Your application has been Submitted with following details	
Proposal No	IA/OR/IND/217083/2021
Compliance ID	20026303
Compliance Number(For Tracking)	EC/M/COMPLIANCE/20026303/2023
Reporting Year	2023
Reporting Period	01 Dec(01 Apr - 30 Sep)
Submission Date	27-10-2023
IRO Name	ARTATRANA MISHRA
IRO Email	jhk109@ifs.nic.in
State	ODISHA
IRO Office Address	Integrated Regional Offices, Bhubaneswar
Note:- SMS and E-Mail has been sent to ARTATRANA MISHRA, ODISHA with Notification to Project Proponent.	

Dalmia cement
FUTURE TODAY

cement! sugar! refractories! power!

DCBL/MOEFCC/001/2023-131
October 26, 2023

To,
The Addl. Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest & Climate Change,
Integrated Regional Office (EZ),
A/3, Chandrasekharpur,
Bhubaneswar – 751 023

Sub: **Submission of Six-Monthly Compliance Report of the Environmental Clearance for M/s Dalmia Cement (Bharat) Limited (Line 1 & 2), At/Po. - Rajgangpur, Dist.- Sundargarh, Odisha for the period April-2023 to September-2023.**

Ref: Environmental Clearance vide File No. J-11011/352/2005-IA. II (I) dated 05.04.2007.

Dear Sir,

With reference to above captioned subject matter, we are submitting herewith the six-monthly compliance report of the conditions laid down in above Environmental clearance for the period April-2023 to September-2023.

Thanking you,

Yours sincerely,

For **Dalmia Cement Bharat Limited,**

(Ashok Kumar Mishra)
General Manager - Environment

Encl: As above.

CC: 1. The Director, Impact Assessment Division, MoEF&CC, New Delhi.
2. The Member Secretary, CPCB, New Delhi.
3. The Member Secretary, OSPCB, Bhubaneswar, Odisha.

Half Yearly Compliance Report(Preview)

Proposal Details

Proposal No
IA/OR/IND/217083/2021
Category
Industrial Projects - 2
Proposal Name
Expansion of Clinker Production (1.20 to 2.90 MTPA) and Cement Plant (2.00 to 4.00 MTPA) at Rajgangpur, Sundargarh, Odisha by M/s Dalmia Cement Bharat Limited
Plot / Survey/ Khasra No.
Village(s)
Sub-District(s)
State
ODISHA
District
SUNDARGARH
MoEF File No
J-11011/352/2005-IA.II(I)
Name of the Entity/
Corporate Office
Dalmia Cement (Bharat) Limited
Entity's PAN
NA
Entity Name as per PAN
NA
Entity details mentioned above is correct ?
Agree

Covering Letter

Covering Letter
Click to View

Compliance Reporting Details

Reporting Year
2023
Reporting Period
01 Dec(01 Apr - 30 Sep)
Remark(if any)

Details of Production and Project Area

Date of Commencement of Project/Activity

1951-11-12

	Project Area as per EC Granted	Actual Project Area in Possession
Private	0	0
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	0	0

PRODUCTION CAPACITY							
Sr.No.	**Name of the Product**	**Units**	**As per EC Granted**	**As per CTO Granted**	**CTO ID**	**Valid Up To**	**Production during last financial year**
1	Clinker	Tons per Annum (TPA)	2900000	2900000	5321	31-03-2025	1377691
2	Cement	Tons per Annum (TPA)	4000000	4000000	5321	31-03-2025	3259171
3	WHRB	MW	11	11	5321	31-03-2025	40001

Conditions

Specific Conditions

Sr.No.	Condition Heading	Condition Details	Status of Compliance,Remarks/Reason and Supporting Documents	
1	AIR QUALITY MONITORING AND PRESERVATION	1. The gaseous and particulate matter emissions from various units shall confirm to the standards prescribed by the Orissa State Pollution Control Board (OSPCB). At no time the particulate emissions shall exceed OSPCB limit. Interlocking facility shall be provided in the pollution control	PPs Submission	The gaseous and particulate matter emissions from various units is within the limits/standard as prescribed by OSPCB. The monitored results are attached. Interlocking facility has been provided such that in case of failure, the unit will shut down automatically. Complied Attachment: NA

		equipment so that in the event of the pollution control equipment not working, the respective unit is shut down automatically.		
2	AIR QUALITY MONITORING AND PRESERVATION	2. Continuous on-line monitoring system to monitor gaseous emission shall be controlled with in 50 mg/Nm3 by installing adequate air pollution control system. On-line monitoring data shall be submitted to the OSPCB and CPCB regularly.	PPs Submission	The gaseous emissions are being monitored by the continuous online monitoring system installed and monitored data is being transmitted to the Board servers. Online monitoring data is being transmitted to the Board server. reports are submitted to OSPCB monthly and to Regional Office, MoEF&CC every 6 months. Complied Attachment: NA
3	AIR QUALITY MONITORING AND PRESERVATION	3. Ambient Air Quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities. Monitoring of ambient air quality and stack emission shall be carried out regularly in consultation with OSPCB and report submitted to the OSPCB quarterly and to the ministry?s Regional office at Bhubaneswar half - yearly. One ambient air quality monitoring station shall be installed in downwind direction.	PPs Submission	The Ambient Air Quality Monitoring results including noise levels are well within the standards as stipulated by State Authorities. Reports are submitted to the statutory body regularly. One ambient air quality monitoring station has been installed in downwind direction. Complied Attachment: NA
4	AIR QUALITY MONITORING AND PRESERVATION	4. The company shall install adequate dust collection and extraction system to control fugitive dust emission at various transfer points, raw	PPs Submission	Complied. Air pollution control measures & systems are adopted: a. Dust collection extraction system (Bag filters) have been installed and

		mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. ESP to Cooler, cyclone & bag filter to kiln, CVRM and bag filters shall be provided in the coal mill and cement mills to control air emissions less than 50 mg/ Nm3. Jet pulse bag filters/ dust extraction system shall be provided to control fugitive emissions in raw material, coal handling & cement grinding areas. Dust suppression system at unloading hoppers, discharge gate of silos and totally closed operations for all belt conveyors & storage etc. shall be used. Raw materials shall store in closed roof sheds & clinker in silos.		maintained at various transfer points such as loading/ unloading areas. Raw materials are transported through closed conveyor belts. b. Coal handling, cement grinding units are equipped with bag filters to control fugitive dust emissions. c. Bag house have been installed for CVRM & Coal mill to maintain stack emission as per standard. d. Road sweeping machines are deployed for regular cleaning of roads. Internal roads are concreted and water sprinkling on the roads are also carried out. e. Belt conveyors are thoroughly hood covered. f. Clinker is stored in clinker silo & transported in rakes through hatch adopter system. g. Raw material is covered with tarpaulin. h. Water sprinkling for dust suppression is done at raw material handling areas. Complied Attachment: NA
5	AIR QUALITY MONITORING AND PRESERVATION	5. Asphalting/concerning of roads and water spray all around the coal stockpiles shall be carried out to control fugitive emissions.	PPs Submission	Roads are either black topped or concreted and water spraying is done on the coal stock piles to control fugitive dust emissions. Complied Attachment: NA
6	WATER QUALITY MONITORING AND PRESERVATION	6. Total water requirement from the Nakti nala and ground water source shall not exceed 5,788 m3/d including 785 m3/d respectively and prior permission for the drawl of ground water from the State water	PPs Submission	? The total water requirement is well within 5799 m3/day. ? No ground water is used for industrial purposes. ? Treated wastewater is recycled and reused for dust suppression, green belt development and

		resources/Minor irrigation Deptt./CGWA shall be obtained. All the treated waste water shall be recycled and reused in the process, dust suppression, green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and ?zero? discharge shall be adopted. Domestic effluent treated in Sewage Treatment Plant (STP) shall be used for green belt development within the plant and colony area		other low end used within the plant premises. ? Domestic sewage is treated in the STP. Complied Attachment: NA
7	WASTE MANAGEMENT	7. All the cement dust collected from pollution control devices shall be recycled and reutilized in the process. Char from sponge iron plant of M/s. OCL shall be used as raw material in manufacturing cement and mixed with feed. Hazardous waste viz. Used oil from gear boxes and automotive batteries, etc shall be properly stored in a designated area and sold to authorized recyclers/ re processors.	PPs Submission	a.) Dust collected from pollution control devices is recycled back in the process. b.) Char is used as raw material, as per availability. c.) Used oil & batteries are stored at designated places before being disposed off to authorized recyclers/re-processors. Complied Attachment: NA
8	WATER QUALITY MONITORING AND PRESERVATION	8. The company must harvest the rainwater from the roof tops and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.	PPs Submission	Rain water from roof tops and storm water drains is collected and stored in an earthen reservoir to facilitate recharge of ground water and the same water is reused for various activities within the plant premises.

				Complied Attachment: NA
9	GREENBELT	9. Green belt shall be developed in at least 28.0 ha out of total 91.15 ha land in consultation with the local DFO as per the CPCB guidelines.	PPs Submission	Green cover has been developed in and around the plant premises. Gap filling is also carried out owing to survival rate of 85%. Efforts are being taken to increase the survival rate beyond 90%. This year, we have planted around 11702 saplings till sept 2023 Being Complied Attachment: NA
10	Corporate Environmental Responsibility	10. The company shall undertake eco-development measures including community welfare measures in the project area.	PPs Submission	Company is continuously engaged with community welfare and development programs through our CSR team. Complied Attachment: NA
11	Corporate Environmental Responsibility	11. All the recommendation mentioned in the Charter on the Corporate Responsibility for Environmental Protection (CREP) shall be strictly followed.	PPs Submission	All the CREP recommendations as per the Charter are being adhered to. Being Complied Attachment: NA
12	WASTE MANAGEMENT	12. High calorific hazardous waste shall be used as fuel in the cement kiln. Accordingly, provision to be made in the kiln.	PPs Submission	High calorific hazardous waste is used as fuel in cement kiln through AFR route. Complied Attachment: NA
13	Statutory compliance	13. Prior permission from the State Forest Department shall be obtained regarding likely impact of proposed expansion on the reserve forest viz. Gudiali RF (3km), Tunmura RF (6.5 km)	PPs Submission	All raw material transportation is being done through closed circuit conveyor belts from mines to cement plant. Maximum transportation is being done through railway

		Chudia RF (6.5 km) and Hathidhara R.F. (4 km) and recommendations/ suggestion, if any shall be implemented in a time bound manner.		rakes. Complied Attachment: NA

General Conditions

Sr.No.	Condition Heading	Condition Details	Status of Compliance,Remarks/Reason and Supporting Documents	
1	MISCELLANEOUS	1. The project authority must adhere to the stipulation made by Orissa State Pollution Control Board and State Government.	PPs Submission	All stipulations made by OSPCB and State Govt. are being strictly adhered to. Complied Attachment: NA
2	MISCELLANEOUS	2. No expansion or modification of the plant should be carried out without prior approval of this Ministry.	PPs Submission	No expansion or modification of the plant has been carried out without prior approval of the Ministry. Complied Attachment: NA
3	AIR QUALITY MONITORING AND PRESERVATION	3. Adequate number of ambient air quality-monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SO2 and NOX are anticipated in consultation with the OSPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including Regional Office at	PPs Submission	Four numbers of ambient air quality monitoring stations have been installed covering upwind and downwind directions in consultation with OSPCB. Data is being transmitted to the Board server on a continuous basis. Complied Attachment: NA

		Bhubaneswar and OSPCB once in six months.		
4	WATER QUALITY MONITORING AND PRESERVATION	4. Industrial wastewater shall be properly collected, treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. The treated waste water shall be recycled in the plant as well as utilization for plantation purposes.	PPs Submission	Wastewater generated in the plant is treated in the effluent treatment plant (ETP) and the treated wastewater conforms to the prescribed limits as specified by OSPCB in the consent order. The treated water is utilized in the plant for machineries cooling, sprinkling on road & plantation purposes. Complied Attachment: NA
5	WASTE MANAGEMENT	5. The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous waste in accordance with the Hazardous Waste (Management and Handling) Rules, 2003. Authorization from the OSPCB must be obtained for collection, storage, treatment and disposal of hazardous wastes.	PPs Submission	The Hazardous Wastes are being handled and disposed off as per HOWM Rules, 2016 and amendments thereof. Complied Attachment: NA
6	Noise Monitoring & Prevention	6. The overall noise levels in and around the plant area shall be kept well within the standards (85dBA) by providing noise control measures	PPs Submission	The overall noise levels in and around the plant area are within the prescribed standard. Complied Attachment: NA

		including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall confirm to the standards prescribed under EPA Rules, 1986 viz. 75 dBA (day time) and 70 dBA (night time).		
7	MISCELLANEOUS	7. The project proponent shall comply with all the environmental protection measures and safeguards recommended in the Environmental Impact Assessment / Environmental management Plan.	PPs Submission	All the environmental protection measures and safeguards as recommended in EIA/EMP have been implemented Complied Attachment: NA
8	MISCELLANEOUS	8. As proposed in EIA / EMP, Rs.31.82 Crores and Rs.2.64 Crores earmarked toward the capital cost and recurring the expenditure / annum for environmental protection measures shall be used judiciously to implement the conditions as well as Ministry of Environment and forests as well as the State Government. The funds so provided shall not be diverted for any other purposes.	PPs Submission	The environmental protection measures have been implemented with the funds allocated for the purpose and the funds have not been diverted for any other purpose. Complied Attachment: NA
9	MISCELLANEOUS	9. The Regional Office of this Ministry at	PPs Submission	Six monthly compliance reports along with the

			Bhubaneswar / Central Pollution Control Board / OSPCB shall monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly		monitored data are submitted to the statutory bodies regularly. Complied Attachment: NA
	10	Statutory compliance	10. The project authorities should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the 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 This shall be advertised within seven days from the date of issues of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be	PPs Submission	The grant of Environmental Clearance has been published in two local newspapers i.e. ?The Samaj? (Odia) and ?The New Indian Express ? (English) dated 11.04.2007 Complied Attachment: NA

		forwarded to the Regional office.	
11	MISCELLANEOUS	11. The project Authorities shall inform the Regional Office as well as The Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	PPs Submission: Noted. Complied Attachment: NA

Document Upload

Last Site Visit Report (if available)
NA
Last Site Visit Report Date (if available)

Additional Attachment (if any)
Click to View

Additional Remarks (if any)
The detailed environment monitoring report for the period April 2023 to September 2023 is attached as additional attachment.

☑ I 'Dalmia Cement (Bharat) Limited' hereby give undertaking that the specific / general condition is entered by me is correct.

ENVIRONMENTAL MONITORING REPORT

BASED ON DATA GENERATED

FROM

APRIL – SEPTEMBER 2023

FOR

DALMIA CEMENT BHARAT LIMITED

At/Po: RAJGANGPUR – 770017, District: SUNDARGARH, ODISHA

Prepared By:

Cleenviron Private Limited

D-124, KOELNAGAR, ROURKELA, ODISHA

Tele fax: 0661 – 2475746

Email:cleenviron@gmail.com

Table No: 1

AMBIENT AIR QUALITY DATA
From 01.04.2023 to 30.09.2023
Station: A-1 (Konark Vihar Area)

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
April	33	78	23	33	< 0.1
	40	83	13	24	< 0.1
May	25	87	07	21	< 0.1
	24	70	09	26	< 0.1
	30	87	06	19	< 0.1
	21	65	08	23	< 0.1
	22	63	05	20	< 0.1
	38	85	06	21	< 0.1
	20	66	07	26	< 0.1
	24	73	05	23	< 0.1
	38	87	04	16	< 0.1
June	26	82	07	22	< 0.1
	33	91	12	29	< 0.1
	30	86	10	21	< 0.1
	31	88	11	20	< 0.1
	26	80	08	27	< 0.1
	24	87	10	35	< 0.1
	19	60	09	19	< 0.1
	11	31	05	15	< 0.1
July	14	48	08	21	< 0.1
	25	74	10	22	< 0.1
	13	31	06	14	< 0.1
	15	45	< 3	08	< 0.1
	19	55	03	12	< 0.1
	21	61	05	12	< 0.1
	14	41	07	17	< 0.1
	15	43	11	32	< 0.1
	14	36	06	13	
August	18	52	04	21	< 0.1
	14	38	05	20	< 0.1
	23	64	05	16	< 0.1
	22	65	03	17	< 0.1
	13	41	03	13	< 0.1
	12	41	08	22	< 0.1
	15	47	05	20	< 0.1
	23	64	05	21	< 0.1
	21	65	06	13	< 0.1
September	25	73	08	25	< 0.1
	27	75	04	20	< 0.1
	21	60	05	18	< 0.1
	26	74	06	20	< 0.1
	13	37	07	26	< 0.1
	22	64	05	17	< 0.1

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
	10	29	< 3	09	< 0.1
	20	63	06	25	< 0.1

Table No: 2

AMBIENT AIR QUALITY DATA
From 01.04.2023 to 30.09.2023
Station: A-2 (General Store Area, Line – 1)

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
April	33	73	24	31	< 0.1
	36	85	16	32	< 0.1
May	27	74	05	16	< 0.1
	30	73	06	18	< 0.1
	36	93	04	15	< 0.1
	25	71	10	22	< 0.1
	39	94	03	12	< 0.1
	23	74	09	22	< 0.1
	28	80	05	16	< 0.1
	29	87	06	20	< 0.1
	36	89	05	12	< 0.1
June	25	73	05	20	< 0.1
	32	94	13	29	< 0.1
	26	84	04	15	< 0.1
	30	86	10	30	< 0.1
	33	90	08	31	< 0.1
	27	92	14	29	< 0.1
	24	81	10	34	< 0.1
	16	46	03	15	< 0.1
July	25	73	05	20	< 0.1
	32	94	13	29	< 0.1
	26	84	04	15	< 0.1
	30	86	10	30	< 0.1
	33	90	08	31	< 0.1
	27	92	14	29	< 0.1
	24	81	10	34	< 0.1
	16	46	03	15	< 0.1
	25	73	05	20	< 0.1
August	10	24	05	18	< 0.1
	23	62	04	20	< 0.1
	22	60	09	17	< 0.1
	21	65	08	28	< 0.1
	25	78	05	20	< 0.1
	23	68	09	24	< 0.1
	22	60	08	26	< 0.1
	20	57	05	16	< 0.1
	24	73	06	18	< 0.1
September	26	75	05	21	< 0.1

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
	16	45	08	26	< 0.1
	23	64	08	27	< 0.1
	25	70	05	20	< 0.1
	21	60	07	10	< 0.1
	24	69	03	12	< 0.1
	15	48	04	19	< 0.1
	23	76	08	27	< 0.1

Table No: 3

AMBIENT AIR QUALITY DATA

From 01.04.2023 to 30.09.2023

Station: A-3 (Material Gate, DSP Unit)

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
April	34	76	17	25	< 0.1
	35	84	17	23	< 0.1
May	32	91	03	10	< 0.1
	35	91	04	13	< 0.1
	28	80	04	12	< 0.1
	34	95	08	25	< 0.1
	31	85	06	20	< 0.1
	37	96	09	20	< 0.1
	24	76	08	26	< 0.1
	28	83	09	12	< 0.1
	33	92	10	19	< 0.1
June	38	97	05	19	< 0.1
	26	84	08	26	< 0.1
	27	87	07	23	< 0.1
	29	90	07	10	< 0.1
	34	83	08	30	< 0.1
	26	80	08	17	< 0.1
	27	79	07	23	< 0.1
	06	17	06	21	< 0.1
July	21	67	09	28	< 0.1
	27	77	04	14	< 0.1
	26	75	07	36	< 0.1
	28	78	05	12	< 0.1
	23	74	09	21	< 0.1
	26	78	07	23	< 0.1
	27	77	11	35	< 0.1
	23	69	07	17	< 0.1
	21	58	08	18	< 0.1
August	11	30	07	26	< 0.1
	22	69	03	15	< 0.1
	28	78	12	16	< 0.1
	21	62	04	15	< 0.1
	29	80	04	15	< 0.1

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
	28	79	13	42	< 0.1
	24	78	10	34	< 0.1
	21	67	04	21	< 0.1
	26	75	07	26	< 0.1
September	26	79	07	21	< 0.1
	27	80	09	33	< 0.1
	23	74	09	27	< 0.1
	22	63	05	21	< 0.1
	26	70	09	20	< 0.1
	25	69	06	21	< 0.1
	28	74	05	18	< 0.1
	27	78	04	16	< 0.1

Table No: 4

AMBIENT AIR QUALITY DATA
From 01.04.2023 to 30.09.2023
Station: A-4 (Near Refractory Main Gate)

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
April	26	79	15	23	< 0.1
	40	86	11	21	< 0.1
May	36	94	05	18	< 0.1
	29	84	05	15	< 0.1
	37	89	07	22	< 0.1
	33	86	09	20	< 0.1
	26	87	05	18	< 0.1
	29	84	04	12	< 0.1
	38	88	13	43	< 0.1
	30	82	08	17	< 0.1
	39	95	04	13	< 0.1
June	36	92	08	31	< 0.1
	35	88	12	31	< 0.1
	31	82	12	23	< 0.1
	35	84	09	22	< 0.1
	35	86	20	42	< 0.1
	29	81	05	19	< 0.1
	26	89	07	26	< 0.1
	24	59	07	26	< 0.1
July	25	70	04	13	< 0.1
	28	79	07	25	< 0.1
	29	80	08	30	< 0.1
	27	78	07	16	< 0.1
	29	71	08	11	< 0.1
	23	71	09	28	< 0.1
	26	74	09	32	< 0.1
	28	77	04	13	< 0.1
	23	71	15	31	< 0.1

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
August	21	59	10	30	< 0.1
	24	67	06	21	< 0.1
	24	70	06	19	< 0.1
	24	67	07	23	< 0.1
	27	77	03	10	< 0.1
	23	72	06	16	< 0.1
	27	82	10	15	< 0.1
	23	71	08	11	< 0.1
	29	78	05	14	< 0.1
September	24	70	04	16	< 0.1
	25	72	08	25	< 0.1
	28	79	05	19	< 0.1
	24	69	03	12	< 0.1
	23	66	07	23	< 0.1
	26	70	04	14	< 0.1
	12	33	05	19	< 0.1
	21	63	04	14	< 0.1

Table No: 5

AMBIENT AIR QUALITY DATA

From 01.04.2023 to 30.09.2023

Station: A-5 (Pay Loader Garage Area, Line – 1)

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
April	34	87	11	17	< 0.1
	40	73	15	25	< 0.1
May	35	95	04	13	< 0.1
	32	82	06	18	< 0.1
	33	82	05	16	< 0.1
	32	86	04	15	< 0.1
	32	81	03	15	< 0.1
	27	81	09	22	< 0.1
	30	88	07	18	< 0.1
	27	82	04	15	< 0.1
	39	90	06	21	< 0.1
June	26	78	07	23	< 0.1
	27	76	11	23	< 0.1
	33	92	09	29	< 0.1
	23	63	05	19	< 0.1
	27	87	09	29	< 0.1
	28	82	06	20	< 0.1
	27	81	07	28	< 0.1
	12	35	08	13	< 0.1
July	25	77	08	22	< 0.1
	14	40	06	21	< 0.1
	22	70	08	34	< 0.1
	31	75	04	10	< 0.1

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
	22	63	07	13	< 0.1
	23	72	04	15	< 0.1
	18	51	08	26	< 0.1
	23	60	09	29	< 0.1
	22	62	10	32	< 0.1
August	12	31	03	13	< 0.1
	25	72	07	21	< 0.1
	27	77	11	19	< 0.1
	24	76	05	18	< 0.1
	16	51	11	19	< 0.1
	24	67	04	15	< 0.1
	23	69	04	15	< 0.1
	24	67	05	22	< 0.1
	26	70	06	20	< 0.1
September	24	71	04	19	< 0.1
	26	77	07	21	< 0.1
	21	64	05	19	< 0.1
	20	59	07	25	< 0.1
	25	70	05	15	< 0.1
	22	65	05	15	< 0.1
	20	56	04	24	< 0.1
	22	72	07	20	< 0.1

Table No: 6

AMBIENT AIR QUALITY DATA

From 01.04.2023 to 30.09.2023

Station: A-6 (Workshop Area, Line – 2)

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
April	38	85	13	20	< 0.1
	36	74	14	21	< 0.1
May	28	80	05	08	< 0.1
	26	83	08	23	< 0.1
	31	89	03	09	< 0.1
	23	68	07	22	< 0.1
	27	77	07	22	< 0.1
	36	92	08	20	< 0.1
	39	94	10	33	< 0.1
	25	89	08	29	< 0.1
	29	83	12	38	< 0.1
June	33	85	08	25	< 0.1
	25	76	14	42	< 0.1
	36	90	05	11	< 0.1
	25	89	05	17	< 0.1
	36	89	09	29	< 0.1
	25	83	07	12	< 0.1
	24	71	06	29	< 0.1

Months	PM2.5 µg/m³	PM10 µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³
	08	25	09	12	< 0.1
July	25	76	04	14	< 0.1
	18	50	07	16	< 0.1
	17	47	08	23	< 0.1
	16	47	06	22	< 0.1
	13	35	04	16	< 0.1
	11	32	06	22	< 0.1
	10	34	07	25	< 0.1
	12	23	10	24	< 0.1
	16	43	05	11	< 0.1
August	21	66	08	27	< 0.1
	19	58	< 3	12	< 0.1
	19	53	03	14	< 0.1
	23	70	07	15	< 0.1
	25	71	09	30	< 0.1
	18	56	07	23	< 0.1
	23	70	05	24	< 0.1
	18	48	05	16	< 0.1
	20	62	04	20	< 0.1
September	28	80	03	12	< 0.1
	21	63	05	19	< 0.1
	17	55	07	25	< 0.1
	22	63	07	22	< 0.1
	24	69	04	14	< 0.1
	23	66	04	21	< 0.1
	16	45	06	21	< 0.1
	24	68	04	18	< 0.1

Table No 7:

STACK EMISSION MONITORING RESULTS

Months	Location of sampling	PM mg/Nm³	SO_2 mg/Nm³	NO_2 mg/Nm³	Hg mg/Nm³
April	Coal Mill – 1 Bag Filter	09	-	-	-
	Cooler ESP – 1	20	-	-	-
	CVRM – 1 Bag Filter	6.4	-	-	-
	CVRM – 2 Bag Filter	12	-	-	-
	CVRM – 3 Bag Filter	08	-	-	-
	Clinker Cooler Attached To ESP (DSP Unit)	12	-	-	-
	Coal Mill Attached To Bag Filter (DSP Unit)	08	-	-	-
	Kiln & VRM ESP – 1	11	4	628	-
	Kiln & Raw Mill RABH (DSP Unit)	13	6	438	-
	Boiler 1 & 2 ESP Stack	41	146.7	187.3	< 0.02
May	Coal Mill – 1 Bag Filter	10	-	-	-
	Cooler ESP – 1	06	-	-	-
	CVRM – 1 Bag Filter	05	-	-	-
	CVRM – 2 Bag Filter	09	-	-	-
	CVRM – 3 Bag Filter	15	-	-	-
	Coal Mill – 2 Bag Filter	17	-	-	-

Months	Location of sampling	PM mg/Nm³	SO_2 mg/Nm³	NO_2 mg/Nm³	Hg mg/Nm³
	Cooler ESP – 2	14	-	-	-
	Clinker Cooler Attached To ESP (DSP Unit)	15	-	-	-
	Coal Mill Attached To Bag Filter (DSP Unit)	07	-	-	-
	Kiln & VRM ESP – 1	05	18.49	517.95	-
	Kiln & VRM – 2 RABH	11	16.84	227.6	-
	Kiln & Raw Mill RABH (DSP Unit)	12	66.75	251.8	-
	Boiler 1 & 2 ESP Stack	25	432.32	288.1	< 0.02
June	Coal Mill – 1 Bag Filter	18	-	-	-
	Cooler ESP – 1	21	-	-	-
	CVRM – 1 Bag Filter	12	-	-	-
	CVRM – 2 Bag Filter	11	-	-	-
	CVRM – 3 Bag Filter	13	-	-	-
	Coal Mill – 2 Bag Filter	14	-	-	-
	Cooler ESP – 2	21	-	-	-
	Clinker Cooler Attached To ESP (DSP Unit)	13	-	-	-
	Coal Mill Attached To Bag Filter (DSP Unit)	06	-	-	-
	Kiln & VRM ESP – 1	6	21.62	533.0	-
	Kiln & VRM – 2 RABH	6	28.09	202.6	-
	Kiln & Raw Mill RABH (DSP Unit)	10	61.45	189.81	-
	Boiler 1 & 2 ESP Stack	12	463.74	253.00	< 0.02
July	Coal Mill – 1 Bag Filter	08	-	-	-
	Cooler ESP – 1	23	-	-	-
	CVRM – 1 Bag Filter	08	-	-	-
	CVRM – 2 Bag Filter	05	-	-	-
	CVRM – 3 Bag Filter	06	-	-	-
	Coal Mill – 2 Bag Filter	19	-	-	-
	Cooler ESP – 2	07	-	-	-
	Clinker Cooler Attached To ESP (DSP Unit)	09	-	-	-
	Coal Mill Attached To Bag Filter (DSP Unit)	06	-	-	-
	Kiln & VRM ESP – 1	07	20.80	437.3	-
	Kiln & VRM – 2 RABH	08	31.27	249.4	-
	Kiln & Raw Mill RABH (DSP Unit)	09	70.43	216.3	-
	Boiler 1 & 2 ESP Stack	27	388.21	242.6	< 0.02
August	CVRM – 1 Bag Filter	09	-	-	-
	CVRM – 2 Bag Filter	06	-	-	-
	CVRM – 3 Bag Filter	22	-	-	-
	Coal Mill – 2 Bag Filter	15	-	-	-
	Cooler ESP – 2	12	-	-	-
	Clinker Cooler Attached To ESP (DSP Unit)	10	-	-	-
	Coal Mill Attached To Bag Filter (DSP Unit)	06	-	-	-
	Kiln & VRM – 2 RABH	07	28.88	190.01	-
	Kiln & Raw Mill RABH (DSP Unit)	07	56.55	200.2	-
	Boiler 1 & 2 ESP Stack	19	446.94	281.00	< 0.02
September	Coal Mill – 1 Bag Filter	25	-	-	-
	Cooler ESP – 1	19	-	-	-
	CVRM – 1 Bag Filter	19	-	-	-
	CVRM – 2 Bag Filter	13	-	-	-
	CVRM – 3 Bag Filter	14	-	-	-
	Coal Mill – 2 Bag Filter	27	-	-	-

Months	Location of sampling	PM mg/Nm³	SO_2 mg/Nm³	NO_2 mg/Nm³	Hg mg/Nm³
	Cooler ESP – 2	21	-	-	-
	Kiln & VRM ESP – 1	06	13.0	223.15	-
	Kiln & VRM – 2 RABH	10	30.39	181.68	-
	Boiler 1 & 2 ESP Stack	11	423.87	275.92	< 0.02

Table No 8:

GROUND WATER QUALITY RESULT FOR THE MONTH OF MAY 2023

Sl No	Parameter	Results Obtained					Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Tube Well Village Liploi	Tube Well Village Surudihi	Tube Well IT Colony	Tube Well Wesco Colony	Tube Well Village Banthupada		
1	Turbidity	2.1	1.2	10.1	12.2	11.3	NTU	5.0
2	pH Value	6.71	6.60	6.70	6.78	6.74	-	6.5 – 8.5
3	Total Hardness (as $CaCO_3$)	633.86	345.74	300.46	415.72	370.44	mg/l	600
4	Iron (as Fe)	0.42	< 0.01	1.40	0.65	0.40	mg/l	0.3
5	Chlorides (as Cl)	275.91	92.97	39.99	70.98	154.98	mg/l	1000
6	Total Dissolved Solids	1091	541	474	639	712	mg/l	2000
7	Electrical Conductivity	1712	835	734	984	1149	µS/cm	-
8	Calcium (as Ca)	242.50	94.03	94.03	117.13	117.13	mg/l	200
9	Magnesium (as Mg)	7.00	27.0	16.0	30.0	19.06	mg/l	100
10	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
11	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.3
12	Sulfate (as SO_4)	131.56	84.67	64.41	167.11	71.03	mg/l	400
13	Total Nitrate (as NO_3)	62.15	55.05	1.40	8.55	6.35	mg/l	45
14	Total Alkalinity (as $CaCO_3$)	328	224	256	244	288	mg/l	600
15	Acidity	30	28	28	18	22	mg/l	-
16	Sulphide (as H_2S)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.05
17	Sodium (as Na)	40.14	23.81	31.76	32.65	42.11	mg/l	-
18	Potassium (as K)	2.96	3.08	2.24	2.84	12.42	mg/l	-
19	Fluoride (as F)	0.5	0.5	0.4	0.4	0.5	mg/l	1.5
20	Cadmium (as Cd)	ND	ND	ND	ND	ND	mg/l	0.003
21	Lead (as Pb)	ND	ND	ND	ND	ND	mg/l	0.01
22	Arsenic (as As)	ND	ND	ND	ND	ND	mg/l	0.05
23	Mercury (as Hg)	ND	ND	ND	ND	ND	mg/l	0.001
24	Selenium (as Se)	ND	ND	ND	ND	ND	mg/l	0.01
25	Nickel (as Ni)	ND	ND	ND	ND	ND	mg/l	0.02
26	Zinc (as Zn)	ND	ND	ND	ND	ND	mg/l	15.0
27	Total Chromium (as Cr)	ND	ND	ND	ND	ND	mg/l	0.05
29	Colour	< 5	< 5	< 5	< 5	< 5	Hazen	15
30	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
31	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
32	Temperature	29.6	29.8	29.9	29.5	29.6	°C	-
33	Residual Free Chlorine	0.24	0.22	0.21	0.26	0.24	mg/l	1.0 (min)
34	Total Bacterial Count	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent
35	E coli	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent

Table No 9:

GROUND WATER QUALITY RESULT FOR THE MONTH OF JUNE 2023

Sl No	Parameter	Results Obtained					Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Tube Well Village Liploi	Tube Well Village Surudihi	Tube Well IT Colony	Tube Well OCL Daily Market Gate	Tube Well Village Ranibandha		
1	Turbidity	1.7	2.5	5.3	2.0	0.1	NTU	5.0
2	pH Value	6.82	6.65	6.72	6.88	6.10	-	6.5 – 8.5
3	Total Hardness (as $CaCO_3$)	579.36	342.72	301.92	350.88	146.88	mg/l	600

Sl No	Parameter	Results Obtained					Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Tube Well Village Liploi	Tube Well Village Surudihi	Tube Well IT Colony	Tube Well OCL Daily Market Gate	Tube Well Village Ranibandha		
4	Iron (as Fe)	0.09	0.18	0.26	0.16	0.04	mg/l	0.3
5	Chlorides (as Cl)	282.91	51.98	39.98	45.99	37.99	mg/l	1000
6	Total Dissolved Solids	1025	549	444	512	239	mg/l	2000
7	Electrical Conductivity	1617	831	740	827	399	µS/cm	-
8	Calcium (as Ca)	142.27	76.86	85.03	80.13	44.15	mg/l	200
9	Magnesium (as Mg)	54.53	36.08	21.84	36.71	8.92	mg/l	100
10	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
11	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.3
12	Sulfate (as SO_4)	136.80	77.91	63.56	102.40	13.34	mg/l	400
13	Total Nitrate (as NO_3)	60.4	46.85	2.29	15.07	5.61	mg/l	45
14	Total Alkalinity (as $CaCO_3$)	300	224	188	200	100	mg/l	600
15	Acidity	50	32	38	38	30	mg/l	-
16	Sulphide (as H_2S)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.05
17	Sodium (as Na)	45.03	23.70	33.15	25.11	12.42	mg/l	-
18	Potassium (as K)	2.92	2.93	2.26	1.35	1.17	mg/l	-
19	Fluoride (as F)	0.5	0.5	0.4	0.9	0.6	mg/l	1.5
20	Cadmium (as Cd)	ND	ND	ND	ND	ND	mg/l	0.003
21	Lead (as Pb)	ND	ND	ND	ND	ND	mg/l	0.01
22	Arsenic (as As)	ND	ND	ND	ND	ND	mg/l	0.05
23	Mercury (as Hg)	ND	ND	ND	ND	ND	mg/l	0.001
24	Selenium (as Se)	ND	ND	ND	ND	ND	mg/l	0.01
25	Nickel (as Ni)	ND	ND	ND	ND	ND	mg/l	0.02
26	Zinc (as Zn)	ND	ND	ND	ND	ND	mg/l	15.0
27	Total Chromium (as Cr)	ND	ND	ND	ND	ND	mg/l	0.05
29	Colour	< 5	< 5	< 5	< 5	< 5	Hazen	15
30	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
31	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
32	Temperature	29.5	29.6	29.4	29.5	29.6	^oC	-
33	Residual Free Chlorine	0.25	0.20	0.22	0.26	0.24	mg/l	1.0 (min)
34	Total Bacterial Count	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent
35	E coli	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent

Table No 10:

GROUND WATER QUALITY RESULT FOR THE MONTH OF JULY 2023

Sl No	Parameter	Results Obtained					Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Tube Well Village Liploi	Tube Well Village Surudihi	Tube Well IT Colony	Tube Well OCL Daily Market Gate	Tube Well Village Ranibandha		
1	Turbidity	1.6	2.4	4.1	1.9	0.10	NTU	5.0
2	pH Value	6.44	6.51	6.77	7.12	6.89	-	6.5 – 8.5
3	Total Hardness (as $CaCO_3$)	485.52	473.28	359.04	12.24	338.64	mg/l	600
4	Iron (as Fe)	0.10	0.16	0.29	0.06	0.25	mg/l	0.3
5	Chlorides (as Cl)	201.94	124.17	49.98	74.68	52.94	mg/l	1000
6	Total Dissolved Solids	909	780	460	164	424	mg/l	2000
7	Electrical Conductivity	1428	1277	811	273	690	µS/cm	-
8	Calcium (as Ca)	140.63	88.30	76.85	3.27	83.40	mg/l	200
9	Magnesium (as Mg)	32.72	61.47	40.65	1.0	31.73	mg/l	100
10	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
11	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.3
12	Sulfate (as SO_4)	161.96	115.25	66.80	3.87	38.06	mg/l	400
13	Total Nitrate (as NO_3)	55.4	40.13	3.09	< 2.20	4.64	mg/l	45
14	Total Alkalinity (as $CaCO_3$)	280	288	248	12	212	mg/l	600
15	Acidity	50	40	26	06	18	mg/l	-
16	Sulphide (as H_2S)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.05
17	Sodium (as Na)	33.08	50.03	24.63	39.88	9.30	mg/l	-
18	Potassium (as K)	2.24	2.78	1.28	7.44	3.85	mg/l	-
19	Fluoride (as F)	0.50	0.60	0.40	0.60	0.50	mg/l	1.5

Sl No	Parameter	Results Obtained					Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Tube Well Village Liploi	Tube Well Village Surudihi	Tube Well IT Colony	Tube Well OCL Daily Market Gate	Tube Well Village Ranibandha		
20	Cadmium (as Cd)	ND	ND	ND	ND	ND	mg/l	0.003
21	Lead (as Pb)	ND	ND	ND	ND	ND	mg/l	0.01
22	Arsenic (as As)	ND	ND	ND	ND	ND	mg/l	0.05
23	Mercury (as Hg)	ND	ND	ND	ND	ND	mg/l	0.001
24	Selenium (as Se)	ND	ND	ND	ND	ND	mg/l	0.01
25	Nickel (as Ni)	ND	ND	ND	ND	ND	mg/l	0.02
26	Zinc (as Zn)	ND	ND	ND	ND	ND	mg/l	15.0
27	Total Chromium (as Cr)	ND	ND	ND	ND	ND	mg/l	0.05
29	Colour	< 5	< 5	< 5	< 5	< 5	Hazen	15
30	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
31	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
32	Temperature	29.7	30.2	29.1	29.4	28.7	^{o}C	-
33	Residual Free Chlorine	0.12	0.16	0.19	0.08	0.11	mg/l	1.0 (min)
34	Total Bacterial Count	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent
35	E coli	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent

Table No 11:

GROUND WATER QUALITY RESULT FOR THE MONTH OF AUGUST 2023

Sl No	Parameter	Results Obtained					Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Tube Well Village Liploi	Tube Well Village Surudihi	Tube Well IT Colony	Tube Well OCL Daily Market Gate	Tube Well Village Ranibandha		
1	Turbidity	3.8	4.6	4.0	4.9	3.1	NTU	5.0
2	pH Value	6.66	6.57	6.69	6.69	6.57	-	6.5 – 8.5
3	Total Hardness (as $CaCO_3$)	495.81	170.69	349.50	357.63	308.86	mg/l	600
4	Iron (as Fe)	0.27	0.07	0.24	0.17	0.07	mg/l	0.3
5	Chlorides (as Cl)	136.98	18.72	47.30	56.17	52.23	mg/l	1000
6	Total Dissolved Solids	875	255	498	521	448	mg/l	2000
7	Electrical Conductivity	1426	402	794	828	732	µS/cm	-
8	Calcium (as Ca)	116.91	53.75	89.58	104.25	87.96	mg/l	200
9	Magnesium (as Mg)	48.39	8.88	30.61	23.70	21.72	mg/l	100
10	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
11	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.3
12	Sulfate (as SO_4)	108.13	30.18	60.10	69.51	35.51	mg/l	400
13	Total Nitrate (as NO_3)	32.05	3.93	2.25	6.96	30.10	mg/l	45
14	Total Alkalinity (as $CaCO_3$)	372	128	252	248	200	mg/l	600
15	Acidity	48	44	48	38	44	mg/l	-
16	Sulphide (as H_2S)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.05
17	Sodium (as Na)	57.35	19.70	30.86	28.24	27.70	mg/l	-
18	Potassium (as K)	1.99	1.40	3.74	2.80	2.26	mg/l	-
19	Fluoride (as F)	0.70	0.80	0.50	0.80	0.60	mg/l	1.5
20	Cadmium (as Cd)	ND	ND	ND	ND	ND	mg/l	0.003
21	Lead (as Pb)	ND	ND	ND	ND	ND	mg/l	0.01
22	Arsenic (as As)	ND	ND	ND	ND	ND	mg/l	0.05
23	Mercury (as Hg)	ND	ND	ND	ND	ND	mg/l	0.001
24	Selenium (as Se)	ND	ND	ND	ND	ND	mg/l	0.01
25	Nickel (as Ni)	ND	ND	ND	ND	ND	mg/l	0.02
26	Zinc (as Zn)	ND	ND	ND	ND	ND	mg/l	15.0
27	Total Chromium (as Cr)	ND	ND	ND	ND	ND	mg/l	0.05
29	Colour	< 5	< 5	< 5	< 5	< 5	Hazen	15
30	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
31	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
32	Temperature	28.2	29.4	29.3	29.3	29.4	^{o}C	-
33	Residual Free Chlorine	0.21	0.22	0.21	0.26	0.12	mg/l	1.0 (min)
34	Total Bacterial Count	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent
35	E coli	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent

Table No 12:

GROUND WATER QUALITY RESULT FOR THE MONTH OF SEPTEMBER 2023

Sl No	Parameter	Results Obtained					Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Tube Well Village Liploi	Tube Well Village Surudihi	Tube Well IT Colony	Tube Well OCL Daily Market Gate	Tube Well Village Ranibandha		
1	Turbidity	3.6	4.8	4.2	0.8	2.4	NTU	5.0
2	pH Value	6.75	6.62	6.59	6.74	6.50	-	6.5 – 8.5
3	Total Hardness (as $CaCO_3$)	584	176	312	336	136	mg/l	600
4	Iron (as Fe)	0.29	0.10	0.26	0.20	0.08	mg/l	0.3
5	Chlorides (as Cl)	84.75	15.77	43.36	54.20	35.48	mg/l	1000
6	Total Dissolved Solids	796	228	470	520	226	mg/l	2000
7	Electrical Conductivity	1286	372	757	816	371	µS/cm	-
8	Calcium (as Ca)	121.84	59.32	57.72	94.59	44.89	mg/l	200
9	Magnesium (as Mg)	68.04	6.80	40.82	24.30	5.83	mg/l	100
10	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
11	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.3
12	Sulfate (as SO_4)	120.71	22.64	75.09	93.14	23.67	mg/l	400
13	Total Nitrate (as NO_3)	29.05	3.13	3.46	5.92	< 2.20	mg/l	45
14	Total Alkalinity (as $CaCO_3$)	352	124	232	228	96	mg/l	600
15	Acidity	56	26	40	46	38	mg/l	-
16	Sulphide (as H_2S)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.05
17	Sodium (as Na)	26.32	7.69	32.60	25.97	10.46	mg/l	-
18	Potassium (as K)	0.70	1.74	2.54	0.92	0.89	mg/l	-
19	Fluoride (as F)	0.90	0.90	1.0	0.90	0.50	mg/l	1.5
20	Cadmium (as Cd)	ND	ND	ND	ND	ND	mg/l	0.003
21	Lead (as Pb)	ND	ND	ND	ND	ND	mg/l	0.01
22	Arsenic (as As)	ND	ND	ND	ND	ND	mg/l	0.05
23	Mercury (as Hg)	ND	ND	ND	ND	ND	mg/l	0.001
24	Selenium (as Se)	ND	ND	ND	ND	ND	mg/l	0.01
25	Nickel (as Ni)	ND	ND	ND	ND	ND	mg/l	0.02
26	Zinc (as Zn)	ND	ND	ND	ND	ND	mg/l	15.0
27	Total Chromium (as Cr)	ND	ND	ND	ND	ND	mg/l	0.05
29	Colour	< 5	< 5	< 5	< 5	< 5	Hazen	15
30	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
31	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
32	Temperature	20.5	30.4	30.5	30.5	30.5	°C	-
33	Residual Free Chlorine	0.24	0.22	0.16	0.24	0.11	mg/l	1.0 (min)
34	Total Bacterial Count	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent
35	E coli	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent

Table No 13:

DRINKING WATER QUALITY RESULT FOR THE MONTH OF MAY 2023

Sl No	Parameter	Results Obtained						Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Drinking Water General store Canteen	Drinking Water CPP	Drinking Water Line – 2 Canteen	Drinking Water Near Konark Vihar	Drinking Water Point Near Guest House	Drinking Water Near DSP Unit Cooler		
1	Turbidity	0.1	0.1	0.1	0.1	0.1	0.1	NTU	5.0
2	pH Value	7.84	7.80	7.48	7.85	7.79	7.86	-	6.5 – 8.5
3	Total Hardness (as $CaCO_3$)	214.03	209.92	214.03	205.8	205.8	189.34	mg/l	600
4	Iron (as Fe)	0.1	0.09	0.10	0.02	0.03	0.08	mg/l	0.3
5	Chlorides (as Cl)	29.99	27.99	26.99	25.99	26.99	22.99	mg/l	1000
6	Total Dissolved Solids	301	290	288	310	300	281	mg/l	2000
7	Electrical Conductivity	471	478	469	489	474	432	µS/cm	-
8	Calcium (as Ca)	57.74	49.49	57.74	49.49	52.79	41.24	mg/l	200
9	Magnesium (as Mg)	17.0	21.0	17.0	20.0	18.0	21.0	mg/l	100
10	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
11	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.3
12	Sulfate (as SO_4)	9.58	10.30	7.79	11.11	8.19	9.56	mg/l	400

Sl No	Parameter	Results Obtained						Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Drinking Water General store Canteen	Drinking Water CPP	Drinking Water Line – 2 Canteen	Drinking Water Near Konark Vihar	Drinking Water Point Near Guest House	Drinking Water Near DSP Unit Cooler		
13	Total Nitrate (as NO_3)	< 2.20	< 2.20	< 2.20	2.31	2.03	0.08	mg/l	45
14	Total Alkalinity (as $CaCO_3$)	188	184	180	200	188	180	mg/l	600
15	Acidity	< 1.0	< 1.0	< 1.0	06	08	< 1.0	mg/l	-
16	Sulphide (as H_2S)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.05
17	Sodium (as Na)	16.93	17.33	15.69	17.63	17.72	15.86	mg/l	-
18	Potassium (as K)	4.79	4.53	4.61	10.56	10.61	4.15	mg/l	-
19	Fluoride (as F)	4.0	1.0	1.0	0.5	0.7	0.7	mg/l	1.5
20	Cadmium (as Cd)	ND	ND	ND	ND	ND	ND	mg/l	0.003
21	Lead (as Pb)	ND	ND	ND	ND	ND	ND	mg/l	0.01
22	Arsenic (as As)	ND	ND	ND	ND	ND	ND	mg/l	0.05
23	Mercury (as Hg)	ND	ND	ND	ND	ND	ND	mg/l	0.001
24	Selenium (as Se)	ND	ND	ND	ND	ND	ND	mg/l	0.01
25	Nickel (as Ni)	ND	ND	ND	ND	ND	ND	mg/l	0.02
26	Zinc (as Zn)	ND	ND	ND	ND	ND	ND	mg/l	15.0
27	Total Chromium (as Cr)	ND	ND	ND	ND	ND	ND	mg/l	0.05
29	Colour	< 5	< 5	< 5	< 5	< 5	< 5	Hazen	15
30	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
31	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
32	Temperature	31.5	29.4	29.6	29.6	29.3	29.2	°C	-
33	Residual Free Chlorine	0.10	0.09	0.09	0.24	0.10	0.09	mg/l	1.0 (min)
34	Total Bacterial Count	Absent	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent
35	E coli	Absent	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent

Table No 14:

DRINKING WATER QUALITY RESULT FOR THE MONTH OF JUNE 2023

Sl No	Parameter	Results Obtained						Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Drinking Water Near Main Gate Canteen (Line – 1)	Drinking Water Near CPP Canteen (Line – 2)	KHD Worker Canteen (Line-1)	Drinking Water Near Main Gate (Line – 2)	Drinking Water Near Worker's Canteen	Drinking Water Near Coal Mill		
1	Turbidity	0.1	0.1	0.1	0.3	0.4	0.4	NTU	5.0
2	pH Value	7.76	7.73	7.71	7.66	7.69	7.89	-	6.5 – 8.5
3	Total Hardness (as $CaCO_3$)	208.08	228.48	224.4	220.32	212.16	208.08	mg/l	600
4	Iron (as Fe)	0.08	0.10	0.03	0.10	0.13	0.32	mg/l	0.3
5	Chlorides (as Cl)	29.99	31.99	32.99	33.99	28.99	29.99	mg/l	1000
6	Total Dissolved Solids	313	314	320	318	336	324	mg/l	2000
7	Electrical Conductivity	521	524	533	530	529	531	µS/cm	-
8	Calcium (as Ca)	40.88	47.42	49.06	35.98	50.69	49.06	mg/l	200
9	Magnesium (as Mg)	25.78	26.77	24.79	31.73	20.82	20.82	mg/l	100
10	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
11	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.3
12	Sulfate (as SO_4)	9.14	11.11	13.45	13.86	14.38	12.68	mg/l	400
13	Total Nitrate (as NO_3)	< 2.20	< 2.20	< 2.20	< 2.20	20.02	4.15	mg/l	45
14	Total Alkalinity (as $CaCO_3$)	160	164	168	164	172	172	mg/l	600
15	Acidity	02	02	02	< 1.0	08	6.0	mg/l	-
16	Sulphide (as H_2S)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.05
17	Sodium (as Na)	18.58	21.22	21.08	21.03	22.33	22.54	mg/l	-
18	Potassium (as K)	4.77	4.91	4.87	4.82	4.64	4.77	mg/l	-
19	Fluoride (as F)	0.9	0.9	01	1.0	0.5	0.5	mg/l	1.5
20	Cadmium (as Cd)	ND	ND	ND	ND	ND	ND	mg/l	0.003
21	Lead (as Pb)	ND	ND	ND	ND	ND	ND	mg/l	0.01
22	Arsenic (as As)	ND	ND	ND	ND	ND	ND	mg/l	0.05
23	Mercury (as Hg)	ND	ND	ND	ND	ND	ND	mg/l	0.001
24	Selenium (as Se)	ND	ND	ND	ND	ND	ND	mg/l	0.01
25	Nickel (as Ni)	ND	ND	ND	ND	ND	ND	mg/l	0.02
26	Zinc (as Zn)	ND	ND	ND	ND	ND	ND	mg/l	15.0
27	Total Chromium (as Cr)	ND	ND	ND	ND	ND	ND	mg/l	0.05
29	Colour	< 5	< 5	< 5	< 5	< 5	< 5	Hazen	15

Sl No	Parameter	Results Obtained						Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Drinking Water Near Main Gate Canteen (Line – 1)	Drinking Water Near CPP Canteen (Line – 2)	KHD Worker Canteen (Line-1)	Drinking Water Near Main Gate (Line – 2)	Drinking Water Near Worker's Canteen	Drinking Water Near Coal Mill		
30	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
31	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
32	Temperature	26.3	29.4	29.6	29.7	29.4	29.2	^{o}C	-
33	Residual Free Chlorine	0.10	0.09	0.09	0.08	0.10	0.09	mg/l	1.0 (min)
34	Total Bacterial Count	Absent	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent
35	E coli	Absent	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent

Table No 15:

DRINKING WATER QUALITY RESULT FOR THE MONTH OF JULY 2023

Sl No	Parameter	Results Obtained						Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		Drinking Water Near CCR Building (Line – 1)	Drinking Water Near Konark Vihar	Drinking Water Near CPP Office (Line – 2)	Drinking Water Near VRM (Line – 2)	Drinking Water Near New Weigh Bridge	Drinking Water Near General Store		
1	Turbidity	0.10	0.10	0.10	0.10	0.90	0.10	NTU	5.0
2	pH Value	6.95	7.28	7.27	7.59	7.33	7.41	-	6.5 – 8.5
3	Total Hardness (as $CaCO_3$)	134.64	24.48	126.48	257.04	175.44	171.36	mg/l	600
4	Iron (as Fe)	0.06	< 0.01	0.25	0.22	0.22	0.22	mg/l	0.3
5	Chlorides (as Cl)	21.99	5.99	17.99	10.99	27.99	24.99	mg/l	1000
6	Total Dissolved Solids	193	39	196	322	252	255	mg/l	2000
7	Electrical Conductivity	320	63.9	324	531	418	418	µS/cm	-
8	Calcium (as Ca)	35.96	4.91	32.71	58.86	42.52	37.61	mg/l	200
9	Magnesium (as Mg)	10.90	2.97	10.91	26.76	16.85	18.84	mg/l	100
10	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
11	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.3
12	Sulfate (as SO_4)	33.85	2.67	34.57	93.89	35.50	35.17	mg/l	400
13	Total Nitrate (as NO_3)	7.74	3.71	< 2.20	2.46	3.11	< 2.20	mg/l	45
14	Total Alkalinity (as $CaCO_3$)	64	16	88	120	100	124	mg/l	600
15	Acidity	06	02	06	08	08	08	mg/l	-
16	Sulphide (as H_2S)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.05
17	Sodium (as Na)	9.69	2.12	11.06	5.61	14.91	15.18	mg/l	-
18	Potassium (as K)	3.69	0.64	3.76	2.38	8.99	5.08	mg/l	-
19	Fluoride (as F)	0.90	0.31	0.20	0.70	0.40	0.50	mg/l	1.5
20	Cadmium (as Cd)	ND	ND	ND	ND	ND	ND	mg/l	0.003
21	Lead (as Pb)	ND	ND	ND	ND	ND	ND	mg/l	0.01
22	Arsenic (as As)	ND	ND	ND	ND	ND	ND	mg/l	0.05
23	Mercury (as Hg)	ND	ND	ND	ND	ND	ND	mg/l	0.001
24	Selenium (as Se)	ND	ND	ND	ND	ND	ND	mg/l	0.01
25	Nickel (as Ni)	ND	ND	ND	ND	ND	ND	mg/l	0.02
26	Zinc (as Zn)	ND	ND	ND	ND	ND	ND	mg/l	15.0
27	Total Chromium (as Cr)	ND	ND	ND	ND	ND	ND	mg/l	0.05
29	Colour	< 5	< 5	< 5	< 5	< 5	< 5	Hazen	15
30	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
31	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
32	Temperature	30.5	30.6	29.6	30.8	30.1	30.5	^{o}C	-
33	Residual Free Chlorine	0.09	0.10	0.07	0.08	0.11	0.08	mg/l	1.0 (min)
34	Total Bacterial Count	Absent	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent
35	E coli	Absent	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent

Table No 16:

DRINKING WATER QUALITY RESULT FOR THE MONTH OF AUGUST 2023

Sl No	Parameter	Results Obtained						Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		General Store Canteen Drinking Water (L – 1)	Drinking Water Near Main Gate Canteen (L – 1)	CPP Drinking Water Point (L – 2)	Canteen Drinking Water Point (L– 2)	Guest House Drinking Water	Drinking Water Near Cooler		
1	Turbidity	1.0	1.1	2.5	1.0	3.9	2.1	NTU	5.0
2	pH Value	7.53	7.45	7.23	7.32	7.54	7.43	-	6.5 – 8.5
3	Total Hardness (as $CaCO_3$)	154.43	146.30	182.88	150.36	142.24	146.30	mg/l	600
4	Iron (as Fe)	0.29	0.18	0.21	0.28	0.23	0.22	mg/l	0.3
5	Chlorides (as Cl)	19.71	17.74	25.62	17.74	17.74	15.77	mg/l	1000
6	Total Dissolved Solids	216	202	246	208	208	208	mg/l	2000
7	Electrical Conductivity	352	320	380	333	342	319	µS/cm	-
8	Calcium (as Ca)	43.98	40.72	45.61	37.46	42.35	37.46	mg/l	200
9	Magnesium (as Mg)	10.86	10.56	16.78	13.82	8.88	12.84	mg/l	100
10	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
11	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.3
12	Sulfate (as SO_4)	38.28	29.27	51.21	30.94	2.17	30.55	mg/l	400
13	Total Nitrate (as NO_3)	3.98	5.26	4.66	3.19	5.70	< 2.20	mg/l	45
14	Total Alkalinity (as $CaCO_3$)	88	92	88	100	120	112	mg/l	600
15	Acidity	06	10	08	04	10	12	mg/l	-
16	Sulphide (as H_2S)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.05
17	Sodium (as Na)	7.19	7.38	8.03	7.46	17.56	7.52	mg/l	-
18	Potassium (as K)	2.36	2.26	2.39	2.29	7.32	2.27	mg/l	-
19	Fluoride (as F)	01	1.0	0.90	0.90	0.50	0.60	mg/l	1.5
20	Cadmium (as Cd)	ND	ND	ND	ND	ND	ND	mg/l	0.003
21	Lead (as Pb)	ND	ND	ND	ND	ND	ND	mg/l	0.01
22	Arsenic (as As)	ND	ND	ND	ND	ND	ND	mg/l	0.05
23	Mercury (as Hg)	ND	ND	ND	ND	ND	ND	mg/l	0.001
24	Selenium (as Se)	ND	ND	ND	ND	ND	ND	mg/l	0.01
25	Nickel (as Ni)	ND	ND	ND	ND	ND	ND	mg/l	0.02
26	Zinc (as Zn)	ND	ND	ND	ND	ND	ND	mg/l	15.0
27	Total Chromium (as Cr)	ND	ND	ND	ND	ND	ND	mg/l	0.05
29	Colour	< 5	< 5	< 5	< 5	< 5	< 5	Hazen	15
30	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
31	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
32	Temperature	27.7	29.6	28.1	28.5	29.5	29.5	°C	-
33	Residual Free Chlorine	0.12	0.09	0.13	0.10	0.09	0.14	mg/l	1.0 (min)
34	Total Bacterial Count	Absent	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent
35	E coli	Absent	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent

Table No 17:

DRINKING WATER QUALITY RESULT FOR THE MONTH OF SEPTEMBER 2023

Sl No	Parameter	Results Obtained						Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		General Store Canteen Drinking Water (L – 1)	Drinking Water Near CPP Canteen (L – 2)	Drinking Water Near KHD Worker Canteen (L – 2)	Drinking Water Near Main Gate (Line – 2)	Drinking Water Near Worker's Canteen	Drinking Water Near New Weigh Bridge		
1	Turbidity	0.5	1.0	1.1	1.0	0.90	0.90	NTU	5.0
2	pH Value	7.69	7.78	7.76	7.78	7.76	7.78	-	6.5 – 8.5
3	Total Hardness (as $CaCO_3$)	140	144	144	144	132	148	mg/l	600
4	Iron (as Fe)	0.30	0.20	0.29	0.20	0.20	0.30	mg/l	0.3
5	Chlorides (as Cl)	18.72	17.74	19.71	17.74	16.75	16.75	mg/l	1000
6	Total Dissolved Solids	190	190	188	190	185	204	mg/l	2000
7	Electrical Conductivity	313	312	308	312	307	314	µS/cm	-
8	Calcium (as Ca)	40.08	40.08	28.86	40.08	33.66	32.06	mg/l	200
9	Magnesium (as Mg)	9.72	10.69	17.49	10.69	11.66	16.52	mg/l	100
10	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
11	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.3
12	Sulfate (as SO_4)	17.10	19.72	17.17	19.72	17.76	20.76	mg/l	400

Sl No	Parameter	Results Obtained						Unit	Permissible Limit in absence of Alternate Source as per IS 10500: 2012
		General Store Canteen Drinking Water (L – 1)	Drinking Water Near CPP Canteen (L – 2)	Drinking Water Near KHD Worker Canteen (L – 2)	Drinking Water Near Main Gate (Line – 2)	Drinking Water Near Worker's Canteen	Drinking Water Near New Weigh Bridge		
13	Total Nitrate (as NO_3)	3.98	2.24	3.19	2.24	2.56	3.15	mg/l	45
14	Total Alkalinity (as $CaCO_3$)	100	100	100	100	108	104	mg/l	600
15	Acidity	06	16	08	16	06	08	mg/l	-
16	Sulphide (as H_2S)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.05
17	Sodium (as Na)	8.00	7.90	8.12	7.90	8.03	8.06	mg/l	-
18	Potassium (as K)	1.61	1.69	1.67	1.69	1.66	1.69	mg/l	-
19	Fluoride (as F)	1.0	1.0	0.90	1.0	0.50	0.50	mg/l	1.5
20	Cadmium (as Cd)	ND	ND	ND	ND	ND	ND	mg/l	0.003
21	Lead (as Pb)	ND	ND	ND	ND	ND	ND	mg/l	0.01
22	Arsenic (as As)	ND	ND	ND	ND	ND	ND	mg/l	0.05
23	Mercury (as Hg)	ND	ND	ND	ND	ND	ND	mg/l	0.001
24	Selenium (as Se)	ND	ND	ND	ND	ND	ND	mg/l	0.01
25	Nickel (as Ni)	ND	ND	ND	ND	ND	ND	mg/l	0.02
26	Zinc (as Zn)	ND	ND	ND	ND	ND	ND	mg/l	15.0
27	Total Chromium (as Cr)	ND	ND	ND	ND	ND	ND	mg/l	0.05
29	Colour	< 5	< 5	< 5	< 5	< 5	< 5	Hazen	15
30	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
31	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable
32	Temperature	30.5	30.6	30.5	30.5	30.6	30.6	^oC	-
33	Residual Free Chlorine	0.14	0.13	0.10	0.11	0.18	0.14	mg/l	1.0 (min)
34	Total Bacterial Count	Absent	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent
35	E coli	Absent	Absent	Absent	Absent	Absent	Absent	Nos/100ml	Absent

Table No 18:

SURFACE WATER QUALITY RESULT FOR THE MONTH OF MAY 2023

Sl No	Parameter	Results Obtained				Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
		Fakro Pada Nala	Liploi Nadi	Poda Nadi	Amaghat Nadi		
1	pH Value	7.38	7.36	7.29	7.61	-	6.5 – 8.5
2	Electrical Conductivity	626	840	1080	522	µS/cm	-
3	Total Dissolved Solids	375	504	648	313	mg/l	1500
4	Total Hardness (as $CaCO_3$)	193.45	242.84	218.15	275.77	mg/l	-
5	Chlorides (as Cl)	49.98	130.96	92.97	27.99	mg/l	600
6	Sulfate (as SO_4)	15.46	48.32	58.32	16.13	mg/l	400
7	Total Nitrate (as NO_3)	< 2.20	< 2.20	< 2.20	< 2.20	mg/l	50
8	Fluoride (as F)	1.0	1.0	1.0	0.90	mg/l	1.5
9	Calcium (as Ca)	41.24	57.74	51.14	39.00	mg/l	-
10	Magnesium (as Mg)	22.00	24.00	30.00	16.13	mg/l	-
11	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
12	Iron (as Fe)	< 0.01	0.10	< 0.01	< 0.01	mg/l	50
13	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	-
14	Zinc (as Zn)	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	15
15	Total Arsenic (as As)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.2
16	Mercury (as Hg)	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	-
17	Lead (as Pb)	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	0.1
18	Cadmium (as Cd)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.01
19	Hex. Chromium (as Cr^{+6})	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	0.05
20	Selenium (as Se)	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	0.05
21	Colour	< 5	< 5	< 5	< 5	Hazen	300
22	Odour	Agreeable	Agreeable	Agreeable	Agreeable	-	-
23	Taste	Agreeable	Agreeable	Agreeable	Agreeable	-	-
24	Dissolved Oxygen (Min.)	6.2	6.4	6.2	6.4	mg/l	4
25	BOD 5 days at 20^oC	01	01	01	01	mg/l	3
26	Oil & Grease	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	0.1
27	Free Carbon Dioxide (as CO_2)	15.84	12.32	40.48	5.28	mg/l	-

Sl	Parameter	Results Obtained				Unit	Surface Water Quality
29	Free Ammonia (as NH_3)	< 0.012	< 0.012	< 0.012	< 0.012	mg/l	-
30	Cyanide (as CN)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.05
31	Phenolic Compounds (as C_6H_5OH)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.005
32	Anionic Detergents (as MBAS)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	1.0

Table No 19:

SURFACE WATER QUALITY RESULT FOR THE MONTH OF JUNE 2023

Sl No	Parameter	Results Obtained				Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
		Liploi Nadi Upstream (Shirdi Sai Temple)	Liploi Nadi Downstream (Poda Nadi)	Amaghat Nadi	Liploi Nadi (Muncipality Dump Yard)		
1	pH Value	7.99	7.50	7.88	7.13	-	6.5 – 8.5
2	Electrical Conductivity	885	1066	578	1196	µS/cm	-
3	Total Dissolved Solids	531	640	347	718	mg/l	1500
4	Total Hardness (as $CaCO_3$)	244.8	326.4	236.64	412.08	mg/l	-
5	Chlorides (as Cl)	110.97	89.97	32.99	131.96	mg/l	600
6	Sulfate (as SO_4)	45.62	64.28	12.73	56.93	mg/l	400
7	Total Nitrate (as NO_3)	< 2.20	3.49	4.37	< 2.20	mg/l	50
8	Fluoride (as F)	1.0	0.9	0.9	1.0	mg/l	1.5
9	Calcium (as Ca)	37.61	107.93	62.14	91.57	mg/l	-
10	Magnesium (as Mg)	36.68	13.88	19.83	44.61	mg/l	-
11	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
12	Iron (as Fe)	< 0.01	< 0.01	< 0.01	0.84	mg/l	50
13	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	-
14	Zinc (as Zn)	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	15
15	Total Arsenic (as As)	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	0.2
16	Mercury (as Hg)	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	-
17	Lead (as Pb)	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	0.1
18	Cadmium (as Cd)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.01
19	Hex. Chromium (as Cr^{+6})	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	0.05
20	Selenium (as Se)	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	0.05
21	Colour	< 5	< 5	< 5	< 5	Hazen	300
22	Odour	Agreeable	Agreeable	Agreeable	Agreeable	-	-
23	Taste	Agreeable	Agreeable	Agreeable	Agreeable	-	-
24	Dissolved Oxygen (Min.)	6.2	6.1	6.1	6.4	mg/l	4
25	BOD 5 days at 20°C	01	02	01	02	mg/l	3
26	Oil & Grease	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	0.1
27	Free Carbon Dioxide (as CO_2)	< 0.1	17.6	< 0.1	8.8	mg/l	-
29	Free Ammonia (as NH_3)	< 0.012	< 0.012	< 0.012	< 0.012	mg/l	-
30	Cyanide (as CN)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.05
31	Phenolic Compounds (as C_6H_5OH)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.005
32	Anionic Detergents (as MBAS)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	1.0

Table No 20:

SURFACE WATER QUALITY RESULT FOR THE MONTH OF JULY 2023

Sl No	Parameter	Results Obtained				Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
		Liploi Nadi Upstream (Shirdi Sai Temple)	Liploi Nadi (Muncipality Dump Yard)	Amaghat Nadi	Liploi Nadi Downstream (Poda Nadi)		
1	pH Value	7.05	7.23	7.22	7.19	-	6.5 – 8.5
2	Electrical Conductivity	187.2	177.6	267	267	µS/cm	-
3	Total Dissolved Solids	112	107	160	160	mg/l	1500
4	Total Hardness (as $CaCO_3$)	77.52	73.44	122.4	102	mg/l	-
5	Chlorides (as Cl)	9.86	9.86	11.83	16.75	mg/l	600

6	Sulfate (as SO_4)	29.48	34.88	27.47	34.42	mg/l	400
7	Total Nitrate (as NO_3)	< 2.20	< 2.20	< 2.20	< 2.20	mg/l	50
8	Fluoride (as F)	1.0	0.80	1.0	0.90	mg/l	1.5
9	Calcium (as Ca)	21.26	22.89	32.71	26.16	mg/l	-
10	Magnesium (as Mg)	5.95	3.96	9.91	8.92	mg/l	-
11	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
12	Iron (as Fe)	1.89	1.08	1.07	1.94	mg/l	50
13	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	-
14	Zinc (as Zn)	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	15
15	Total Arsenic (as As)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.2
16	Mercury (as Hg)	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	-
17	Lead (as Pb)	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	0.1
18	Cadmium (as Cd)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.01
19	Hex. Chromium (as Cr^{+6})	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	0.05
20	Selenium (as Se)	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	0.05
21	Colour	< 5	< 5	< 5	< 5	Hazen	300
22	Odour	Agreeable	Agreeable	Agreeable	Agreeable	-	-
23	Taste	Agreeable	Agreeable	Agreeable	Agreeable	-	-
24	Dissolved Oxygen (Min.)	6.2	6.1	6.3	6.3	mg/l	4
25	BOD 5 days at 20°C	01	01	01	01	mg/l	3
26	Oil & Grease	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	0.1
27	Free Carbon Dioxide (as CO_2)	7.04	5.28	5.28	7.04	mg/l	-
29	Free Ammonia (as NH_3)	< 0.012	< 0.012	< 0.012	< 0.012	mg/l	-
30	Cyanide (as CN)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.05
31	Phenolic Compounds (as C_6H_5OH)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.005
32	Anionic Detergents (as MBAS)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	1.0

Table No 21:

SURFACE WATER QUALITY RESULT FOR THE MONTH OF AUGUST 2023

Sl No	Parameter	Results Obtained				Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
		Liploi Nadi Upstream (Shirdi Sai Temple)	Liploi Nadi (Muncipality Dump Yard)	Amaghat Nadi	Liploi Nadi Downstream (Poda Nadi)		
1	pH Value	7.45	7.44	7.58	7.36	-	6.5 – 8.5
2	Electrical Conductivity	333	384	327	520	µS/cm	-
3	Total Dissolved Solids	199	230	196	306	mg/l	1500
4	Total Hardness (as $CaCO_3$)	130.05	158.49	146.38	211.33	mg/l	-
5	Chlorides (as Cl)	9.86	20.69	12.81	36.46	mg/l	600
6	Sulfate (as SO_4)	25.26	27.59	16.97	50.58	mg/l	400
7	Total Nitrate (as NO_3)	2.76	3.01	3.13	3.01	mg/l	50
8	Fluoride (as F)	01	01	01	0.9	mg/l	1.5
9	Calcium (as Ca)	37.46	47.24	39.09	52.12	mg/l	-
10	Magnesium (as Mg)	8.88	9.87	11.85	19.75	mg/l	-
11	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
12	Iron (as Fe)	0.43	0.56	0.10	0.25	mg/l	50
13	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	-
14	Zinc (as Zn)	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	15
15	Total Arsenic (as As)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.2
16	Mercury (as Hg)	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	-
17	Lead (as Pb)	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	0.1
18	Cadmium (as Cd)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.01
19	Hex. Chromium (as Cr^{+6})	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	0.05
20	Selenium (as Se)	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	0.05
21	Colour	< 5	< 5	< 5	< 5	Hazen	300
22	Odour	Agreeable	Agreeable	Agreeable	Agreeable	-	-
23	Taste	Agreeable	Agreeable	Agreeable	Agreeable	-	-
24	Dissolved Oxygen (Min.)	6.2	6.1	6.2	6.3	mg/l	4
25	BOD 5 days at 20°C	02	01	01	02	mg/l	3
26	Oil & Grease	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	0.1
27	Free Carbon Dioxide (as CO_2)	10.56	10.56	10.56	12.32	mg/l	-
29	Free Ammonia (as NH_3)	< 0.012	< 0.012	< 0.012	< 0.012	mg/l	-
30	Cyanide (as CN)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.05

Sl	Parameter	Results Obtained				Unit	Surface Water Quality Standard
31	Phenolic Compounds (as C_6H_5OH)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.005
32	Anionic Detergents (as MBAS)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	1.0

Table No 22:

SURFACE WATER QUALITY RESULT FOR THE MONTH OF SEPTEMBER 2023

Sl No	Parameter	Results Obtained				Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
		Liploi Nadi Upstream (Shirdi Sai Temple)	Liploi Nadi (Muncipality Dump Yard)	Amaghat Nadi	Liploi Nadi Downstream (Poda Nadi)		
1	pH Value	7.63	7.62	7.74	7.59	-	6.5 – 8.5
2	Electrical Conductivity	306	312	321	413	µS/cm	-
3	Total Dissolved Solids	184	187	193	248	mg/l	1500
4	Total Hardness (as $CaCO_3$)	124	124	148	164	mg/l	-
5	Chlorides (as Cl)	10.84	12.81	12.81	21.68	mg/l	600
6	Sulfate (as SO_4)	25.19	26.15	24.40	37.44	mg/l	400
7	Total Nitrate (as NO_3)	< 2.20	3.31	2.76	< 2.20	mg/l	50
8	Fluoride (as F)	0.30	1.0	0.90	1.0	mg/l	1.5
9	Calcium (as Ca)	27.25	35.27	38.48	41.68	mg/l	-
10	Magnesium (as Mg)	13.61	8.75	12.64	14.58	mg/l	-
11	Copper (as Cu)	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	1.5
12	Iron (as Fe)	0.31	0.46	0.12	0.59	mg/l	50
13	Manganese (as Mn)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	-
14	Zinc (as Zn)	< 0.02	< 0.02	< 0.02	< 0.02	mg/l	15
15	Total Arsenic (as As)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.2
16	Mercury (as Hg)	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	-
17	Lead (as Pb)	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	0.1
18	Cadmium (as Cd)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	0.01
19	Hex. Chromium (as Cr^{+6})	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	0.05
20	Selenium (as Se)	< 0.01	< 0.01	< 0.01	< 0.01	mg/l	0.05
21	Colour	< 5	< 5	< 5	< 5	Hazen	300
22	Odour	Agreeable	Agreeable	Agreeable	Agreeable	-	-
23	Taste	Agreeable	Agreeable	Agreeable	Agreeable	-	-
24	Dissolved Oxygen (Min.)	6.3	6.1	6.3	6.4	mg/l	4
25	BOD 5 days at 20°C	01	03	02	02	mg/l	3
26	Oil & Grease	< 0.10	< 0.10	< 0.10	< 0.10	mg/l	0.1
27	Free Carbon Dioxide (as CO_2)	7.04	8.8	5.28	10.56	mg/l	-
28	Free Ammonia (as NH_3)	< 0.012	< 0.012	< 0.012	< 0.012	mg/l	-
29	Cyanide (as CN)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.05
30	Phenolic Compounds (as C_6H_5OH)	< 0.002	< 0.002	< 0.002	< 0.002	mg/l	0.005
31	Anionic Detergents (as MBAS)	< 0.05	< 0.05	< 0.05	< 0.05	mg/l	1.0
32	Total Coliforms	100	1000	100	1000	Nos/100ml	5000

Table No 23:

EFFLUENT WATER QUALITY RESULT OF ETP INLET & OUTLET

Sl No	Parameters	Results Obtained					Unit
		MAY	JUNE	JULY	AUGUST	SEPTEMBER	
1	pH Value	7.45	7.51	7.51	7.29	7.29	-
2.	Total Suspended Solids	23.6	23.2	20.2	10.2	10.7	mg/l
3.	Oil & Grease	2.2	2.4	2.2	2.2	2.5	mg/l
4.	BOD 5days at 20°C	45	50	60	36	60	mg/l
5.	COD	138.26	139.46	186.20	100.08	201.46	mg/l

Sl No	Parameters	Results Obtained					Permissible Limit as per CTO Conditions	Unit
		MAY	JUNE	JULY	AUGUST	SEPTEMBER		
1	pH Value	7.37	7.41	7.0	7.27	7.23	5.5 – 9.0	-
2.	Total Suspended Solids	2.6	11	8.2	7.4	7.0	100	mg/l
3.	Oil & Grease	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	10	mg/l
4.	BOD 5days at 20^{O}C	09	12	15	20	30	-	mg/l
5.	COD	32.106	28.114	48.160	58.476	92.421	-	mg/l

Table No 24 :

EFFLUENT WATER QUALITY RESULT OF STP OUTLET

Sl No	Parameters	Results Obtained					Permissible Limit as per CTO Conditions	Unit
		MAY	JUNE	JULY	AUGUST	SEPTEMBER		
1	pH Value	7.44	7.34	7.27	7.10	7.61	5.5 – 9.0	-
2.	Total Suspended Solids	07	8.4	< 2.5	11.2	< 2.5	100	mg/l
3.	BOD 5days at 20^{O}C	22	11	05	10	06	10	mg/l
4.	Fecal Coliform	10^2	10	10^2	10^2	10^2	-	mg/l
5.	COD	61.6	36.781	17.120	29.925	22.108	-	mg/l

Table No 25:

EFFLUENT WATER QUALITY RESULT OF STP OUTLET DSP UNIT 2023

Sl No	Parameters	Results Obtained					Permissible Limit as per CTO Conditions	Unit
		MAY	JUNE	JULY	AUGUST	SEPTEMBER		
1	pH Value	7.51	7.46	7.29	7.66	7.64	5.5 – 9.0	-
2.	Total Suspended Solids	23.6	34.5	89.5	34.9	15.4	100	mg/l
3.	BOD 5days at 20^{O}C	28	20	20	17	16	10	mg/l
4.	Fecal Coliform	10^3	10^2	10^3	10^2	10^2	-	mg/l
5.	COD	75.8	64.62	58.12	52.46	49.612	-	mg/l

Table No 26:

SOIL QUALITY RESULT FOR THE MONTH OF MAY 2023

Sl. No.	Parameter	Unit	Line 1 AFR Area	Line 2 Water Harvesting Pond Area	AFR Area DSP Unit	Pond DSP Unit
1.	Colour	-	Greyish Brown	Dark Brown	Greyish	Dark Greyish
2.	Type of Soil	-	Fine Grained Soil	Fine Grained Soil	Fine Grained Soil	Fine Grained Soil
3.	Texture	-	Sandy Clay Loam	Silty Clay Loam	Silty Loam	Silty Clay
4.	Bulk Density	gm/cm^3	1.8	1.3	1.33	1.45
5.	pH (1:2 Suspension)	-	8.11	8.16	7.82	7.87
6.	Iron	mg/kg	8.27	4.49	2.94	5.53
7.	Calcium	mg/kg	152	284	196	312
8.	Available Potassium (as K_2O)	Kg/ha	215.04	372.96	289.44	324.96
9.	Organic Carbon	%	0.25	0.72	0.49	0.71

Sl. No.	Parameter	Unit	Line 1 AFR Area	Line 2 Water Harvesting Pond Area	AFR Area DSP Unit	Pond DSP Unit
10.	Available Nitrogen (as N)	Kg/ha	100.352	200.7	225.79	188.16
11.	Manganese	mg/kg	11.69	3.69	4.47	6.28
12.	Infiltration Rate	cm/hr	6.71	6.86	7.32	6.36
13.	Porosity	mg/m^3	0.3239	0.2546	0.4577	0.2185
14.	Moisture Content	%	16.34	17.45	17.89	16.82
16.	Chloride	mg/kg	0.12	0.27	0.19	0.22
17.	Sulphate	mg/kg	0.5	0.43	0.8	1.0

Table No 27:

SOIL QUALITY RESULT FOR THE MONTH OF JUNE 2023

Sl. No.	Parameter	Unit	Line 1 AFR Area	Line 2 STP Area	Konark Vihar	Near New Weigh Bridge
1.	Colour	-	Grayish Brown	Dark Brown	Dark Brown	Grayish
2.	Type of Soil	-	Fine Grained Soil	Fine Grained Soil	Fine Grained Soil	Fine Grained Soil
3.	Texture	-	Sandy Clay Loam	Silty Clay Loam	Silty Clay Loam	Silty Loam
4.	Bulk Density	gm/cm^3	1.8	1.3	1.3	1.20
5.	pH (1:2 Suspension)	-	8.22	7.94	8.31	8.15
6.	Iron	mg/kg	8.27	4.49	4.49	2.67
7.	Calcium	mg/kg	152	284	284	201
8.	Available Potassium (as K_2O)	Kg/ha	286.08	492.4	370.08	153.04
9.	Organic Carbon	%	< 0.50	1.16	< 0.28	< 0.5
10.	Available Nitrogen (as N)	Kg/ha	125.44	238.34	125.44	112.9
11.	Manganese	mg/kg	11.22	4.08	4.21	5.01
12.	Infiltration Rate	cm/hr	7.74	7.89	7.89	8.12
13.	Porosity	mg/m^3	0.3546	0.2984	0.2766	0.5117
14.	Moisture Content	%	19.34	21.45	22.45	22.89
16.	Chloride	mg/kg	0.10	0.29	0.21	0.15
17.	Sulphate	mg/kg	0.41	0.53	0.50	0.7

Table No 28:

SOIL QUALITY RESULT FOR THE MONTH OF JULY 2023

Sl. No.	Parameter	Unit	Line 1 AFR Area	Line 2 STP Area	Konark Vihar	Near New Weigh Bridge
1.	Colour	-	Greyish Brown	Dark Brown	Dark Brown	Grayish
2.	Type of Soil	-	Fine Grained Soil	Fine Grained Soil	Fine Grained Soil	Fine Grained Soil
3.	Texture	-	Sandy Clay Loam	Silty Clay Loam	Silty Clay Loam	Greyish
4.	Bulk Density	gm/cm^3	1.3	1.2	1.3	Fine Grained Soil
5.	pH (1:2 Suspension)	-	8.35	8.14	8.01	Silty Loam
6.	Iron	mg/kg	4.8	5.21	6.05	1.2
7.	Calcium	mg/kg	174	179	193	7.99
8.	Available Potassium (as K_2O)	Kg/ha	182.52	1052.64	230.52	5.08
9.	Organic Carbon	%	< 0.50	0.9	< 0.50	168
10.	Available Nitrogen (as N)	Kg/ha	50.18	263.42	12.54	126
11.	Manganese	mg/kg	9.61	9.23	9.76	< 0.5
12.	Infiltration Rate	cm/hr	6.54	4.26	4.77	12.54
13.	Porosity	mg/m^3	0.1857	0.1922	0.2004	6.02
14.	Moisture Content	%	21.26	22.57	22.84	5.61

Sl. No.	Parameter	Unit	Line 1 AFR Area	Line 2 STP Area	Konark Vihar	Near New Weigh Bridge
16.	Chloride	mg/kg	0.11	0.08	0.18	0.1185
17.	Sulphate	mg/kg	0.6	0.5	0.5	23.45

Table No 29:

SOIL QUALITY RESULT FOR THE MONTH OF AUGUST 2023

Sl. No.	Parameter	Unit	Line 1 AFR Area	Line 2 STP Area	Konark Vihar	Near New Weigh Bridge
1.	Colour	-	Greyish Brown	Dark Brown	Dark Brown	Greyish
2.	Type of Soil	-	Fine Grained Soil	Fine Grained Soil	Fine Grained Soil	Fine Grained Soil
3.	Texture	-	Sandy Clay Loam	Silty Clay Loam	Silty Clay Loam	Silty Loam
4.	Bulk Density	gm/cm^3	1.4	1.4	1.3	1.45
5.	pH (1:2 Suspension)	-	8.57	8.43	8.39	9.10
6.	Iron	mg/kg	4.8	5.21	6.05	5.48
7.	Calcium	mg/kg	168	177	194	188
8.	Available Potassium (as K_2O)	Kg/ha	310.76	234.84	198.08	336.48
9.	Organic Carbon	%	0.81	1.34	2.08	0.82
10.	Available Nitrogen (as N)	Kg/ha	87.81	150.52	338.68	37.63
11.	Manganese	mg/kg	8.18	10.04	8.68	8.12
12.	Infiltration Rate	cm/hr	7.74	5.96	3.87	5.61
13.	Porosity	mg/m^3	0.20	0.18	0.21	0.19
14.	Moisture Content	%	25.4	23.8	27.65	23
16.	Chloride	mg/kg	0.15	0.18	0.16	0.26
17.	Sulphate	mg/kg	0.45	0.24	0.35	0.5

Table No 30:

SOIL QUALITY RESULT FOR THE MONTH OF SEPTEMBER 2023

Sl. No.	Parameter	Unit	Inside Store Yard (Line – 1)	Kiskindhaban Area	AFR Area (Line – 2)	AFR Area
1.	Colour	-	Greyish Brown	Dark Brown	Dark Brown	Greyish
2.	Type of Soil	-	Fine Grained Soil	Fine Grained Soil	Fine Grained Soil	Fine Grained Soil
3.	Texture	-	Sandy Clay Loam	Silty Clay Loam	Silty Clay Loam	Silty Loam
4.	Bulk Density	gm/cm^3	1.3	1.2	1.3	1.2
5.	pH (1:2 Suspension)	-	7.65	7.63	8.00	7.93
6.	Iron	mg/kg	4.8	5.21	6.05	5.08
7.	Calcium	mg/kg	174	179	193	168
8.	Available Potassium (as K_2O)	Kg/ha	354	350.4	318	223.2
9.	Organic Carbon	%	3.27	1.90	1.10	< 0.5
10.	Available Nitrogen (as N)	Kg/ha	112.89	213.24	112.89	125.44
11.	Manganese	mg/kg	9.61	9.23	9.76	6.02
12.	Infiltration Rate	cm/hr	6.54	4.26	4.77	5.61
13.	Porosity	mg/m^3	0.1857	0.1922	0.2004	0.1185
14.	Moisture Content	%	21.26	22.57	22.84	23.45
16.	Chloride	mg/kg	0.11	0.08	0.18	0.16
17.	Sulphate	mg/kg	0.6	0.5	0.5	0.60

Table No: 31:

NOISE LEVEL MONITORING DATA

From 01.04.2023 to 30.09.2023

Month	Location	L_{eq} dB(A) Day Time	L_{eq} dB(A) Night Time	L_{max} dB(A)	L_{min} dB(A)
April	CCR BUILDING (Line – 2)	66.5	63.8	68.3	62.7
	Work Shop (Line – 2)	60.8	61.2	65.9	59.6
	CPP Area (Line – 2)	64.9	62.3	67.2	61.1
	General Store (Line – 1)	60.6	61.2	68.3	58.8
	Loco Gate 132 KV (Line – 1)	62.3	60.4	66.4	58.7
	Konark Vihar	55.6	52.9	61.2	42.3
	General Store (DSP Unit)	68.8	64.5	70.8	61.2
	Project Gate (DSP Unit)	63.1	56.7	66.4	52.4
May	CCR BUILDING (Line – 2)	73.2	67.9	76.2	66.0
	Work Shop (Line – 2)	62.2	56.5	66.8	54.7
	CPP Area (Line – 2)	69.1	67.9	72.8	66.9
	General Store (Line – 1)	61.9	58.0	65.7	56.9
	Loco Gate 132 KV (Line – 1)	63.6	58.0	67.2	56.4
	Konark Vihar	48.8	41.0	53.2	38.7
	General Store (DSP Unit)	62.1	56.1	67.1	54.8
	Project Gate (DSP Unit)	53.4	46.8	57.8	45.2
June	Main gate Near Canteen (Line – 1)	61.8	59.1	70.6	54.0
	Payloader Garage (Line – 1)	65.8	66.6	74.2	57.8
	Engineering Hostel (Line – 2)	65.4	65.4	73.7	57.8
	General Store (Line – 1)	65.8	64.8	72.2	60.1
	Loco Gate 132 KV (Line – 1)	66.7	65.1	70.9	62.3
	Konark Vihar	54.8	44.5	57.8	42.3
	STP Area (DSP Unit)	70.9	66.7	74.1	67.9
	Near AFR Storage Area (DSP Unit)	66.8	68.6	75.0	59.0
July	General Store Area (Line – 1)	64.9	64.8	69.9	61.4
	Refractory Main Gate Area	72.1	66.0	74.3	58.4
	Konark Vihar Area	53.3	41.0	60.8	40.5
	CCR Building Area (Line – 2)	67.3	59.2	69.8	54.7
	Work Shop Area (Line – 2)	67.2	67.7	74.2	56.9
	Guest House Area	64.7	60.0	68.6	55.6
	Project Gate Area (DSP Unit)	60.8	60.3	70.9	52.9
	General Store Area (DSP Unit)	71.5	67.3	73.5	65.2
August	Main gate Near Canteen (Line – 1)	65.1	59.1	73.6	49.1
	Payloader Garage (Line – 1)	68.1	60.7	73.8	58.2
	Guest House Area	62.9	57.9	66.8	53.9
	Konark Vihar Area	50.2	39.8	55.6	38.2
	CPP Line – 2 Area	65.0	61.8	70.6	59.9
	Engineering Hostel Area (Line – 2)	64.4	65.8	73.0	53.1
	STP Area (DSP Unit)	69.2	67.4	73.7	64.8
	AFR Storage Area (DSP Unit)	68.0	64.3	72.8	59.2
September	Work Shop (Line – 2)	62.2	61.5	69.9	60.3
	CPP Area (Line – 2)	60.4	59.1	74.9	53.5
	Guest House Area	57.7	54.0	78.7	47.3
	Konark Vihar Area	49.5	59.3	68.5	33.4
	General Store Area (Line – 1)	60.8	58.9	75.0	56.1
	Refractory Main Gate Area	65.0	63.8	79.3	59.6
	General Store (DSP Unit)	61.1	58.8	81.6	36.7
	Project Gate (DSP Unit)	52.3	53.6	80.4	42.9