JAYPEE CHURK INDUSTRIAL COMPLEX

JAIPRAKASH
ASSOCIATES LIMITED
Cement Division

August 06, 2021

JCIC/ENV/UPPCB-ES/303/2021

To,

The Member Secretary,
U.P. Pollution Control Board,
TC-12 V, Vibhuti Khand,
Gomti Nagar,
Lucknow- 226010.

Sub: Environmental Statement for the financial year ending 31st March, 2021 for Captive Thermal Power Plant of M/s Jaypee Churk Industrial Complex (Unit of Jaiprakash Associates Limited), Sonbhadra, (U.P.).

Ref: EC vide letter no. J -13012/106/2009-IA II (T) dated 18.12.12.

Dear Sir,

With reference to the above cited subject, please find enclosed Environmental Statement in Form- V prescribed under Rule 14 of the Environment (Protection) Act 1986, for Captive Thermal power Plant of M/s Jaypee Churk Industrial Complex (A Unit of Jaiprakash Associates Limited), Churk, Sonebhadra, (U.P.) for the financial year ending 31st March 2021.

Thanking You.

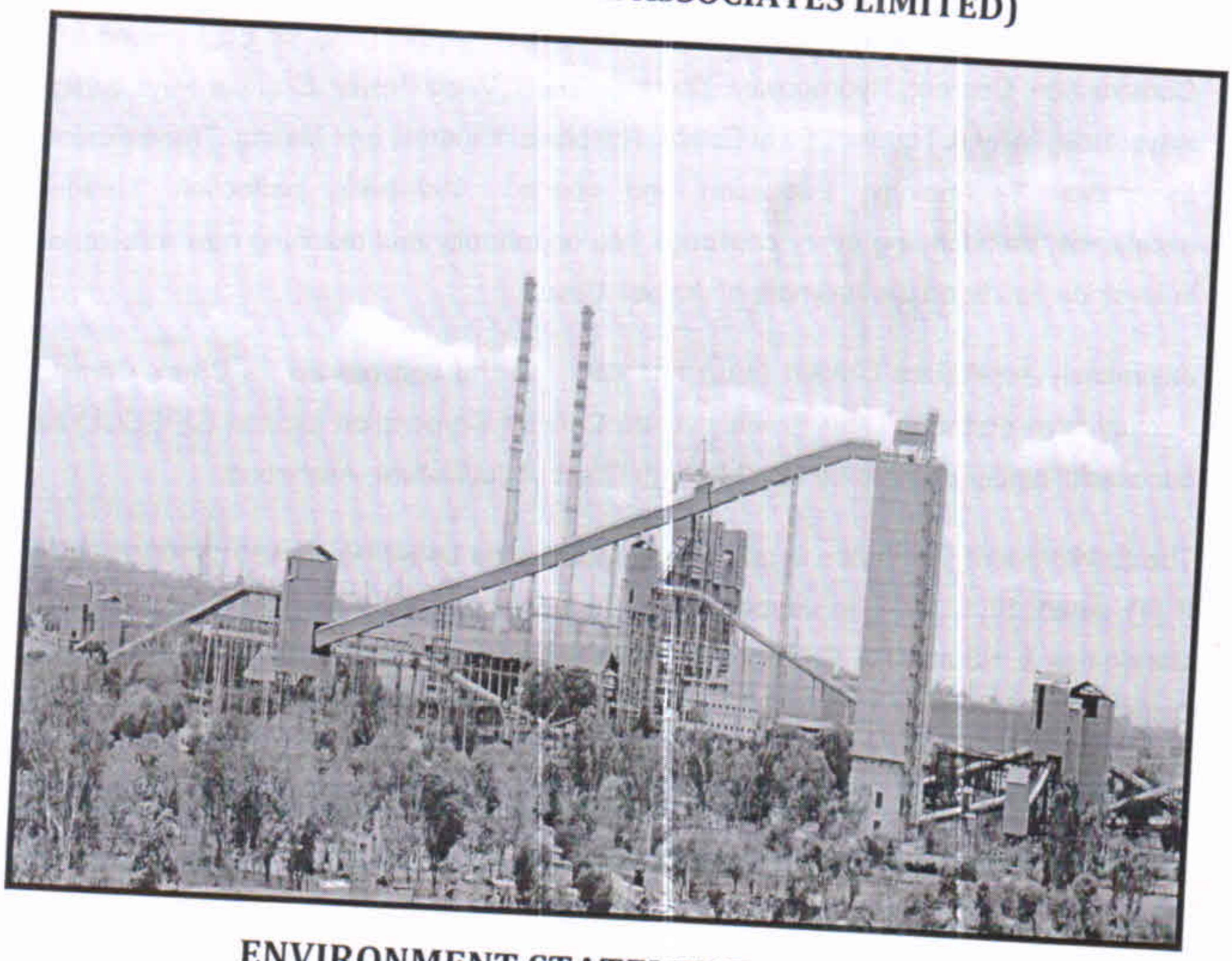
Yours Sincerely,
For Jaypee Churk Industrial Complex
(A Unit of Jaiprakash Associates)

R. N. Yadav
(Factory Manager)

Encl: As Above.

CC: - Regional Officer, U.P. Pollution Control Board, Robertsganj, Sonebhadra (UP)

JAYPEE CHURK INDUSTRIAL COMPLEX
(UNIT OF JAIPRAKASH ASSOCIATES LIMITED)



ENVIRONMENT STATEMENT REPORT
[2020-21]

SUBMITTED TO

UTTAR PRADESH POLLUTION CONTROL BOARD

INTRODUCTION

The Jaypee group is a blue chip diversified industrial conglomerate with a four decade experience of Continuous growth and diversification in the fields of Engineering and Construction, Cement, Hydropower, Thermal Power, Wind Power, Express ways & High ways, Hospitality & Tourism, Real Estate, Hospitals, Minerals and Mining, Transmission, Information Technology, Education and sports. Achieving perfection, creating excellence, transforming every challenge into opportunity and reaching new milestones in its stride has been the hallmark of Jaypee Group.

Jaiprakash Associates Limited (JAL) has acquired the unit named as Churk Cement Factory from erstwhile Uttar Pradesh State Cement Corporation Limited (UPSCCL) as successful bidder ordered by Hon'ble High Court of Judicature, Allahabad.

The Environment Clearance is granted by MoEF, vide Letter no. J -13012/106/2009-IA II (T) dated 18.12.2012 to Jaypee Churk Industrial Complex for 4 x 60 MW Power Generation & 1.00 MTPA Cement Grinding unit at Village- Churk, Tehsil- Robertsganj, District–Sonbhadra (UP). Currently the unit has installed capacity of 3x60 MW Captive Power Plant. Out of 3 units of CPP only 1 unit of 60 MW is in operation.

"FORM – V"

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING WITH 31st MARCH 2021

PART – A

(I)	Name & Address of the Owner / Occupier of the Industry Operation or Process	Jaypee Churk Industrial Complex (A Unit of Jaiprakash Associates Limited) Village & Post: Churk, Tehsil – Robertsganj Distt : Sonebhadra (UP) – 231206 Ph. 05445-252110
(II)	Industry Category	Red Category and Large (Cement and Thermal Power)
(III)	Production Capacity	**Power Plant Installed Capacity is 3 X 60 MW, only 1 unit of 60 MW is in Operation.** (EC has been granted for 4x60 MW captive power plant &1.0 MTPA Cement Grinding unit.)
(IV)	Year of Establishment	2013
(V)	Date of last Environmental Statement Submitted	12.09.2020

PART – B

Water & Raw Material Consumption

A. Water

(i) Water Consumption (m^3/Day):-

Industrial Water Consumption (Process & Cooling) - 399.27

Domestic Water Consumption (Plant & Township) - 503.70

(ii) Consumption per unit of production:-

Name of the Product	Cooling water consumption per unit of product output (m^3/KWH)	
	During the Previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
Electricity	0.00052	0.00041

B. Raw Material Consumption

Name of Raw Materials	Name of the Product	Consumption of Raw Material per unit of output (MT/KWH)	
		During the Previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
Coal	Electricity	0.00092	0.00080

PART- C

Pollution discharges to environment/ unit of output.

(Parameter as specified in the consent issued)

S. No.	Pollutants	Quantity of Pollutants Discharged (Mass / day) (MT/day)	Concentration of Pollutants in discharged (mg/Nm^3)	Percentage of variation from prescribed standard with reasons
(A)	**Water**			
	Industrial & Domestic Waste Water	ETP & STP treated water is fully re-used for dust suppression & green belt development. Zero Liquid Discharge is maintained.		
(B)	**Air**			
Air	Ambient air quality data is enclosed as Annexure –I			
Stack Emission	Boiler ESP	0.15	34.30	All parameters are within the prescribed limits stipulated by concerned regulatory body

PART – D

As specified under Hazardous waste & other waste (Management & Transboundary Movement) Rules, 2016.

Hazardous Waste	Total Quantity (ltr.)	
	During the previous Financial Year (2019-20)	During the current Financial Year (2020-21)
(a) From process - Used & Waste Oil	450 ltr	450 ltr
(b) From pollution control facilities	Nil	Nil

PART- E

(SOLID WASTES)

Solid Waste		Total Quantity Generated	
		During the Previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
a	Fly ash generation from Process & Pollution Control Facilities	146785 MT	130473 MT + 312.032 MT (From outside)
b	Fly Ash Quantity recycled or reutilized		
i	Sold	-	-
ii	utilized	147701.94 MT	132269.5 MT
iii	Balance qty. with the Unit	3031.83 MT	1547.362 MT

Note: Fly ash generated from the Unit is being transported in bulker to our grinding unit at Chunar & Churk for cement manufacturing.

PART- F

Please specify the characterizations (in terms of composition of quantum) of Hazardous as well solid waste and indicate disposal practice adopted for both these categories of wastes.

Hazardous Waste (generated from entire premises)

Used Oil & Waste Oil

Hazardous Waste: The hazardous waste i.e. used Oil and waste oil generated during various processes in the plant is being collected in empty drums & then stored at Hazardous waste storage area. Authorization for disposal of Hazardous waste has been obtained from UPPCB. The used oil & waste oil shall be disposed off through authorized recyclers/vendors by UPPCB as per the provisions mentioned in Hazardous waste & other waste (Management & Transboundary Movement) Rules, 2016.

Solid Waste: Solid waste generated from operations and pollution control equipments are bottom ash and fly ash. It is collected pneumatically in the Silos & transported in bulkers for our cement Grinding Unit at Chunar & Churk.

PART- G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

- Greenbelt strengthening is an ongoing process. Greenbelt plays an important role in the control of air pollution and also gives and aesthetic look to the site. Selected species of plants have been planted in and around the premises to control the fugitive dust.

- Latest state of the art APCEs have been installed in the Unit to capture the dust covering all the point source emissions and material transfer points. There are 3 ESPs attached with the Boilers to capture the particulate matter. Also more than 20 Bag Filters installed in the process at various material transfer points to capture the Particulate Matter having efficiency more than 99%. The material captured by the APCEs is automatically recycled back, which in turn enhances the process economy.

- Roads in and around the plant is being concreted which in turn reduces the fugitive dust emissions due to vehicular movement.

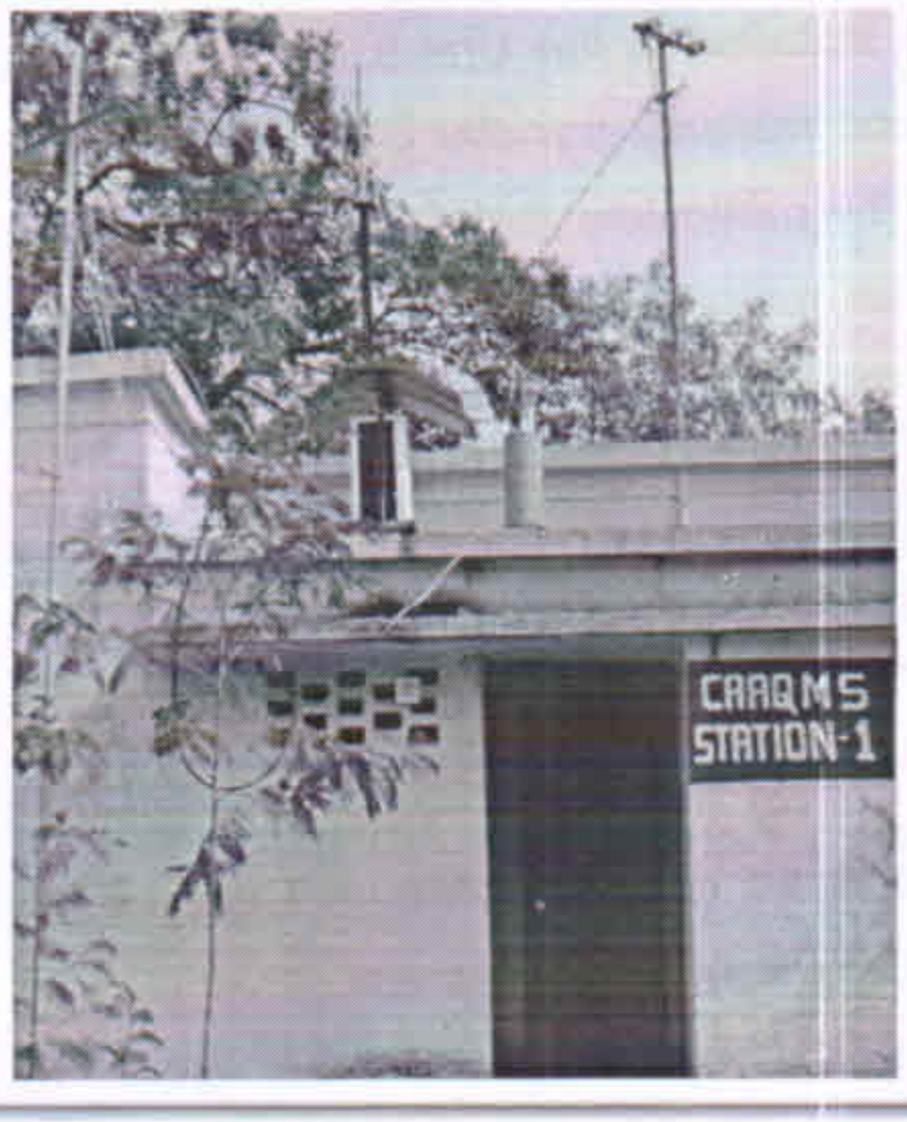
- Water sprinklers have been installed at required transfer points in Coal handling plant. 100% treated ETP water is being re-used in dust suppression.
- Treated water from STP is being utilized in colony & plant for green belt development.
- 100% fly ash & bottom ash is being transported pneumatically from ESP hopper to ash silos for storage. Fly ash is transported from Churk to our cement grinding unit at Chunar & Churk for manufacturing of Cement. No ash pond is proposed. Hence there is least likely impact of project on the environment.
- Only air cooled condensers are installed, which significantly reduces water consumption for cooling of exhaust steam.

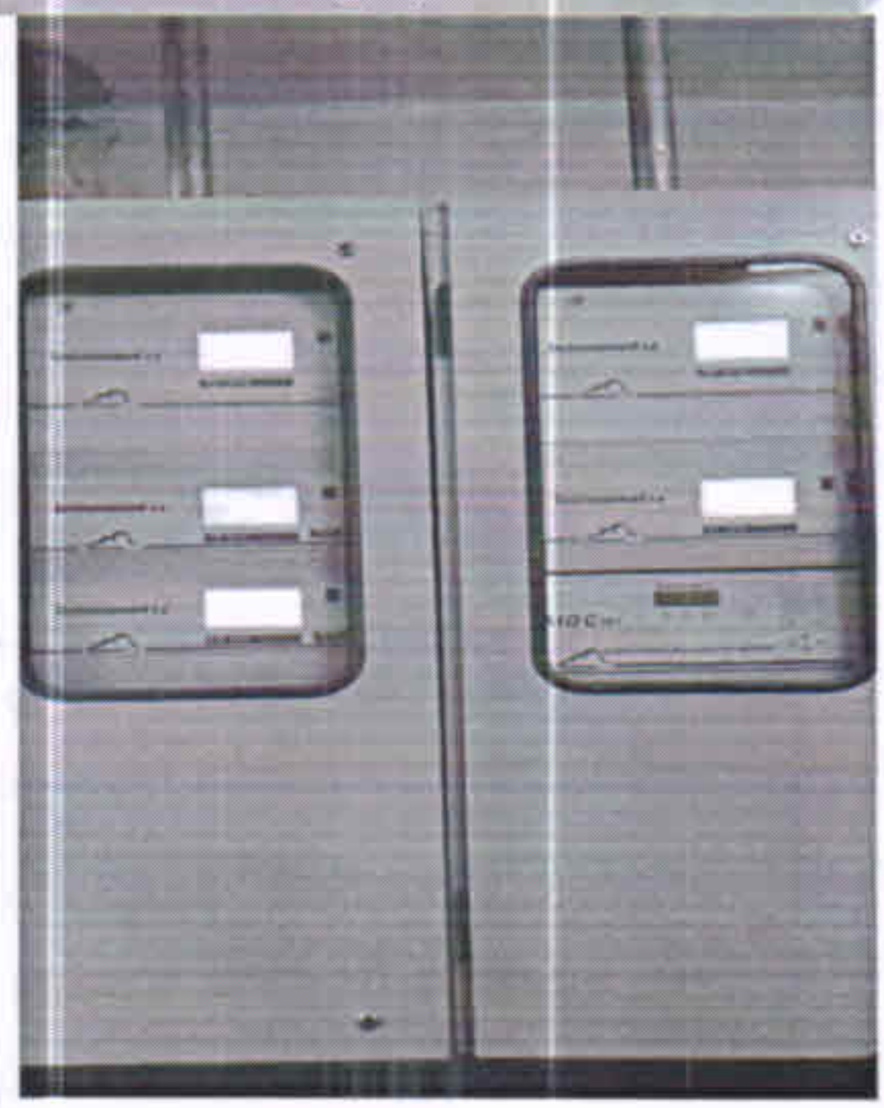
PART- H

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

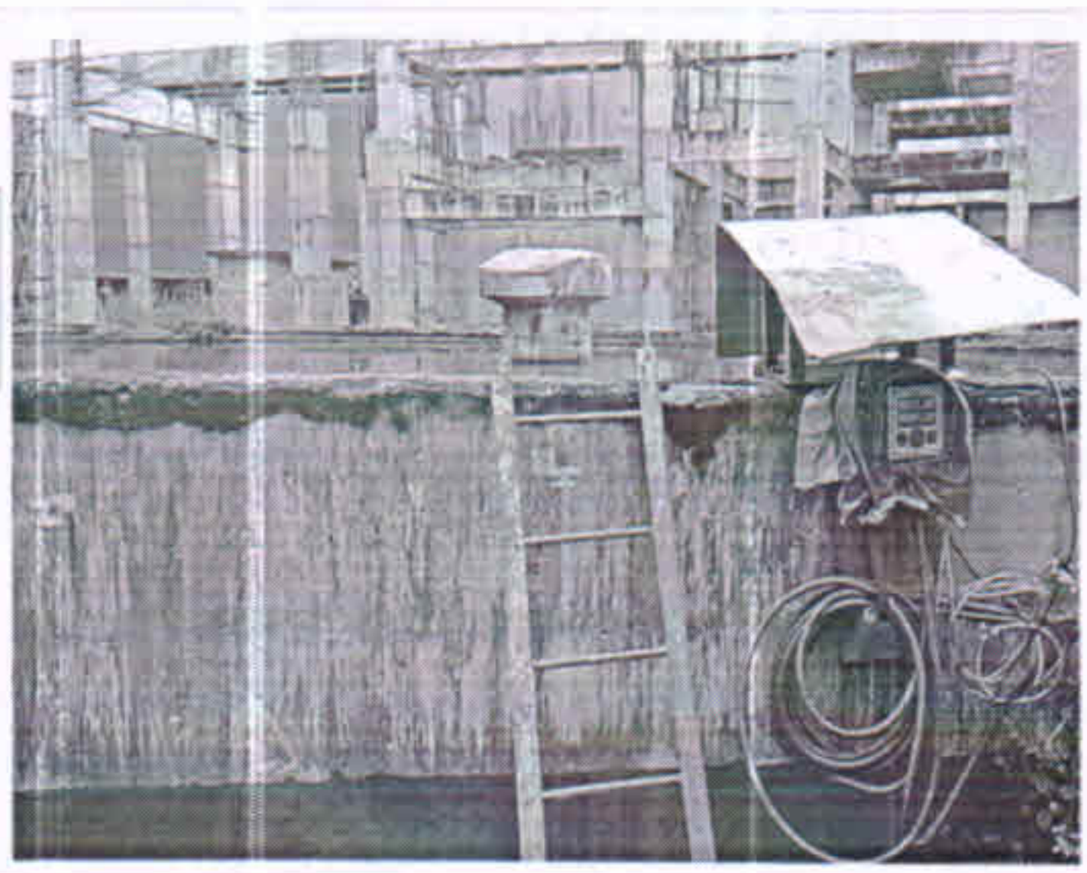
1. Continuous Ambient Air Quality Monitoring System, Continuous Emission Monitoring System & Online Effluent Monitoring system have been installed in the unit & data of CEMS & online effluent monitoring system is being uploaded at CPCB server.

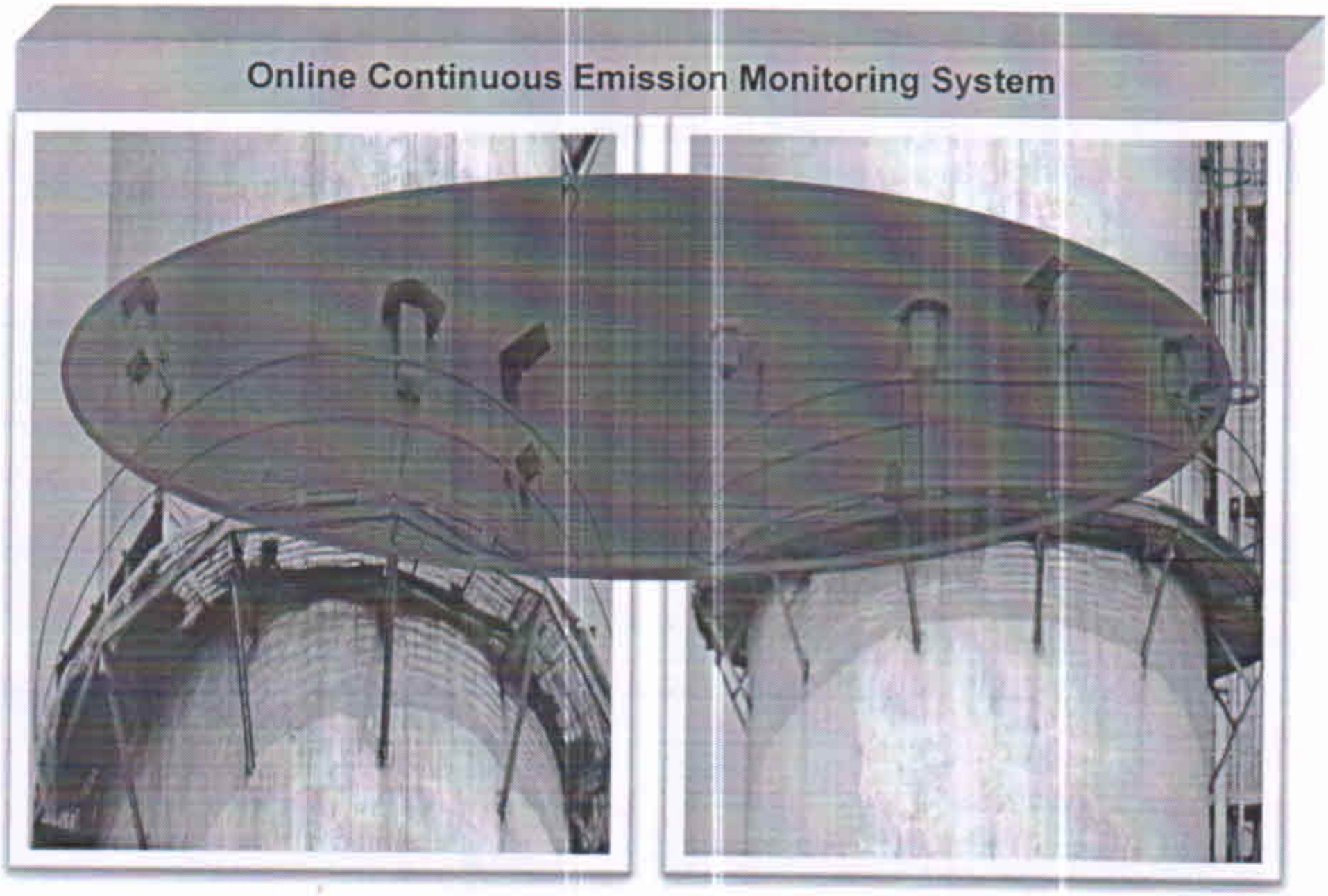
Continuous Ambient Air Quality Monitoring System



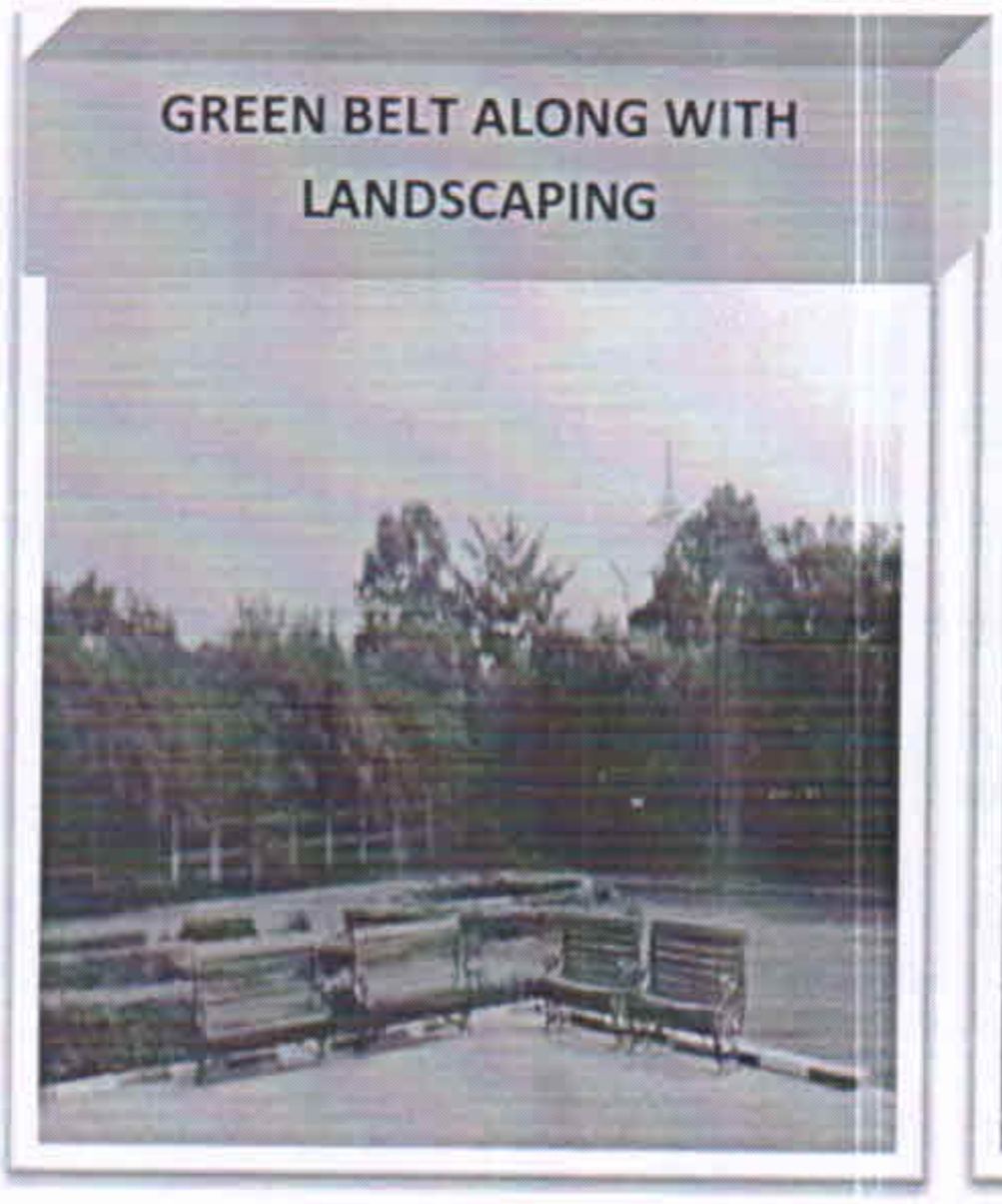


Online Effluent Monitoring System



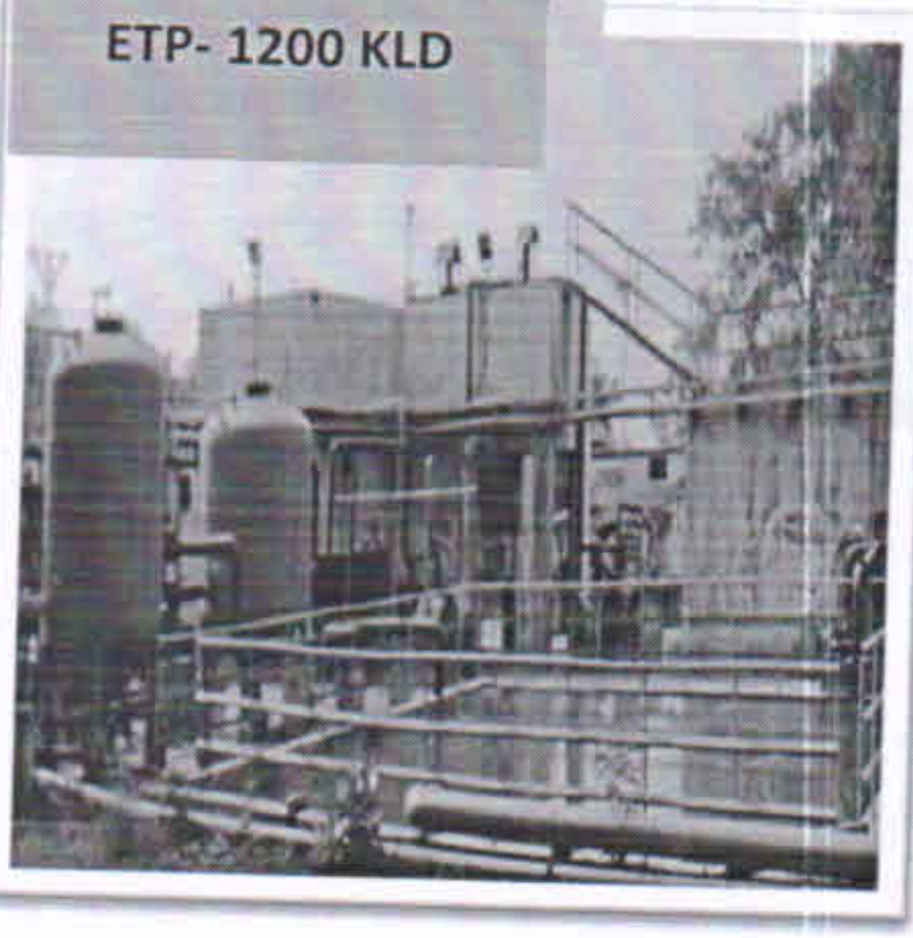


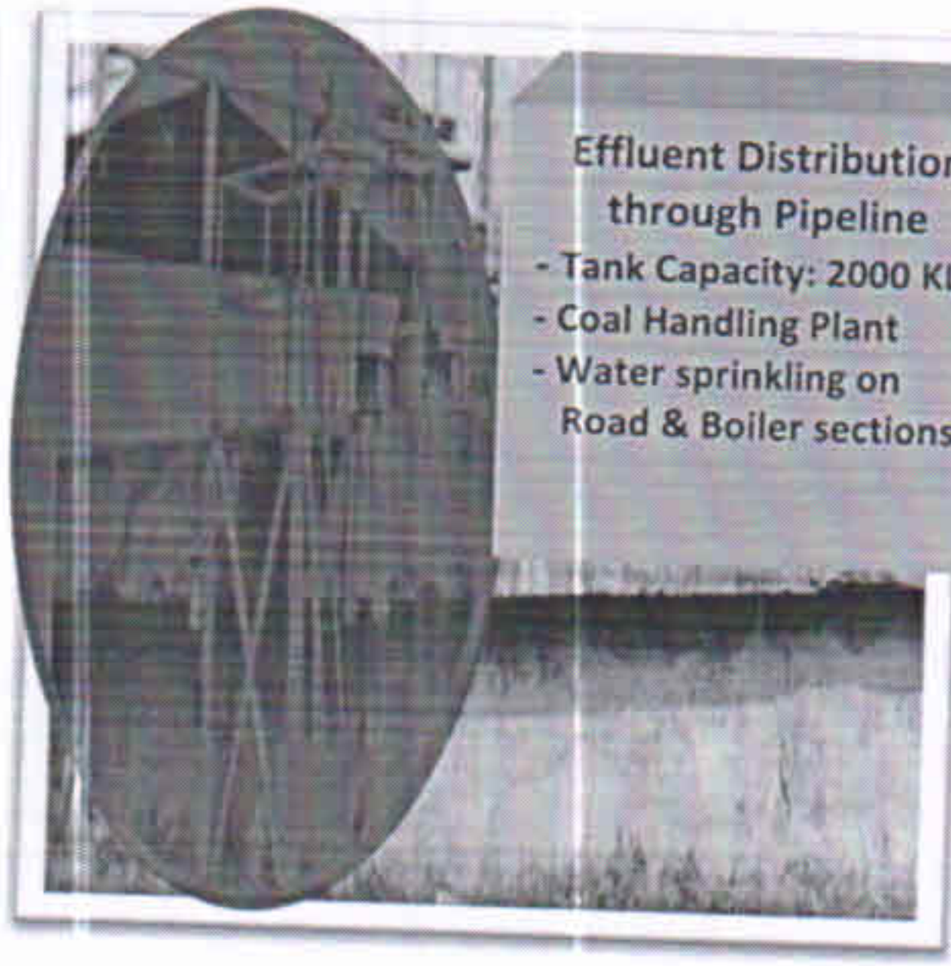
2. Tree plantation is in progress inside the premises. Also small patches of gardens are being developed inside of the plant premises & township wherever the open space is available to improve the plant beautification.



3. Plant is designed on zero discharge principle. Effluent generated from various processes e.g. cooling tower blow down, Boiler blow down & DM Plant backwash etc. is collected in neutralization pit & pumped to ETP for further treatment. As of now total waste water is used for spraying in the Coal Handling Plant to inhibit dust from flying, including transfer points on conveyor belts & coal unloading points.

ETP- 1200 KLD

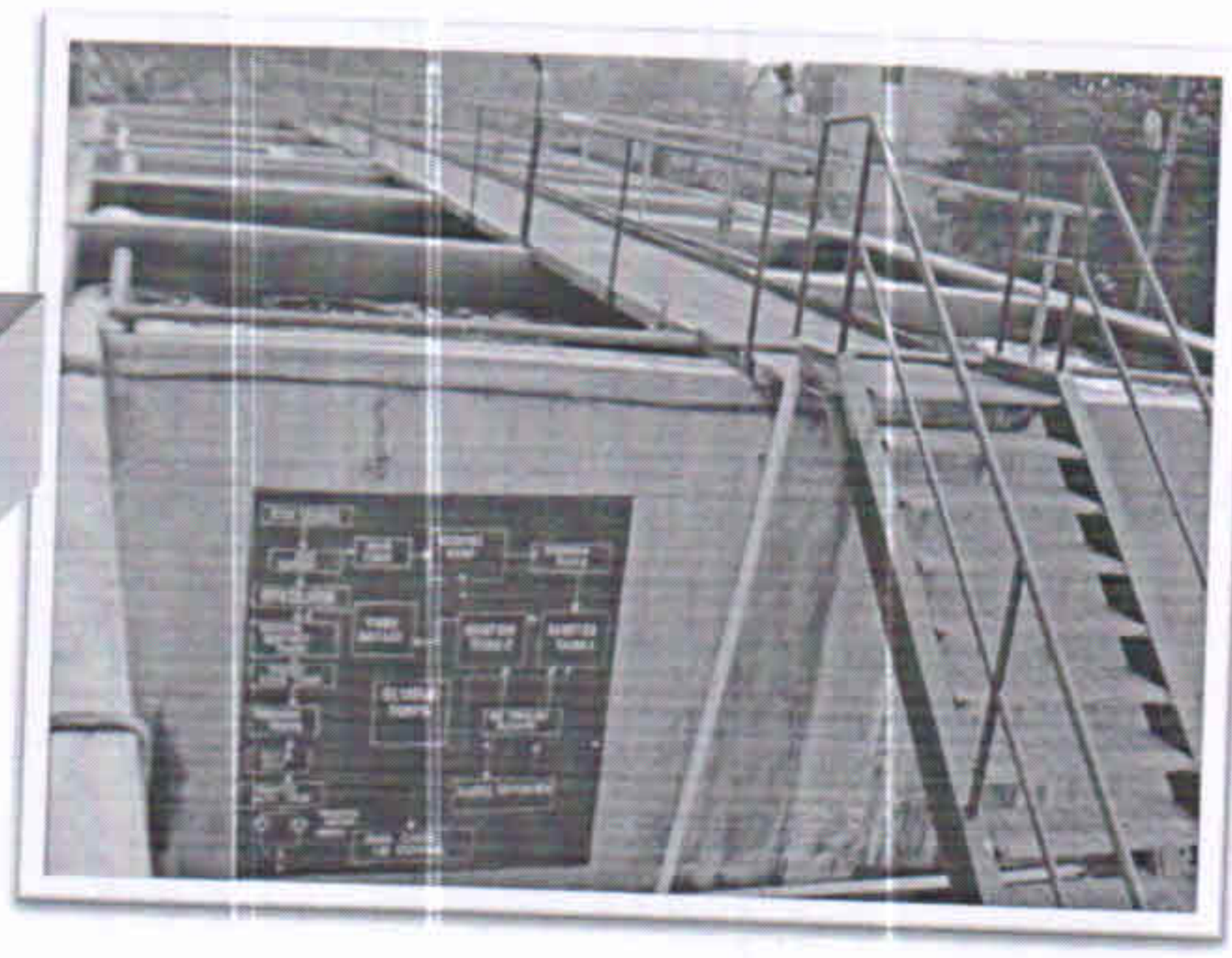




Effluent Distribution through Pipeline
- Tank Capacity: 2000 KL
- Coal Handling Plant
- Water sprinkling on Road & Boiler sections

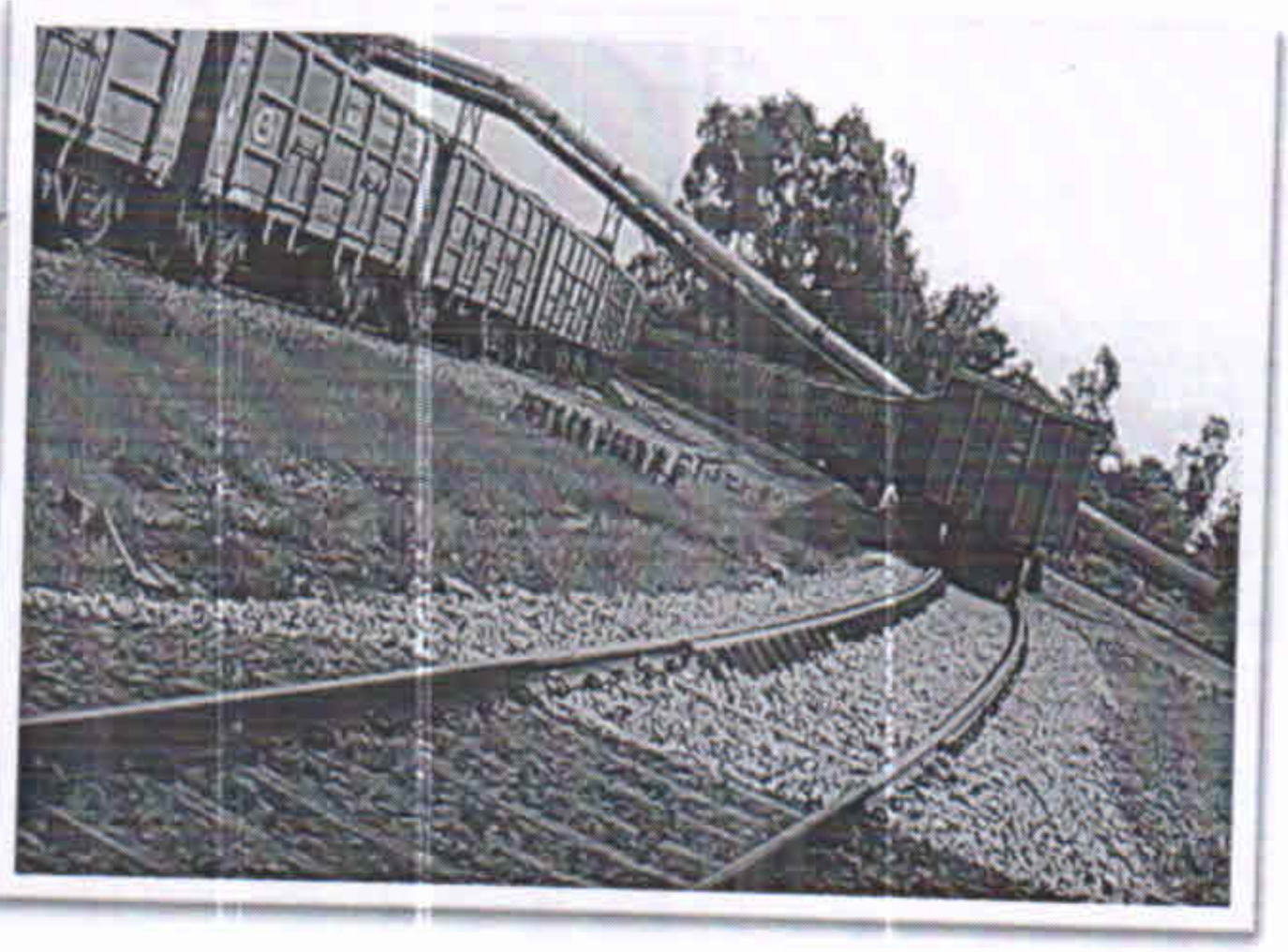
4. A sewage treatment plant has been installed in the plant for treatment of domestic waste water & it is being reused in green belt development.

STP- 300 KLD



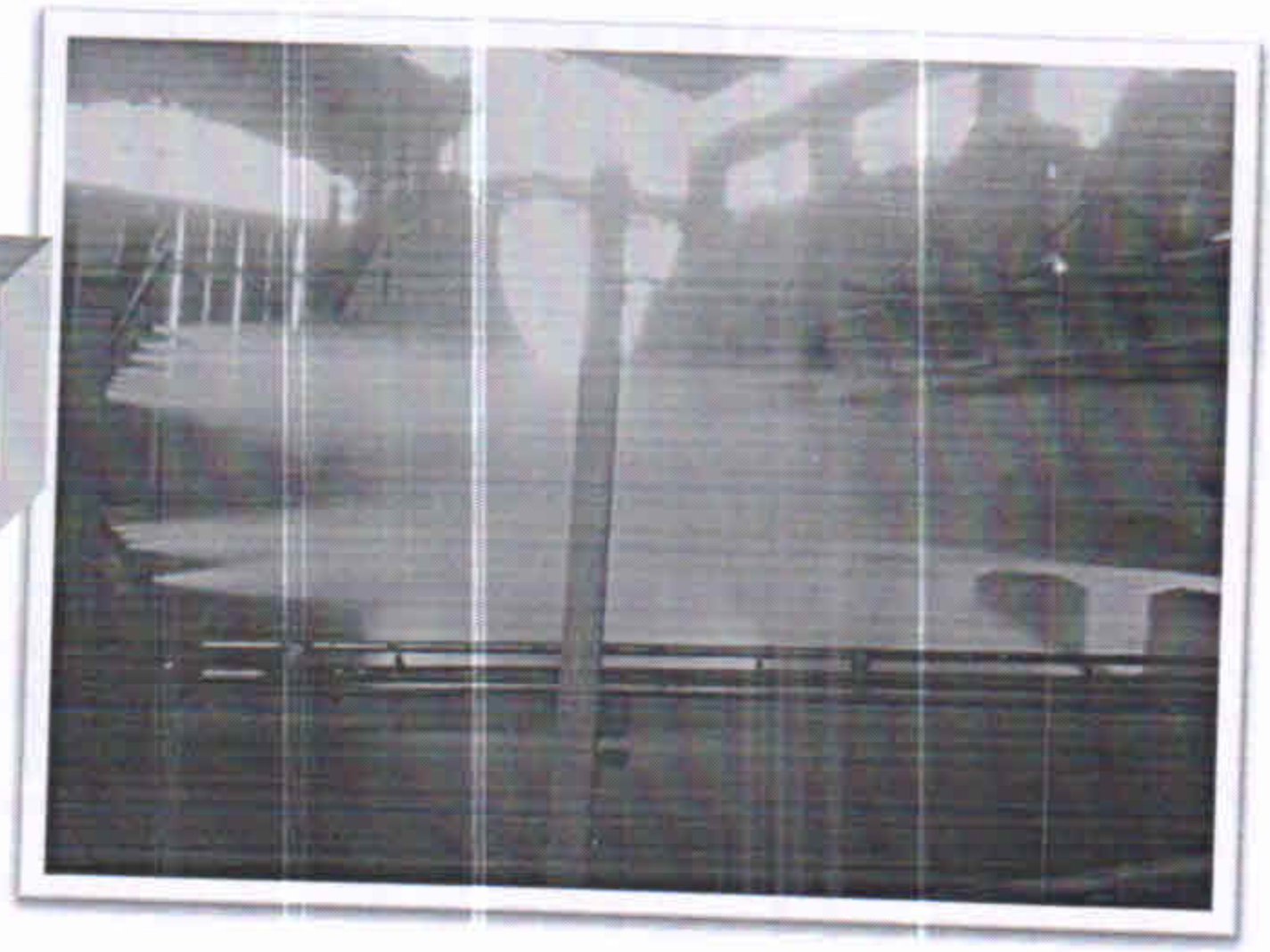
5. Coal is being transported through railways, avoiding fugitive dust generation in the transportation.

Coal Transportation through Rail Line



6. Dust suppression system at wagon tippler & belt conveyors installed to control fugitive dust emissions during unloading of coal.

Dust Suppression System at Wagon Tippler



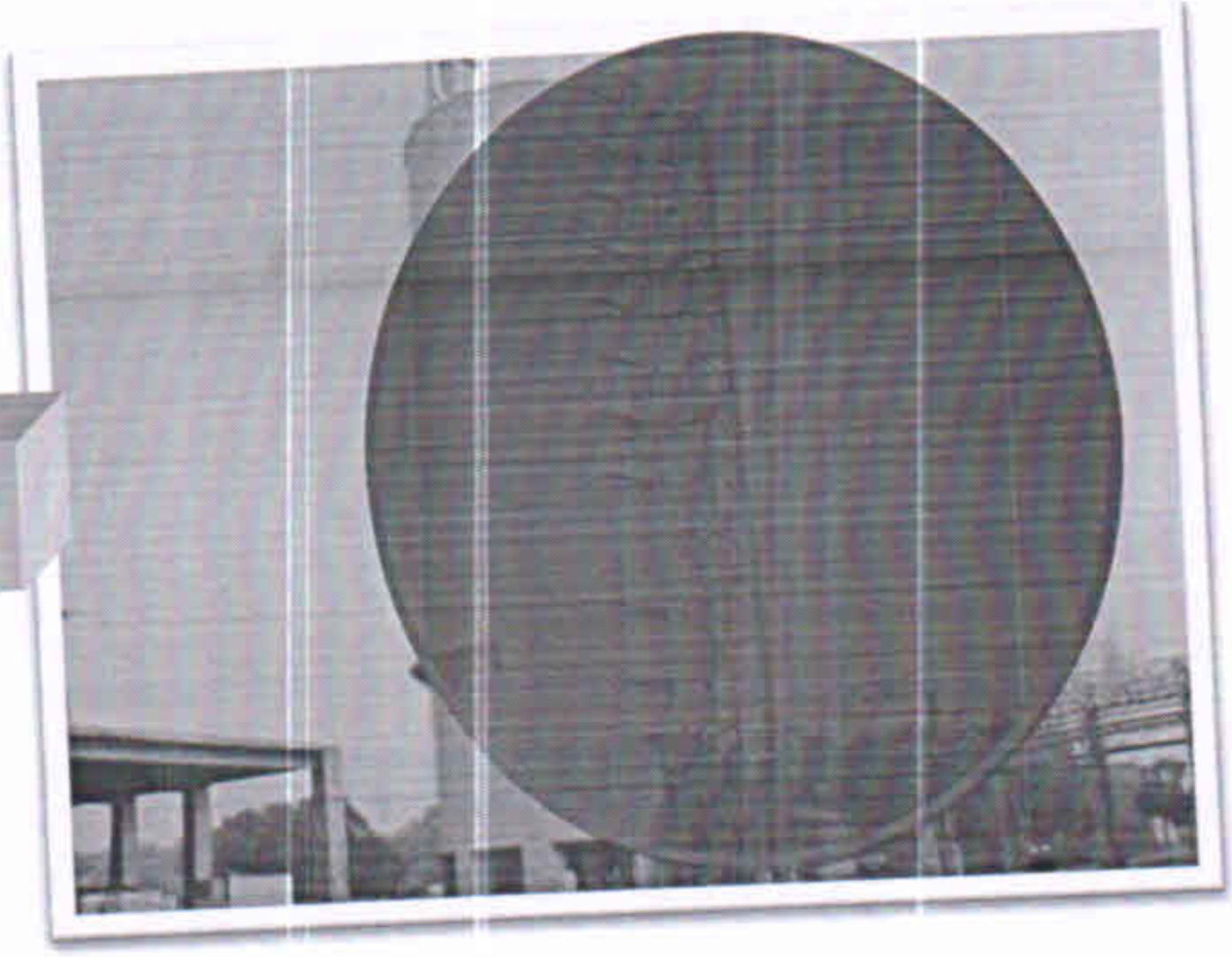
7. Coal is being unloaded through mechanized tippler having water sprinkling facility to control fugitive emissions during unloading.

Coal Unloading through Mechanized Tippler at Wagon Tippler

8. All the conveyor belts and transfer points are fully covered with GI sheet.

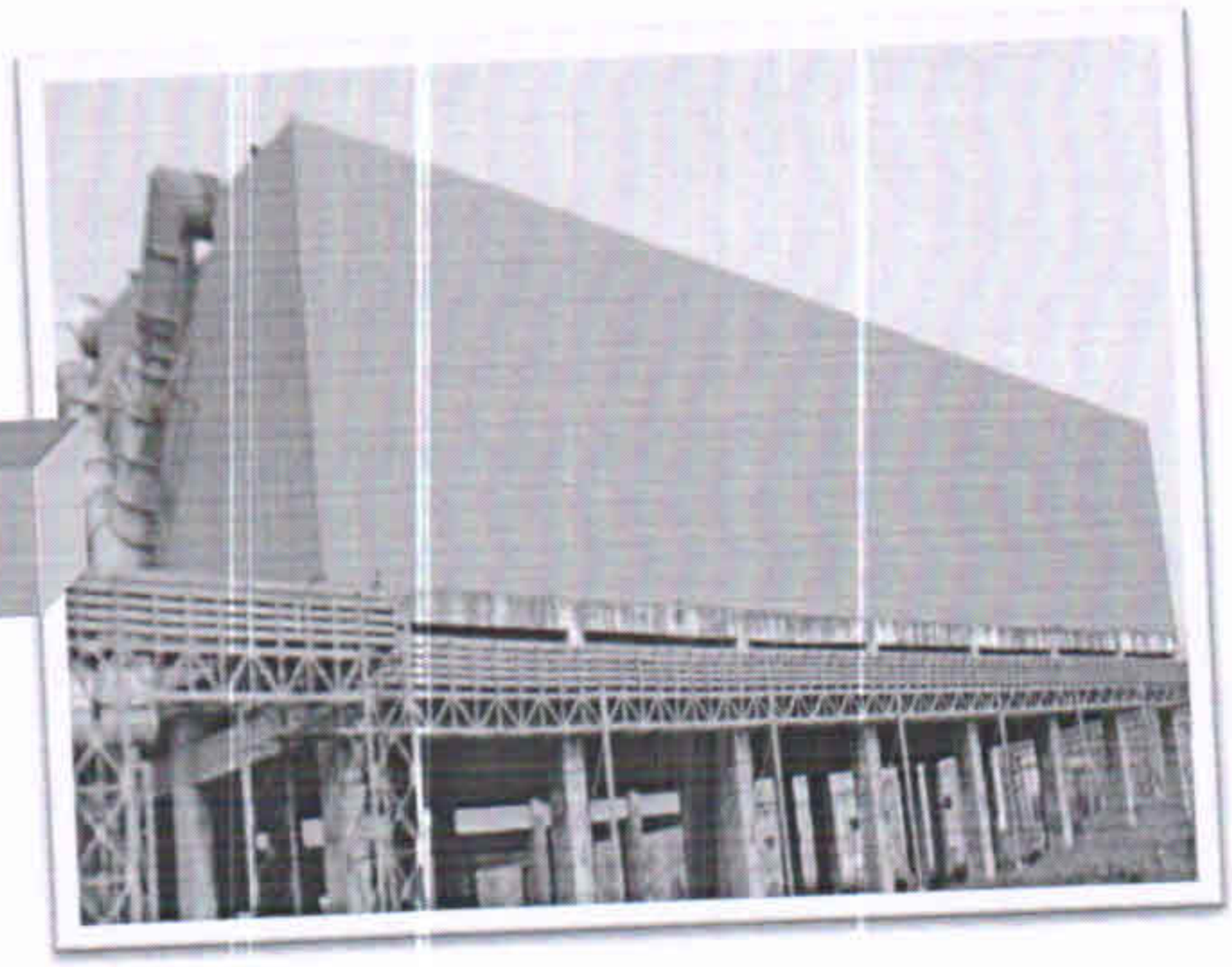
Fully covered conveyor belts

9. Closed pipe conveying system for transportation of ash within the ash handling system in the plant.



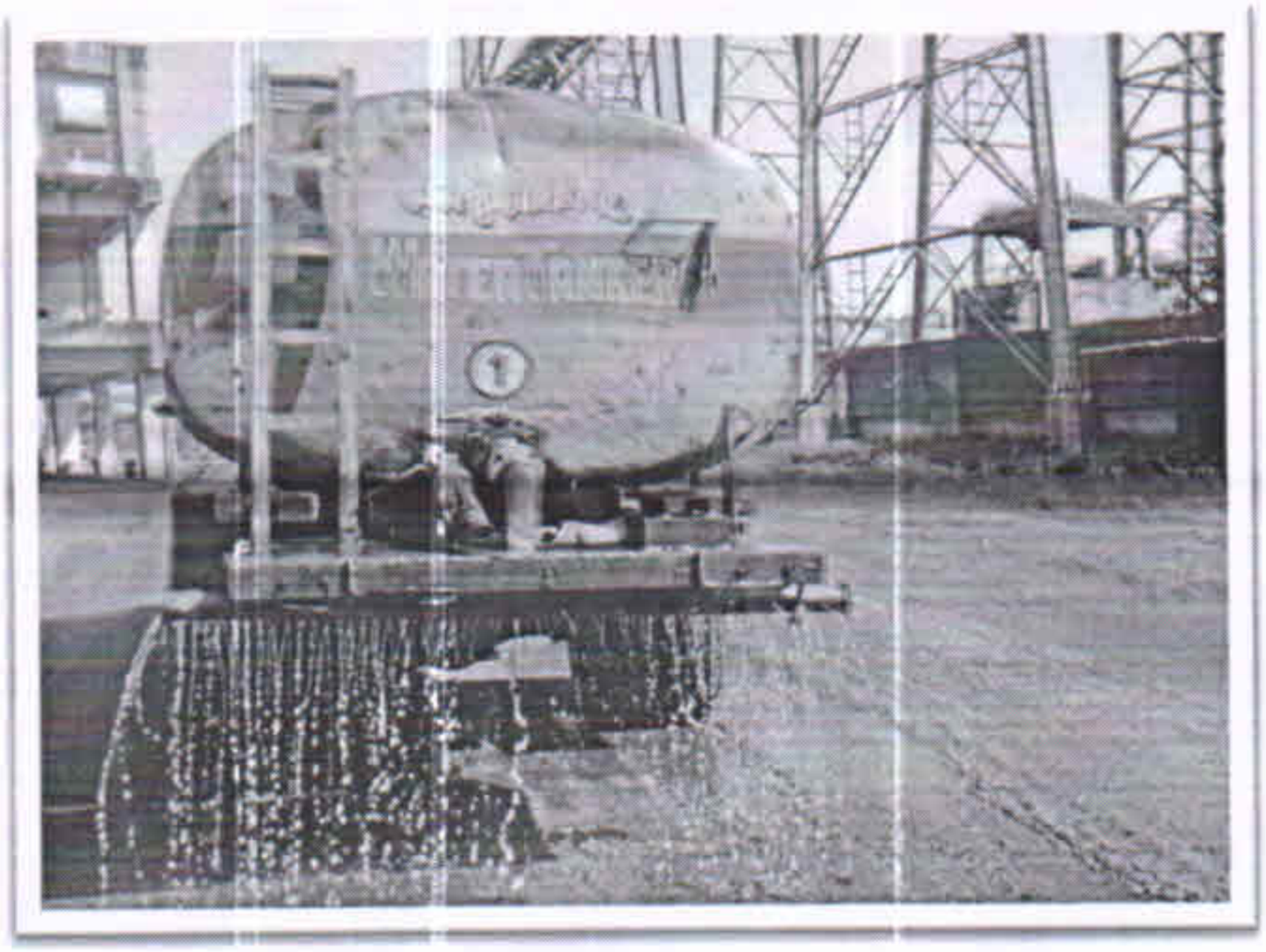
Fly ash storage & conveying system

10. Air cooled condensers have been installed in place of water cooled to reduce plant water requirement.



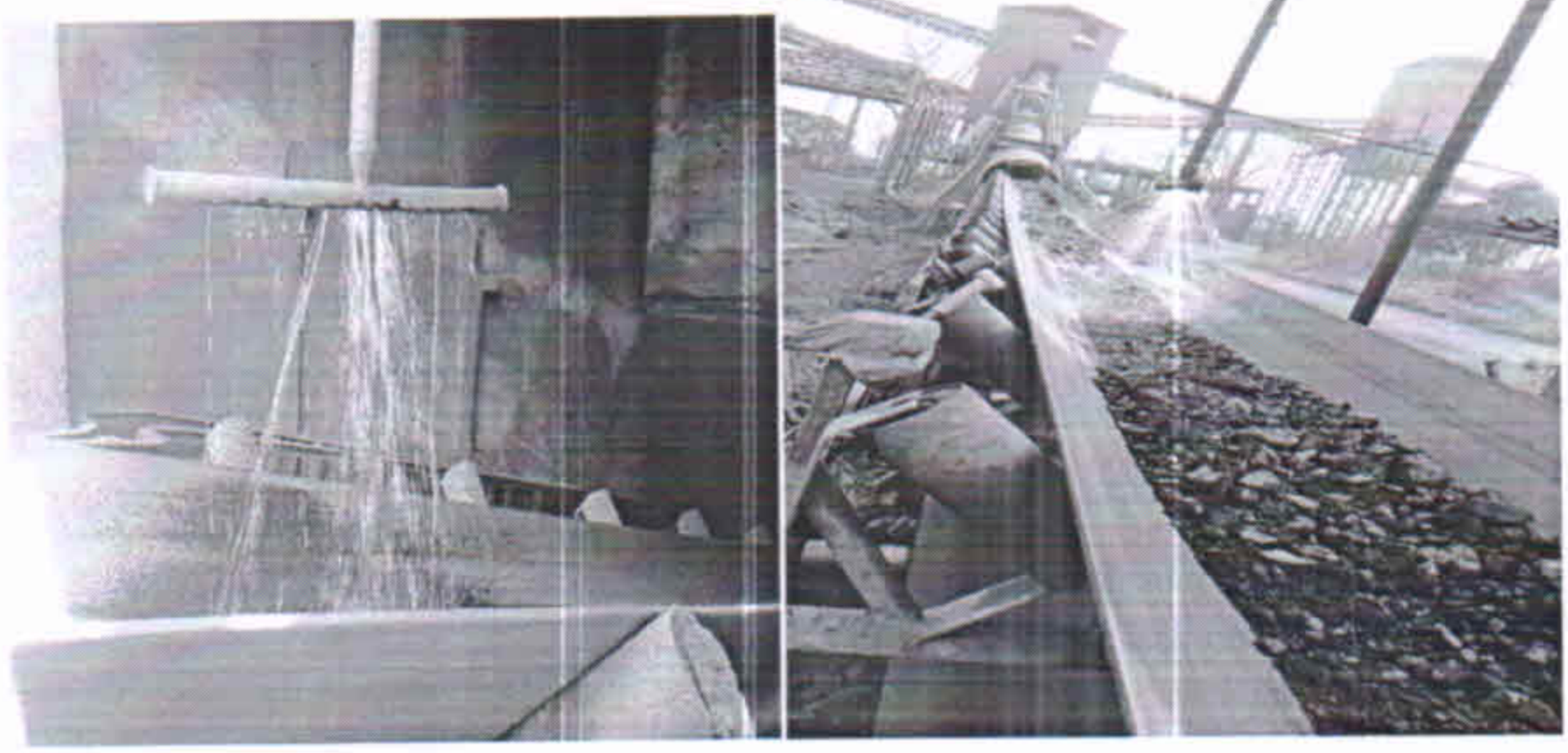
Air cooled Condenser

11. Dust suppression arrangement has been provided on approach road by using mobile water tanker.



12. Continuous water sprinkling is being carried out on the top of the heap at regular intervals to prevent dusting.

13. Water sprinkling is being carried out at each and every stage of coal handling to avoid generation of coal dust or other dust within premises.



14. Proper drainage system has been provided at coal storage area & rain water runoff is collected at settling tanks to remove all the settle able solids.

15. 130 meter tall stack constructed to disperse the stack emission in wide area to have minimum impact on ground level.

16. Maintenance department is doing regular checking and scheduled maintenance of all the pollution control devices.

17. Bag filters are installed at fly ash silos & coal bunkers to control the dust emissions.

18. Appropriate transfer chutes have been provided at coal transfer points, unloading points etc. to minimize the discharge height and spread of air borne dust.

19. A fly ash management is done through dry ash collection system, wherein the fly ash is utilized in cement manufacturing at our Churk & Chunar Cement Grinding Unit.

20. Housekeeping is taking on top priority and engaged sufficient no. of manpower for maintaining neat & clean environment in the plant premises.

21. World Environment day was celebrated at JCIC, Churk on 5th June, 2021 with full zeal and enthusiasm. All the employees have attended the function.

MISCELLANEOUS:

Any other particulars in respect of environmental protection and abatement of pollution.

Details of step taken for improvement of environment:

- Coal shed has been constructed to cover the coal stock pile.
- Installation of cold fog system at Wagon Tippler with transfer points in significant reduction of fugitive dust emission for conductive environment.
- Settling pits are constructed near coal handling plant to arrest settleable solids from rain water.
- Green belt development in and around the Plant premises is being continue.
- Dried STP sludge is being utilized in horticulture as organic manure.
- Provision has been made for potable water to the nearby community through dedicated water tankers & networks of water pipelines.

Dated: 05/08/2021

for Jaypee Churk Industrial Complex
(A Unit of Jaiprakash Associates Limited)

R. N. Yadav
(Factory Manager)

JAYPEE CHURK INDUSTRIAL COMPLEX

(A Unit of Jaiprakash Associate Limited)

AMBIENT AIR QUALITY MONITORING REPORT

Period : April 2020 - March 2021

Month	Particulars	Location- Near Main Gate				Location- Near Store			
		PM10	PM2.5	SO_2	NO_X	PM10	PM2.5	SO_2	NO_X
		($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Apr-20	Monthly Average	Shutdown due to COVID-19							
May-20		63.51	17.51	11.98	13.03	60.12	15.50	11.58	12.64
Jun-20		63.21	25.77	13.02	12.06	59.81	23.77	12.62	11.67
Jul-20		62.88	26.15	13.60	12.04	59.49	24.14	13.20	11.65
Aug-20		62.32	26.95	14.58	11.90	58.93	24.94	14.18	11.50
Sep-20		61.62	27.02	14.58	11.82	58.23	25.01	14.18	11.42
Oct-20		62.16	27.02	14.58	11.83	58.77	25.01	14.18	11.43
Nov-20		63.03	26.80	15.09	11.82	59.51	25.59	14.18	11.42
Dec-20		61.86	28.02	15.31	11.67	58.46	26.01	14.91	11.27
Jan-21		61.60	28.72	15.84	11 55	58.21	26.71	15.44	11.16
Feb-21		61.75	28.73	16.20	11 52	58.36	26.72	15.80	11.12
Mar-21		61.85	28.88	15.99	11.56	58.46	26.87	15.59	11.17
Min		61.60	17.51	11.98	11.52	58.21	15.50	11.58	11.12
Max		63.51	28.88	16.20	13.03	60.12	26.87	15.80	12.64
Average		62.35	26.50	14.61	11.89	58.94	24.57	14.17	11.50

JAYPEE CHURK INDUSTRIAL COMPLEX

(A Unit of Jaiprakash Associate Limited)

AMBIENT AIR QUALITY MONITORING REPORT

Period : April 2020 - March 2021

Month	Particulars	Location- Near Rear Gate				Location- Near Dispatch Gate			
		PM10	PM2.5	SO_2	NO_X	PM10	PM2.5	SO_2	NO_X
		($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Apr-20	Monthly Average	Shutdown due to COVID-19							
May-20		61.58	16.34	13.03	14.09	63.94	18.43	12.62	13.68
Jun-20		61.27	24.61	14.07	13.12	63.64	26.70	13.66	12.71
Jul-20		60.95	24.98	14.65	13.09	63.31	27.07	14.24	12.69
Aug-20		60.39	25.78	15.63	12.95	62.75	27.87	15.22	12.54
Sep-20		59.69	25.85	15.63	12.87	62.05	27.94	15.22	12.46
Oct-20		60.23	25.85	15.63	12.88	62.59	27.94	15.22	12.47
Nov-20		59.69	26.06	15.61	12.87	62.68	27.08	15.27	12.34
Dec-20		59.92	26.85	16.36	12.72	62.29	28.94	15.95	12.31
Jan-21		59.67	27.55	16.89	12.60	62.03	29.64	16.48	12.20
Feb-21		59.82	27.56	17.25	12.57	62.18	29.65	16.84	12.16
Mar-21		59.92	27.71	17.04	12.61	62.28	29.80	16.63	12.21
Min		59.67	16.34	13.03	12.57	62.03	18.43	12.62	12.16
Max		61.58	27.71	17.25	14.09	63.94	29.80	16.84	13.68
Average		60.28	25.38	15.62	12.94	62.71	27.37	15.22	12.53