ENVIRONMENTAL STATEMENT

OF

MEJA URJA NIGAM (P) LTD, STAGE-I (2 x 660MW)

(A Joint Venture of NTPC Limited & U.P.R.V.U N. Ltd.)

For the financial year ending 31 March -2025.

MEJA THERMAL POWER PROJECT

P.O- Kohdar, Tehsil- Meja , Distt-Prayagraj (UP)-212301

PART - A

Environmental Statement for the Financial Year ending 31st March 2025

1	Name and address of the Owner/Occupier of the Industry operation or process.	**Shri Asesh Kumar Chattopadhyay** **Chief Executive Officer** MUNPL
2	Industry category Primary (STC Code) Secondary (STC Code).	Coal Based Thermal Power Plant
3	Production capacity – Units	UNIT#-I & II, 660+660 = **1320 MW** **Generation** 2023-24 : 8275.82 MU 2024-25 : 8598.22 MU
4	Year of establishment	**2011** (Erection Activities Started)
5	Date of last environmental statement submitted.	**30.09.2024** vide Ref: No. MUNPL/EMG /24-25/51

PART - B

Water and Raw Material Consumption

1. Water Consumption (m^3/day)

Process	1306
Cooling	61357
Domestic	1256

Process (Plant) **Water Drawn Per Product Output** (Litre/Kilo Watt Hour):

Name of Products	During The Previous Financial Year (2023-24)	During the Current financial Year (2024-25)
Electricity	**2.5640 L/ kwhr**	**2.71 L/kWhr**

2. Raw material consumption

Sl. no.	Name of Raw Materials	Name of Product	Unit	Consumption of raw material per unit of output	
				During The Previous Financial Year (2023-24)	During the Current Financial Year (2024-25)
i.	Coal	Electricity	kg/kWh	0.60	0.64
ii.	Oil	Electricity	ml/kWh	0.37	0.34

PART - C

Pollution discharged to Environment / unit of output

Pollutants	Quantity of Pollutant discharged	Concentration of Pollutant	% -Percentage of variation from prescribed standard with reasons
(A) Water	**NIL - Due to ZLD implemented (contingent)**	-	-
i- Ash Pond Effluents	NIL	NA	NA
ii- Main Plant Effluent	NIL	NA	NA
iii- Sewage Effluents	NIL	NA	NA
(B) AIR (Stack Emission) Average			
PM	1.7 MT/Day	17.87 mg/Nm^3 (avg)	-40.4%
SO_2	95 MT /day	930 mg/Nm^3 (avg)	830%*
NO_x	30 MT /day	300 mg/Nm^3 (avg)	200%**

* FGD are installed to control SOx emission. Under observation.

** For NOx control catalytic burners are installed. Under observation.

PART - D

HAZARDOUS WASTE

Hazardous wastes	2023-24				2024-25			
1. From Process								
(a) Waste Oil / Used Oil	NIL				NIL			
(b) Used Battery	4.06				NIL			
(c) Empty barrels Container liners contaminated with hazardous chemical wastes	NIL				NIL			
(d) BMW (Kg)	RED	YELLOW	BLUE	WHITE	RED	YELLOW	BLUE	WHITE
	52.78	45.47	22.36	9.6	95.06	78.97	31.93	9.31
(e) Spent carbon or filter medium	NIL				NIL			
(f) Oily Sludge	NIL				NIL			
2. **From Pollution Control Facilities**	NIL							

PART - E

Solid Wastes

Solid Wastes	Total Quantity	
	2023-24	**2024-25**
A- From Process	Nil	Nil
B- From Pollution Control Facilities		
i -Ash (Lakh Ton)	17.85	20.18
ii-Mill Rejects / Clinkers etc. (Ton)	1900	2058
C- (1) Quantity Recycled or Re- Utilised Within the unit		
i. Land filling (Ton)	NIL	NIL
ii- Any other solid waste	NIL	NIL
(2) Sold		
i- Ash (issued to cement industries in (Ton)	10.88	9.48
ii outside Brick units other than brick klins (Ton)	0	0.057
iii. Construction of road and fly over embankment (Ton)	1.75	5.69
(3) Fly Ash disposed to captive ash dyke		
i Ash Pond disposal (Ton)	5.21	4.95

PART - F

Please specify the characterization (in term of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

	Quantity (2024-25)	Nature	Disposal method
A. Hazardous Waste			
(a) Waste Oil	Nil	Brown liquid	--
(b) Used batteries	Nil	--	--
(c) Spent resin	Nil	Granular solid	--
(d) Oily Sludge	Nil	Black residues containing oil	--
(e) Discarded containers)	Nil	MS / PVC drums & jerry cans	--
(f) Spent Carbon	Nil	Black powder	--
B. Solid Waste			
Coal Ash	20.18 Lakh Ton	Given below	As specified in Part – E above

Characteristics of fly ash

Sl. No.	Component	Composition (%)	Quantum (MT)	Disposal Practice
1-	**Fly ASH:**			
i-	Lead as Pb	0.000207	3.34132	After utilization in cement industries, HCSD lining, brick plants, land filling etc, the remaining ash disposed in ash dyke.
ii-	Arsenic as As	0.000025	0.35142	
iii-	Mercury as Hg	0.000012	0.19366	
2-	**Bottom Ash**			
i-	Lead as Pb	0.000126	0.50846	
ii-	Arsenic as As	0.000024	0.09684	
iii-	Mercury as Hg	0.000014	0.05649	

PART - G

Impact of the pollution control measures on conservation of natural resources and consequently on the cost of production.

- STP of 2200 KLD recycles sewage from plant and township and reutilized in horticulture leads to conservation of water.

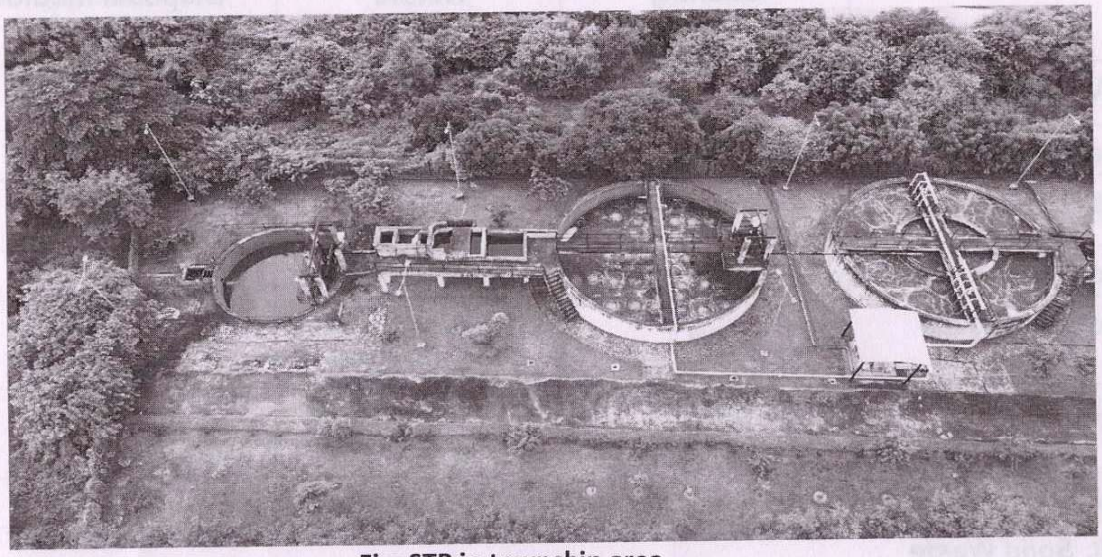
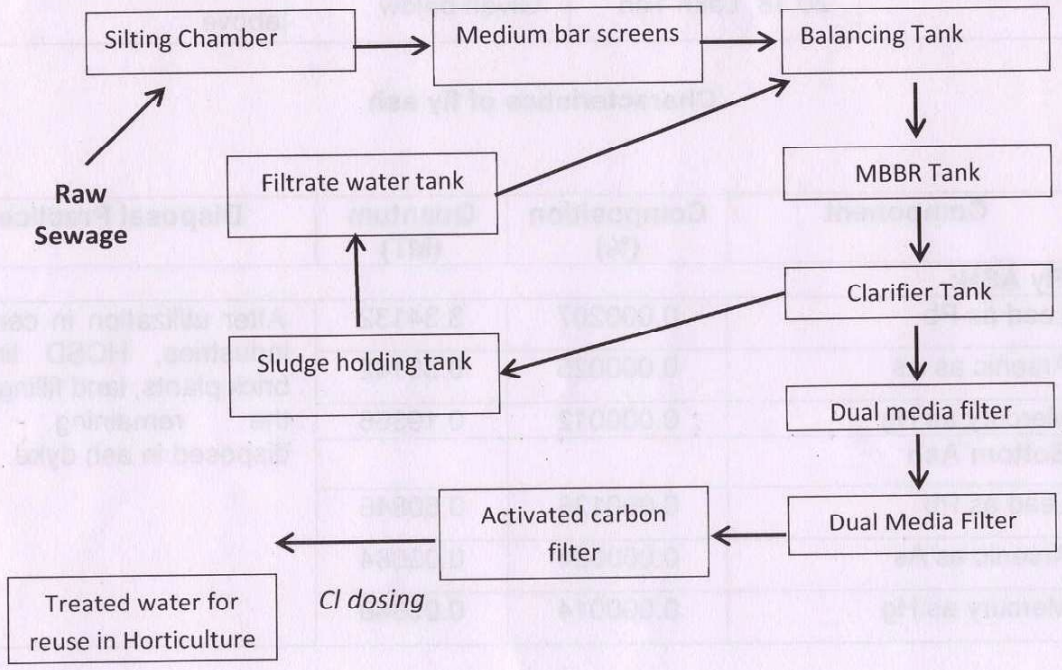


Fig: STP in township area



Scheme of Sewage Treatment Process

- The treated sewage water from Sewage Treatment Plant is being reused for horticulture work inside township area. Analysis reports of treated STP water quality are sent on regular basis to U.P. Pollution Control Board. Third party monitoring of treated sewage water quality is also being done regularly.
- Drip irrigation system is being used in township for efficient utilization of treated water from STP for horticulture works. It reduces the water use by directly targeting the root zone, water isn't wasted on areas that won't benefit the plant.

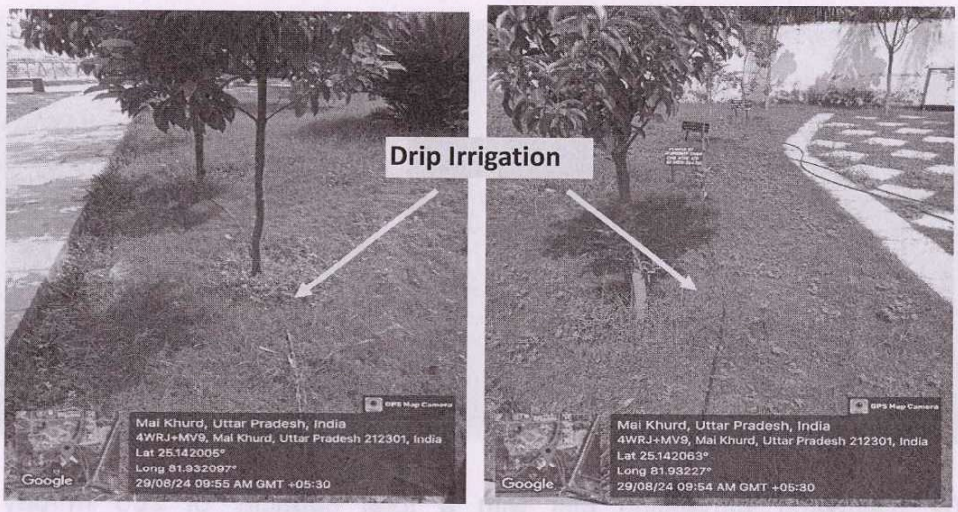
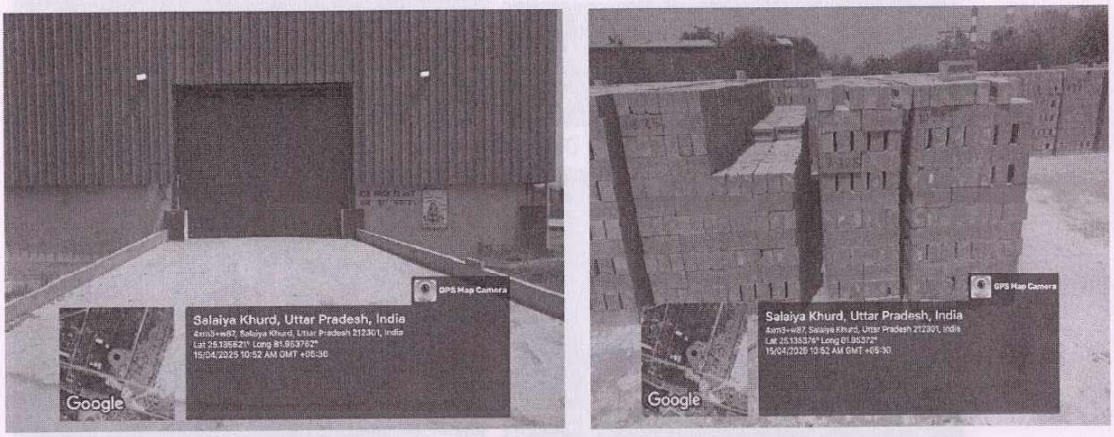


Figure: Drip Irrigation system in Township

- Effluent drains are diverted to treatment systems like Liquid Waste Treatment System, Coal Slurry Settling Ponds (CSSP), Ash Water Recirculation System (AWRS) and others. Treated effluents are recycled and reused and thereby conserving the precious natural resource i.e, Water.

Figure: Coal Slurry Settling Ponds (CSSP)

- Drain separation and Zero liquid discharge is being implemented for effective and efficient conservation of water resource.
- Surge settling tank commissioned to reduce ash water circulation to dyke, thereby reducing evaporation loss. Around 6% of Ash Handling System daily water consumption will be saved.
- Ash brick plant has a capacity of producing 1800-2000 bricks/hr. The Ash bricks are being used in construction works and thereby conserving virgin topsoil.



- 02 Rainwater harvesting pits with a total capacity of 288 m^3/day have been commissioned.

Figure: Rainwater harvesting pit: Township

- MUNPL has installed state of the art pollution control devices to minimize levels of pollution and to reduce the GHG emissions from its operations. Some of the major pollution control equipment installed at MUNPL, Meja are:

a. 02 Nos. of High Efficiency Electrostatic Precipitators in all the units having efficiency more than 99.97% for control of particulate matter emissions through stacks.
b. DeNox system has been installed in MUNPL, Meja for control of oxides of Nitrogen.
c. Flue Gas Desulphurization (FGD) to reduce SO_2 emission
d. Closed circuit cooling towers for conservation of water.
e. Ash Water Recirculation Systems for 100% reuse of ash slurry disposal water after settlement of ash.
f. Water Sprinkling in Wagon Tippler and Coal Stock Piles for dust suppression systems in the coal handling plant to minimize fugitive coal dust emission.

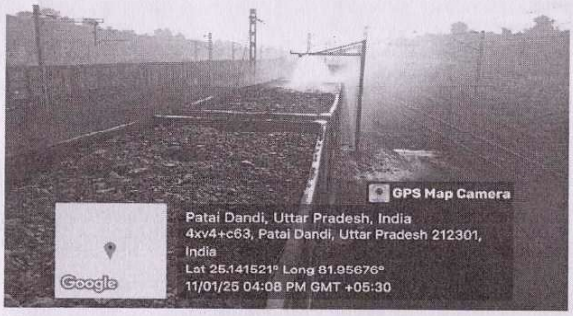


Figure: Pre-wetting of Coal Wagons

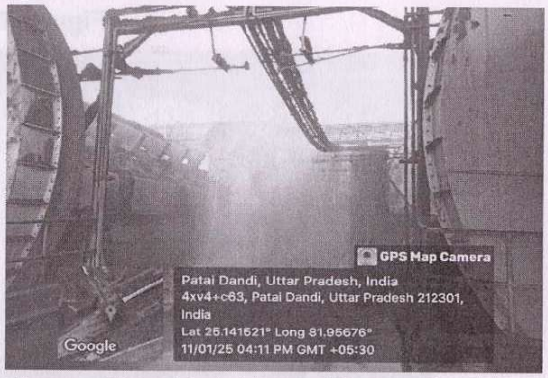


Figure: Water Sprinkling at Wagon Tippler

Figure: Water sprinkling in Coal yard

Figure: Water sprinkling in Wagon Tripler

g. Coal Slurry Settling Ponds for reuse of water.
h. Effluent Treatment Plant (ETP) for maintaining zero discharge of effluent and reuse of wastewater after treatment.
i. Dust Extraction and Dust Suppression (DEDS) system and Dry Fog Dust Suppression (DFDS) system in Coal Handling Plant to reduce fugitive dust emissions.

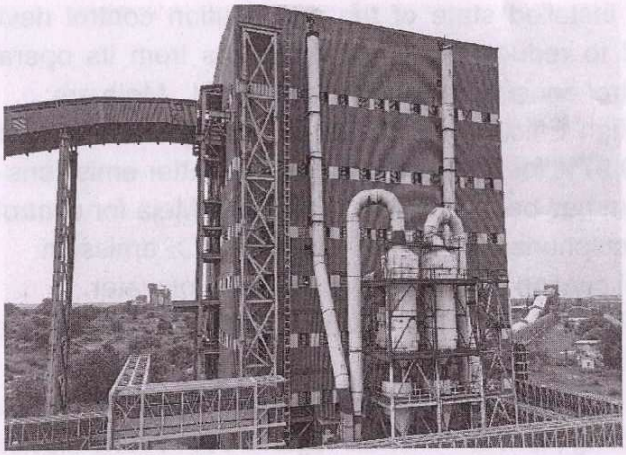


Figure: DEDS in Coal Handling Plant

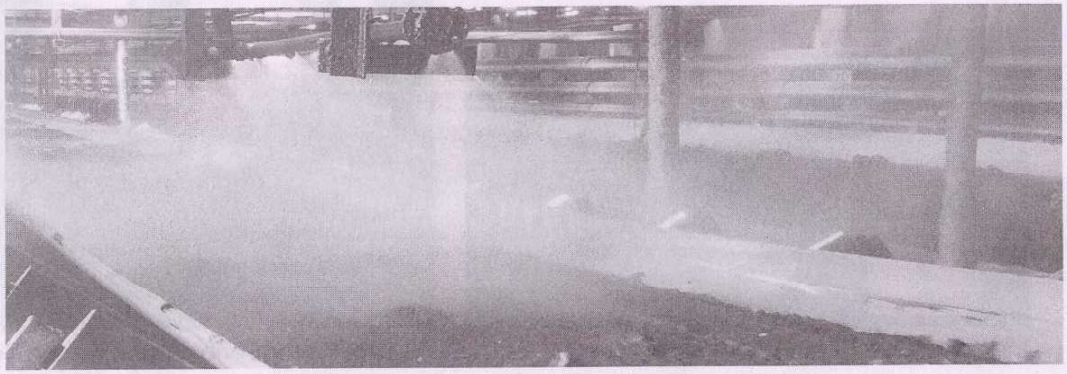


Figure: Dry Fog Dust suppression system in Conveyor belts

j. Dust collection from road is being done on daily basis.

PART - H

Additional measures / investment proposal for environmental protection including abatement of pollution

- Flue Gas Desulphurization (FGD) of both the units are in operation to reduce SO_2 emission.

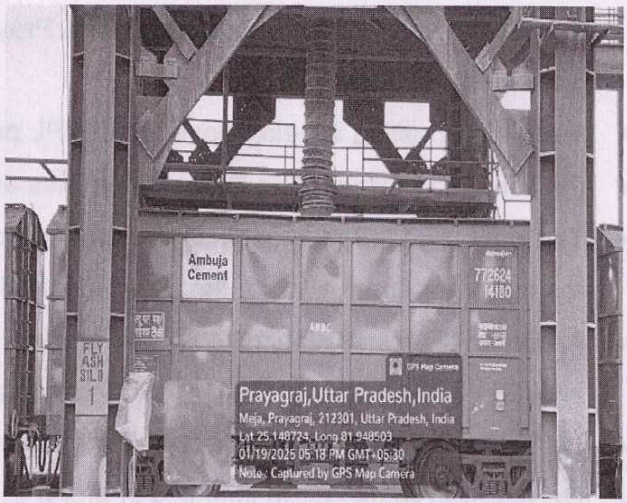


Figure:

- Dry fly ash is being transported through closed railway wagon which has further reduced the vehicular emission.
- Ash pond Lagoon-II and Lagoon-III are water covered.
- In Ash Pond, 30 nos. of water sprinklers are provided to suppress fugitive dust.
- Water sprinkling along the roads/ approaches in and around Ash Pond is being carried out regularly with 02 nos. water tankers. Further, additional 02 more water tankers are deployed for sprinkling water along the approach roads to plant and township.
- Fog Cannon is deployed in Ash Pond as well as in surrounding areas to suppress fugitive dust.
- During coal unloading at Wagon Tippler pre-wetting and dust suppression system is in service.
- In Coal yard 88 nos. of water sprinklers are installed and in service.

- Dust extraction system is in service in crusher house and dry fog dust suppression systems is in service in coal conveyors.
- Online monitoring system i.e. AAQMS, CEMS & EQMS installed for effective monitoring of ambient air quality, emissions and effluents.
- Third party monitoring of environmental parameters for effective environment management of project is being carried out through Indian Institute of Toxicology Research, Lucknow.
- Miyawaki forest has been developed in 1.2 Ha of land with 30,000 nos. of saplings planted through the Social Forestry Department, Prayagraj. As on date, more than 3.7 lakhs trees have been planted.
- Vermi-composting is being done in MUNPL premises.
- Fly ash being disposed to Cement factories and other ash users.
- The project of 3.5 MW capacity for rooftop solar is in progress under existing Stage-I and the target for completion of the same is March'26.
- Additionally, installation of 1.5 MW rooftop solar panel within plant buildings has been included in the scope of Stage-II EPC package.
- 25 MW of floating PV solar project planned on 145-acre area of water reservoirs.
- DeNox system has been installed in MUNPL, Meja for control of oxides of Nitrogen.
- Utilization of pond ash is being done in NHAI road projects by providing transport charges from MUNPL, Meja ash dyke to nearby road projects of NHAI.
- Recurring expenditure are being done for maintenance of AAQMS, CEMS and EQMS system.
- Awareness program related to environment has been regularly made in nearby villages, schools and with employees and associates by MUNPL, Meja. In Financial year 2024-25 a total expenditure of amount ₹6,13,118.00 has been made in awareness campaign related to environment.
- MUNPL with DFO has conserved the wildlife (Black Buck) in the area.

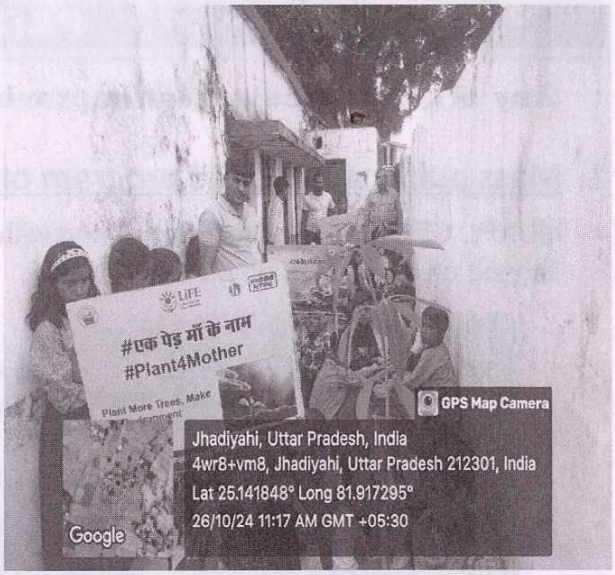
PART - I

Any other particulars for improving the quality of the environment.

1. Mass public awareness program on 'एक पेड़ माँ के नाम':

- MUNPL CEO Shri Kamlesh Soni along with his parents participated in 'एक पेड़ माँ के नाम' and flagged off the campaign on 08.07.2024

- The activity was carried in the neighboring schools, where school students, their teachers and school Principal's, actively participated in the campaign **'एक पेड़ माँ के नाम'** and planted trees in their school compound.



2. Van Mahostav 2024

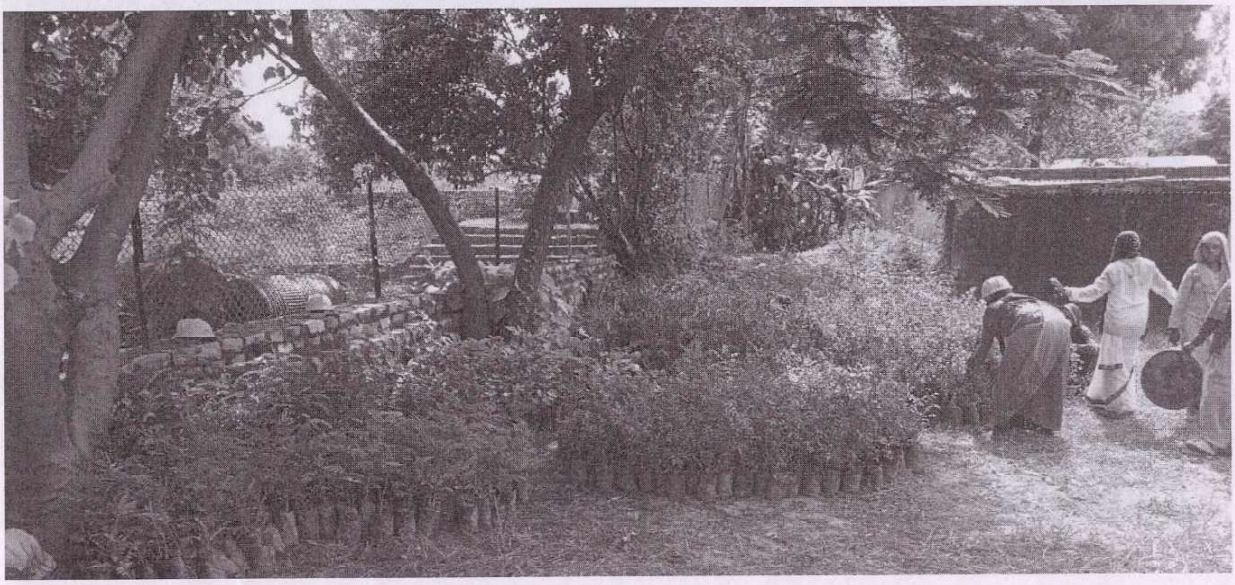
- Van Mahotsav, an annual tree-planting festival was celebrated in MUNPL, continues to be a vital event in 2024, reinforcing the nation's commitment to Environmental Conservation. Large-scale tree plantation campaigns was carried in plant, township and surrounding villages.


Mass Tree Planation – Township
वृहद वृक्षारोपण
Latitude: 25.14688
Longitude: 81.932409
Elevation: 99.66±8 m
Accuracy: 7.9 m
Time: 07-20-2024 16:36
Powered by NoteCam


वृहद वृक्षारोपण
Time: 07-19-2024 17:19
Powered by NoteCam

3. Tree Sapling Distribution 2024

- As part of the Van Mahotsav 2024 celebrations and the ongoing commitment to environmental sustainability, MUNPL has organized a tree sapling distribution drive, where 1,500 saplings native species were provided to the neighboring community.



4. World Environment Day 2024

- MUNPL is committed to sustainability and environmental conservation, and as part of the **World Environment Day 2024** celebrations on **June 5**, various initiatives were undertaken to promote ecological responsibility and awareness.

Figure : Walkathon

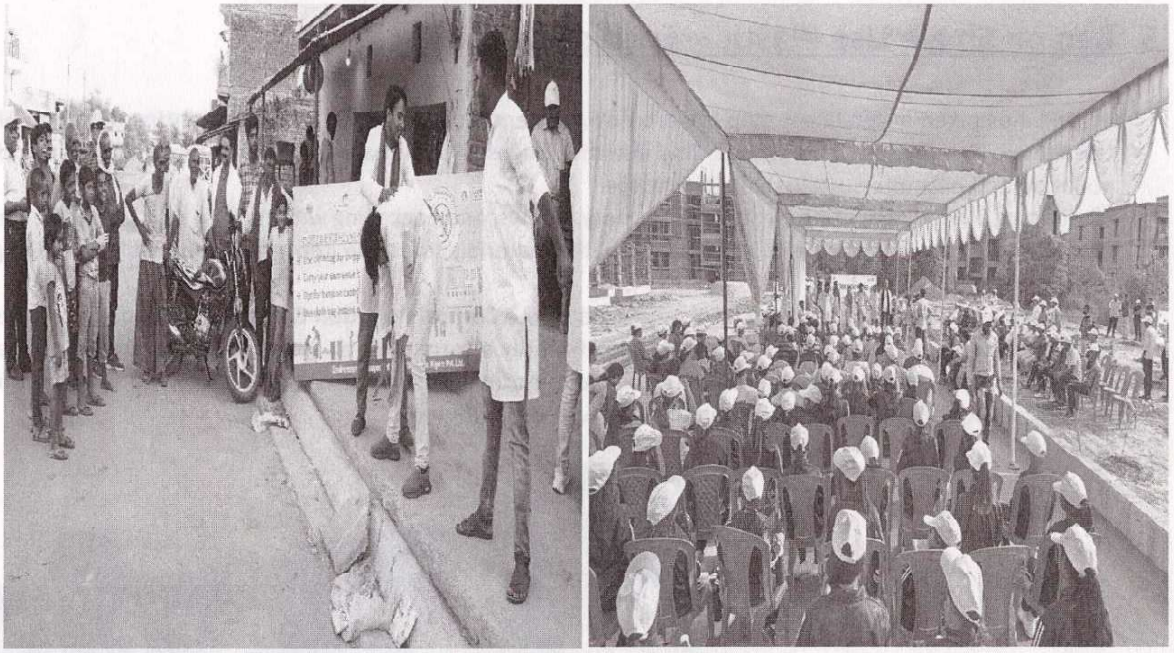


Figure : Nukkad Nattak

- Nukkad Natak was organized in nearby villages and schools to sensitize people about importance of water and spreading awareness about this year world water day theme "Glacier Preservation" educating the public about water scarcity. The plays were followed by a water conservation pledge taken by participants, reinforcing their commitment to sustainable water practices.

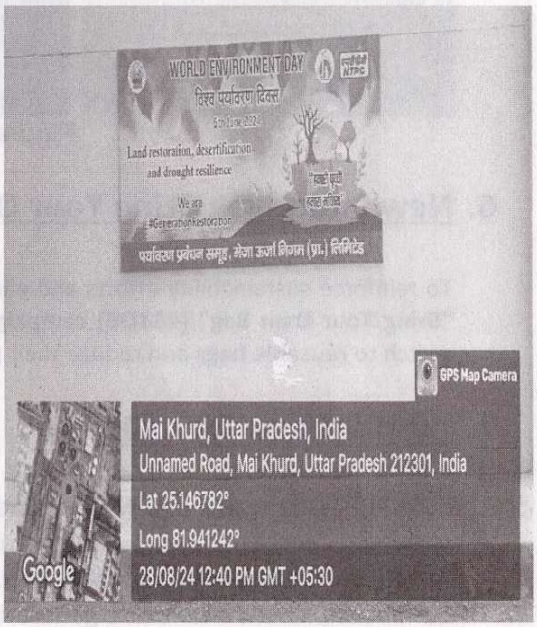


Figure : Display of banners at prominent locations for spreading the awareness

5. Ban on Single Use Plastic – Encourage Ecolastic

MUNPL has taken a significant step toward environmental conservation by implementing a **ban on Single-Use Plastic** (SUP) within its premises. This initiative aligns with global and national efforts to reduce plastic pollution and promote sustainable alternatives.
Eliminating SUP by restricting plastic bags, cutlery, straws, and packaging within office spaces, cafeterias, and project sites. Encouraging the use of biodegradable materials, reusable items, and recyclable packaging.

Distribution of Ecolastic bags, which are approved by the **Central Pollution Control Board** and recommended by **NITI Aayog** is an **100% compostable and eco-friendly alternatives** to conventional plastic bags. They are made from **corn starch and other biodegradable materials**, ensuring they break down naturally within **3-6 months** without harming the environment bags were distributed.

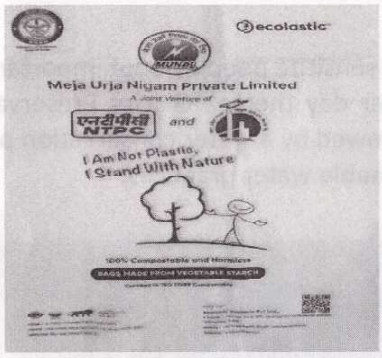


Figure : Promotion of EcoPlastic

6. New Initiative : Bring Your Own Bag

To reinforce sustainability efforts and eliminate single-use plastics, **MUNPL has launched a new initiative "Bring Your Own Bag" (#BYOB) campaign.** This initiative encourages employees and family members to switch to **reusable bags** and reduce their plastic footprint

7. World Water Day 2025

MUNPL World water day was celebrated in order to raise awareness and to sensitize people of vicinity, students of nearby schools, employees of MUNPL and associates about importance of water for life and the need to manage this precious resource in a sustainable and equitable way for the benefit of present and future generations.

Figure: Nukkad Natak in the nearby village and schools regarding protection of environment.

Figure: Quiz Competition

Figure: Mass tree plantation on World Water Day

Figure: World Water Day Celebration at MUNPL-MEJA

Figure: Walkathon during World Water Day

Figure: World Water Day Pledge in Township

Figure: Nukkad Natak spreading the awareness on World Water Day in Township.

27.09.2025

बाप्पादित्य सरकार / BAPPADITYA SARKAR
एजीएम (पी&एस,ईएमजी,एफईएस) / AGM (P&S, EMG, FES)
मेजा ऊर्जा निगम (प्रा.) लि., प्रयागराज
Meja Urja Nigam (P) Ltd. Prayagraj
(एनटीपीसी लि. एवं उ.प्र.रा वि.उ.नि.लि. का संयुक्त उपक्रम)
(A Joint Venture of NTPC Ltd. & UPRVUN Ltd.)