुर

Scanned with CamScanner

ANNEXURE - XVII

adani

ENVIRONMENT, HEALTH & SAFETY POLICY

We at Adani, strive to make our businesses sustainable, that benefits our customers, our employees, our shareholders and society in general. We believe that in addition to integrated infrastructure business, there is a bottom line in performing our operations according to prescribed standards, specifications and regulations on governance, which are safe in working and environmental friendly for the well-being of the working community.

As a responsible corporate, we at ADANI have a firm conviction that the industrial injuries, occupational hazards as well as safety and environmental incidents are preventable. We recognize and trust people as our most important asset and have commitment to provide safe and healthy work environment impacting not only those, who are working in our industry but also community, which is living in the vicinity.

To achieve this objective, we shall

a. Develop, implement, maintain and sustain EHS Management System across the Group to set up new benchmarks for the respective sector of operations, which superimpose the regulatory and statutory requirements.

b. Verify, audit and periodically review EHS performance and set new targets to revise these benchmarks.

c. Formulate EHS objectives and targets for continual improvement and to have a periodic review for ensuring that these are in conjunction with the individual business and corporate levels.

d. Conduct all our operational activities in such a manner as to avoid harm to employees, contractors, stakeholders and community at large.

e. Inculcate safety & health as a personal value through behavioral intervention and recognize it across levels with continuous correction of unsafe behavior.

f. Provide adequate training and resources so as to bring awareness and ability to carry out work safely.

g. Emphasize responsibility and accountability to all employees and contractor workforce for safe performance on the job and encourage safe behavior off the job.

h. Evolve ways to reduce or eliminate the use or release of toxic and hazardous material and prevent pollution by conserving natural resources, recovering and recycling the raw materials for safe, healthy and clean environment.

GAUTAM S ADANI

Date: 01.01.2016

ANNEXURE - XVIII

Mirzapur Thermal Energy (UP) Private Limited

MTEUPPL recognizes the importance of aligning its operations with global sustainability initiatives, particularly the SDGs outlined by the United Nations, and is committed to supporting India's pledge toward achieving net-zero emissions by 2050. The following measures highlight the alignment of the proposed Ultra Super Critical (USC) Thermal Power Plant project with relevant SDGs and the roadmap for progressing toward the net-zero mission:

1. Alignment with Sustainable Development Goals (SDGs)

The USC thermal power plant project aligns with the following SDGs:

- SDG 7: Affordable and Clean Energy
  - The adoption of USC technology significantly improves thermal efficiency, thereby reducing fuel consumption and greenhouse gas emissions compared to conventional power plants.
- SDG 9: Industry, Innovation, and Infrastructure
  o Deployment of advanced emission control systems such as, Selective Catalytic Reduction (SCR), and Electrostatic Precipitators (ESP) to minimize environmental impact.
  - Implementation of real-time emission monitoring systems (CEMS) & CAAQMS to ensure regulatory compliance and maintain transparency.
- SDG 13: Climate Action
  - Reduction in CO_2 emissions per unit of energy generated by adopting ultra-supercritical technology.
  - Active participation in afforestation projects and carbon offset programs to contribute to climate mitigation.
- SDG 6: Clean Water and Sanitation
  - Incorporating zero liquid discharge (ZLD) systems to ensure efficient water usage and recycling within the plant operations.
- SDG 12: Responsible Consumption and Production
  - fly ash utilization in cement and construction industries to ensure waste-to-resource conversion.
  - Maximizing efficiency in coal usage through advanced coal handling and combustion techniques.

2. Net Zero by 2050: Roadmap and Actions

To align with the mission of achieving net-zero emissions by 2050, Adani Power's USC thermal power plant will adopt the following measures:

- Energy Efficiency and Emission Reductions

- Maintain plant high efficiency leveraging USC technology to minimize CO_2 emissions per unit of energy produced.
- Ensure compliance with stringent emission norms through state-of-the-art pollution control systems (e.g., SCR for NOx). • Carbon **o**ffsetting and Sequestration

- Partner with local governments and NGOs for large-scale afforestation projects to offset residual emissions.
- Implement agroforestry and promote biodiversity conservation in areas surrounding the plant site.

- Stakeholder Engagement and Reporting
  - Develop and regularly update a detailed roadmap for net-zero emissions, including interim milestones.
  - Engage with the regulatory authority and stakeholders by submitting periodic updates on progress toward SDG alignment and net-zero commitments.

3. Key Actions Already Undertaken

- Installation of USC boilers, which improve efficiency and reduce CO_2 emissions by 20% compared to subcritical plants.
- Deployment of cutting-edge pollution control equipment (e.g., SCR, ESP) to achieve emissions well within prescribed norms.
- Implementation of zero liquid discharge (ZLD) to ensure water conservation and waste management.
- Utilization of fly ash for cement and brick manufacturing to achieve 100% utilization targets.

4. Commitments and Future Reporting

MTEUPPL is committed to:

- Periodically updating the regulatory authority & stakeholders with progress reports on SDG alignment and the net-zero roadmap.
- Undertaking third-party audits to validate emission reductions and sustainability efforts.