

Reg./AD & mail

JKC/ENV/EC/13 B/

Date: 23.11.2024

The Director,
Ministry of Environment, Forest & Climate Change (Integrated Regional Office)
A-209 & 218, "ARANYA BHAWAN", Jhalana Institutional Area, Jaipur-302004
Tel No: 0141-2713786, 2713778 Email: iro.jaipur-mefcc@gov.in

Subject: Compliance Report of Environmental Clearance conditions for Expansion of Grey Cement production capacity from 13,33,530 TPA to 13,69,830 TPA by debottlenecking / internal modification and product mix change of Line-1 (i.e. production of both grey and white clinker & cement from existing grey facility) by implementation of white & grey convertible facility in both Line - I & Line- II without any change in total granted capacity of Grey Clinker (8,77,950 TPA), White Clinker (4,95,000 TPA) & White Cement (5,54,400 TPA) at Village: Gotan, Tehsil: Merta, District: Nagaur (Rajasthan) by M/s. JK Cement Works, Gotan (Unit of J.K Cement Ltd.)- Reg. Environment Clearance under the provision of para 7 (ii) of EIA Notification, 2006.

Ref.: EC letter No. J-11011/63/2008-IA-II dated August 18, 2008 & Letter No. EC22A009RJ183791 File no. IA-J-11011/63/2008-IA-II(I) dated 27.05.2022

Sir, Following is the compliance status of environment clearance for production of cement as above referred letter:

Name of the Project : Expansion of Grey Cement line-1 from 471900 TPA to 508200 TPA with convertible facility - White Cement production 242659 TPA (Line – 2 project work is hold.)
Period of EC Compliance : From 1st April-2024 to 30th September-2024

SPECIFIC CONDITIONS:

Sr.	Conditions	Compliance Status
i	Three tier green belt are from 19ha. to 23ha. To achieve 33% of the project area shall be completed by monsoon season 2022 with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basic to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in thin regard, shall be submitted to concerned Regional Office, of the MOEF&CC.	We have developed and well maintained more than 33% green belt area of plant area which is tree sapling of Neem, Desi Ashok, Pendular Ashok, Arjun, conocarpus, State Tree Khejri etc. has been planted around the plant boundary, nearby area, colony area. A total of 24.55 hectares area of plantation has developed with 44563 nos. surviving saplings and 67.02% survival rate. Gap filling is doing in every monsoon for increasing density of plants. this mansoon sesion we have planted 1648 plants. Refer layout attached Annexure-1
ii	Greeting and paving shall be implemented in the plant area to arrest soil erosion and dust pollution from the exposed soil surface.	We have already taken care for controlling the fugitive dust emission by adopting the better house-keeping, concreting the movement areas and development of green belt.

📎 Water Probability study Report Attached for Reference

Corporate Office

📍 Prism Tower, 5th Floor, Ninaniya Estate,
Gwal Pahari, Gurugram - 122102, Haryana
☎ +0124-6919000
✉ admin.prismt@jkcement.com
🌐 www.jkcement.com

JK SUPER CEMENT
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Manufacturing Units at :
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Balasiner (Gujarat) | Fujairah

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WallMaxX
White Cement Based Putty



Registered Office : 🏠 Kamla Tower, Kanpur-208001, U.P., India. ☎ +91-512-2371478 to 85 📠 91-512-2399854 🌐 www.jkcement.com

Jodhpur Office : 🏠 182, Gopi Krishna Vihar, Near Guru Ka Talab, Near Pratap Nagar, Jodhpur-342001. ☎ +0291-2432021, 2433072

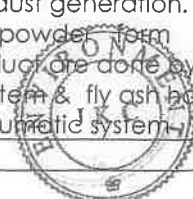
iii	Ammonia Gas Detectors shall be installed at the storage site and the kiln stack for detecting leakage / seepage of ammonia gas.	We have installed Ammonia Gas Detectors at the storage site and the kiln stack for detecting leakage / seepage of ammonia gas. (SNCR)
iv	Particulate matter emission from all the stacks shall not exceed 30mg/Nm3.	Particulate matter emission from all the stacks are under 30mg/Nm3. & OCEM system has installed at site for monitoring & connected with PCB's servers.
v	All stockyards shall have impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run of material.	All stockyards is maintained flooring and equipped with water spray system for dust suppression (As required & Designed).
vi	All internal roads and connecting road from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per traffic load due to existing and proposed project.	Agreed, Factory roads connected with State highway directly & Axle Standard (MSA) maintained as per traffic norms.
vii	Slip road shall be provided at gates and along crossing on main gate.	We have provided at sites,
viii	Covered shed and toe walls shall be provided for raw material storage to check any attrition of raw materials. Storage shed shall have garland drains, material trap and shall be built on concrete platform.	Covered shed and toe walls provided for raw material storage to check any attrition of raw materials. Storage shed have garland drains, material trap and built on concrete platform.
ix	Performance monitoring of all pollution control device shall be carried out annually and report shall be submitted to MEF&CC, Regional Office.	Environmental Management cell has been setup. The Unit Head looks after the total control of pollutions, monitoring & maintenance of pollution control devices with the help of Technical -Head along with mechanical department, Environment Department, Environment Officers, Engineers (Chemical) & a trained team. Periodically & Annually reports are submitted to MOEF&CC, Regional Offices.
x	Following addition arrangements to control fugitive dust shall be provided. Fog/ Mist sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal, and Fly ash and similar solid waste storage areas. Proper covered vehicle shall be used while transport of material. Wheel washing mechanism shall be provided in entry and exists gate.	As Below Status Mist sprinklers installed at all conveyors point and on bulk raw material storage area (at the transfer points) Proper covered vehicle are using for finished product and ensuring at factory gate level. Wheel washing mechanism not required due to dry process and all road maintained pacca.
xi	1166 KLD water after expansion shall be met from ground water sources as approved by the competent authority. Surface water sources like mine pit water, rain water harvested water and use of treated sewage water from nearby municipal corporation shall be explored and action plan in thin regard shall be submitted to the Regional Office of the MOEF&CC for gradual phase out of the ground water in a time frame of two years from the date of issue of EC.	We assure for the same i. e. the water consumption shall not exceed the limit. Permission for the same has been obtained from CGWA. Surface water sources like mine pit water, rain water harvested water and use of treated sewage water from nearby municipal corporation Water study Report attached. presently no any possibility in this feasibility report which was carried out by accredited consultant. Because the water is very precious for us.
xii	Rain Water Harvesting shall be carried out to recharge 200% of annual ground water withdrawal as committed by the PP.	We have provided very well Rainwater harvesting System. Drawing and other in Letter No.-JKC/ENV/13 A/ dated 26.11.2014 and subsequent correspondence to CGWA compliances on yearly basis.
xiii	Particulate matter emissions from all the stacks shall be less than 30 mg/Nm3.	Particulate matter emission from all the stacks are under 30mg/Nm3. & OCEM system has installed at site for monitoring & connected with PCB's servers.
xiv	Petcoke dosing shall be controlled automatically to control SO2 emission from chimney within the	SO2 emission from chimney within the prescribed limit and controlled automatically. <u>Actually SO2</u>



	prescribed limit.	emission is very lesser compare to prescribed limit.
xv	Dioxin and furans shall be monitored twice a year during coprocessing of hazardous waste and report shall be submitted to the Regional Office of the MOEF&CC.	Agreed, we have ensured and reports submitted to the Regional Office of the MOEF&CC.
xvi	Develop a control strategy and plan that incorporates the pollution control measures. The clean air practice shall be adopted like mechanical collectors, wet scrubbers, fabric filters (bag house) electrostatic precipitator, combustion system (thermal oxidizers), condensers, absorbers and biological degradation. Controlling emission related to transportation shall include emission controls on vehicle as well as use of cleaner fuels.	Environmental Management cell has been setup. The Unit Head looks after the total control of pollutions, monitoring & maintenance of pollution control devices with the help of Technical -Head along with mechanical department, Environment Department, Environment Officers, Engineers (Chemical) & a trained team. Periodically & Annually reports are submitted to MoEF&CC, Regional Offices.

GENERAL CONDITIONS:

Sr.	Conditions	Compliance Status
I	Statutory Compliance	
i.	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount / construe to approval/ consent / permission etc. required to be obtained or standards / conditions to be followed under any other Acts/ Rules / Subordinate legislation etc. as may be applicable to the project.	Agreed, we are follow & complying.
II	Air Quality Monitoring and Preservation	
i.	The project proponent shall install 24X7 continuous Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 nos. Continuous Ambient Air Quality Stations (CAAQS) for monitoring of AAQ parameters with respect to the standards prescribed in Environment Protection Rules, 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online server and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment Protection Rules, 1986 or NABL accredited laboratory.	Continuous Monitoring System (CEMS) is installed at all process stacks & Four CAAQM stations are installed at site and connected to RSPCB & CPCB servers for online monitoring. Apart from this, we also get monitoring done from approved labs on regular basis. Besides, RSPCB also conducts monitoring inspections from time to time. Refer recognized Lab Monitoring reports Attached: Annexure-2
ii.	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment Protection Rules, 1986.	We have monitor fugitive emissions in the plant premises at least every quarter on specific fugitive emissions areas . We are already taking care for controlling the fugitive dust emission by adopting better house-keeping, concreting the movement areas and development of green belt. Bag filters have been provided at material transfer points, packing, loading & unloading points. Further, quarterly AAQM reports are submitted accordingly.
iii.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance.	Every Bag filter (plus jet) facility equipped the leakage detection system.
iv.	The project proponent ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; use closed bulkers for carrying fly ash.	The covered transportation and conveying for ore, coal and other raw material has provided to prevent spillage and dust generation. Transportation of all powder form of raw materials & finished product are done by means of covered conveyor system & fly ash handled through bulkers with pneumatic system.
v.	The project proponent shall provide wind shelter fence	Agreed, if required



	and chemical spraying on the material stock piles.	
vi.	Ventilation system shall be designed for adequate air charges as per the prevailing norms for all tunnels, motors houses and cement bagging plants.	We have provided proper Ventilation system for all required sites.
III	WATER QUALITY MONITORING AND PRESERVATION	
i.	The project proponent shall install 24X7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules, 1986 vide G.S.R. No. 612 (E) dated 25th August 2014 (Cement and subsequent amendment dated 09th May, 2016 (Cement) and 10th May, 2016 9in case of coprocessing cement) as amended from time to time.	The no any process effluent generated from cement process. Only domestic water effluent generated and treated at STP. Treated water use in plantation and maintained ZLD premises. We have install 24X7 continuous effluent monitoring PTZ camera & flow meter with respect to standards. Both are connected with PCB's servers.
ii	The project proponent shall regularly ground water quality at least twice a year (pre-and post-monsoon) at sufficient number of piezometers/sampling wells in the plant and adjacent area through labs recognized under Environmental (protection) Act 1986 and NABL accredited laboratories.	We are conducted the water testing as per norms twice a year by approved lab and maintained records. For ground water level monitoring we have install two number piezometers and connected with vendor cloud servers for real-time monitoring.
iii	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards	Sewage Treatment Plant has installed and all domestic waste water treated and use in plantation with meet the prescribed standards. RSPCB also conducts monitoring inspections from time to time.
iv	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and check the water pollution due to surface run off.	Agreed, garland drains available.
v	Water meters shall be provided at the inlet to all unit processes in the cement plant	Water meters installed
vi	The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.	We are doing efforts to minimize water consumption in the cement plant with new technology adaption.
vii	Tyre washing facility shall be provided at the entrance and exit of the plant gates.	Agreed, if required, Actually no required because of no any sludge/ other material generated from the process.

IV Noise monitoring and prevention:

i	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to regional officer of the Ministry as a part of six-monthly compliance report.	Regular noise monitoring is being done around plant boundary. Noise levels are well within stipulated norms. Proper enclosures have been provided at high noise area. PPEs have been provided to all the workers. Recognized Lab Monitoring Reports Attached: Annexure-2
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V Energy Conservation Measures:

i	Waste heat recovery system shall be provided for kiln and cooler	Agreed - Line-II
ii	The project proponent shall make efforts to achieve power consumption less than 65unit/ton for Portland pozzolana Cement (PPC) and 85unit/ton for the ordinary Portland cement (OPC) production and thermal energy consumption of 670Kcal/Kg of clinker.	Agreed, we will efforts to achieve.
iii	Provide solar power generation on roof tops of buildings, for solar light system for all common areas street lights, parking around project area and maintain the same regularly.	We have installed solar power generation on roof tops 100 kWh for light system.
iv	Provide the project proponent for LED lights in their offices and residential areas.	We have provided all premises LED lights in their offices and residential areas.



VI Waste management:

i	Used refractories shall be recycled as far as possible	Agreed, we have provided recyclers.
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VII Green belt

i	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration by tree in the plant premises.	M/s JK Cement Ltd are make sustainability report and track of targets GHG & others. Every year published IR report by third party & provided on site for public domain
ii	The project proponent shall submit a study report on Decarburization program which would essentially consist of company's carbon emissions, carbon budgeting/balancing carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bounding action plan to reduce its carbon intensity of its operations and supply chain energy transition pathway from fossil fuels to renewable energy etc. All these activities/ assessment should be measurable and monitor able with defined time frames	

VIII. Public Hearing and Human issues:

i	Emergency preparedness plan based on the hazardous identification and Risk Assessment(HIRA) and Disaster Management Plan shall be implemented.	Emergency preparedness plan prepared based on the hazardous identification and Risk Assessment (HIRA) and Disaster Management. The unit is already IMS certified (ISO 9001, ISO 14001 & ISO 45001) and the plan copy is displayed at sites.
ii	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide personnel protection equipment(PPE)as per norms	The safety Department are established and well qualified officers given responsibility of sites which have ensure the personnel protection equipment (PPE)as per norms
ii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Agreed, Periodic health checkup of all the employees have been conducted at our OHC (Dispensary) where all facilities are available. The records maintained Refer Report attached Annexure: -3

IX. Environment Management:

i	The project proponent shall comply with the provisions contained in this Minister's OM vide F. NO.22-65/2017-IA.III dated 30/09/2020	Agreed, we are comply
ii	The company shall have a well laid down environmental policy duly approved by the board of Directors.	The company has laid down environmental policy duly approved by the board of Directors. & available on company Website
ii	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of organization.	Environmental Management cell has been setup. The Unit Head looks after the total control of pollutions, monitoring & maintenance of pollution control devices with the help of Technical -Head along with mechanical department, Environment Department, Environment Officers, Engineers (Chemical) & a trained team.

X. Miscellaneous:

i	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the district or state, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently	Expansion EC: advertised in Rajasthan Dainak Navjyoti & Dainik Bhasker on dated 30.05.2022. Copies are already submitted to your good office earlier compliance report.
ii	The copy of the environment clearance shall be submitted by the project proponents to the head of local bodies, panchayats and municipal body in addition to the relevant offices of the government who in turn has to display the same for 30 days from date of receipt.	We have submitted the copy of the environment clearance Gram Panchayat Gotan within time frame dated 23.06.2022
iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including result of monitored data on their web site and upload on half-yearly basis.	Agreed, we are complying



iv	The project proponent shall monitor the criteria of pollutants level namely: PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	We are following NAAQs, 2009 and cement sector emission norms as per CTO.
v	The project proponent shall submit six monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of environment, forest and climate change at environmental clearance portal.	Agreed, we are complying
vi	The project proponent submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment(Protection) Rules, 1986, as amended subsequently and put on the website of the company	We are submitting every financial year in Form-V to the concerned State Pollution Control Board as prescribed and also put on the website of the company
vii	The project proponent shall inform the Regional Office as well as the ministry, the date of the financial closure and final approval of the project by the concerned authorities , commencing the land development work and start of production of the project	Agreed, for the same.
viii	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitments made during the public hearing and also that during the their presentation to EAC	Agreed
ix	No further expansion or modification in the plant shall be carried out without prior approval of the MoEF& CC	It shall be followed at all times. Changes if any shall be under taken with due permissions.
x	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of the Environment (Protection) Act 1986.	Agreed, Noted
xi	The ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agreed, Noted
xii	The ministry reserves the right to stipulate additional conditions if found necessary. The company in the time bound manner shall implement these conditions.	Agreed, Noted
xiii	The regional office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of the regional office by furnishing the requisite data/ information/ monitoring reports.	Agreed, committed
xiv	Any appeal against this EC shall lie with the National Green Tribunal, if preferred , within a period of 30 days as prescribed under section16 of the National Green Tribunal Act, 2010.	Agreed, Noted

We hope you will find the document in order.

Thanking you,

Yours Faithfully,

For J.K Cement Works, Gotan

Dr. Ranjeet Kumar Bagariya

(Environment Head)

Authorized Signatory

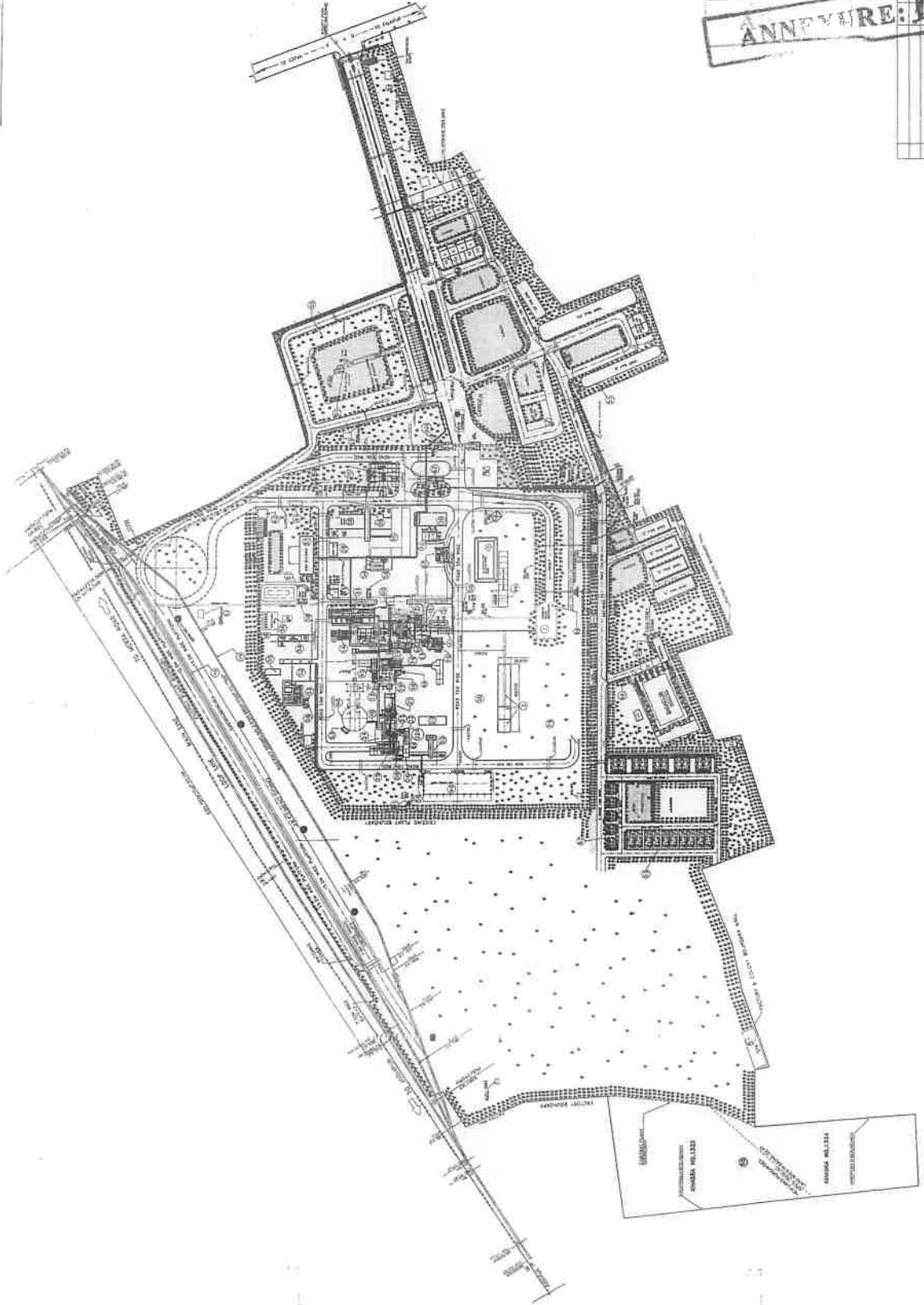
CC To:

Reg. A/d Member Secretary,
Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongari, Jaipur (Raj.) – 302 004

CPP

Reg. A/d Regional Officer,
Rajasthan State Pollution Control Board,
First Floor, Sehkarı Bhoomi Vikas Bank Ltd., Nagaur- 341001

Encl: as above



ANNEXURE: I

NO.	DESCRIPTION	NO. OF SHEETS
1	CONCRETE AND METAL STRUCTURE	123-001
2	STRUCTURE FOUNDATION	123-002
3	STRUCTURE ROOFING	123-003
4	STRUCTURE INTERIORS	123-004
5	STRUCTURE EXTERIORS	123-005
6	STRUCTURE UTILITIES	123-006
7	STRUCTURE FINISHES	123-007
8	STRUCTURE SCHEDULES	123-008
9	STRUCTURE SPECIFICATIONS	123-009
10	STRUCTURE DRAWINGS	123-010
11	STRUCTURE AND FOUNDATION DETAILS	123-011
12	STRUCTURE AND FOUNDATION DETAILS	123-012
13	STRUCTURE AND FOUNDATION DETAILS	123-013
14	STRUCTURE AND FOUNDATION DETAILS	123-014
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100	STRUCTURE AND FOUNDATION DETAILS	123-100

NOTE:
ALL BL OF PUNTS ARE AS PER MDTIC DRG
NO. 'A1-04-000-25(R2)

PLANTATION LAYOUT
FOR PLANT & COLONY

NO. 'A1-04-000-25(R2)

DATE: 11/11/2015

SCALE: 1:1000

PROJECT: PLANTATION LAYOUT FOR PLANT & COLONY

DESIGNED BY: [Name]

CHECKED BY: [Name]

APPROVED BY: [Name]

DATE: 11/11/2015

PROJECT NO: [Number]

SCALE: 1:1000

PROJECT: PLANTATION LAYOUT FOR PLANT & COLONY

DESIGNED BY: [Name]

CHECKED BY: [Name]

APPROVED BY: [Name]

DATE: 11/11/2015

PROJECT NO: [Number]

SCALE: 1:1000

REVISED

REVISED

REVISED

REVISED

REVISED

REVISED



TEST REPORT

ANNEXURE: 2



TC-11227

Sample Number: VTL/AA/01-04
 Name & Address of the Party: M/s JK Cement Works (Unit of JK Cement Ltd.) Vill. & Po.- Gotan, Dist.-Nagaur, Rajasthan

Report No.: VTL/A/2409140013-16/A
 Format No.: 7.8 F 02
 Party Reference No.: NIL
 Report Date: 24/09/2024
 Period of Analysis: 14-24/09/2024
 Receipt Date: 14/09/2024

Sample Description: Ambient Air Quality Monitoring

General Information:-

- Sample collected by : VTL Team
- Instrument Calibration Status : Calibrated
- Meteorological condition during monitoring : Clear sky
- Date of Sampling : 11/09/2024 to 12/09/2024
- Ambient Temperature (°C) : Min. 25°C, Max. 35°C
- Surrounding Activity : Human, Vehicular & Plant Activities
- Scope of Monitoring : Regulatory Requirement
- Sampling & Analysis Protocol : IS-5182 & CPCB Guidelines
- Sampling Duration : 24 hrs.
- Parameter Required : As Per Work Order

Sr.	Parameter	Protocol	Location & Lat. Long				Unit	NAAQS 2009
			Front of Pump house	Front of Weight Bridge	Front of Crusher MCC Room	Bechelor Hostel		
			73°49'36"E 26°38'49"N	73°43'46"E 26°38'46"N	73°43'50"E 26°38'36"N	73°43'41"E 26°38'31"N		
1.	Particulate Matter (PM10)	IS: 5182 (P-23), 2006, RA 2017	53.62	59.78	61.25	56.43	µg/m ³	100
2.	Particulate Matter (PM2.5)	IS 5182 (P-24) -2019	27.48	29.12	30.42	28.49	µg/m ³	60
3.	Sulphur Dioxide (SO2)	IS: 5182 (P-2), 2001, RA 2018	6.52	8.15	9.64	6.13	µg/m ³	80
4.	Nitrogen Dioxide (NO2)	IS: 5182 (P-6), 2006 RA 2018	12.89	15.84	16.12	13.80	µg/m ³	80
5.	Benzene (as C6H6)	IS: 5182 (P-11)-2006, RA.2017	*BLQ(**LOQ1.0)	*BLQ(**LOQ1.0)	*BLQ(**LOQ1.0)	*BLQ(**LOQ1.0)	µg/m ³	5
6.	Ammonia (as NH3)	3 rd Ed. 1988, Method No. 401	7.64	9.58	10.31	7.49	µg/m ³	400
7.	Ozone (as O3)	IS:5182 (P-9):1974, RA.2019	12.21	14.23	16.34	13.57	µg/m ³	180
8.	Lead (as pb)	IS:5182 (P-22):2004, RA.2019	*BLQ(**LOQ0.02)	*BLQ(**LOQ0.02)	*BLQ(**LOQ0.02)	*BLQ(**LOQ0.02)	µg/m ³	1
9.	Arsenic (as As)	3 rd Ed. 1988, Method No. 302	*BLQ(**LOQ0.15)	*BLQ(**LOQ0.15)	*BLQ(**LOQ0.15)	*BLQ(**LOQ0.15)	ng/m ³	6
10.	Nickel (as Ni)	USEPA Compendium IO-3.2, 1999	*BLQ(**LOQ5.0)	*BLQ(**LOQ5.0)	*BLQ(**LOQ5.0)	*BLQ(**LOQ5.0)	ng/m ³	20
11.	Benzo (a) Pyrene	IS:5182 (P-12):2004, RA.2019	*BLQ(**LOQ0.2)	*BLQ(**LOQ0.2)	*BLQ(**LOQ0.2)	*BLQ(**LOQ0.2)	ng/m ³	1

-----End of the Report-----

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TEST REPORT

Sample Number: VTL/AA/01-04
Name & Address of the Party: M/s JK Cement Works (Unit of JK Cement Ltd.) Vill. & Po.- Gotan, Dist.-Nagaur, Rajasthan

Report No.: VTL/A/2409140013-16/B
Format No.: 7.8 F 02
Party Reference No.: NIL
Report Date: 24/09/2024
Period of Analysis: 14-24/09/2024
Receipt Date: 14/09/2024

Sample Description: Ambient Air Quality Monitoring

General Information:-

Sample collected by : VTL Team
Instrument Calibration Status : Calibrated
Meteorological condition during monitoring : Clear sky
Date of Sampling : 11/09/2024 to 12/09/2024
Ambient Temperature (°C) : Min. 25°C, Max. 35°C
Surrounding Activity : Human, Vehicular & Plant Activities
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS-5182 & CPCB Guidelines
Sampling Duration : 24 hrs.
Parameter Required : As Per Work Order

Sr.	Parameter	Protocol	Location & Lat. Long				Unit	NAAQS 2009
			Front of Pump house	Front of Weight Bridge	Front of Crusher MCC Room	Bechelor Hostel		
			73°49'36"E 26°38'49"N	73°43'46"E 26°38'46"N	73°43'50"E 26°38'36"N	73°43'41"E 26°38'31"N		
1.	Carbon Monoxide (as CO)	IS:5182 (P-10) NDIR	0.56	0.60	0.63	0.57	mg/m ³	4

-----End of the Report-----

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TEST REPORT



Sample Number:	VTL/AN/01-04	Report No.:	VTL/A/2409140013-16/A
Name & Address of the Party:	M/s JK Cement Works (Unit of JK Cement Ltd.) Vill. & Po.- Gotan, Dist.-Nagaur, Rajasthan	Format No.:	7.8 F 04
Sample Description:	Ambient Noise Level Monitoring	Party Reference No.:	NIL
Scope of Monitoring	Regulatory Requirement	Report Date:	24/09/2024
Protocol Used:	IS 9989	Receipt Date:	14/09/2024
Instrument Used:	SLM	Sampling Duration	24 Hrs.
		Sample Collected by	VTL Team
		Instrument	Calibrated
		Calibration Status	Calibrated

Ambient Noise Level Monitoring Results

General Information:-
 Meteorological condition during monitoring : Clear sky
 Date of Monitoring : 11/09/2024 to 12/09/2024
 Time of Monitoring : 06:00 AM to 06:00AM
 Ambient Temperature (°C) : Min. 25°C, Max. 35°C
 Surrounding Activity : Human, Vehicular & Plant Activities
 Parameter Required : As per Work Order

Sr.	Test Parameter	Protocol	Location & Latlong							
			Front of Pump house		Front of Weight Bridge		Front of Crusher MCC Room		Bechelor Hostel	
			73°49'36"E 26°38'49"N	73°43'46"E 26°38'46"N	73°43'50"E 26°38'36"N	73°43'41"E 26°38'31"N				
1.	Leq. dB(A)	IS:9989-1981, RA 2020	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
			60.8	48.3	62.7	44.9	63.5	50.7	48.2	37.6

Category of Zones	Leq in dB (A)	
	Day	Night
Industrial	75	70
Commercial	65	55
Residential	55	45
Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.
 2. Night Time is reckoned between 10.00 PM to 6.00 AM.
 3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeakers and bursting of crackers is banned in these zones.
 Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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TEST REPORT



Sample Number : VTLWW/02

M/S JK Cement Works
(Unit of JK Cement Ltd) Vill. & PO. - Gotan Dist - Nagaur, Rajasthan

Name & Address of the Party :

Sample Description : Waste Water
Sampling Location : STP Outlet (STP Treated Water) 300 KLD STP
Sample Collected By : VTL Team, 73°43'22" N & 26°38'28"E
Coordinates : 73°43'41" & 26°38'31"

ULR No. : TC112272400000771F
Report No. : VTLWW/2409140004/A
Format No : 7.8 F-01
Party Reference No : NIL
Report Date : 24/09/2024
Period of Analysis : 14/09/2024-24/09/2024
Receipt Date : 14/09/2024
Sampling Date : 11/09/2024
Parameter Required : As per work order

Table with 6 columns: S.No., Test Parameters, Test Method, Result, Unit, Limits. Contains 10 rows of test data including pH, TSS, Temperature, Oil & Grease, Ammonical Nitrogen, Total Kjeldahl Nitrogen, BOD, COD, Sulphide, and Residual Free Chlorine.

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Quantification

End of Report



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TEST REPORT

Sample Number : VTL/WW/02

M/S JK Cement Works
(Unit of JK Cement Ltd.) Vill. & PO. - Gotan Dist -
Nagaur, Rajasthan

Name & Address of the Party :

Sample Description : Waste Water

Sampling Location : STP Outlet (STP Treated Water) 300 KLD STP

Sample Collected By : VTL Team, 73°43'22" N & 26°38'28"E

Coordinates : 73°43'41" & 26°38'31"

Report No. : VTL/WW/2409140004/B

Format No : 7.8 F-01

Party Reference No : NIL

Report Date : 24/09/2024

Period of Analysis : 14/09/2024-24/09/2024

Receipt Date : 14/09/2024

Sampling Date : 11/09/2024

Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA. 2019	625.0	mg/l	--
2	Fecal Coliform	IS 1622, 1981 RA 2019	28	MPN/100ml	100

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Quantification

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TEST REPORT



Sample Number : VTL/S/01
Name & Address of the Party : M/S JK Cement Works
(Unit of JK Cement Ltd.) Vill. & PO. - Gotan Dist -
Nagaur, Rajasthan

Report No. : VTL/S/2409140019/A
Format No : 7.8 F-03
Party Reference No : NIL
Report Date : 24/09/2024
Period of Analysis : 14/09/2024-24/09/2024
Receipt Date : 14/09/2024

Sample Description : Stack Emission Monitoring

General Information:-

Sampling Location : DG Set 350 KVA
Sample Collected By : VTL Team
Date of Sampling : 10/09/2024
Sampling duration (Minutes) : 43 Min. (17:40 to 18:23 Hrs.)
Stack attached to : Acoustic Encloser
Make of stack : MS
Diameter of stack(m) : 0.15 M
Height of stack(m) : 30 M
Instrument calibration status : Calibrated
Meteorological Condition : Clear Sky
Ambient Temperature - Ta (°C) : 33
Temperature of Stack Gases - Ts (°C) : 110
Velocity of Stack Gases (m/sec.) : 15.60
Flow rate of PM (LPM) : 24
Flow rate of Gas (LPM) : 2.0
Sampling condition : OK
Protocol used : IS 11255 & USEPA
Coordinates : 73°43'41" & 26°38'31"

S.No.	Parameters	Test Method	Results	Units	Limits
1	Particulate Matter (PM)	IS: 11255 (P-1) : 1985, RA 2019	0.010	gm/kw-hr	0.02
2	Oxide of Nitrogen (NOX)	IS 11255 (P- 7) 2005; RA 2017	0.22	gm/kw-hr	0.40
3	Total Hydrocarbon (HC)	USEPA 18: 1996	0.11	gm/kw-hr	0.19
4	Sulphur Dioxide (SO2)	IS: 11255(P-2): 1985, RA 2019	3.85	gm/kw-hr	Not Specified
5	Carbon Monoxide (CO)	USEPA 10: 1996	1.10	gm/kw-hr	3.5

*BLQ= Below Limit Of Quantification, **LOQ= Limit Of Quantification

End of Report



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TEST REPORT



TC-11227

Sample Number : VTL/S/02
Name & Address of the Party : M/S JK Cement Works
(Unit of JK Cement Ltd.) Vill. & PO. - Gotan Dist - Nagaur, Rajasthan

Report No. : VTL/S/2409140020/A
Format No : 7.8 F-03
Party Reference No : NIL
Report Date : 24/09/2024
Period of Analysis : 14/09/2024-24/09/2024
Receipt Date : 14/09/2024

Sample Description : Stack Emission Monitoring

General Information:-

Sampling Location : Ready Mix Mortar
Sample Collected By : VTL Team
Date of Sampling : 12/09/2024
Sampling duration (Minutes) : 40 Min. (11:00 to 11:40 Hrs.)
Stack attached to : Bag House
Make of stack : MS
Diameter of stack(m) : 0.75 M
Height of stack(m) : 30 M
Instrument calibration status : Calibrated
Meteorological Condition : Clear Sky
Ambient Temperature - Ta (°C) : 36
Temperature of Stack Gases - Ts (°C) : 58
Velocity of Stack Gases (m/sec.) : 6.62
Flow rate of PM (LPM) : 25
Flow rate of Gas (LPM) : --
Sampling condition : OK
Protocol used : IS 11255 & USEPA
Coordinates : --

Table with 6 columns: S.No., Parameters, Test Method, Results, Units, Limits. Row 1: 1, Particulate Matter (PM), IS: 11255 (P-1) : 1985, RA 2019, 16.23, mg/Nm3, 30

End of Report



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TEST REPORT



Sample Number : VTL/S/03
Name & Address of the Party : M/S JK Cement Works
(Unit of JK Cement Ltd.) Vill. & PO. - Gotan Dist - Nagaur, Rajasthan

Report No. : VTL/S/2409140021/A
Format No : 7.8 F-03
Party Reference No : NIL
Report Date : 24/09/2024
Period of Analysis : 14/09/2024-24/09/2024
Receipt Date : 14/09/2024

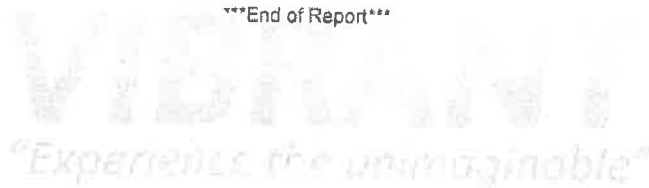
Sample Description : Stack Emission Monitoring

- General Information:-
Sampling Location : Great Cooler/ Quencher
Sample Collected By : VTL Team
Date of Sampling : 10/09/2024
Sampling duration (Minutes) : 22 Min. (12:40 to 13:02 Hrs.)
Stack attached to : ESP
Make of stack : MS
Diameter of stack(m) : 2.0 M
Height of stack(m) : 30 M
Instrument calibration status : Calibrated
Meteorological Condition : Clear Sky
Ambient Temperature - Ta (°C) : 42
Temperature of Stack Gases - Ts (°C) : 213
Velocity of Stack Gases (m/sec.) : 17.73
Flow rate of PM (LPM) : 46
Flow rate of Gas (LPM) : --
Sampling condition : OK
Protocol used : IS 11255 & USEPA
Coordinates : --

Table with 6 columns: S.No., Parameters, Test Method, Results, Units, Limits. Row 1: 1, Particulate Matter (PM), IS: 11255 (P-1) : 1985, RA 2019, 16.22, mg/Nm3, 30

*BLQ= Below Limit Of Quantification, **LOQ= Limit Of Quantification

End of Report



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TEST REPORT



Sample Number : VTL/S/04

Name & Address of the Party : M/S JK Cement Works
(Unit of JK Cement Ltd) Vill. & PO. - Gotan Dist - Nagaur, Rajasthan

Report No. : VTL/S/2409140022/A
Format No : 7.8 F-03
Party Reference No : NIL
Report Date : 24/09/2024
Period of Analysis : 14/09/2024-24/09/2024
Receipt Date : 14/09/2024

Sample Description : Stack Emission Monitoring

General Information:-

Sampling Location : Raw Mill Kiln ESP
Sample Collected By : VTL Team
Date of Sampling : 10/09/2024
Sampling duration (Minutes) : 30 Min. (15:00 to 15:30 Hrs.)
Stack attached to : ESP
Make of stack : MS
Diameter of stack(m) : 2.56 M
Height of stack(m) : 82 M
Instrument calibration status : Calibrated
Meteorological Condition : Clear Sky
Ambient Temperature - Ta (°C) : 32
Temperature of Stack Gases - Ts (°C) : 134
Velocity of Stack Gases (m/sec.) : 11.41
Flow rate of PM (LPM) : 34
Flow rate of Gas (LPM) : -
Sampling condition : OK
Protocol used : IS 11255 & USEPA
Coordinates : --

S.No.	Parameters	Test Method	Results	Units	Limits
1	Particulate Matter (PM)	IS: 11255 (P-1) : 1985, RA 2019	15.68	mg/Nm3	30
2	Sulphur Dioxide (SO2)	IS: 11255(P- 2): 1985, RA,2019	62.48	mg/Nm3	100
3	Carbon Monoxide (CO)	USEPA 10: 1996	16.24	mg/Nm3	--
4	Oxide of Nitrogen (NO2)	IS-11255 (P-7), RA 2017	352.67	mg/Nm3	800

*BLQ= Below Limit Of Quantification, **LOQ= Limit Of Quantification

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TEST REPORT



Sample Number : VTL/S/04
Name & Address of the Party : M/S JK White Cement Works
 (Unit of JK Cement Ltd.) Vill. & Po, Gotan, Dist. -
 Nagaur, Rajasthan

Report No. : VTL/S/2409140023/A
Format No : 7.8 F-03
Party Reference No : Nil
Report Date : 24/09/2024
Period of Analysis : 14/09/2024-24/09/2024
Receipt Date : 14/09/2024

Sample Description : Stack Emission Monitoring

General Information:-

Sampling Location : Pet Coke/ Coal Mill-03
Sample Collected By : VTL Team
Date of Sampling : 10/09/2024
Sampling duration (Minutes) : 22 min. (17:00 to 17:22 hrs.)
Stack attached to : Bag House
Make of stack : MS
Diameter of stack(m) : 0.85 m
Height of stack(m) : 40.59 m
Instrument calibration status : Calibrated
Meteorological Condition : Clear Sky
Ambient Temperature - Ta (°C) : 33°C
Temperature of Stack Gases - Ts (°C) : 60
Velocity of Stack Gases (m/sec.) : 12.36
Flow rate of PM (LPM) : 46
Flow rate of Gas (LPM) : --
Sampling condition : OK
Protocol used : IS 11255 & USEPA
Coordinates : --

S.No.	Parameters	Test Method	Results	Units	Limits
1	Particulate Matter (PM)	IS: 11255 (P-1) : 1985, RA 2019	10.89	mg/Nm ³	30

*BLQ= Below Limit Of Quantification, **LOQ= Limit Of Quantification

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TEST REPORT



Sample Number: VTL/AA/01-04
 Name & Address of the Party: M/s JK Cement Works (Unit of JK Cement Ltd.) Vill. & Po.- Gotan, Dist.-Nagaur, Rajasthan

Report No.: VTL/A/2406150001-04/A
 Format No.: 7.8 F 02
 Party Reference No.: NIL
 Report Date: 20/06/2024
 Period of Analysis: 15-20/06/2024
 Receipt Date: 15/06/2024

Sample Description: Ambient Air Quality Monitoring

General Information:-

Sample collected by : VTL Team
 Instrument Calibration Status : Calibrated
 Meteorological condition during monitoring : Clear sky
 Date of Sampling : 11/06/2024 to 12/06/2024
 Ambient Temperature (°C) : Min. 32°C, Max. 41°C
 Surrounding Activity : Human, Vehicular & Plant Activities
 Scope of Monitoring : Regulatory Requirement
 Sampling & Analysis Protocol : IS-5182 & CPCB Guidelines
 Sampling Duration : 24 hrs.
 Parameter Required : As Per Work Order

Sr.	Parameter	Protocol	Location & Lat. Long				Unit	NAAQS 2009
			Front of Pump house 73°49'36"E 26°38'49"N	Front of Weight Bridge 73°43'46"E 26°38'46"N	Front of Crusher MCC Room 73°43'50"E 26°38'36"N	Bechelor Hostel 73°43'41"E 26°38'31"N		
1.	Particulate Matter (PM10)	IS: 5182 (P-23), 2006, RA 2017	58.13	62.57	65.82	60.49	µg/m ³	100
2.	Particulate Matter (PM2.5)	IS 5182 (P-24) -2019	29.45	31.24	33.76	30.72	µg/m ³	60
3.	Sulphur Dioxide (SO2)	IS: 5182 (P-2), 2001, RA 2018	7.75	10.20	11.64	7.10	µg/m ³	80
4.	Nitrogen Dioxide (NO2)	IS: 5182 (P-6), 2006 RA 2018	15.37	17.42	18.67	14.65	µg/m ³	80
5.	Benzene (as C6H6)	IS: 5182 (P-11)-2006, RA.2017	*BLQ(**LOQ1.0)	*BLQ(**LOQ1.0)	*BLQ(**LOQ1.0)	*BLQ(**LOQ1.0)	µg/m ³	5
6.	Ammonia (as NH3)	3 rd Ed. 1988, Method No. 401	8.12	10.72	11.44	9.57	µg/m ³	400
7.	Ozone (as O3)	IS:5182 (P-9):1974, RA.2019	14.32	16.71	17.69	15.22	µg/m ³	180
8.	Lead (as pb)	IS:5182 (P-22):2004, RA.2019	*BLQ(**LOQ0.02)	*BLQ(**LOQ0.02)	*BLQ(**LOQ0.02)	*BLQ(**LOQ0.02)	µg/m ³	1
9.	Arsenic (as As)	3 rd Ed. 1988, Method No. 302	*BLQ(**LOQ0.15)	*BLQ(**LOQ0.15)	*BLQ(**LOQ0.15)	*BLQ(**LOQ0.15)	ng/m ³	6
10.	Nickel (as Ni)	USEPA Compendium 10-3.2, 1999	*BLQ(**LOQ5.0)	*BLQ(**LOQ5.0)	*BLQ(**LOQ5.0)	*BLQ(**LOQ5.0)	ng/m ³	20
11.	Benzo (a) Pyrene	IS:5182 (P-12):2004, RA.2019	*BLQ(**LOQ0.2)	*BLQ(**LOQ0.2)	*BLQ(**LOQ0.2)	*BLQ(**LOQ0.2)	ng/m ³	1

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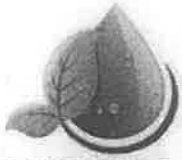
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TEST REPORT

Sample Number: VTL/AA/01-04 Report No.: VTL/A/2406150001-04/B
 Name & Address of the Party: M/s JK Cement Works (Unit of JK Cement Ltd.) Vill. & Po.- Gotan, Dist.-Nagaur, Rajasthan Format No.: 78F 02
 Party Reference No.: NIL
 Report Date: 20/06/2024
 Period of Analysis: 15-20/06/2024
 Receipt Date: 15/06/2024

Sample Description: Ambient Air Quality Monitoring

General Information:-

Sample collected by : VTL Team
 Instrument Calibration Status : Calibrated
 Meteorological condition during monitoring : Clear sky
 Date of Sampling : 11/06/2024 to 12/06/2024
 Ambient Temperature (°C) : Min. 32°C, Max. 41°C
 Surrounding Activity : Human, Vehicular & Plant Activities
 Scope of Monitoring : Regulatory Requirement
 Sampling & Analysis Protocol : IS-5182 & CPCB Guidelines
 Sampling Duration : 24 hrs.
 Parameter Required : As Per Work Order

Sr.	Parameter	Protocol	Location & Lat. Long				Unit	NAAQS 2009
			Front of Pump house	Front of Weight Bridge	Front of Crusher MCC Room	Bechelor Hostel		
			73°49'36"E 26°38'49"N	73°43'46"E 26°38'46"N	73°43'50"E 26°38'36"N	73°43'41"E 26°38'31"N		
1.	Carbon Monoxide (as CO)	IS:5182 (P-10) NDIR	0.58	0.62	0.67	0.59	mg/m ³	4

-----End of the Report-----

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Checked By



RK Yadav
Lab Incharge
Authorized Signatory

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Vibrant Techno Lab Pvt. Ltd.

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TEST REPORT



TC-11227

Sample Number: VTL/AN/01-04
Name & Address of the Party: M/s JK Cement Works
(Unit of JK Cement Ltd.) Vill. & Po.- Gotan,
Dist.-Nagaur, Rajasthan
Sample Description: Ambient Noise Level Monitoring
Scope of Monitoring: Regulatory Requirement
Protocol Used: IS 9989
Instrument Used: SLM

Report No.: VTL/A/2406150001-04/A
Format No.: 7.8 F 04
Party Reference No.: NIL
Report Date: 20/06/2024
Receipt Date: 15/06/2024
Sampling Duration: 24 Hrs.
Sample Collected by: VTL Team
Instrument Calibration Status: Calibrated

Ambient Noise Level Monitoring Results

General Information:-

Meteorological condition during monitoring: : Clear sky
Date of Monitoring: : 11/06/2024 to 12/06/2024
Time of Monitoring: : 06:00 AM to 06:00AM
Ambient Temperature (°C): : Min. 32°C, Max. 41°C
Surrounding Activity: : Human, Vehicular & Plant Activities
Parameter Required: : As per Work Order

Sr.	Test Parameter	Protocol	Location & Latlong							
			Front of Pump house		Front of Weight Bridge		Front of Crusher MCC Room		Bachelor Hostel	
			73°49'36"E 26°38'49"N	73°43'46"E 26°38'46"N	73°43'50"E 26°38'36"N	73°43'41"E 26°38'31"N				
1.	Leq, dB(A)	IS:9989-1981, RA 2020	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
			61.7	49.5	63.1	47.9	60.5	52.0	49.9	38.4

Category of Zones	Leq in dB (A)	
	Day	Night
Industrial	75	70
Commercial	65	55
Residential	55	45
Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.
2. Night Time is reckoned between 10.00 PM to 6.00 AM.
3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeakers and bursting of crackers is banned in these zones.
Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

-----End of the Report-----

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TEST REPORT



Sample Number : VTL/WW/02

M/S JK Cement Works
(Unit of JK Cement Ltd.) Vill. & PO. - Gofan Dist -
Nagaur, Rajasthan

Name & Address of the Party :

Sample Description : Waste Water
Sampling Location : STP Outlet (STP Treated Water) 300 KLD STP
Sample Collected By : VTL Team, 73°43'22" N & 26°38'28"E
Preservation : Suitable Preservation
Method of sampling : IS :3025

ULR No. : TC112272400000417F
Report No. : VTL/WW/2406150001/A
Format No : 7.8 F-01
Party Reference No : NIL
Report Date : 25/06/2024
Period of Analysis : 15/06/2024-25/06/2024
Receipt Date : 15/06/2024
Sampling Date : 14/06/2024
Sampling Type : Grab
Sample Quantity : 2 Ltr.
Coordinates : 73°43'41" & 26°38'31"

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	pH	IS: 3025 (P-11): 2022	7.58	-	5.5 to 9.0
2	Total Suspended Solids (TSS)	IS: 3025 (P-17): 2022	17.00	mg/l	20
3	Temperature	IS: 3025 (P-9): 1984, RA 2017	1.91	°C	Shall not exceed 5°C above the receiving water temperature
4	Oil & Grease	IS:3025 (P-39): 2021	*BLQ(**LOQ-4.0)	mg/l	10
5	Ammonical Nitrogen (as NH ₃ -N)	IS: 3025 (P-34) : 1988, Sec.4 RA: 2022	3.08	mg/l	5.0
6	Total Kjeldahl Nitrogen (as NH ₃)	IS: 3025 (P-34): 1988, RA 2022 (Macro Kjeldahl Method)	7.28	mg/l	10
7	Biochemical Oxygen Demand (BOD) (3 days @ 27°C)	IS: 3025 (P-44): 1993, RA: 2019	7.50	mg/l	10
8	Chemical oxygen Demand (COD)	IS : 3025 (P-58) : 2006 RA: 2017	29.64	mg/l	50
9	Sulphide (as S)	IS: 3025 (P-29) :1986 Idometric, RA :2019	0.64	mg/l	2
10	Residual Free Chlorine	IS: 3025 (P-26):2021	0.71	mg/l	1.0

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Quantification

End of Report

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TEST REPORT

Sample Number : VTL/WW/02

M/S JK Cement Works
(Unit of JK Cement Ltd.) Vill. & PO. - Götan Dist -
Nagaur, Rajasthan

Name & Address of the Party :

Sample Description : Waste Water
Sampling Location : STP Outlet (STP Treated Water) 300 KLD STP
Sample Collected By : VTL Team, 73°43'22" N & 26°38'28"E
Preservation : Suitable Preservation
Method of sampling : IS :3025

Report No. : VTL/WW/2406150001/B
Format No : 7.8 F-01
Party Reference No : NIL
Report Date : 25/06/2024
Period of Analysis : 15/06/2024-25/06/2024
Receipt Date : 15/06/2024
Sampling Date : 14/06/2024
Sampling Type : Grab
Sample Quantity : 2 Ltr.
Coordinates : 73°43'41" & 26°38'31"

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA. 2019	724.77	mg/l	--
2	Fecal Coliform	IS 1622, 1981 RA 2019	23.0	MPN/100ml	100

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Quantification

End of Report



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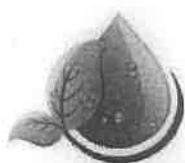
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TEST REPORT



VIBRANT

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Sample Number : VTL/S/01

Name & Address of the Party : M/S JK Cement Works
(Unit of JK Cement Ltd.) Vill. & PO. - Gotan Dist -
Nagaur, Rajasthan

Report No. : VTL/S/2406150001/A
Format No : 7.8 F-03
Party Reference No : NIL
Report Date : 25/06/2024
Period of Analysis : 15/06/2024-25/06/2024
Receipt Date : 15/06/2024

Sample Description : Stack Emission Monitoring

General Information:-

Sampling Location : DG Set 350 KVA
Sample Collected By : VTL Team
Date of Sampling : 13/06/2024
Sampling duration (Minutes) : 23 Min. (07:00 to 07:23 Hrs.)
Stack attached to : Acoustic Encloser
Make of stack : MS
Diameter of stack(m) : 0.15 M
Height of stack(m) : 30 M
Instrument calibration status : Calibrated
Meteorological Condition : Clear Sky
Ambient Temperature - Ta (°C) : 33
Temperature of Stack Gases - Ts (°C) : 110
Velocity of Stack Gases (m/sec.) : 13.37
Flow rate of PM (LPM) : 44
Flow rate of Gas (LPM) : 2.0
Sampling condition : OK
Protocol used : IS 11255 & USEPA
Coordinates : 73°43'41" & 26°38'31"

S.No.	Parameters	Test Method	Results	Units	Limits
1	Particulate Matter (PM)	IS: 11255 (P-1) : 1985, RA 2019	0.013	gm/kw-hr	0.02
2	Oxide of Nitrogen (NOX)	IS 11255 (P-7) 2005; RA 2017	0.24	gm/kw-hr	0.40
3	Total Hydrocarbon (HC)	USEPA 18: 1996	0.10	gm/kw-hr	0.19
4	Sulphur Dioxide (SO ₂)	IS: 11255(P-2): 1985, RA 2019	4.12	gm/kw-hr	Not Specified
5	Carbon Monoxide (CO)	USEPA 10: 1996	1.34	gm/kw-hr	3.5

*BLQ= Below Limit Of Quantification, **LOQ= Limit Of Quantification

End of Report



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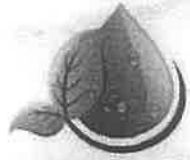


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VIBRANT

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Sample Number : VTU/S/02

Name & Address of the Party : M/S JK Cement Works
(Unit of JK Cement Ltd.) Vill. & PO. - Gotan Dist -
Nagaur, Rajasthan

TEST REPORT



Report No. : VTL/S/2406150002/A
Format No : 7.8 F-03
Party Reference No : NIL
Report Date : 25/06/2024
Period of Analysis : 16/06/2024-25/06/2024
Receipt Date : 15/06/2024

Sample Description : Stack Emission Monitoring

General Information:-

Sampling Location : Ready Mix Mortar
Sample Collected By : VTL Team
Date of Sampling : 13/06/2024
Sampling duration (Minutes) : 23 Min. (08:00 to 08:23 Hrs.)
Stack attached to : Bag House
Make of stack : MS
Diameter of stack(m) : 0.75 M
Height of stack(m) : 30 M
Instrument calibration status : Calibrated
Meteorological Condition : Clear Sky
Ambient Temperature - Ta (°C) : 34
Temperature of Stack Gases - Ts (°C) : 39
Velocity of Stack Gases (m/sec.) : 10.57
Flow rate of PM (LPM) : 43
Flow rate of Gas (LPM) : -
Sampling condition : OK
Protocol used : IS 11255 & USEPA
Coordinates : -

S.No.	Parameters	Test Method	Results	Units	Limits
1	Particulate Matter (PM)	IS: 11255 (P-1) : 1985, RA 2019	18.97	mg/Nm3	30

End of Report

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STACK MONITORING REPORT
MONTH: APR-2024

S. No	Stack mark	Stack attached to	Stack DIA (in mm)	Stack Height. From G.L. (mtrs.)	No. of Samples	Operating conditions	Temp. of Gases °c	Velocity (m/sec)	Volume of Gas in Stack (Nm ³ /Min)	PM (Mg/Nm ³)	Raw Mill/ Kiln SO _x (mg/ Nm ³)	Raw Mill/ Kiln NO _x (mg/ Nm ³)
1	A	Limestone Crusher	700	30	1	All readings were taken under normal operating conditions	41	10.1	253.44	14.4	Plant Under Shutdown	Plant Under Shutdown
2	B	Raw Mill/Kin	2600	80	1							
3	C	Grate Cooler	2200	30	1							
4	D	Cement Mill/ Packing	900	30	1							
5	E	Cement Mill/ (Belt)	900	30	1							
6	F	Petro Coke Mill	850	31	1							
7	G	Ready Mix Mortar Plant	750	30	1							
8	H	Flyash Handling	588	32	1							

STACK MONITORING REPORT
MONTH: MAY-2024

S. No	Stack mark	Stack attached to	Stack DIA (in mm)	Stack Height. From G.L. (mtrs.)	No. of Samples	Operating conditions	Temp. of Gases °c	Velocity (m/sec)	Volume of Gas in Stack (Nm ³ /Min)	PM (Mg/Nm ³)	Raw Mill/ Kiln SO _x (mg/ Nm ³)	Raw Mill/ Kiln NO _x (mg/ Nm ³)
1	A	Limestone Crusher	700	30	1	All readings were taken under normal operating conditions	42	9.7	244.35	13.8	Plant Under Shutdown	Plant Under Shutdown
2	B	Raw Mill/Kin	2600	80	1							
3	C	Grate Cooler	2200	30	1							
4	D	Cement Mill/ Packing	900	30	1							
5	E	Cement Mill/ (Belt)	900	30	1							
6	F	Petro Coke Mill	850	31	1							
7	G	Ready Mix Mortar Plant	750	30	1							
8	H	Flyash Handling	588	32	1							

STACK MONITORING REPORT
MONTH: JUN-2024

S. No	Stack mark	Stack attached to	Stack DIA (in mm)	Stack Height. From G.L. (mtrs.)	No. of Samples	Operating conditions	Temp. of Gases °c	Velocity (m/sec)	Volume of Gas in Stack (Nm ³ /Min)	PM (Mg/Nm ³)	Raw Mill/ Kiln SO _x (mg/ Nm ³)	Raw Mill/ Kiln NO _x (mg/ Nm ³)
1	A	Limestone Crusher	700	30	1	All readings were taken under normal operating conditions	44	9.9	247.08	14.9	Plant Under Shutdown	Plant Under Shutdown
2	B	Raw Mill/Kin	2600	80	1							
3	C	Grate Cooler	2200	30	1							
4	D	Cement Mill/ Packing	900	30	1							
5	E	Cement Mill/ (Belt)	900	30	1							
6	F	Petro Coke Mill	850	31	1							
7	G	Ready Mix Mortar Plant	750	30	1							
8	H	Flyash Handling	588	32	1							

STACK MONITORING REPORT

Annexure-1

MONTH: JUL-2024												
S.No	Stack mark	Stack attached to	Stack DIA (in mm)	Stack Height. From G.L. (mtrs.)	No. of Samples	Operating conditions	Temp. of Gases 0c	Velocity (m/sec)	Volume of Gas in Stack (Nm3/Min)	PM (Mg/ Nm3)	Raw Mill/ Kiln SOx (mg/ Nm3)	Raw Mill/ Kiln Nox (mg/ Nm3)
1	A	Limestone Crusher	700	30	1	All readings were taken under normal operating conditions	45	10.1	251.85	16.48	Plant Under Shutdown	Plant Under Shutdown
2	B	Raw Mill/Kiln	2600	80	1							
3	C	Grate Cooler	2200	30	1							
4	D	Cement Mill	900	30	1							
5	E	Cement Mill/ Packing	900	30	1							
6	F	Petro Coke Mill	850	31	1							
7	G	Ready Mix Mortar Plant	750	30	1							
8	H	Flyash Handling	588	32	1							

MONTH: AUG-2024												
S.No	Stack mark	Stack attached to	Stack DIA (in mm)	Stack Height. From G.L. (mtrs.)	No. of Samples	Operating conditions	Temp. of Gases 0c	Velocity (m/sec)	Volume of Gas in Stack (Nm3/Min)	PM (Mg/ Nm3)	Raw Mill/ Kiln SOx (mg/ Nm3)	Raw Mill/ Kiln Nox (mg/ Nm3)
1	A	Limestone Crusher	700	30	1	All readings were taken under normal operating conditions	45	10.28	222.34	17.28	30.8	466.35
2	B	Raw Mill/Kiln	2600	80	1							
3	C	Grate Cooler	2200	30	1							
4	D	Cement Mill	900	30	1							
5	E	Cement Mill/ Packing	900	30	1							
6	F	Petro Coke Mill	850	31	1							
7	G	Ready Mix Mortar Plant	750	30	1							
8	H	Flyash Handling	588	32	1							



AMBIENT AIR QUALITY MONITORING REPORT
PERIOD: APR-2024 TO JUN-2024 (QUARTER - 1) FY 2024-25
MONTH: APR-2024

Sr.	DATE	LOCATION	PM ₁₀	PM _{2.5}	SO ₂	NOx	CO
			µg/M ³	µg/M ³	µg/M ³	µg/M ³	µg/M ³
1	01.04.2024	Front of Weigh Bridge	52.20	40.66	12.0	20.0	1259
2	29.04.2024	Front of Weigh Bridge	57.54	32.43	10.0	18.0	1144
3	01.04.2024	Front of Crusher MCC Room	48.76	36.00	12.0	14.0	1144
4	29.04.2024	Front of Crusher MCC Room	51.19	33.15	10.0	16.0	915
5	01.04.2024	Bachelor Hostel	49.64	31.62	10.0	20.0	1030
6	29.04.2024	Bachelor Hostel	45.89	32.95	12.0	16.0	915
7	01.04.2024	Front of Pump House	48.14	37.11	12.0	18.0	1259
8	29.04.2024	Front of Pump House	52.27	33.00	10.0	16.0	1144

MONTH: MAY-2024

Sr.	DATE	LOCATION	PM ₁₀	PM _{2.5}	SO ₂	NOx	CO
			µg/M ³	µg/M ³	µg/M ³	µg/M ³	µg/M ³
1	06.05.2024	Front of Weigh Bridge	59.14	35.54	13.0	15.0	1144
2	27.05.2024	Front of Weigh Bridge	54.50	37.91	10.0	13.0	1373
3	06.05.2024	Front of Crusher MCC Room	50.66	39.94	12.0	16.0	1488
4	27.05.2024	Front of Crusher MCC Room	53.39	37.80	12.0	12.0	1030
5	06.05.2024	Bachelor Hostel	46.54	34.54	10.0	14.0	1373
6	27.05.2024	Bachelor Hostel	54.26	34.99	8.0	14.0	1259
7	06.05.2024	Front of Pump House	51.30	34.46	12.0	17.0	1144
8	27.05.2024	Front of Pump House	48.48	36.19	9.0	15.0	1373

MONTH: JUN-2024

Sr.	DATE	LOCATION	PM ₁₀	PM _{2.5}	SO ₂	NOx	CO
			µg/M ³	µg/M ³	µg/M ³	µg/M ³	µg/M ³
1	03.06.2024	Front of Weigh Bridge	62.22	34.39	13.0	16.0	1144
2	24.06.2024	Front of Weigh Bridge	56.96	36.56	12.0	14.0	1373
3	03.06.2024	Front of Crusher MCC Room	61.32	34.19	10.0	14.0	1488
4	24.06.2024	Front of Crusher MCC Room	60.79	36.51	8.0	12.0	1030
5	03.06.2024	Bachelor Hostel	47.64	33.70	10.0	14.0	1373
6	24.06.2024	Bachelor Hostel	51.14	31.85	12.0	10.0	1259
7	03.06.2024	Front of Pump House	51.85	37.44	10.0	18.0	1144
8	24.06.2024	Front of Pump House	55.43	40.70	11.0	14.0	1144





MONTH: SEP-2024

S. No	Stack mark	Stack attached to	Stack DIA (in mm)	Stack Height From G.L. (mtrs.)	No. of Samples	Operating conditions	Temp. of Gases 0c	Velocity (m/sec)	Volume of Gas in Stack (Nm3/Min)	PM (Mg/ Nm3)	Raw Mill/ Kiln SOx (mg/ Nm3)	Raw Mill/ Kiln Nox (mg/ Nm3)
1	A	Limestone Crusher	700	30	1	All readings were taken under normal operating conditions	44	10.1	219.75	15.32	37.40	508.23
2	B	Raw Mill/kiln	2600	80	1		134	12.2	2851.01	19.26		
3	C	Grate Cooler	2200	30	1		116	11.0	1920.74	20.01		
4	D	Cement Mill	900	30	1	Plant Under Shutdown						
5	E	Cement Mill/ Facking	900	30	1	Plant Under Shutdown						
6	F	Petro Coke Mill	850	31	1	67	10.6	317.04	14.23			
7	G	Ready Mix Mortar Plant	750	30	1	48	7.9	195.48	16.29			
8	H	Flyash Handling	588	32	1	Plant Under Shutdown						

AMBIENT AIR QUALITY MONITORING REPORT

MONTH: JUL-2024

Sr.	DATE	LOCATION	PM ₁₀ µg/M ³	PM _{2.5} µg/M ³	SO ₂ µg/M ³	NOx µg/M ³	CO µg/M ³
1	02.07.2024	Front of Weigh Bridge	59.37	37.68	12.0	17.0	1316
2	29.07.2024	Front of Weigh Bridge	49.04	34.44	14.0	15.0	1385
3	02.07.2024	Front of Crusher MCC Room	58.78	37.23	13.0	15.0	1316
4	29.07.2024	Front of Crusher MCC Room	52.40	31.37	12.0	13.0	1304
5	02.07.2024	Bachelor Hostel	43.84	32.97	11.0	14.0	1282
6	29.07.2024	Bachelor Hostel	54.02	38.92	10.0	12.0	1259
7	02.07.2024	Front of Pump House	48.21	36.94	13.0	17.0	1316
8	29.07.2024	Front of Pump House	50.95	32.99	12.0	16.0	1339



MONTH: AUG-2024

Sr.	DATE	LOCATION	PM ₁₀	PM _{2.5}	SO ₂	NOx	CO
			µg/M ³	µg/M ³	µg/M ³	µg/M ³	µg/M ³
1	03.08.2024	Front of Weigh Bridge	48.15	28.01	12.0	14.0	1293
2	29.08.2024	Front of Weigh Bridge	45.30	34.28	13.0	16.0	1304
3	03.08.2024	Front of Crusher MCC Room	50.61	35.86	11.0	14.0	1350
4	29.08.2024	Front of Crusher MCC Room	45.27	32.66	10.0	13.0	1362
5	03.08.2024	Bachelor Hostel	45.83	29.36	12.0	15.0	1385
6	29.08.2024	Bachelor Hostel	44.04	32.51	11.0	16.0	1316
7	03.08.2024	Front of Pump House	47.04	33.75	13.0	17.0	1327
8	29.08.2024	Front of Pump House	49.51	34.24	14.0	16.0	1350

MONTH: SEP-2024

Sr.	DATE	LOCATION	PM ₁₀	PM _{2.5}	SO ₂	NOx	CO
			µg/M ³	µg/M ³	µg/M ³	µg/M ³	µg/M ³
1	02.09.2024	Front of Weigh Bridge	54.19	32.68	11.0	16.0	1282
2	30.09.2024	Front of Weigh Bridge	36.96	34.28	13.0	15.0	1304
3	02.09.2024	Front of Crusher MCC Room	49.74	31.37	12.0	18.0	1316
4	30.09.2024	Front of Crusher MCC Room	47.52	32.66	14.0	15.0	1270
5	02.09.2024	Bachelor Hostel	48.73	29.36	13.0	14.0	1259
6	30.09.2024	Bachelor Hostel	39.34	32.51	14.0	16.0	1293
7	02.09.2024	Front of Pump House	47.91	33.75	15.0	15.0	1304
8	30.09.2024	Front of Pump House	50.25	29.35	12.0	17.0	1327

Ambient Noise Level Measurement Record (in dB (A))

Date: 24/9/2024

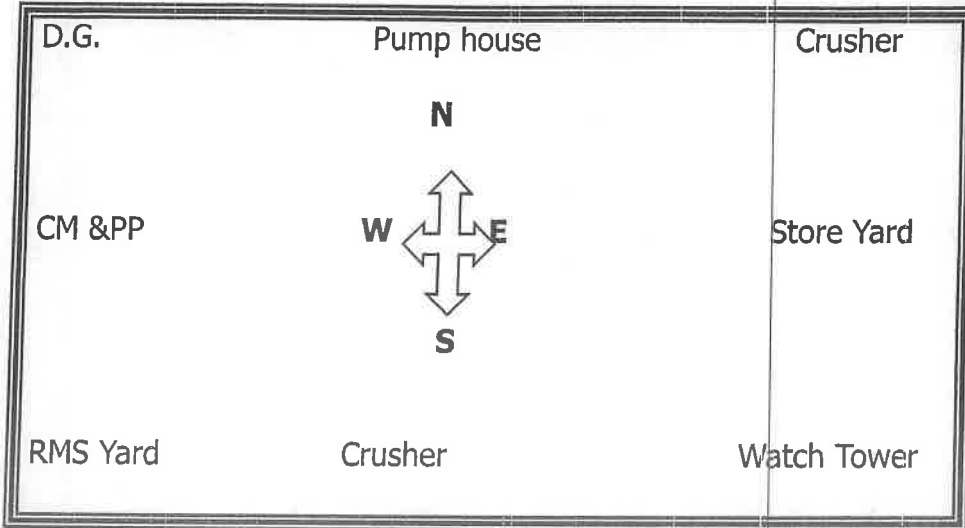
Time: 10.50 AM

Day/ Night:

N3 51/54

N2 60/62

N1 50/51



W1 49/51

E1 52/53

S3 59/60

S2 61/63

S1 57/58

- CRUSHER : OPERATING/ NOT OPERATING ✓
- RAW MILL : OPERATING/ NOT OPERATING ✓
- KILN : OPERATING/ NOT OPERATING ✓
- CEMENT MILL : OPERATING/ NOT OPERATING. ✓
- PACKING PLANT : OPERATING/ NOT OPERATING ✓
- D. G. : OPERATING/ NOT OPERATING ✓
- COMPRESSOR : OPERATING/ NOT OPERATING ✓
- PET- COKE MILL : OPERATING/ NOT OPERATING ✓
- Ready Mix Mortar : OPERATING/ NOT OPERATING ✓

REMARKS IF ANY:

MEASURED BY:

Leg 53.5



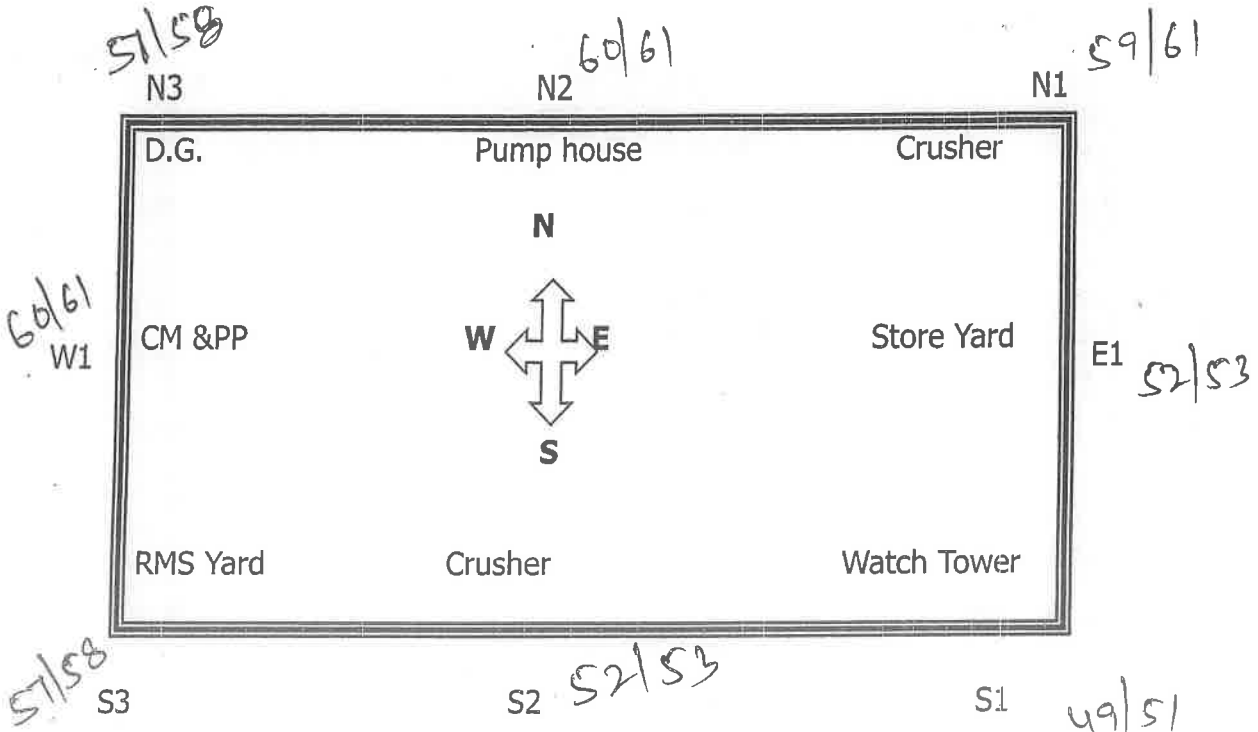
SIGNATURE:

Ambient Noise Level Measurement Record (in dB (A))

Date: 24/9/2024

Time: 10.00 PM

Day/ Night: Day Night



- CRUSHER : OPERATING/ NOT OPERATING
- RAW MILL : OPERATING/ NOT OPERATING
- KILN : OPERATING/ NOT OPERATING
- CEMENT MILL : OPERATING/ NOT OPERATING.
- PACKING PLANT : OPERATING/ NOT OPERATING
- D. G. : OPERATING/ NOT OPERATING
- COMPRESSOR : OPERATING/ NOT OPERATING
- PET- COKE MILL : OPERATING/ NOT OPERATING
- Ready Mix Mortar : OPERATING/ NOT OPERATING

REMARKS IF ANY:

MEASURED BY:

Lej 52.4

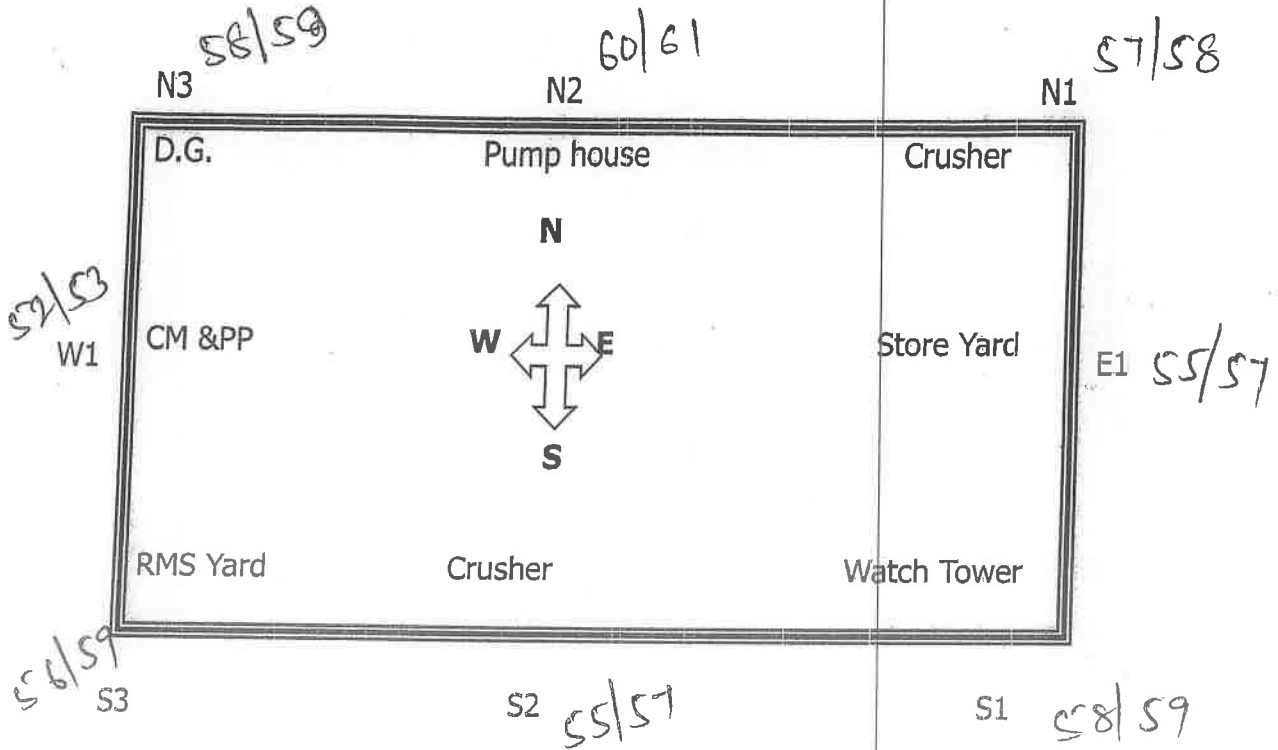

 SIGNATURE:

Ambient Noise Level Measurement Record (in dB (A))

Date: 27/8/2024

Time: 11.30 AM

Day/ Night: Day Night



- CRUSHER : OPERATING/ NOT OPERATING
- RAW MILL : OPERATING/ NOT OPERATING
- KILN : OPERATING/ NOT OPERATING
- CEMENT MILL : OPERATING/ NOT OPERATING.
- PACKING PLANT : OPERATING/ NOT OPERATING
- D. G. : OPERATING/ NOT OPERATING
- COMPRESSOR : OPERATING/ NOT OPERATING
- PET- COKE MILL : OPERATING/ NOT OPERATING
- Ready Mix Mortar : OPERATING/ NOT OPERATING

REMARKS IF ANY:

MEASURED BY:

Leg 53.5

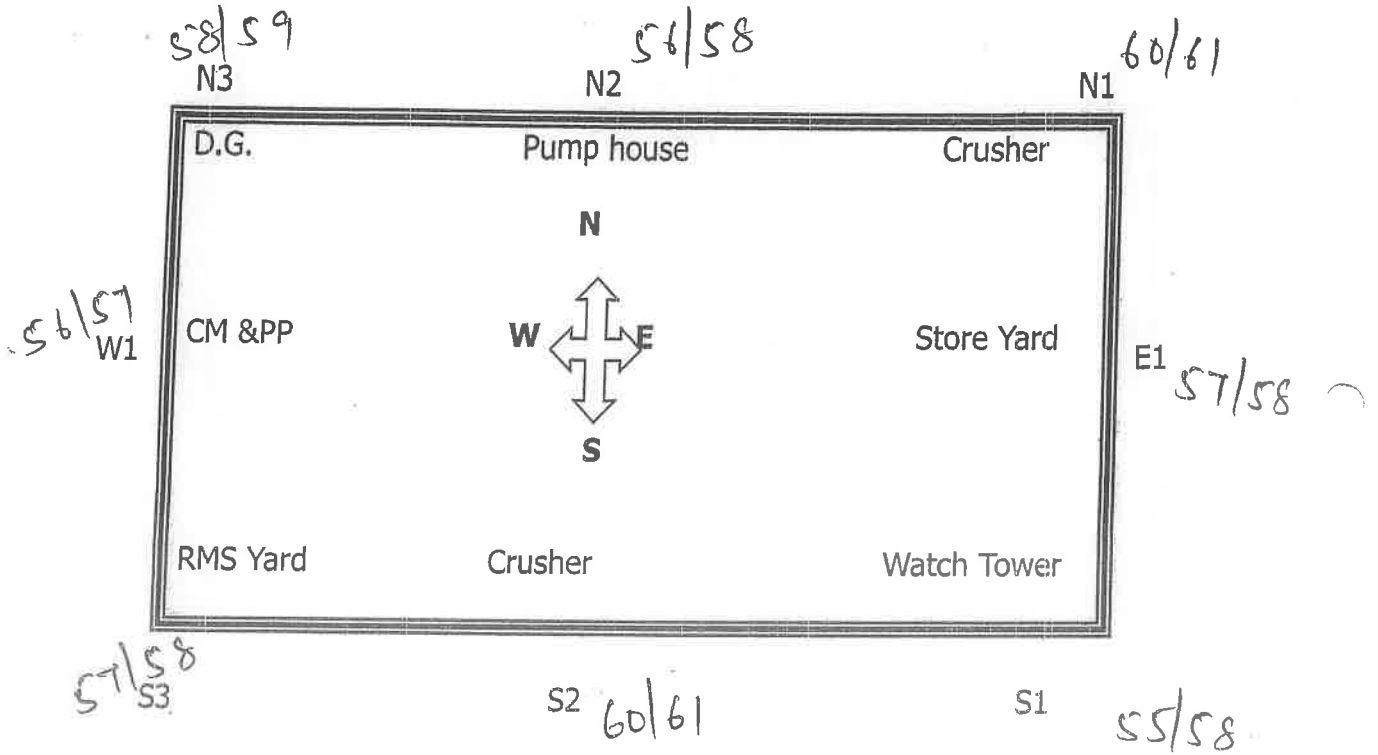
SIGNATURE:

Ambient Noise Level Measurement Record (in dB (A))

Date: 27/8/2024

Time: 9.45 PM

Day/ Night: Day Night



- CRUSHER : OPERATING/ NOT OPERATING
- RAW MILL : OPERATING/ NOT OPERATING
- KILN : OPERATING/ NOT OPERATING
- CEMENT MILL : OPERATING/ NOT OPERATING
- PACKING PLANT : OPERATING/ NOT OPERATING
- D. G. : OPERATING/ NOT OPERATING
- COMPRESSOR : OPERATING/ NOT OPERATING
- PET- COKE MILL : OPERATING/ NOT OPERATING
- Ready Mix Mortar : OPERATING/ NOT OPERATING

REMARKS IF ANY:

MEASURED BY:

Leg 51.6



Ambient Noise Level Measurement Record (in dB (A))

Date: 23/7/2024

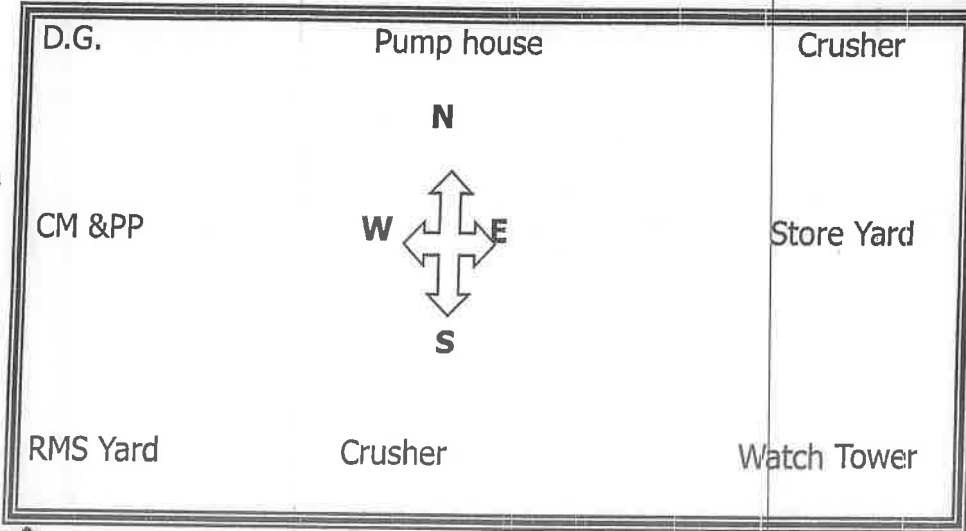
Time: 12:30 PM

Day/ Night:

58/60
N3

62/63
N2

N1 60/61



- CRUSHER : OPERATING/ NOT OPERATING ✓
- RAW MILL : OPERATING/ NOT OPERATING ✓
- KILN : OPERATING/ NOT OPERATING ✓
- CEMENT MILL : OPERATING/ NOT OPERATING ✓
- PACKING PLANT : OPERATING/ NOT OPERATING ✓
- D. G. : OPERATING/ NOT OPERATING ✓
- COMPRESSOR : OPERATING/ NOT OPERATING ✓
- PET- COKE MILL : OPERATING/ NOT OPERATING ✓
- Ready Mix Mortar : OPERATING/ NOT OPERATING ✓

REMARKS IF ANY:

MEASURED BY:

Les S1.3

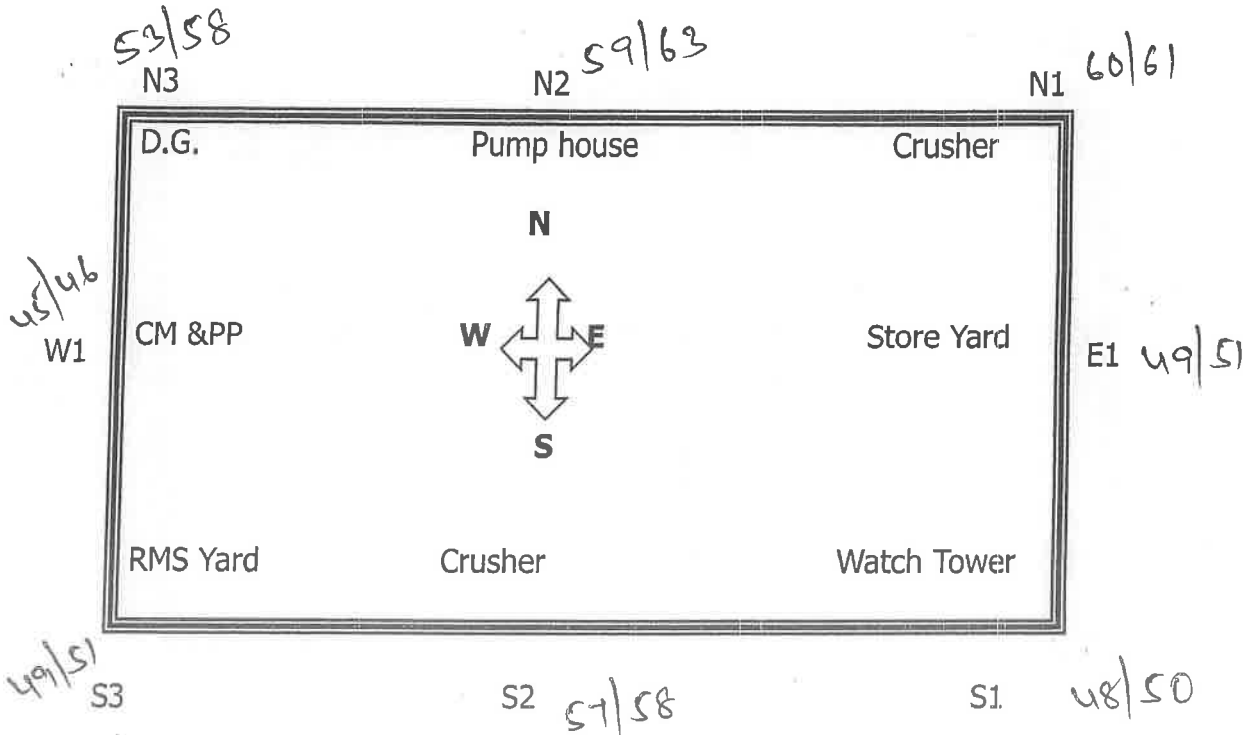

 SIGNATURE:

Ambient Noise Level Measurement Record (in dB (A))

Date: 23/7/2024

Time: 9.30 PM

Day/ Night: Day Night



- CRUSHER : OPERATING/ NOT OPERATING
- RAW MILL : OPERATING/ NOT OPERATING
- KILN : OPERATING/ NOT OPERATING
- CEMENT MILL : OPERATING/ NOT OPERATING.
- PACKING PLANT : OPERATING/ NOT OPERATING
- D. G. : OPERATING/ NOT OPERATING
- COMPRESSOR : OPERATING/ NOT OPERATING
- PET- COKE MILL : OPERATING/ NOT OPERATING
- Ready Mix Mortar : OPERATING/ NOT OPERATING

REMARKS IF ANY:

MEASURED BY:

Leg 48.5

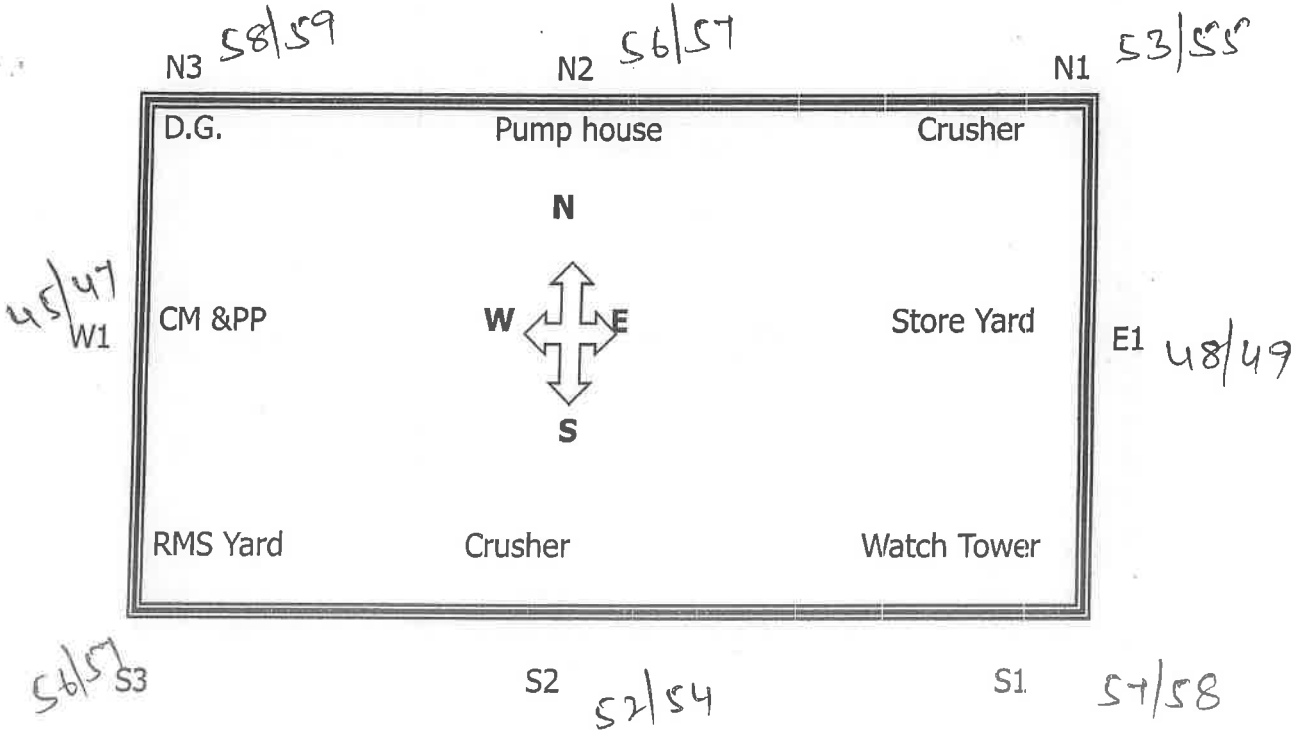


Ambient Noise Level Measurement Record (in dB (A))

Date: 25/06/2024

Time: 11.30 Am

Day/ Night:



- CRUSHER : OPERATING/ NOT OPERATING ✓
- RAW MILL : OPERATING/ NOT OPERATING ✓
- KILN : OPERATING/ NOT OPERATING ✓
- CEMENT MILL : OPERATING/ NOT OPERATING ✓
- PACKING PLANT : OPERATING/ NOT OPERATING ✓
- D. G. : OPERATING/ NOT OPERATING ✓
- COMPRESSOR : OPERATING/ NOT OPERATING ✓
- PET- COKE MILL : OPERATING/ NOT OPERATING ✓
- Ready Mix Mortar : OPERATING/ NOT OPERATING ✓

REMARKS IF ANY:

MEASURED BY:

Leg 49.6

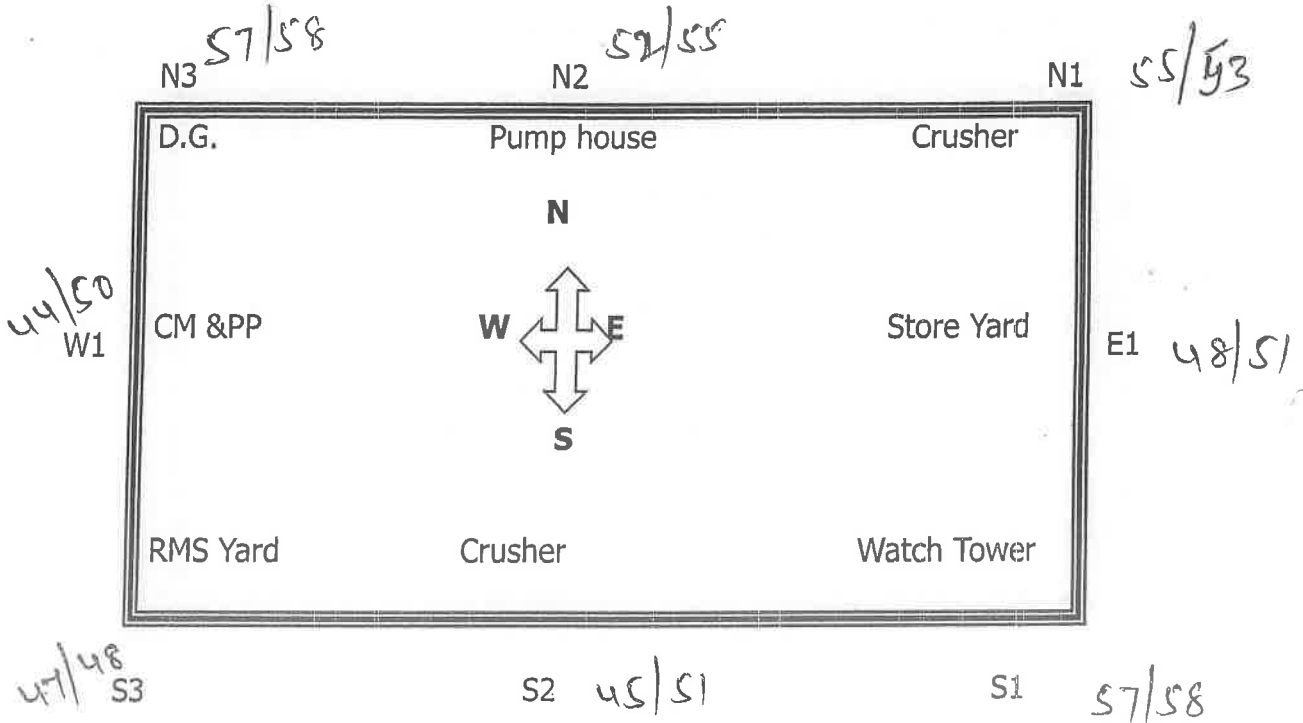
SIGNATURE:

Ambient Noise Level Measurement Record (in dB (A))

Date: 25/06/2024

Time: 10:00 PM

Day/ Night: Day Night



- CRUSHER : OPERATING/ NOT OPERATING
- RAW MILL : OPERATING/ NOT OPERATING
- KILN : OPERATING/ NOT OPERATING
- CEMENT MILL : OPERATING/ NOT OPERATING.
- PACKING PLANT : OPERATING/ NOT OPERATING
- D. G. : OPERATING/ NOT OPERATING
- COMPRESSOR : OPERATING/ NOT OPERATING
- PET- COKE MILL : OPERATING/ NOT OPERATING
- Ready Mix Mortar : OPERATING/ NOT OPERATING

REMARKS IF ANY:

MEASURED BY:

Leg 48.5


 SIGNATURE:

Ambient Noise Level Measurement Record (in dB (A))

Date: 21/5/2024

Time: 12:10 PM

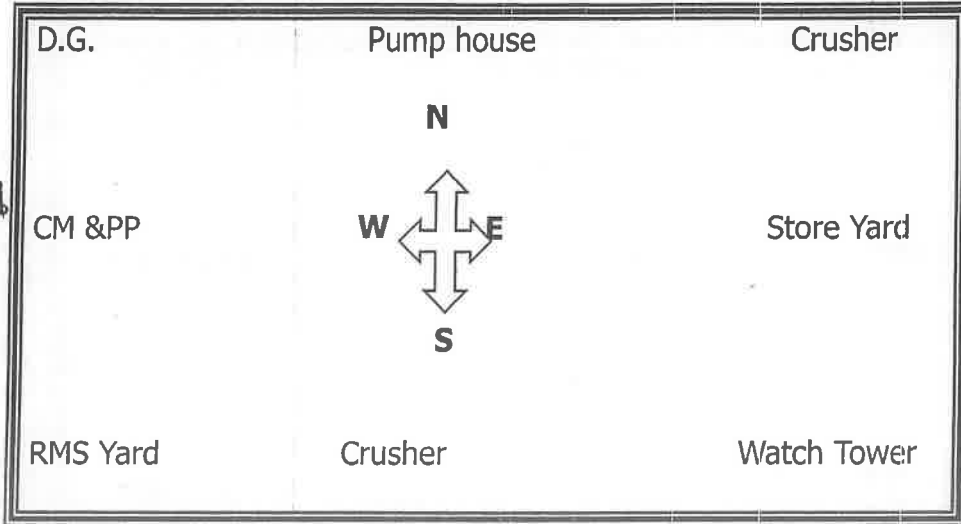
Day/ Night:

N3 51/53

N2 55/58

N1 60/61

W1 50/56



E1 48/52

S3 57/63

S2 58/61

S1 52/53

- CRUSHER : OPERATING/ NOT OPERATING ✓
- RAW MILL : OPERATING/ NOT OPERATING ✓
- KILN : OPERATING/ NOT OPERATING ✓
- CEMENT MILL : OPERATING/ NOT OPERATING ✓
- PACKING PLANT : OPERATING/ NOT OPERATING ✓
- D. G. : OPERATING/ NOT OPERATING ✓
- COMPRESSOR : OPERATING/ NOT OPERATING ✓
- PET- COKE MILL : OPERATING/ NOT OPERATING ✓
- Ready Mix Mortar : OPERATING/ NOT OPERATING ✓

REMARKS IF ANY:

MEASURED BY:

Leg SO.S

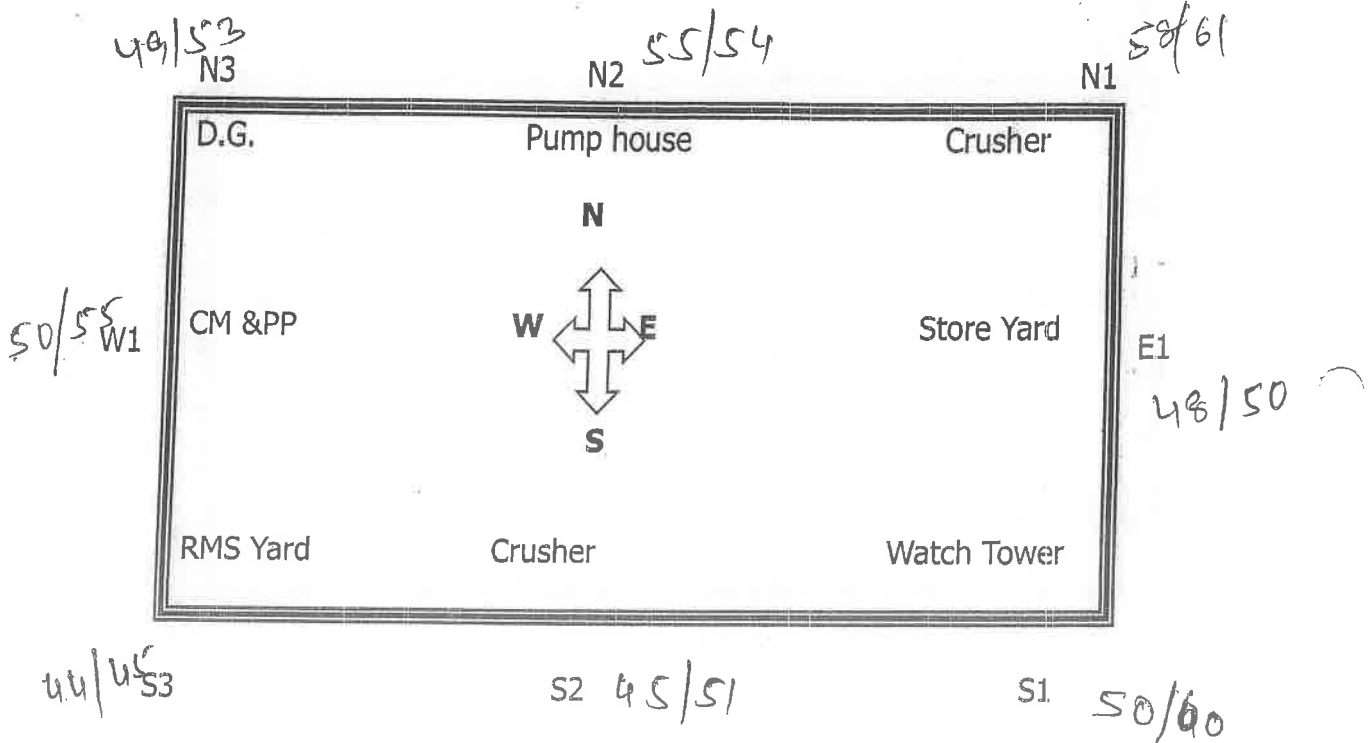


Ambient Noise Level Measurement Record (in dB (A))

Date: 21.05.2024

Time: 9.50 PM

Day/ Night: Day Night



- CRUSHER : OPERATING/ NOT OPERATING
- RAW MILL : OPERATING/ NOT OPERATING
- KILN : OPERATING/ NOT OPERATING
- CEMENT MILL : OPERATING/ NOT OPERATING
- PACKING PLANT : OPERATING/ NOT OPERATING
- D. G. : OPERATING/ NOT OPERATING
- COMPRESSOR : OPERATING/ NOT OPERATING
- PET- COKE MILL : OPERATING/ NOT OPERATING
- Ready Mix Mortar : OPERATING/ NOT OPERATING

REMARKS IF ANY:

MEASURED BY:

Leg 48.6


 SIGNATURE:

Ambient Noise Level Measurement Record (in dB (A))

Date: 23/04/2024

Time: 9.40

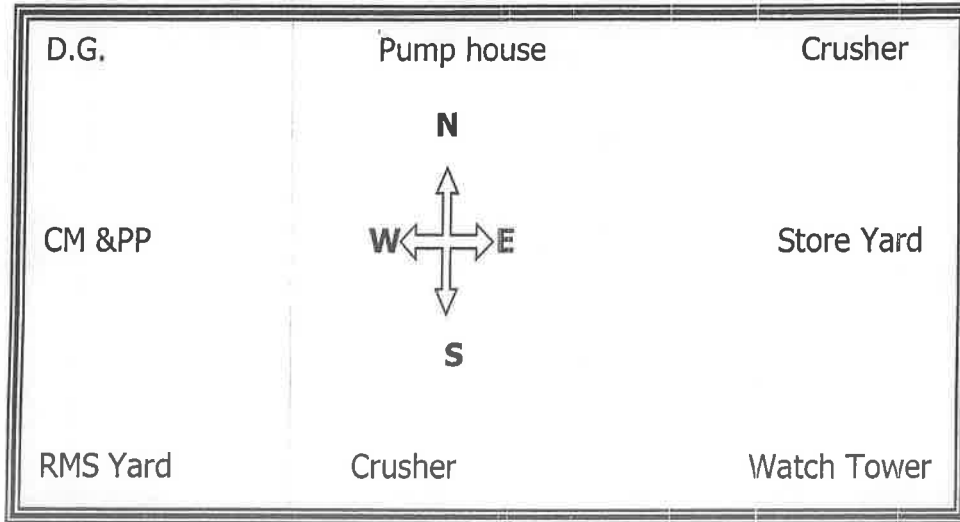
Day/ Night:

48/50
N3

48/52
N2

N1 60/61

S2/55W1



E1
51/54

S3 56/58

S2 48/52

S1 55/57

- CRUSHER : OPERATING/ NOT OPERATING
- RAW MILL : OPERATING/ NOT OPERATING
- KILN : OPERATING/ NOT OPERATING
- CEMENT MILL : OPERATING/ NOT OPERATING.
- PACKING PLANT : OPERATING/ NOT OPERATING
- D. G. : OPERATING/ NOT OPERATING
- COMPRESSOR : OPERATING/ NOT OPERATING
- PET- COKE MILL : OPERATING/ NOT OPERATING
- Ready Mix Mortar : OPERATING/ NOT OPERATING

Le9 - 51.1

REMARKS IF ANY:



MEASURED BY:

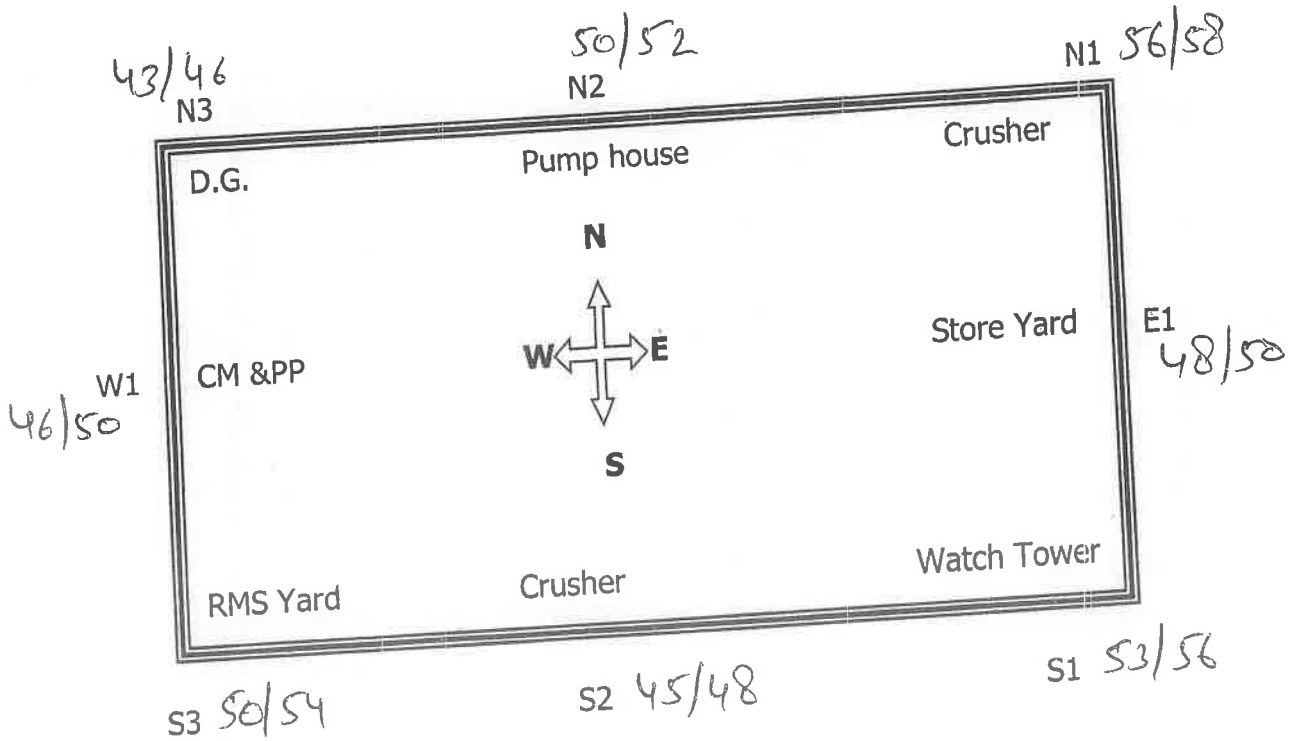

 SIGNATURE:

Ambient Noise Level Measurement Record (in dB (A))

Date: 23/08/2024

Time: 11:22

Day/ Night:



- CRUSHER : OPERATING/ NOT OPERATING
- RAW MILL : OPERATING/ NOT OPERATING
- KILN : OPERATING/ NOT OPERATING
- CEMENT MILL : OPERATING/ NOT OPERATING.
- PACKING PLANT : OPERATING/ NOT OPERATING
- D. G. : OPERATING/ NOT OPERATING
- COMPRESSOR : OPERATING/ NOT OPERATING
- PET- COKE MILL : OPERATING/ NOT OPERATING
- Ready Mix Mortar : OPERATING/ NOT OPERATING

208-48.2

REMARKS IF ANY:

MEASURED BY: [Signature]



SIGNATURE:

PLANTATION AT PLANT PREMISES



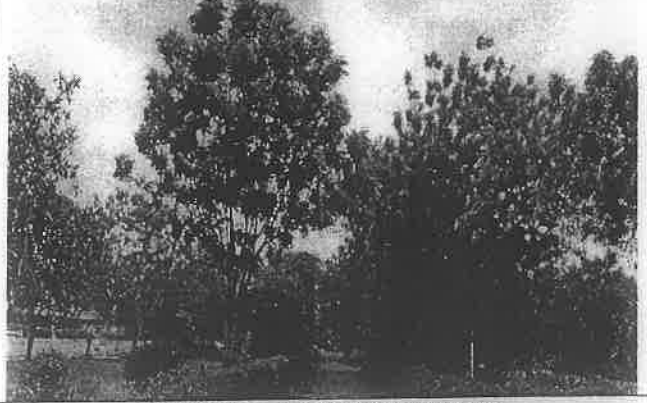
PLANTATION AT PLANT PREMISES



PLANTATION AT PLANT PREMISES



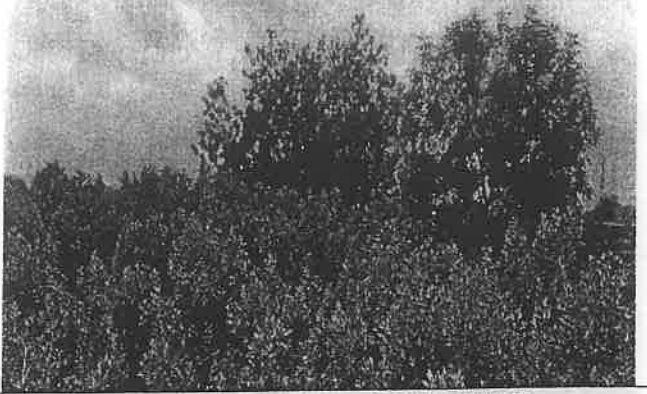
PLANTATION AT PLANT PREMISES



PLANTATION AT PLANT PREMISES



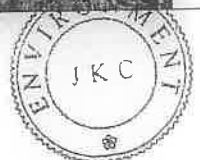
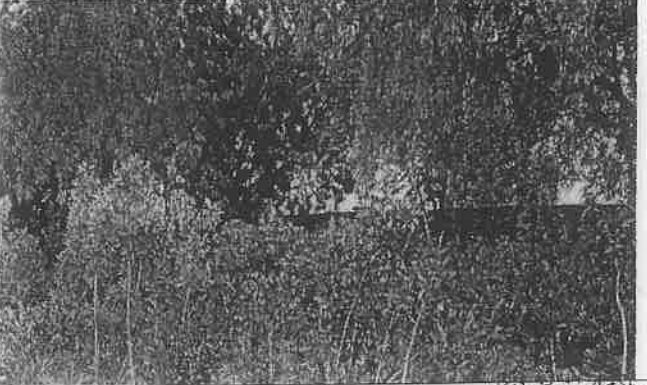
PLANTATION AT PLANT PREMISES



MIYAWAKI GREEN BELT DEVELOPMENT



MIYAWAKI GREEN BELT DEVELOPMENT



M/s JK CEMENT WORKS, GOTAN

Water Withdrawal Data of FY 2024-25

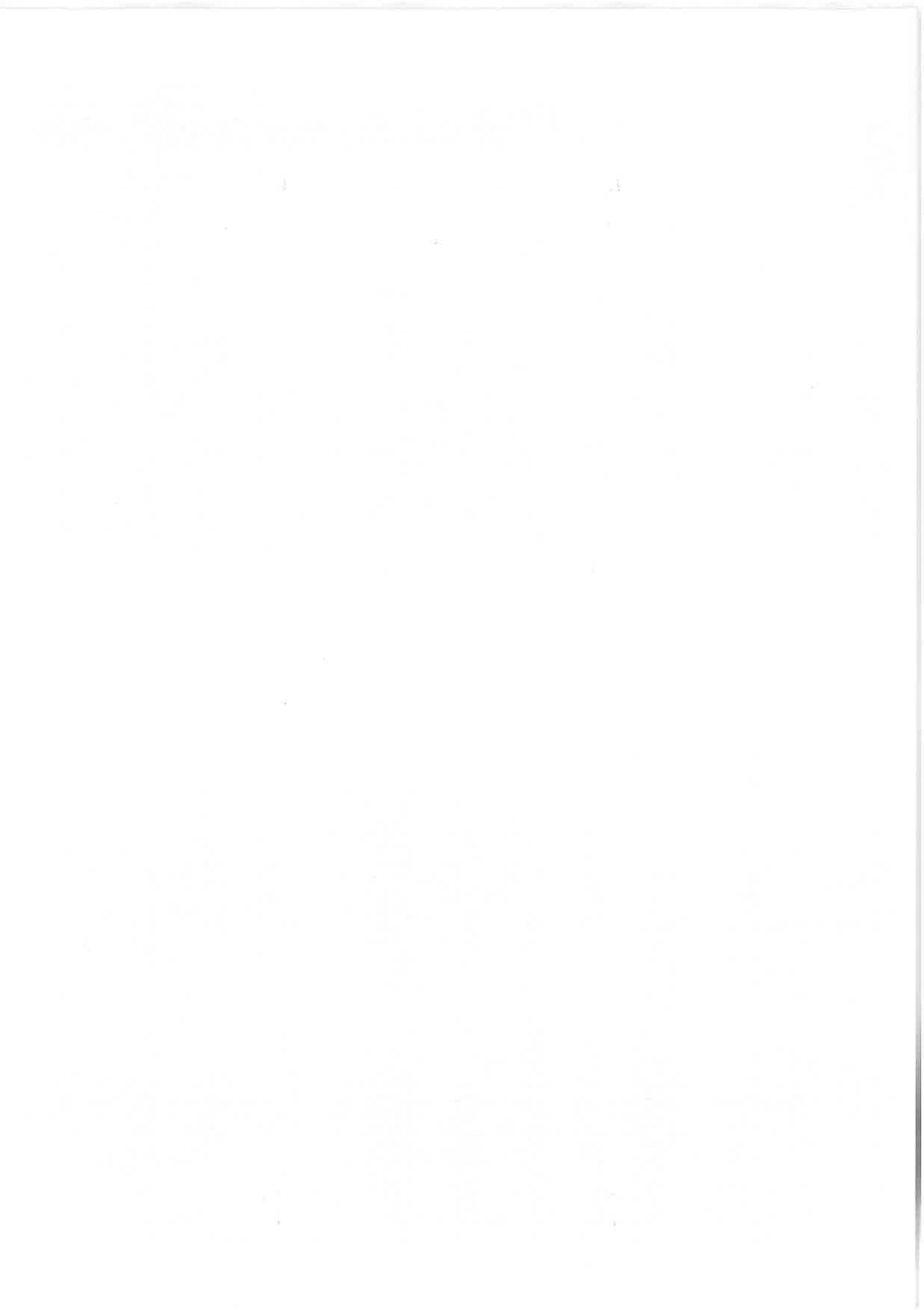
Month	Bore Well No. 1 (KL)	Bore Well No. 2 (KL)	Bore Well No. 3 (KL)	Bore Well No. 4 (KL)	Total Water Withdrawal (KL)	Daily (KL)
Apr-24	4241	5077	195	0	9513	317.10
May-24	1559	9775	388	0	11722	378.13
Jun-24	1980	6770	939	0	9689	322.97
Jul-24	6430	315	1895	0	8640	278.71
Aug-24	7234	5020	4742	0	16996	548.26
Sep-24	7368	1596	6208	0	15172	505.73
TOTAL	28812	28553	14367	0	71732	0.00



JK CEMENT WORKS, GOTAN FY 2024-25



Plant/Site	Employee Name	AUDIOMETRY	Blood Group	DISTANT VISION LEFT	DISTANT VISION	ECG REPORT	HEIGHT	NEAR VISION LEFT	NEAR VISION	SPIROMETRY	WEIGHT
Gotan-Grey	Aditya Kumar	NORMAL	AB-VE	6/6	6/6	NORMAL	174	N-6	N-6	MILD REST	79.8
Gotan-Grey	Anand Kumar Soni	NORMAL	O+VE	6/6 C GLS	6/6 C GLS	NORMAL	175	N-6 C GLS	N-6 C GLS	NORMAL	79
Gotan-Grey	Andhan Kumar	NORMAL	O+VE	6/6	6/6	NORMAL	176	N-6	N-6	NORMAL	85
Gotan-Grey	Anil Kumar	NORMAL	B+VE	6/6GLS	6/6 GLS	NORMAL	167	N-6 GLS	N-6 GLS	NORMAL	81
Gotan-Grey	Anirudh Bhan Ojha	NORMAL	O -VE	6/6	6/6	NORMAL	178	N-6	N-6	NORMAL	95.5
Gotan-Grey	ANKIT AGARWAL	NORMAL	B+VE	6/6	6/6	NORMAL	171	N-6	N-6	NORMAL	63.6
Gotan-Grey	Ashok Kumar Chhapparwal	NORMAL	O+VE	6/6	6/6	NORMAL	170	N-6	N-6	NORMAL	93.20
Gotan-Grey	Bal Mukund Sen	NORMAL	O +VE	6/6	6/6	NORMAL	167	N-6	N-6	NORMAL	89.6
Gotan-Grey	Bhanwar Puri	NORMAL	B+VE	6/6	6/6	NORMAL	172	N-6 GLS	N-6 GLS	MILD REST	61.6
Gotan-Grey	Bhawani Lal Dhakar	NORMAL	AB+VE	6/6	6/6	NORMAL	172	N-6	N-6	MILD REST	68.5
Gotan-Grey	Dashrath Singh	NORMAL	B+VE	6/6 C GLASS	6/6 C GLASS	NORMAL	160	N-6 C GLASS	N-6 C GLASS	NORMAL	71
Gotan-Grey	Deepak Deora	NORMAL	A+VE	6/6	6/6	NORMAL	175	N-6	N-6	NORMAL	80
Gotan-Grey	Dharamraj Chouhan	NORMAL	O-VE	6/6 GLS	6/6 GLS	NORMAL	167	N-8 GLS	N-8 GLS	NORMAL	90.6
Gotan-Grey	Dharmesh Sharma	NORMAL	B+VE	6/6	6/6	NORMAL	164	N-6	N-6	NORMAL	63
Gotan-Grey	Dileep Singh	NORMAL	AB+VE	6/6	6/6	NORMAL	167	N-8 GLS	N-8 GLS	NORMAL	79
Gotan-Grey	Dilip Bharamiya	NORMAL	B+VE	6/6	6/6	NORMAL	173	N-6	N-6	NORMAL	94
Gotan-Grey	Fef Singh Rathore	NORMAL	A+VE	6/6 C GLASS	6/6 C GLASS	NORMAL	181	N-8 C GLASS	N-8 C GLASS	MILD REST	69
Gotan-Grey	Ganpat Singh	NORMAL	A+VE	6/9 CGLASS	6/9 CGLASS	NORMAL	167	N-6 CGLASS	N-6 CGLASS	NORMAL	70
Gotan-Grey	Gopal Jangid	ML BE	B+VE	6/6 CGLASS	6/6 CGLASS	NORMAL	165	N-6 CGLASS	N-6 CGLASS	NORMAL	73
Gotan-Grey	Gopal Lal Sharma	NORMAL	O+VE	6/6 GLS	6/6 GLS	NORMAL	171	N-6 GLS	N-6 GLS	NORMAL	66
Gotan-Grey	Govind Sharma	BL LE	O+VE	6/9 CGLASS	6/9 C GLASS	NORMAL	173	N-6 CGLASS	N-6 CGLASS	NORMAL	84
Gotan-Grey	Hari Singh	BL BE	O+VE	6/6	6/6	NORMAL	172	N-6	N-6	MILD REST	71
Gotan-Grey	Indar Singh Rao	NORMAL	O+VE	6/9 CGLASS	6/9 CGLASS	NORMAL	176	N-6 CGLASS	N-6 CGLASS	NORMAL	69.5
Gotan-Grey	Jagdish Sharma	NORMAL	B+VE	6/9 CGLASS	6/9 CGLASS	NORMAL	169	N-6 GLS	N-6 GLS	MILD REST	62
Gotan-Grey	Kailash Chandra Sikhwal	ML BE	B+VE	6/6	6/6	NORMAL	174	N-6	N-6	NORMAL	90
Gotan-Grey	Kalu Ram Sharma	ML BE	O+VE	6/9 CGLASS	6/6	NORMAL	177	N-8 GLS	N-8 GLS	NORMAL	70
Gotan-Grey	KAMLESH CHOUDHARY	NORMAL	A-VE	6/6	6/6	NORMAL	171	N-6	N-6	NORMAL	85.6
Gotan-Grey	Kedar Mal Kurmi	NORMAL	O+VE	6/6	6/6	NORMAL	181	N-6	N-6	NORMAL	100
Gotan-Grey	Kishore Singh	NORMAL	O+VE	6/6	6/6	NORMAL	170	N-6	N-6	NORMAL	64
Gotan-Grey	Kistur Bhukar	NORMAL	O+VE	6/6	6/6	NORMAL	168	N-6	N-6	NORMAL	68
Gotan-Grey	Mahavir Gusai	NORMAL	O+VE	6/6 C GLS	6/9 C GLS	NORMAL	159	N-6 C GLS	N-6 C GLS	NORMAL	54
Gotan-Grey	Manish Jain	ML BE	B+VE	6/6	6/6	NORMAL	169	N-6	N-6	NORMAL	72
Gotan-Grey	Mohit Tiwari	NORMAL	B-VE	6/6 C GLS	6/6 C GLS	NORMAL	179	N-6	N-6	NORMAL	80
Gotan-Grey	Naresh Kumar Rathi	NORMAL	O-VE	6/6	6/6	NORMAL	181	N-6	N-6	MILD REST	86
Gotan-Grey	Navin Kumar	NORMAL	O+VE	6/6 CGLASS	6/6 CGLASS	NORMAL	165	N-6 CGLASS	N-6 CGLASS	MILD REST	58
Gotan-Grey	Niranjan Jain	NORMAL	AB+VE	6/6 GLS	6/6 GLS	NORMAL	161	N-6	N-6	NORMAL	56
Gotan-Grey	Pankaj Goutam	NORMAL	B+VE	6/6 GLS	6/6 GLS	NORMAL	179	N-6	N-6	NORMAL	87.3
Gotan-Grey	PARMESHVAR LAL	NORMAL	O +VE	6/6	6/6	NORMAL	176	N-6	N-6	NORMAL	75
Gotan-Grey	Pradeep Mundel	NORMAL	O+VE	6/6	6/6	NORMAL	183	N-6	N-6	NORMAL	74.9
Gotan-Grey	Pradhan Singh Chouhan	ML BE	O+VE	6/6 CGLASS	6/6 CGLASS	NORMAL	170	N-6 CGLASS	N-6 CGLASS	NORMAL	91
Gotan-Grey	Prahlad Ram Godara	NORMAL	O+VE	6/9	6/9	NORMAL	172	N-6	N-6	NORMAL	63
Gotan-Grey	Prakash Kumar Saini	NORMAL	AB+VE	6/6 C GLS	6/6 C GLS	NORMAL	171	N-6 C GLS	N-6 C GLS	NORMAL	72
Gotan-Grey	Rajeev Rai	NORMAL	B+VE	6/6	6/6	NORMAL	157	N-6	N-6	NORMAL	57
Gotan-Grey	Rajesh Kumar Rathore	NORMAL	O+VE	6/6GLS	6/6 GLS	NORMAL	163	N-6 GLS	N-6 GLS	NORMAL	79
Gotan-Grey	RAKESH KUMAR ARYA	NORMAL	B+VE	6/6 GLS	6/6 GLS	NORMAL	165	N-6	N-6	NORMAL	71
Gotan-Grey	Ram Avtar	ML BE	O +VE	6/6	6/6	NORMAL	172	N-6	N-6	NORMAL	85
Gotan-Grey	Ram Jeevan Choudhary	NORMAL	A+VE	6/6 GLS	6/6 GLS	NORMAL	172	N-6 GLS	N-6 GLS	MILD REST	73.8
Gotan-Grey	Ram Lal Prajapat	NORMAL	O+VE	6/6 C GLASS	6/6 C GLASS	NORMAL	162	N-6 C GLASS	N-6 C GLASS	MILD REST	89
Gotan-Grey	Ram Lal Prajapat	ML LE	B+VE	6/9 CGLASS	6/9 CGLASS	NORMAL	170	N-8 GLS	N-8 GLS	NORMAL	82
Gotan-Grey	Ram Lal Prajapat	ML BE	B+VE	6/6	6/6	NORMAL	177	N-6 CGLASS	N-6 CGLASS	MILD REST	102
Gotan-Grey	Ram Raj Beda	NORMAL	B+VE	6/6	6/6	NORMAL	170	N-6	N-6	NORMAL	71
Gotan-Grey	Ramesh Chand Sharma	NORMAL	O+VE	6/6 GLS	6/6 GLS	NORMAL	152	N-6 GLS	N-6 GLS	MILD REST	45.5
Gotan-Grey	Rameshwar Lal Sain	NORMAL	O-VE	6/9	6/9	NORMAL	159	N-6 C GLASS	N-6 C GLASS	NORMAL	61
Gotan-Grey	Ravi Khandelwal	NORMAL	O+VE	6/6	6/6	NORMAL	163	N-6	N-6	MILD REST	68
Gotan-Grey	Rekha Ram Prajapat	NORMAL	O+VE	6/6 C GLASS	6/6 C GLASS	NORMAL	168	N-6 C GLASS	N-6 C GLASS	NORMAL	102
Gotan-Grey	ROHIT SINGH RATHORE	NORMAL	A+VE	6/6 CGLASS	6/6 CGLASS	NORMAL	171	N-6 CGLASS	N-6 CGLASS	NORMAL	64
Gotan-Grey	Sahdev Singh Rathore	NORMAL	O+VE	6/6 C GLS	6/6 C GLS	NORMAL	176	N-6 C GLS	N-6 C GLS	NORMAL	89
Gotan-Grey	SANJAY KUMAR DUBE	NORMAL	A+VE	6/6	6/6	NORMAL	176	N-6	N-6	NORMAL	90
Gotan-Grey	Sanjay Kumar Sharma	NORMAL	A+VE	6/6	6/6	NORMAL	176	N-6	N-6	NORMAL	74
Gotan-Grey	Sanjay Muwal	NORMAL	AB+VE	6/6 C GLASS	6/6 C GLASS	NORMAL	180	N-6	N-6	NORMAL	78
Gotan-Grey	Sanjeev Mundel	NORMAL	A+VE	6/6	6/6	NORMAL	175	N-6	N-6	NORMAL	74.8
Gotan-Grey	SHAITAN SINGH RAJPUT	NORMAL	A +VE	6/6	6/6	NORMAL	172	N-6	N-6	NORMAL	84
Gotan-Grey	SHUBHAM ARORA	NORMAL	O+VE	6/6	6/6	NORMAL	171	N-6	N-6	NORMAL	90
Gotan-Grey	Shubham Srivastava	NORMAL	B+VE	6/6 C GLS	6/6 C GLS	NORMAL	176	N-6 C GLS	N-6 C GLS	NORMAL	99.7
Gotan-Grey	SRAWAN KUMAR	NORMAL	O+VE	6/6	6/6	NORMAL	168	N-6	N-6	NORMAL	61
Gotan-Grey	SUDHIR KUMAR LIMBA	NORMAL	B+VE	6/6 CGLASS	6/6 CGLASS	NORMAL	164	N-6 CGLASS	N-6 CGLASS	NORMAL	63.7
Gotan-Grey	SURENDER SINGH	NORMAL	A -VE	6/6	6/6	NORMAL	181	N-6	N-6	NORMAL	76
Gotan-Grey	Tarun Kumar Chippa	NORMAL	A+VE	6/6	6/6	NORMAL	177	N-6	N-6	MILD REST	77
Gotan-Grey	Teja Ram Devasi	NORMAL	A-VE	6/6	6/6	NORMAL	166	N-6 GLS	N-6 GLS	NORMAL	75
Gotan-Grey	UMA SHANKAR MEHTA	NORMAL	B+VE	6/9 C GLASS	6/9 C GLASS	NORMAL	164	N-6 C GLASS	N-6 C GLASS	NORMAL	69
Gotan-Grey	Vikas Paliwal	NORMAL	B+VE	6/6	6/6	NORMAL	1176	N-6	N-6	NORMAL	84.5



WATER PROBABILITY STUDY REPORT

Water Probability studies from Surface water sources like mine pit water, rainwater harvested water and use of treated sewage water in the surrounding area of the plant site boundary at



**JK Cement Works
(Unit of JK Cement Ltd.)
Villages: Gotan, Tehsil: Merta
District: Nagaur
(Rajasthan)**

PROJECT PROPONENT

**M/S. J.K. CEMENT WORKS, GOTAN
(UNIT OF JK CEMENT LTD.),
VPO GOTAN TEHSIL MERTA CITY, MERTACITY,
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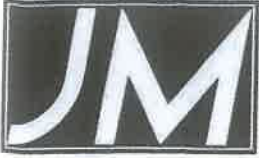
**J.M. ENVIRONET PVT. LTD.
(NABET CERTIFICATE NO. NABET/GWCO/IA/GW018)
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(HARYANA)
Email: jmenviron@hotmail.com**

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the experimental procedures and the statistical analysis performed.

3. The third part of the document presents the results of the study, including a comparison of the different methods and a discussion of the implications of the findings.

4. The fourth part of the document provides a conclusion and a summary of the key findings. It also includes a list of references and a bibliography of the sources used in the study.



30 years of success

JM ENVIRONET PVT. LTD

CIN No.:- U45201RJ1993PTC007449

Undertaking

We, J.M EnviroNet Pvt. Ltd., JMEPL, Emaar Digital Greens, Tower - B, Unit No. 1517, Golf Course Ext. Road, Sector-61, Gurugram (Haryana) - 122 011, Environmental Consultants of M/s. J.K. CEMENT WORKS, GOTAN (UNIT OF JK CEMENT LTD.), for Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary at Village- Gotan, Tehsil, Merta District, Nagaur (Rajasthan), give this undertaking to the effect that this Draft/final Water Probability Study Report has been prepared as per the issue of Environmental Clearance letter requirement EC Identification No. EC22A009RJ183791 and File No. IA-J-11011/63/2008-IA-II(I) under Specific Condition-A, Sl. No. xi of J K Cement Works, Surface water sources like mine pit water, rain water harvested water and use of treated sewage water from nearby municipal corporations shall be explored and action plan in this regard shall be submitted to the Regional Office of the MoEF&CC for gradual phase out of ground water in a time frame of two years from the date of issue. The report has been submitted as per data/details provided by Project Proponent and the data submitted are factually correct.

Date: 16.09.2024

Place: Gurugram

For & behalf of J.M EnviroNet Pvt. Ltd.

Dr. Chandra Shekhar Dubey

Project Coordinator



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Introduction

M/s. J.K. Cement Works, Gotan is operating a Grey Cement Plant - Clinker (2,62,500 TPA) and Cement (4,71,900 TPA) at Village: Gotan, Tehsil: Merta; District: Nagaur (Rajasthan). Environmental Clearance for the same has been obtained from MoEF&CC, New Delhi vide their letter no. J-11011/63/2008-IA (II) dated 18th Aug., 2008.

Thereafter, company had proposed expansion in Grey Cement Plant- Clinker 2,62,500 TPA to 8,77,950 TPA & Cement 4,71,900 TPA to 13,33,530 TPA along with production of White Cement (Clinker 4,95,000 TPA & Cement 5,54,400 TPA) by installation of New Line - II for which environmental clearance has been obtained from MoEF&CC, New Delhi vide letter no. J-11011/63/2008-IA. II (I) dated 06th Dec., 2021.

Also, JK Cement Works had proposed expansion in Grey cement production of line 1 & 2 from 13,33,530 TPA to 13,69,830 TPA by debottlenecking / internal modification of line-1 and also product mix change of line-1 (i.e. production of both grey and white clinker & cement from existing grey facility) by implementing white and grey convertible facility without change in existing grey clinker capacity of 2,62,500 tonnes per annum or production of 2,16,660 tonnes per annum white clinker and expansion of existing grey cement from 4,71,900 to 5,08,200 tonnes per annum or production of 2,42,659 tonnes Per Annum white cement by debottlenecking/internal modification/raw mix change without change in production capacity of already proposed Line-2, Grey & white clinker (Grey-6,15,450 tonnes per annum; White-4,95,000 tonnes per annum) & grey & white cement (grey-8,61,630 tonnes per annum /white 5,54,400 tonnes per annum) at Village: Gotan, Tehsil: Merta, District: Nagaur (Rajasthan) under Section 7 (ii) of EIA Notification 2006 and amended thereof. The environmental clearance for the same has been obtained from MoEF&CC, New Delhi vide letter no. J-11011/63/2008-IA-II(I) dated 27th May., 2022. The copy of the same is enclosed as Annexure B.

1166 KLD water after expansion shall be met from ground water sources as approved by the competent Authority. Surface water sources like mine pit water, rain water harvested water and use of treated sewage water from nearby municipal corporations shall be explored and action plan in this regard shall be submitted to the Regional Office of the MoEF&CC for gradual phase out of ground water in a time frame of two years from the date of issue of EC. These points are mentioned in the Environmental Clearance (Annexure B) of J K Cement Works, Gotan, Line -2 proposed as well as convertible facility of Existing line EC specific condition. In this regard there is a requirement of the study/explore of water probability like mines pit water, rain water harvested water and use of treated sewage water from nearby municipal corporations surrounding area at JK Cement Works, Gotan. For this JK Cement Works consulted M/s. JM EnviroNet Pvt. Ltd. to conduct water probability study. Therefore, the study report was prepared accordingly to submit compliance at Regional Office of the MoEF&CC. Salient Features of the project is given in table No. 1.

The existing water requirement for the plant is 1166 KLD; which will remain the same after proposed expansion is done. Water is being / will sourced from Ground Water. Of the total 1166 KLD, 900 is for Industrial, 124 & 20 for Domestic Use (Residential Colony & Plant), and 122 for Greenbelt/Plantation.

Table 1: Salient Features of the Project.

S. NO.	PARTICULARS	DETAILS
1.	Nature of the Project	Water study
2.	Size of the Project	EXPANSION OF GREY CEMENT PRODUCTION CAPACITY FROM 13,33,530 TPA TO 13,69,830 TPA BY DEBOTTLENECKING / INTERNAL MODIFICATION AND PRODUCT MIX CHANGE OF LINE-1 (I.E. PRODUCTION OF BOTH GREY AND WHITE CLINKER & CEMENT FROM EXISTING GREY FACILITY) BY IMPLEMENTATION OF WHITE & GREY CONVERTIBLE FACILITY IN BOTH LINE - I & LINE- II WITHOUT ANY CHANGE IN TOTAL GRANTED CAPACITY OF GREY CLINKER (8,77,950 TPA), WHITE CLINKER (4,95,000 TPA) & WHITE CEMENT (5,54,400 TPA)
3.	Category of the Project	As per provisions of the Environment Impact Assessment (EIA) Notification, 2006; this project falls under Category "A"; of item '3 (b)' Cement Plants.
4.	Location Details	
	Khasra No.	1792,1793,1799,1854,1856,1919 etc.
	Village	Gotan
	Tehsil	Merta
	District	Nagaur
	State	Rajasthan
	Latitude	26° 38' 14.04" N to 26° 38' 54.16" N
	Longitude	73° 43' 06.67" E to 73° 44' 05.70" E
	Toposheet No.	45 F/10 (G43 H10) & 45 F/14 (G43 H14)
5.	Area Details	
	Total Plant Area	68.99 ha; proposed expansion will be done by debottlenecking / internal modification in the existing machinery. No additional land will be required.
	Greenbelt / Plantation Area (ha)	Approx. 22.76 ha i.e. (33% of the total plant area) has been proposed to be develop under greenbelt / plantation, out of which 19 ha area has already been developed under greenbelt/plantation. & 3.76 ha area under the progress, it will be complete up to December, 2022.
	Environmental Setting Details (with approximate aerial distance & direction from the nearest boundary of plant site)	
	Nearest Village	Gotan (1.0 km in NE direction)
	Nearest City & Town	Merta City (30 km in East direction)
	Nearest National Highway / State Highway	NH - 158 (30 km in East direction) SH - 21 (18 km in SE direction)
	Nearest Railway Station	Gotan Railway Station (1.0 km in NE direction)
	Nearest Airport	Jodhpur Airport (85 km in SW direction)
	Inter District Boundary	Nagaur & Jodhpur (4.0 km in West direction)
	National Parks, Wildlife Sanctuaries, Biosphere Reserves, Protected Forest (PF) etc. within 10 km radius	No National Park, Wildlife Sanctuary, Biosphere Reserve, Reserve & Protected Forest falls within the 10 km radius area.
	Water Bodies (within 10 Km radius)	Banka Bala Nadi (8.0 km in SE direction) Ratri Nadi (9.0 km in NW direction) Both the rivers are seasonal.
	Seismic Zone	Zone - II [as per IS: 1893 (Part-I): 2002]
6.	Cost Details	
	Cost for the Proposed Expansion Project	Rs. 0.70 Crore
	Cost for Environment Protection Measures after proposed Expansion	Capital Cost: Nil Recurring Cost/annum: For Proposed Expansion - Nil
	Basic Requirements for the project	Existing After proposed expansion
	Water Requirement (KLD)	1166 1166
	Source: Groundwater	

[Source: Pre-feasibility Report]

The location map of the study area including the project site is given below in Figure 1.

mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

Water Probability studies from Surface water sources like

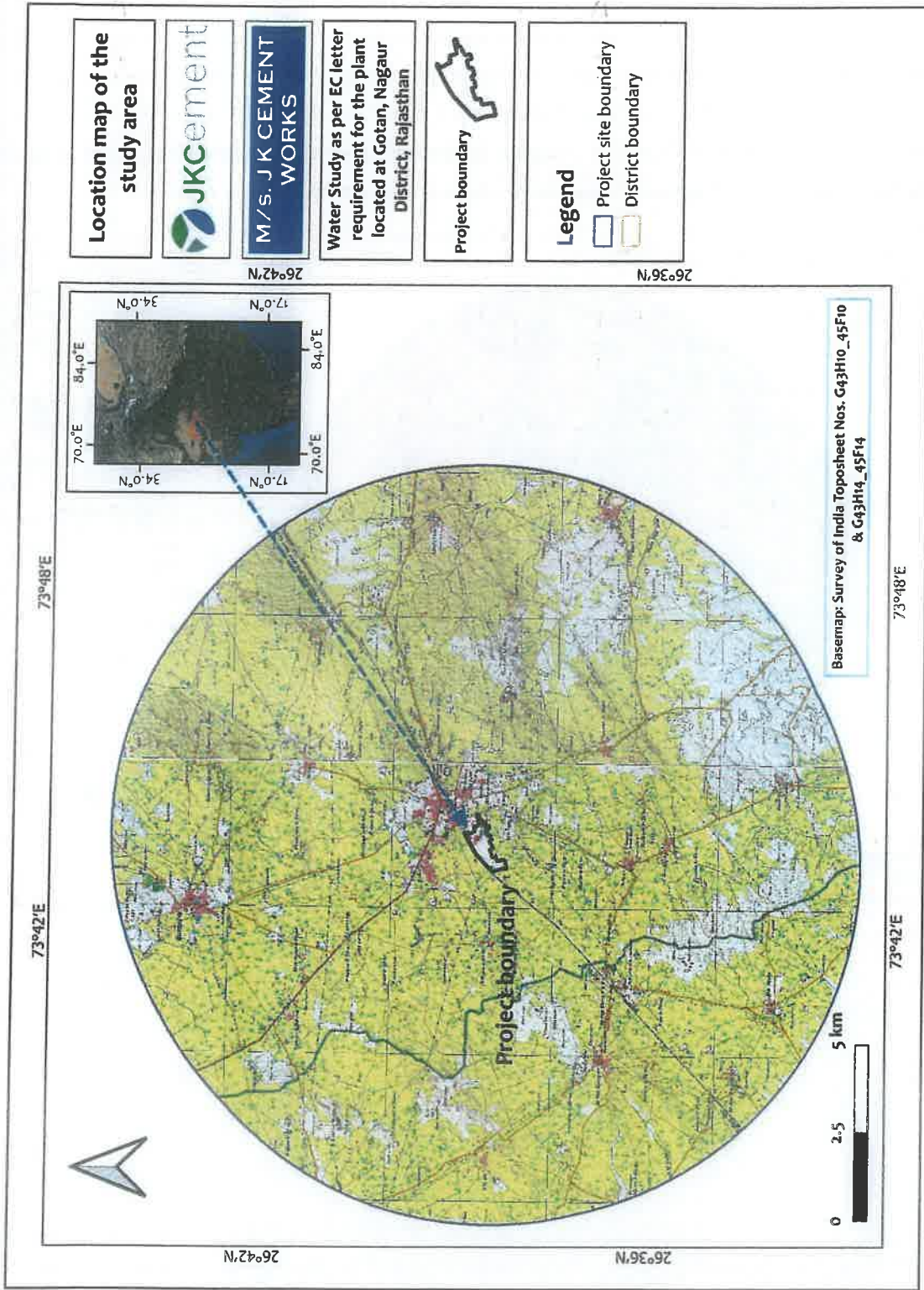


Figure 1: Location map of the study area.

Topography

The general topography of the area is fairly even. Surface Elevation [dataset: ALOS PALSAR L-Band of 12.5m Resolution; date September 23, 2007] in the study area ranges between 235 and 342 m amsl. General slope of the land surface is towards north and east with pockets of high elevation or hillocks measuring 342-340 m amsl at places. The highest elevation observed is 342 m amsl near Tunkliyan village. While the lowest elevation is 240 to 235 m amsl which is occupied by nalas or lower order streams (Fig. 2). While the topography of the nearby village area ranges between 330 and 335 m amsl (Fig. 3).

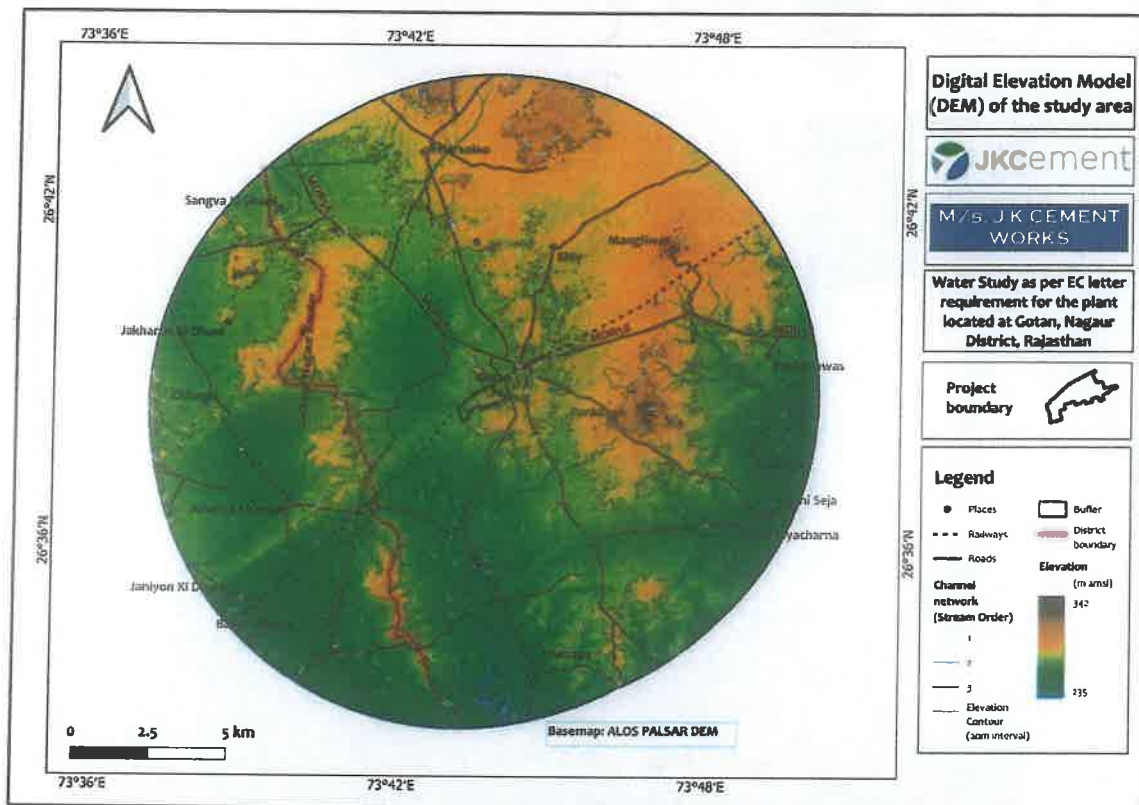


Figure 2: Digital Elevation Model of the study area.

mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

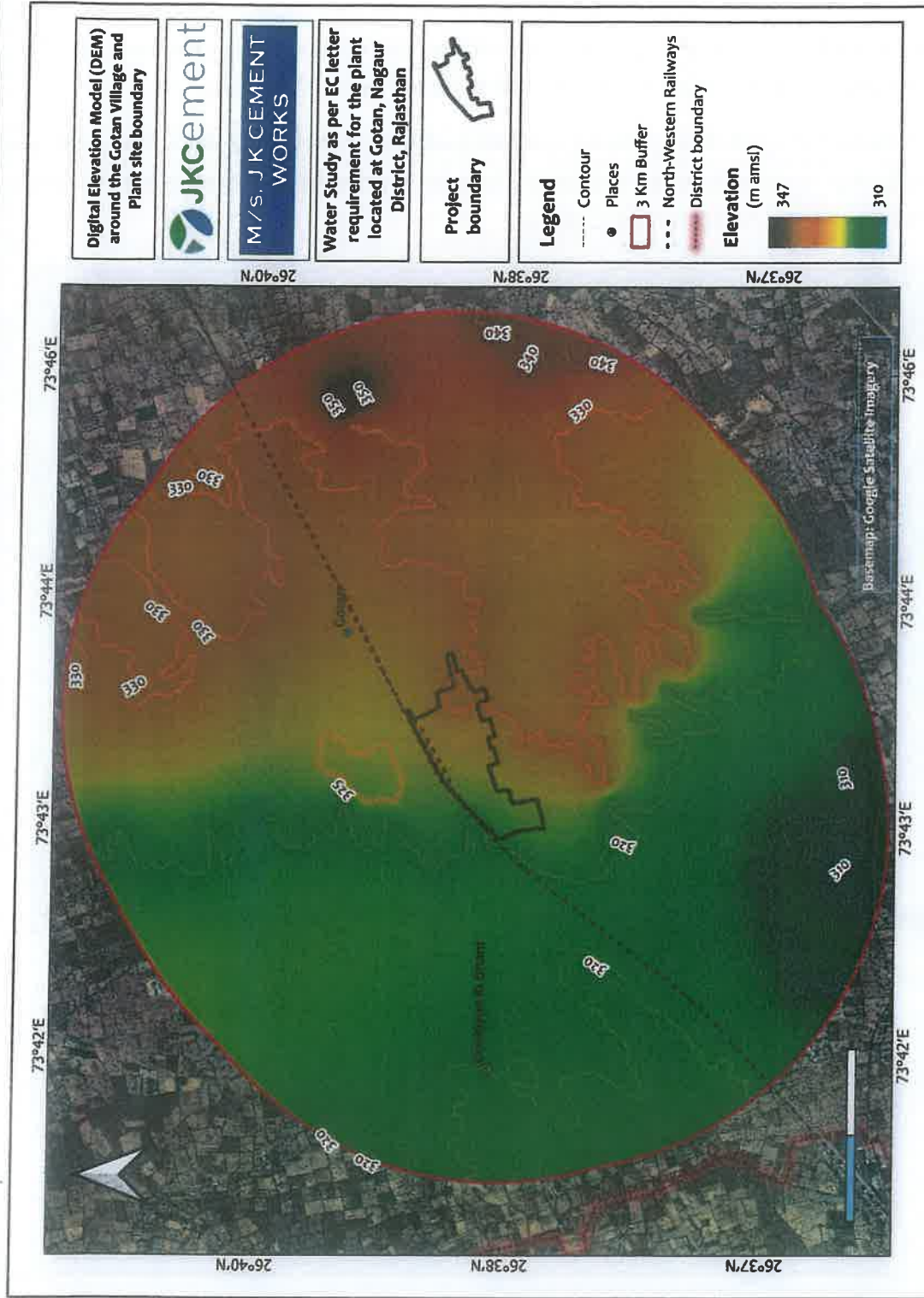


Figure 3: DEM of the nearby village area. [contour digitized from Survey of India toposheet]

Geomorphology and drainage

The study area lies falls under the River Basin-West Flowing Rivers of Kutch and Saurashtra including Luni and sub-Basin Luni Upper (Fig. 4). There is no prominent river in the area except nalas exist that of 1st /3rd Order streams which are ephemeral in nature and die out by itself into the ground.

Majority of the study area is occupied by Aeolian Sand sheet, Pediment Pediplain complex, and few operating mines near Dhanapa village. While the rest is occupied by Dissected denudational Hills and Valleys, anthropogenic terrains, Aeolian Dunes, etc. (Fig. 5).

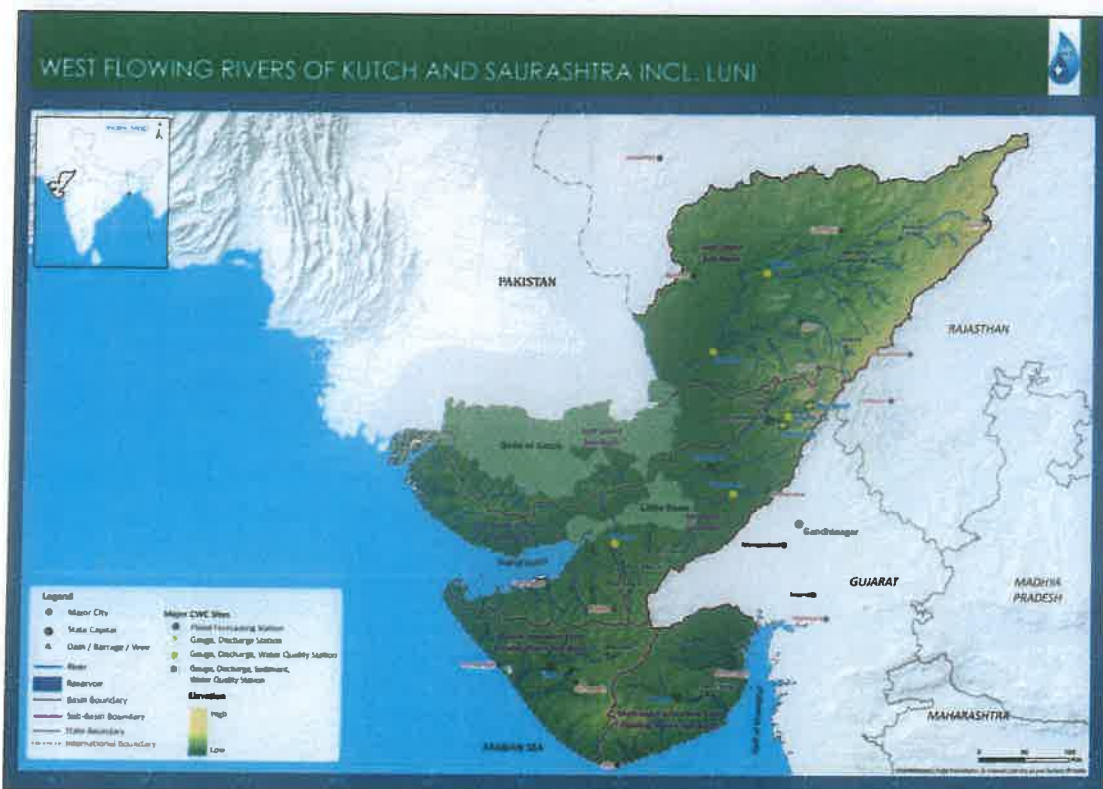


Figure 4: The study area lies within the river basin: West Flowing Rivers of Kutch and Saurashtra including Luni Basin and Sub-Basin: Luni Upper Sub-Basin. [Source: River Basin report, 2014; www.india-wris.nrsc.gov.in]

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

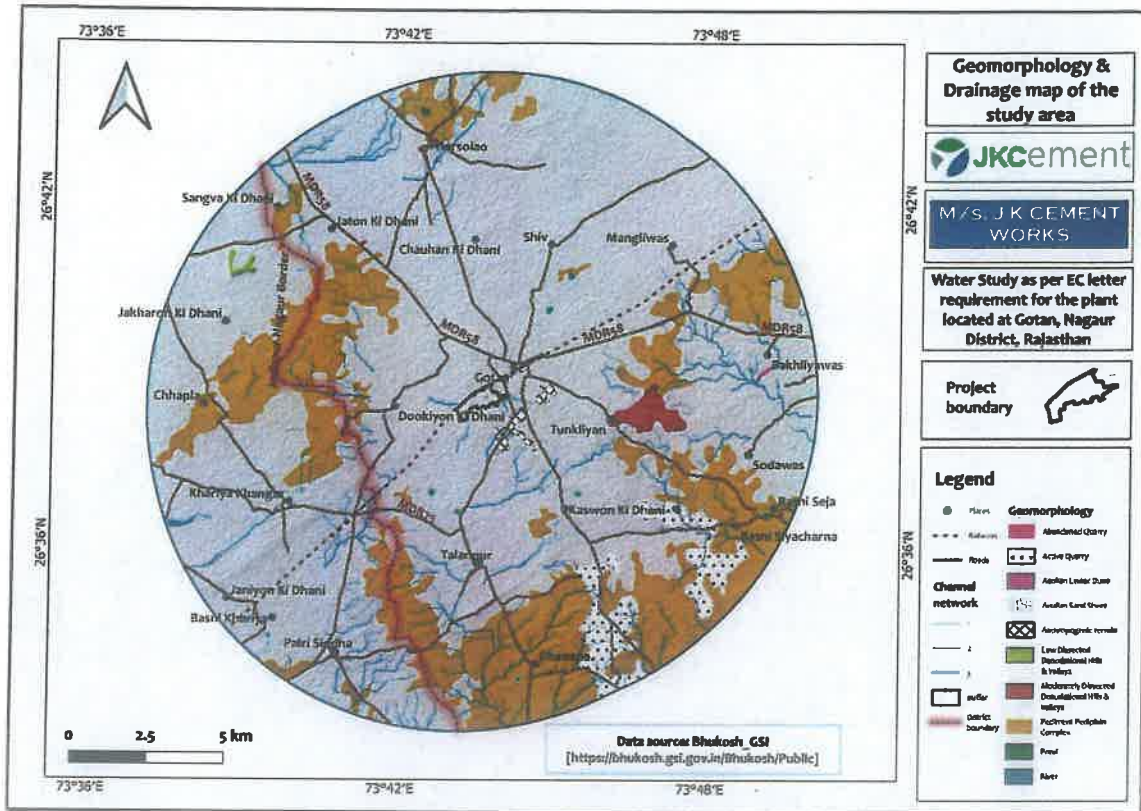


Figure 5: Geomorphology and drainage map of the study area.

Rainfall and Climate

The climate in the district is arid to semi-arid (NAQUIM report, 2017). While the rainfall information of the district has been obtained from the India-WRIS database [<https://indiawris.gov.in/wris/#/rainfall>]. The Yearly Average Rainfall of the Nagaur district (Table 2) from 01-Jan-2014 to 31-Dec-2023 using IMD GRID data is measured to be 497 mm of Actual Rainfall and 406 mm of Normal Rainfall. Thus showing 22.47 % deviation of actual rainfall from Normal values.

Table 2: Yearly Average Rainfall information of Nagaur district from 01-Jan-2014 to 31-Dec-2023 using IMD GRID data.

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
ACTUAL (mm)	459.96	539.3	486.43	409.72	323.14	612.3	405.43	560.76	517.66	658.79
Yearly Average Rainfall = 497 mm										

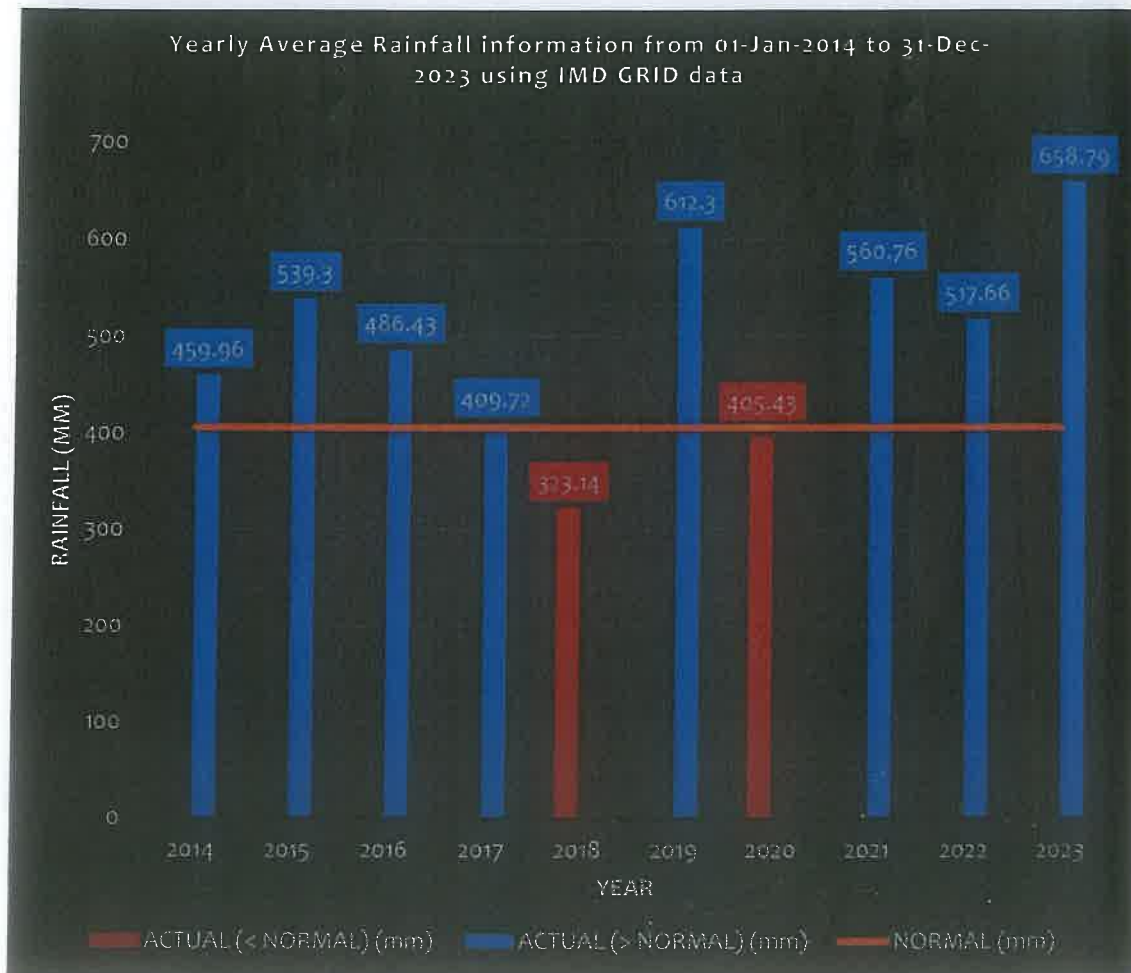


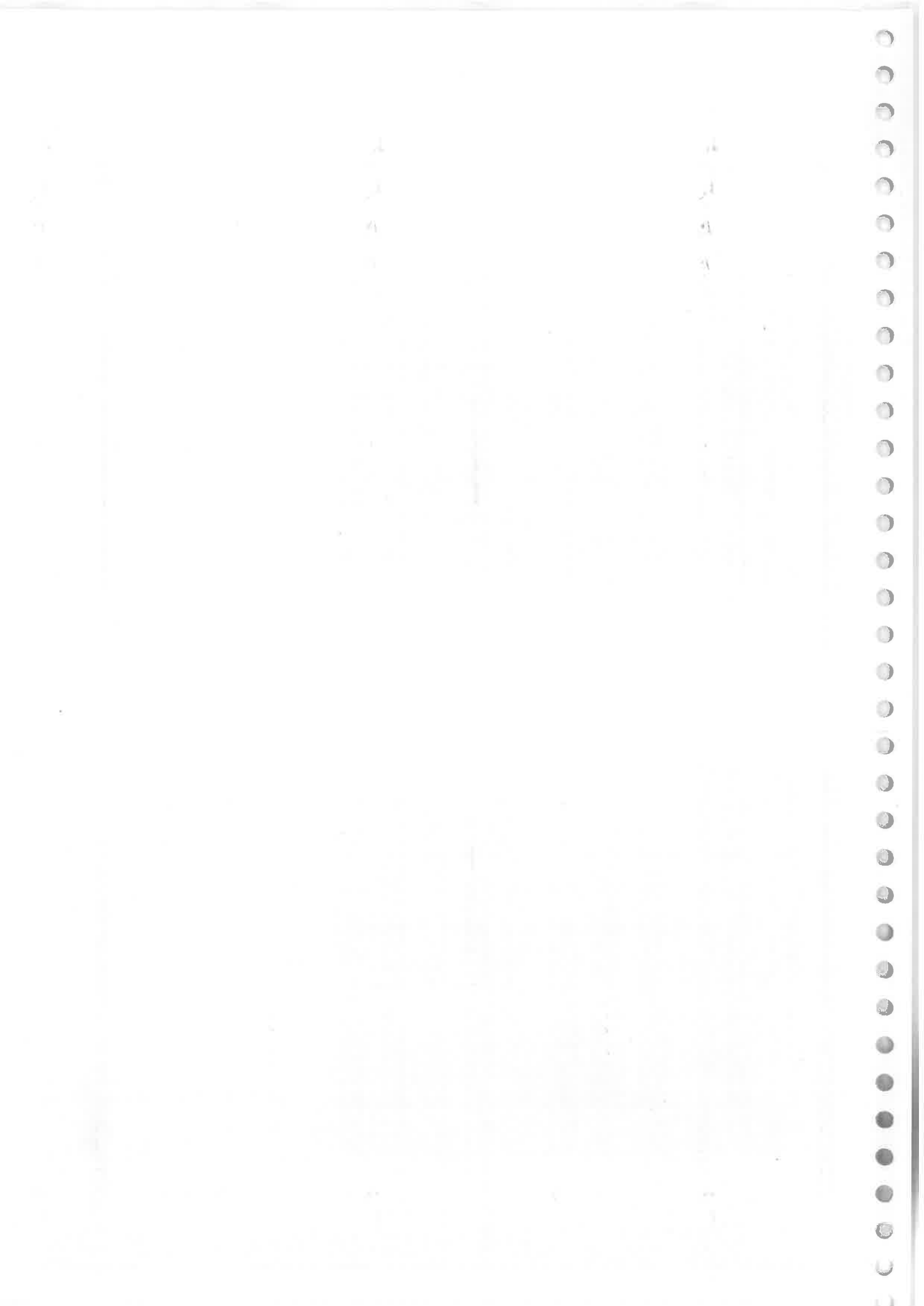
Figure 6: Representative bar graph of yearly average rainfall in the Nagaur district.

Monthly Cumulative Rainfall information of the Nagaur district for previous 10 years from dates 01-Jan-2014 to 31-Dec-2023 has been analysed (Table 3). Decadal analysis of monthly rainfall in the Nagaur district shows that the monthly Normal Rainfall is 4,061 mm (Σ Normal rainfall values since 2014 to 2023), while Actual Rainfall is 4,974 mm (Σ Actual rainfall values since 2014 to 2023) with a 22 % deviation from normal values [Source: <https://indiawris.gov.in/wris/#/rainfall>]. It is observed that the amount of monthly rainfall has significantly increased over the past decade (2014-2023) as shown in Figure 7 below. While Daily rainfall analysis during the previous year-2023 was done for the same station (Nagaur district). It is observed that the daily rainfall amount shows an increasing trend (Fig. 8). The year-2023 receives a total of 658.8 mm with a deviation of 66.22 % from the normal rainfall based on daily rainfall analysis.

Maximum amount of the total annual rainfall in the district is received during the southwest monsoon. The first week of July marks the arrival of the monsoon, which leaves by the middle of September. Due to the district's location in a desert, the area experiences extremes of heat in the summer and cold in the winter. Temperatures rise steadily during the day and at night, peaking in May and June, respectively. Summertime temperatures range from 46 degrees to 47 degrees in the winter (NAQUIM report, 2017).

Table 3: Monthly Cumulative Rainfall information of Nagaur district from 01-Jan-2014 to 31-Dec-2023 using IMD GRID data. [https://india.wris.gov.in/wris/#/rainfall]

Year	Rainfall	January	February	March	April	May	June	July	August	September	October	November	December
2014	Normal (mm)	5.5	6.2	2.4	3.9	13.6	39.3	152.2	117.2	53.4	6.8	2.7	2.9
	Actual (mm)	1.94	2.37	8.38	9.41	20.87	16.7	144.92	167.57	86.16	1.64	0	0
2015	Normal (mm)	5.5	6.2	2.4	3.9	13.6	39.3	152.2	117.2	53.4	6.8	2.7	2.9
	Actual (mm)	4.19	0	40.6	42.71	16.88	64.07	290.33	72.41	7.51	0.6	0	0
2016	Normal (mm)	5.5	6.2	2.4	3.9	13.6	39.3	152.2	117.2	53.4	6.8	2.7	2.9
	Actual (mm)	1.33	0.37	2.72	0	8.58	57.3	150.69	212.75	24.3	28.4	0	0
2017	Normal (mm)	5.5	6.2	2.4	3.9	13.6	39.3	152.2	117.2	53.4	6.8	2.7	2.9
	Actual (mm)	20.29	0.01	9.81	0.2	18.64	121.35	139.87	63.88	29.83	0	0.55	5.3
2018	Normal (mm)	5.5	6.2	2.4	3.9	13.6	39.3	152.2	117.2	53.4	6.8	2.7	2.9
	Actual (mm)	0.02	0.03	0.21	6.84	11.32	94.59	93.86	51.75	64.36	0.01	0.14	0
2019	Normal (mm)	5.5	6.2	2.4	3.9	13.6	39.3	152.2	117.2	53.4	6.8	2.7	2.9
	Actual (mm)	5.49	0.72	0.39	9.66	9.7	13.64	210.8	289.32	38.81	19.31	10.9	3.57
2020	Normal (mm)	5.5	6.2	2.4	3.9	13.6	39.3	152.2	117.2	53.4	6.8	2.7	2.9
	Actual (mm)	0.12	0	12.98	7.52	32.75	54.66	70.09	147.26	79.12	0.7	0.24	0
2021	Normal (mm)	5.5	6.2	2.4	3.9	13.6	39.3	152.2	117.2	53.4	6.8	2.7	2.9
	Actual (mm)	16.17	0	1.23	0.73	81.44	25.19	72.63	150.72	194.16	14.62	0.05	3.82
2022	Normal (mm)	5.5	6.2	2.4	3.9	13.6	39.3	152.2	117.2	53.4	6.8	2.7	2.9
	Actual (mm)	38.36	0.55	3.91	0.67	8.64	74.18	247.06	107.26	20.13	14.95	1.94	0
2023	Normal (mm)	5.5	6.2	2.4	3.9	13.6	39.3	152.2	117.2	53.4	6.8	2.7	2.9
	Actual (mm)	17.82	0	20.47	14.84	110.02	170.39	261.37	10.64	48.18	1.54	3.4	0.12



Monthly Cumulative Rainfall of Nagaur district, Rajasthan (01-Jun-2023 to 20-Mar-2024)

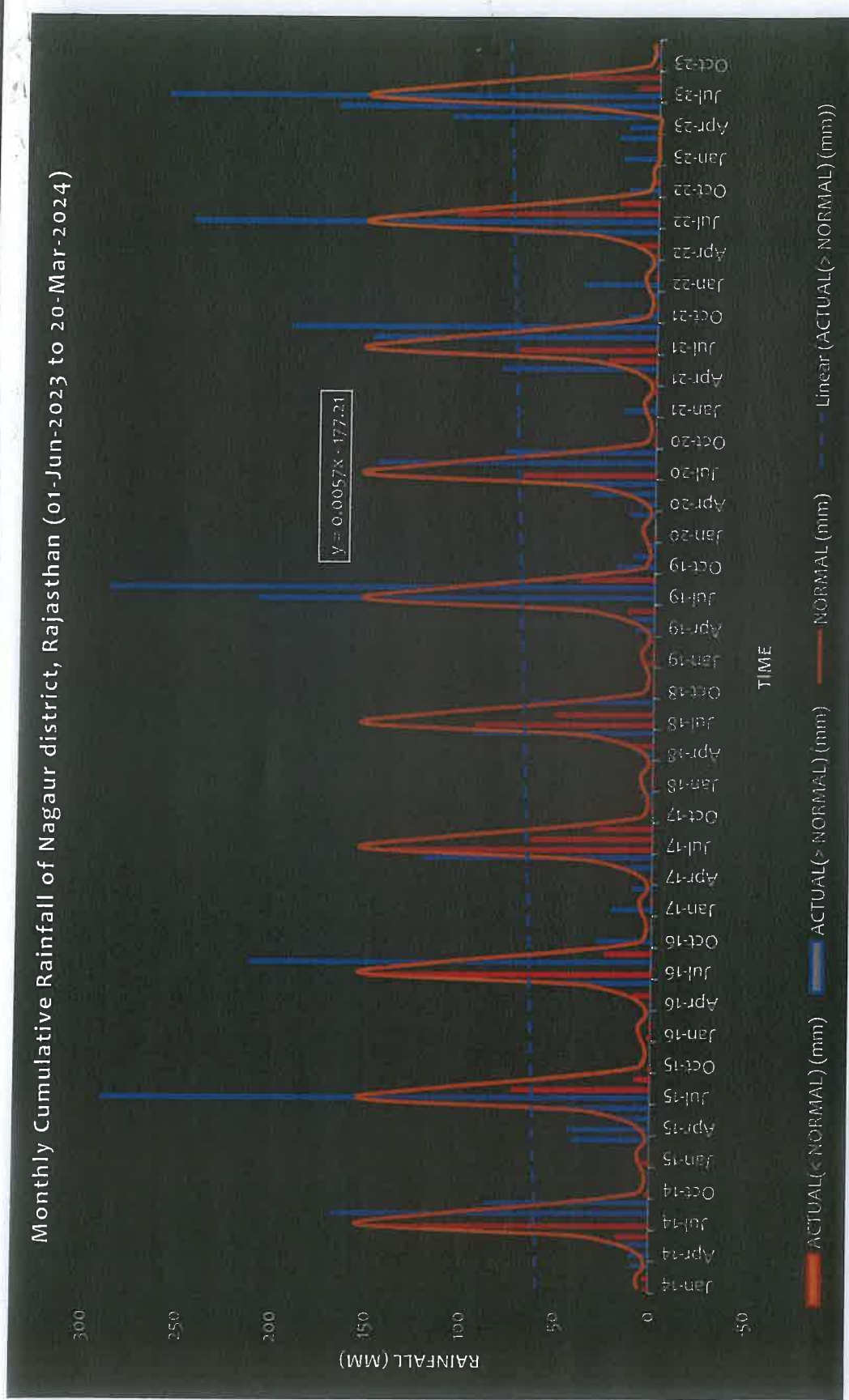


Figure 7: Bar-graph plot of monthly Rainfall of Nagaur district from 01-Jan-2014 to 31-Dec-2023 at Nagaur RG station.

Table 4: Daily Cumulative Rainfall Information (Nagaur district) from 01-Jan-2014 to 31-Dec-2023 using IMD GRID data [<https://india.wriss.gov.in/wris/#/rainfall>].

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Jan	N	0.1	0.1	0	0.1	0.1	0.1	0.3	0.8	0.5	0	0.4	0	0.2	0	0.1	0	0.1	0.1	0	0.1	0.1	0	1.1	0.2	0.1	0.1	0.1	0.2	0	0.1		
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0		
Feb	N	0.3	0.1	0	0.2	0.1	0	0	0	0.6	0	0	0.2	0.1	0	0.9	0.5	0.4	0.5	0.4	0.1	0	0	0.2	0.3	0.5	0.1	0.4	0.3	0	0.4	17.4	
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mar	N	0.1	0	0	0.1	0.1	0	0.1	0	0	0.1	0.2	0	0	0	0	0	0.1	0	0	0.2	0.1	0	0.1	0.3	0.4	0.3	0	0	0	0.1		
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0		
Apr	N	0.2	0.1	0.2	0	0	0.1	0	0.1	0.1	0	0.1	0.2	0.7	0.1	0.2	0.1	0.2	0.1	0	0.1	0	0	0.1	0	0.1	0	0.7	0.1	0.4	0.1	0.01	1.55
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	N	0.1	0.2	0.2	0	0.2	0.4	1.2	0	0.5	0.5	0.5	0.3	0	0.4	0.8	0.2	0.6	0.2	0.5	0.6	0.7	0.3	0.5	1	1.1	0.4	1.1	0.3	0.6	1.26	2.43	
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0.19	0.11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jun	N	6.1	7.73	7.88	0.2	0.01	0.69	0	0.1	0.1	0	0.1	0.2	0.7	0.1	0.2	0.1	0.2	0.1	0	0.1	0	0	0.1	0	0.7	0.1	0.4	0.1	0	0.01	0.01	1.55
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	N	19.63	6.56	4.27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	N	2.8	3.2	3.5	3.3	3	2.5	3.1	2.8	2.7	1.6	2	1.1	2.6	2.9	1.3	1.3	0.5	0.5	0.8	0.7	0.6	1.3	1.9	2.4	1.9	0.3	0.4	0.1	0.3	0	0	
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sep	N	0.4	0.1	0.6	0.9	0.5	0.2	0.3	0.7	0.2	0.1	0.3	0.3	0	0	0	0	0	0	0	0	0	0	0.1	1.1	0.1	0	0.1	0.1	0	0.3	0	
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct	N	0	0.3	0.4	0	0	0.1	0.1	0.3	0.1	0	0	0.1	0	0	0.01	1.3	0	0	0.1	0.4	0	0	0	0	0.1	0	0	0.1	0.4	0.1	0	
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nov	N	0	0.1	0.3	0.1	0	0.3	0	0	0.1	0	0.2	0.2	0	0.3	0.1	0	0	0	0	0	0	0	0.1	0.6	0	0	0	0.3	0	0.1	0.1	
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dec	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	A(<)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* N = Normal Rainfall (mm) A (<) = ACTUAL Rainfall (< NORMAL) (mm)

A (>) = ACTUAL Rainfall (> NORMAL) (mm)

Daily cummulative Rainfall (mm) Trend during the year 2023 of the Nagaur district

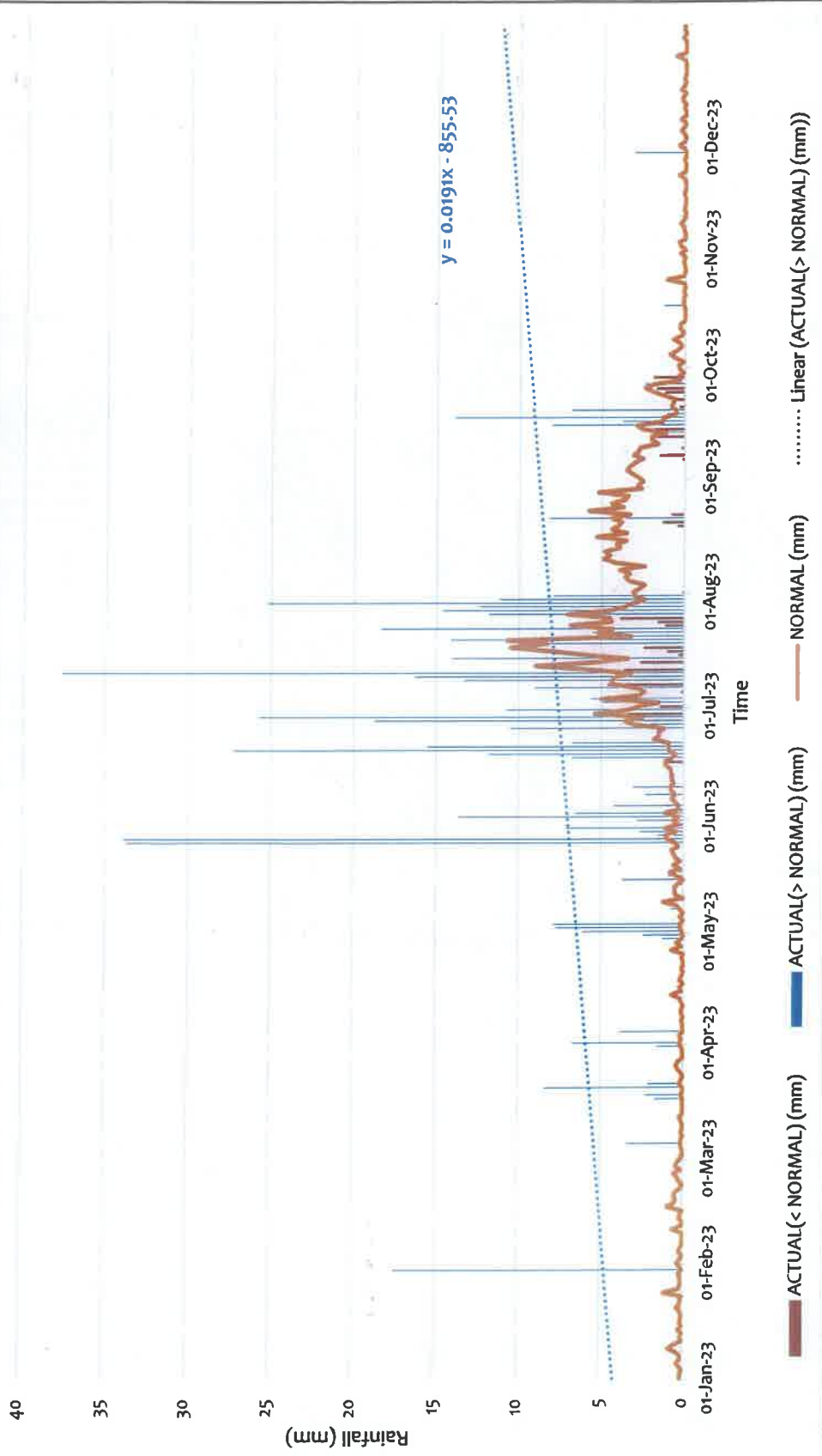


Figure 8: Cumulative Daily Rainfall trend during the period-2023 of the Nagaur district.

Geological setup of the area

The geological set up of the district is presented by different sedimentary, igneous and metamorphic rocks belonging to Bhilwara Super Group, Delhi Super Group, Marwar Super Group, Palana Formation and Quaternary alluvium. The occurrence of geological formations and their respective litho-units in the area is shown in the map below (Fig. 9 & 10).

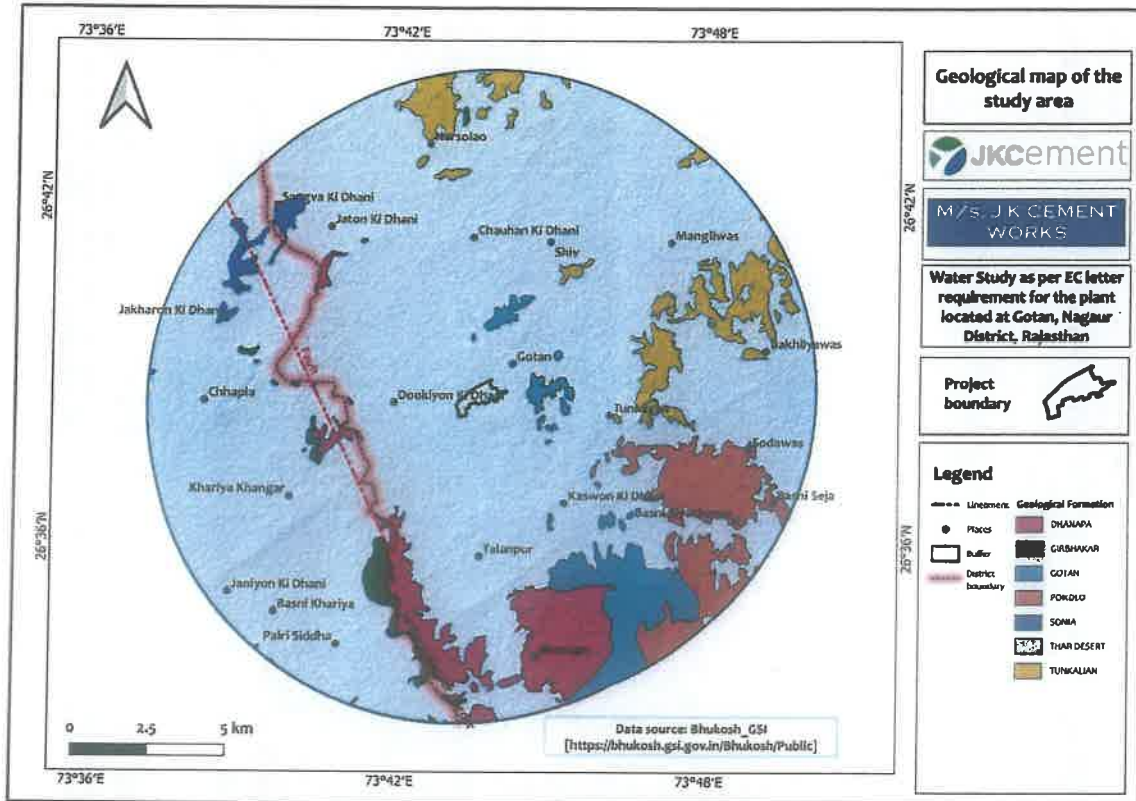


Figure 9: Geology of the study area.

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

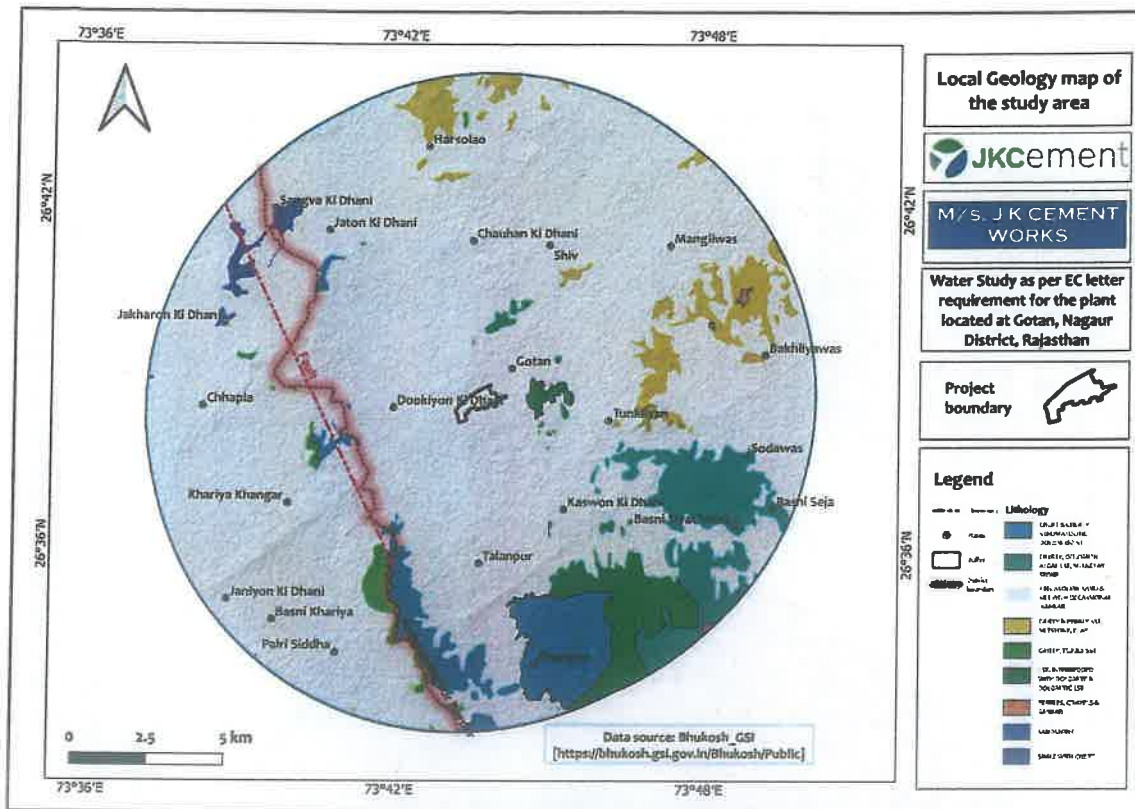


Figure 10: Lithology map of the study area.

Land Use Land Cover

Land use/land cover maps (Fig. 11) has been prepared with Sentinel-2 10m Land Use/Land Cover downloaded from <https://livingatlas.arcgis.com/landcover/>. This dataset is of the year-2023 and is used to visualize land use/land cover of the study area. The map provides information on the natural processes and human activity can rapidly change the landscape. Agricultural field categorize as Crops in the map and Human made structures as Built Area including roads and railways legend occupy most of the area. Built area is denser in the Gotan village. LULC map of the nearby villages of the project boundary.

The area of 3 Km buffer of the plant boundary is 41.95 Km² 41950683 m². The area is occupied by 79.6 % of crops land (Human planted/plotted cereals, grasses, and crops etc.), 18.1 % of built area (Human made structures; major road and rail networks etc.), and 2.3 % of Rangeland/Open areas (Fig. 12 & Table 5).

Table 5: LULC distribution in the 3-Km buffer of the Plant site boundary.

Class	Code	Area (m ²)	Percentage (%)
Crops	1	33400419	79.6
Built area	2	7573588	18.1
Rangeland	3	974304	2.3
Total		41950683	100.0

mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

Water Probability studies from Surface water sources like

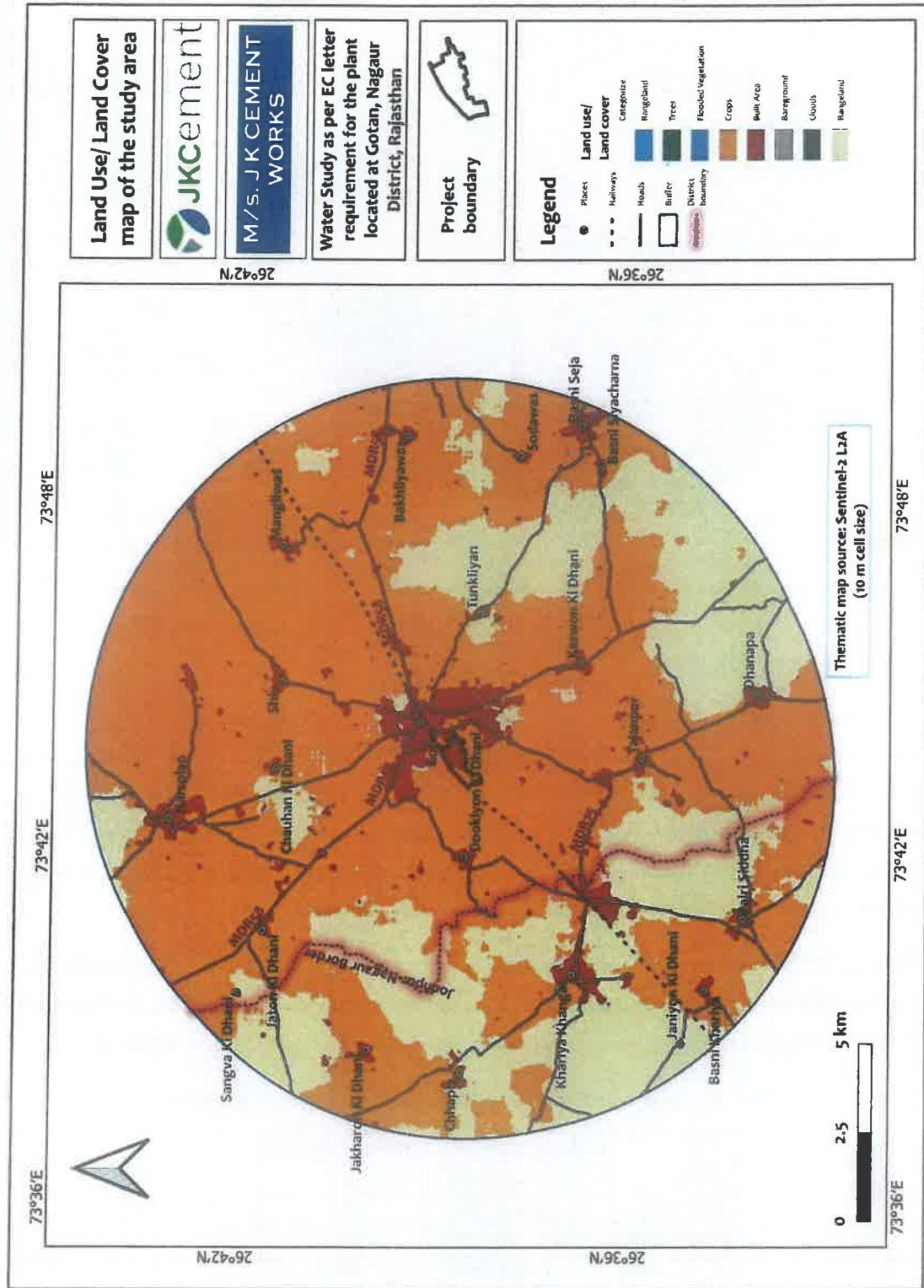


Figure 11: Land Use Land Cover map of the study area [Source: <https://livingatlas.arcgis.com/landcover/>].

mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

Water Probability studies from Surface water sources like

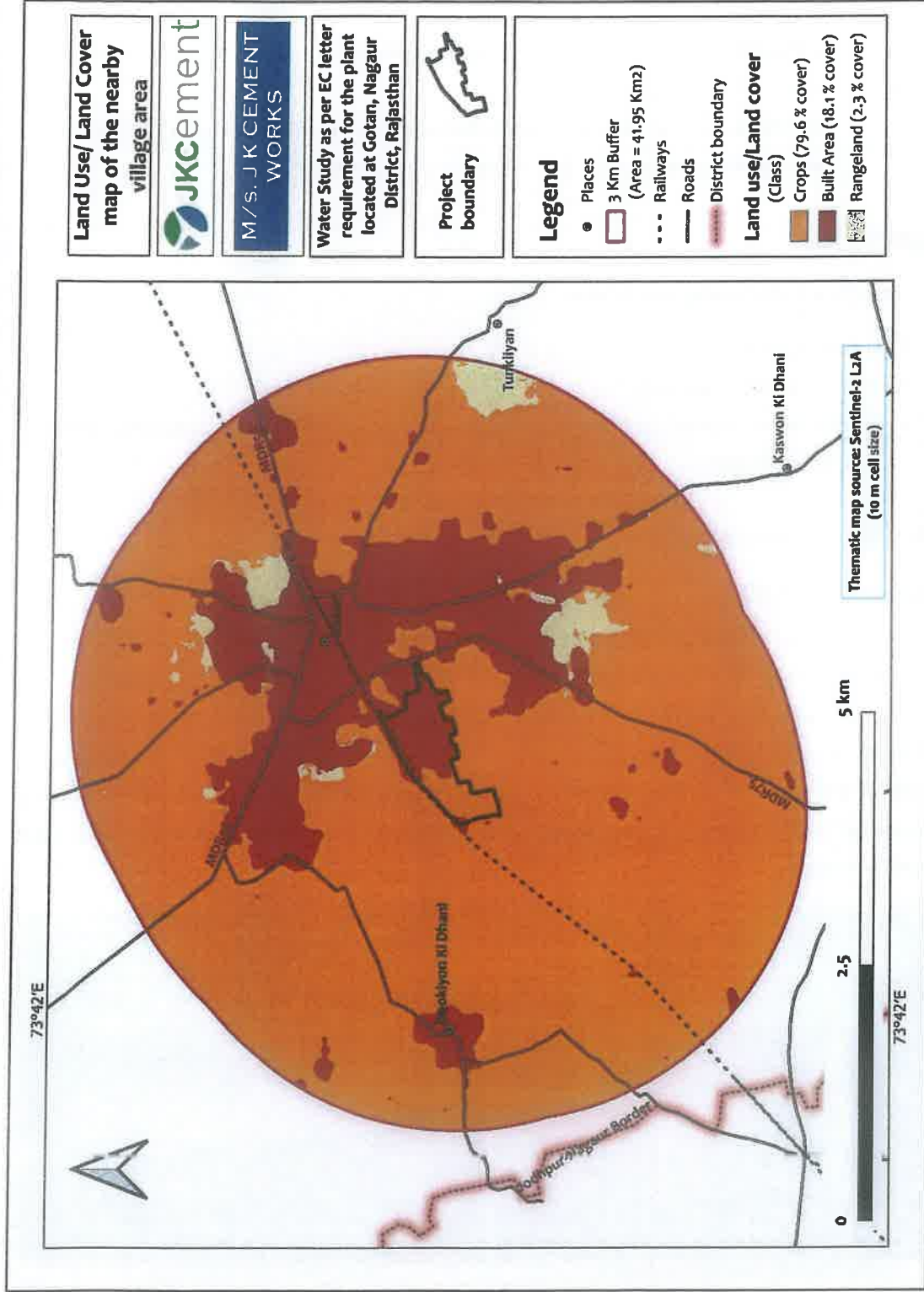


Figure 12: Land use/ Land cover map of the nearby village area.

Scope of work

- i. Initial data compilation
- ii. Site visit by Team for Data collection, as per requirements
- iii. Review of the collected data
- iv. Identification of Surface water sources like mine pit water, rainwater harvested water and use of treated sewage water from nearby municipal corporations

Objectives:

To explore Surface water sources like:

- a. mine pit water
- b. rain water harvested water
- c. use of treated sewage water from nearby gram panchayats (no municipal corporation within ~30 KM from plant)

Site visit observation

Surface water source

Surface water bodies are almost absent within the 10 km buffer of the project site. Most of the area remains dry with lower order streams which receives water during Monsoon season. There are two rivers present namely Banka Bala Nadi (~8.0 km in SE direction) and Ratri Nadi (9.0 km in NW direction) and both the rivers are seasonal in nature. Few village ponds and open quarry being accumulated by rainwater can be observed at the surrounding areas. It is observed that a potential clear water pond at Gotan village is contaminated by the adjacent gram panchayat wastewater accumulation through the broken/incomplete brick wall in between.



Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary



Figure 13: Surface water bodies observed surrounding the project site.

Mine pit water

There is an existing Limestone Mines about 12-13 Km away from the plant site with current working depth of 13-18m bgl while the groundwater level is 198m bgl. So, there is no possibility of groundwater intersection at the present depth of mining plan. Thus, no possibility of groundwater seepage in the mine pit.

During the site visit, rainwater accumulation can be observed at the mine pit. However, the water quantum is not sufficient for any industrial or domestic usage. It is learnt that the collected rainwater is used for water curing of the haul roads and plantation purpose.



Figure 14: Existing Mine pit near Dhanapa village

Rainwater Harvesting (RWH) Structures

Rainwater harvesting (RWH) involves the collection and storage of rainwater from surfaces such as rooftops, which is then redirected to storage systems like tanks, cisterns, or aquifers. This practice is essential for water conservation, especially in areas facing water scarcity, and can significantly reduce dependence on municipal water supplies. M/s. JK Cement Works has developed several rainwater recharge pits both at the Plants & Mines area which is well maintained. There is a total of 37 number RWH pits constructed and maintained at site by M/s. JK Cement Works.

The plant management have installed rainwater recharge pits at colony premises, plant premises as well as the mines area. Existing pit details with its recharge capacity is given in Tables 6 & 7.

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

Table 6: Rainwater Recharge pits constructed by JK Cement Works

Water Recharges Measures Details up to - 2022-23				
Sr. No.	Name of Location	Type of structure	Recharge Yearly (m ³)	Year of Construction
1	JKC Pit No.-1 Near Main Gate	Cement Concrete	5,59,267	2011
2	JKC Pit No.-2 Near Mata Ji Mandir	Cement Concrete		2011
3	JKC Pit No.-3 Near Railway Line	Cement Concrete		2011
4	JKC Pit No.-4 Near Over Head Tank	Cement Concrete		2011
5	JKC Pit No.-5 Behind Bachelor Hostel	Cement Concrete	1,23,72	2015
6	Railway Siding	Cement Concrete	20,000	2018
7	Mines Pit D- ML 75/90	Cement Concrete	2,11,680	2018
8	Mines Pit B- ML 03/93	Cement Concrete	30,240	2018
9	JKC Mine Pit D	Cement Concrete	32,000	2020
Total Capacity of RWHS (m ³ /Year)			8,65,559	

Data Source: Water Audit report at M/s. J.K. Cement Works, Gotan

Table 7: Rainwater Recharge pits constructed by JK White Cement Works

Water Recharges Measures Details up to - 2022-23				
S. No.	Name of Location	Recharge Yearly m ³ /Annum	Year of Construction	Co-ordinates
1	JKWC-Near technical building	5,37,061	2011	Latitude-26°38'36.9384"N Longitude-73°44'32.88;8"E
2	JKWC-In Rawan Ground		2011	Latitude-26°38'37.0608"N Longitude-73°44'31.4808"E
3	JKWC-Near Diesel pump		2011	Latitude-26°38'36.8124"N Longitude-73°44'48.2568"E
4	JKWC-Front of TQ quarters		2011	Latitude-26°38'20.9076"N Longitude-73°44'32.8848"E
5	Mines Pit No.-1		2011	Latitude-26°33'23.32"N Longitude-73°45'34.20"E
6	Mines Pit No.-2		2011	Latitude-26°33'10.43"N Longitude-73°45'50.57"E
7	Mines Pit No.-3		2011	Latitude-26°33'36.22"N Longitude-73°46'10.86"E
8	Mines Pit No.-4		2011	Movable Pit
9	Colony E-Type pit No.-1		2012	Latitude-26°37'54.6636"N Longitude-3°44'49.8336"E
10	JKWC In front of new packing plant		2013	Latitude-26°38'44.0916"N Longitude-73°44'34.0728"E
11	Near Greenhouse Front of C-10		2014	Latitude-26°38'27.8988"N Longitude-73°44'37.4568"E
12	WTP - Near overhead tank		2014	Latitude-26°38'30.6996"N Longitude-73°44'47.9184"E
13	TPP - Near Coal Yard		2014	Latitude-26°39'52.1964"N Longitude-3°44'26.4698"E
14	JKWC- PIT - A (Truck parking Area Near BSNL Office)	4,229.60	2017	Latitude-26°38'24.8352"N Longitude-73°44'26.5416"E
15	JKWC-PIT - B (Truck Parking Area In front of JKWCW Main Gate)	2,643.50	2017	Latitude-26°38'30.6744"N Longitude-73°44'25.8720"E
16	Mines Pit A- ML 03/93	30,240	2018	Latitude-26°33'00.4"N Longitude-73°46'08.70"E
17	Mines Pit B- ML 03/93	30,240	2018	Latitude-26°33'27.40"N Longitude-73°46'37.80"E
18	Mines Pit C- ML 03/93	1,51,200	2018	Latitude-26°33'50.58"N Longitude-73°45'26.14"E
19	Near Putty Plant – Bag Godown	16,000	2019	Latitude-26°38'44.0916"N Longitude-73°44'34.0728"E
20	Colony no. 1	20,000	2019	Latitude-26°38'20.9076"N Longitude-73°44'32.8848"E

1. The first part of the document is a list of names and addresses.

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7. The seventh part of the document is a list of names and addresses.

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

21	Colony No. 1 -	10,000	2020	Latitude-26°63'91.14"N Longitude-73°74'53.95"E
22	Colony No. 2	16,000	2020	Latitude-26°63'49.87"N Longitude-73°74'68.66"E
23	JKWC-Front of QCX Building	12,000	2021	Latitude-26°64'23.94"N Longitude-73°74'28.21"E
24	JKWC- NEAR CRUSHER RAMP	8,000	2021	Latitude-26°64'24.87"N Longitude-73°74'35.57"E
25	JKWC- Near Re-Claimer	6,546	2022	Latitude- 26°38'45.17"N Longitude-73°44'45.43"E
26	JKWC- Near Re-Claimer	6,546	2022	Latitude- 26°38'45.45"N Longitude- 73°44'46.92"E
27	JKWC- Near Re-Claimer	6,546	2022	Latitude- 26°38'37.88"N Longitude-73°44'45.76"E
28	JKWC- Near Re-Claimer	6,546	2022	Latitude- 26°38'37.68"N Longitude-73°44'45.84"E
Total Capacity of RWHS m³(Approx.)		8,63,798.10	Approx. m³/Annum Achieved	

Detail Source: Water Audit at M/s. J.K. White Cement Works, Gotan

Outside Plant site

There are total of two RWH pits one near Main Gate and other near BSNL office (Fig. 15).



RWH pit no. 10 B (2017) near Plant Main Gate

RWH pit no. 9 A (2017) at Parking area near BSNL office

Figure 15: RWH pits outside the plant boundary

Within the plant site of JK White Cement

There are thirty existing RWH pits within JK White Cement Plant (Fig. 16).



RWH pit no. 15 (2020) at Labour Colony

RWH pit no. 5 (2012) at Labour Colony

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary



RWHP pit no. 11 (2014) at TPP



RWHP pit new (unnamed) near Coal Yard



RWHP pit new (unnamed) near Coal Yard



RWHP pit no. 06 (2013) at New Packing Plant



RWHP pit no. 12 (2019) at New Packing Plant



RWHP pit no. 28 (2023) near Re-claimer



Latitude: 26°38'46"
 Longitude: 73°44'44"
 Elevation: 354.416319 m
 Accuracy: 4.93 m
 Time: 10-08-2024 10:30:05
 Note: RWHP No. 28 Near Re-claimer



Latitude: 26°38'46"
 Longitude: 73°44'44"
 Elevation: 354.416319 m
 Accuracy: 4.93 m
 Time: 10-08-2024 10:30:05
 Note: RWHP No. 28 Near Re-claimer

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

<p>RWH pit no. 27 (2023) near Re-claimer</p>  <p>Latitude: 3813837 Longitude: 73144785 Elevation: 235.271317 m Accuracy: 4.86 m Time: 10-08-2024 10:48:46 Note: RWHP pit- 25 near Re-claimer</p>	<p>RWH pit no. 26 (2023) near Re-claimer</p>  <p>Latitude: 3813837 Longitude: 73144785 Elevation: 235.271317 m Accuracy: 4.86 m Time: 10-08-2024 10:48:46 Note: RWHP pit- 25 near Re-claimer</p>
<p>RWH pit no. 25 (2022) near Re-claimer</p>  <p>Latitude: 3813837 Longitude: 73144785 Elevation: 235.271317 m Accuracy: 4.86 m Time: 10-08-2024 11:02:36 Note: RWHP pit near general store</p>	<p>RWH pit no. 08 (2014) at WTP</p> 
<p>RWH pit at General Store</p>  <p>Latitude: 3813837 Longitude: 73144785 Elevation: 235.271317 m Accuracy: 4.86 m Time: 10-08-2024 11:02:36 Note: RWHP pit near general store</p>	<p>RWH pit no. 03 (2011) at NDP</p>  <p>Latitude: 3813837 Longitude: 73144785 Elevation: 235.271317 m Accuracy: 4.86 m Time: 10-08-2024 11:02:36 Note: RWHP pit- 30 near CMI</p>
<p>RWH pit no. 17 (2021) near Crusher Ramp</p>	<p>RWH pit no. 07 (2014) at C-10 Quarter</p>

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary



RWHP pit no. 13 (2019) at D-type Quarter



RWHP pit no. 14 (2020) at B-type Quarter



RWHP pit no. 09 at School Canteen



RWHP pit no. 10 at NBSG



RWHP pit no. 08 at FTH



RWHP pit no. 07 at FAH



RWHP pit no. 06 at EYH



RWHP pit no. 05 at HDB

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary



Figure 16: Thirty existing RWHP pits within JK White Cement Plant.

JK Grey Cement Plant site

There are six existing RWHP pits (Fig. 17) within the JK Grey Cement plant.

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary



Figure 17: Photographs showing existing Rainwater Harvesting pits at the plant premises

At Mine site

There are a total of 7 rainwater recharge pits installed at the mine site, out of which 3 were accessible during the visit (Fig. 18).

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary



Figure 18: Three RWH pits at the operating mine site

Sewage Treatment Plant (STP)

Sewage Treatment Plant shall be provided for treatment of municipal wastewater to meet the prescribed standards. Municipal wastewater is the term used to describe the water produced by household use that may be treated to provide alternative freshwater sources. It contains organic matter, nutrients, and maybe pollutants. The wastewater is collected through a collection system that conveys the wastewater and solids to a treatment plant where the pollutants are removed before the water is discharged for use. The channel can also be used for the stormwater carriage during the monsoon season.

Existing STP

There are three existing STPs (Fig. 19) installed at the plant premises of capacities 100 KLD, 300 KLD & 500 KLD.

Water Probability studies from Surface water sources like mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary



Figure 19: Three Existing STPs at JK Cement Plant.

mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

Water Probability studies from Surface water sources like

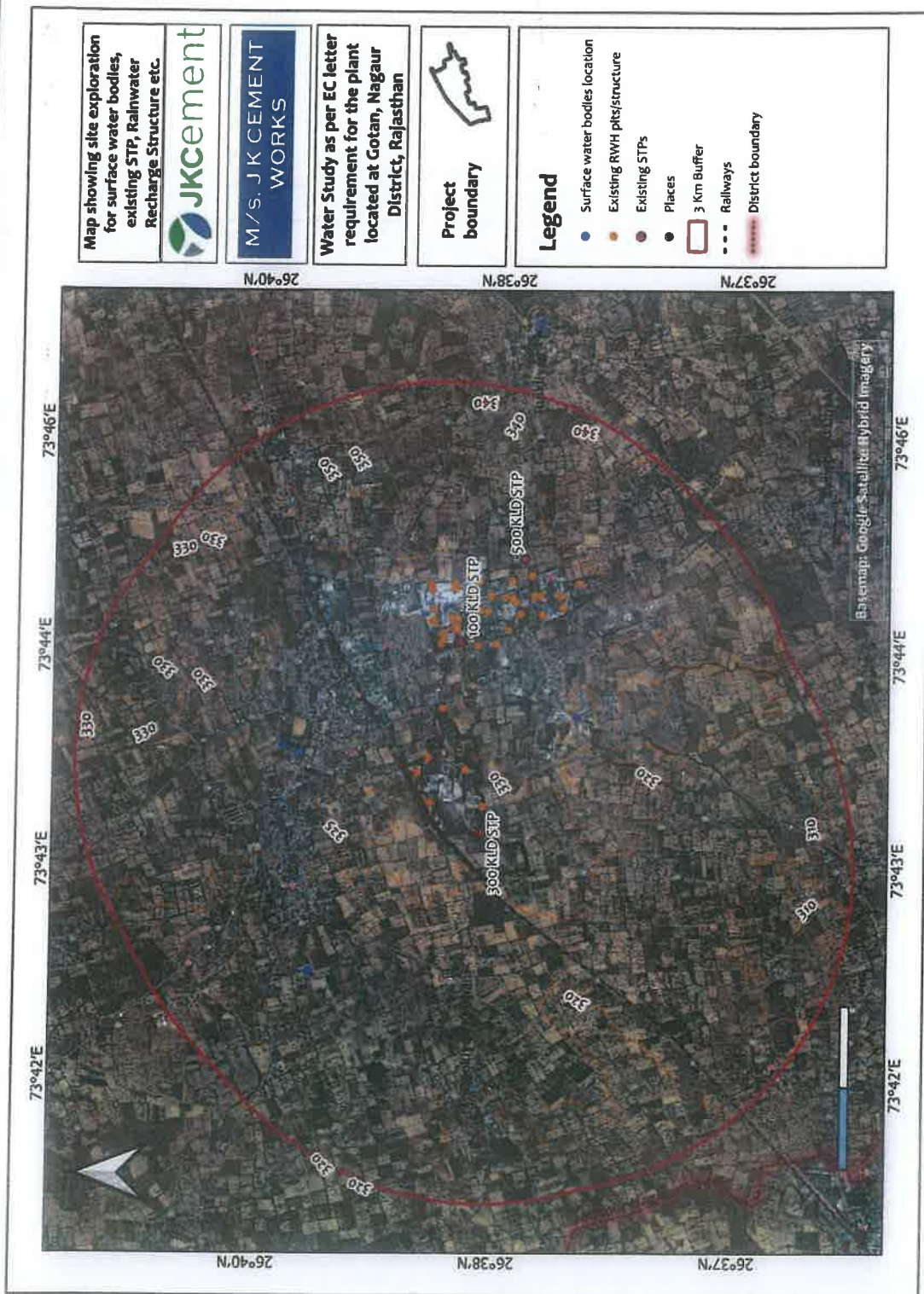


Figure 20: Map showing surface water bodies, existing STPs, Rainwater Harvesting Pits/Structure surrounding the plant site



Proposed STP

The DEM used for the 10 Km buffer zone is of latest version dated 23 September, 2023 from Advanced Land Observing Satellite (ALOS) Phased Array type L-band Synthetic Aperture Radar (PALSAR) for precise regional land-coverage observation in the area. The resolution of the DEM is of high resolution 12.5-meter Pixel spacing. Drainage mapping for Probability study of water path for carrying gram panchayat wastewater to the STP site was carried out within 3Km buffer (core zone) of the project/plant site containing the Gotan village. For this the toposheet has been georeferenced and the elevation contours were digitized. Hydrological analysis was performed for the core zone in a QGIS platform by generating a DEM map. This is to delineate probable channel network from DEM, using as outlet points all the junctions in it.

Water bodies identified near the land of salvation at the front of bus stand. This was done based on time slider tools using the Google Historical Imageries timeframe from Feb, 2012 to Dec, 2023. The same were validated during the site visit (see Fig. 13).

Site selection criteria

1. Based on the topography:

The core zone area is occupied mostly by the agricultural lands of 79-80 % (Fig. 12), with 18 % built area around the Gotan village.

DEM map and lower order streams in the core zone were generated from the Toposheet maps (No. G43 H10 & G43 H14; Survey of India map 1st Edition 2011 of scale 1:50,000 with 10 m contour interval) and Google Satellite imageries.

2. Based on the proximity to sewage sources & population density: potential site was identified near the land of salvation in front of the Bus stand at Gotan Town (Fig. 21).

According to a 2011 Census India report (Source: <https://www.census2011.co.in/data/town/83283-gothan-rajasthan.html>), the Gotan Census Town has a population of 17,700, of which 9,083 are male and 8,617 are female. There are 2556 children in the population between the ages of 0 and 6, or 14.44% of all people. The Town has total over 3,305 houses. Current estimated population of Gotan Census Town in 2024 is approximately 25,000. So, as per 2011 Census, per capita water demand for the town is 11,94,750 lphd considering 50% of the Town total population & rates per capita per day maximum of 135 lphd (as per National Building Code 2016, BIS), out of which 4,77,900 lpd would be generated as municipal waste water.

Route map:

Demarcation of channel route is done based on the slope of the topography, topographic contour, population density based on Survey of India toposheet, nearness to proposal site etc. while the STP site selection is done based on the good accessibility for maintenance and operation, including vehicular access for desludging and other maintenance activities, clear access pathways and adequate space for equipment, from residential areas, schools, and hospitals to minimize Odor and noise pollution, previous site of wastewater accumulation as in the case of proposal-1. Based on the present study, one site was identified for the proposed STP (red color; Fig. 21) and its route map is shown in light green-color on the map below.

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mine pit water, rain water harvested water and use of treated sewage water in the surrounding area of the plant site boundary

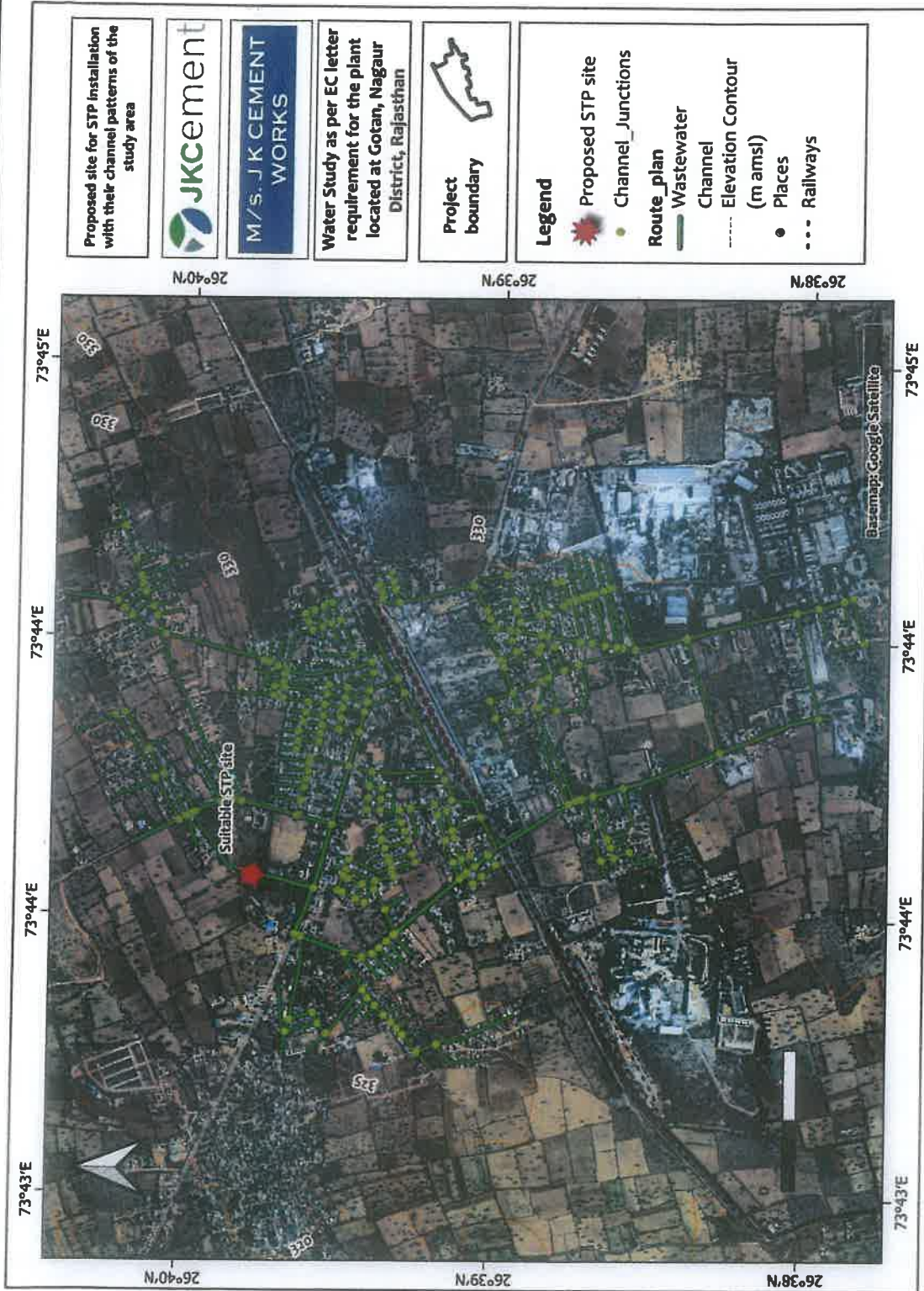


Figure 21: Google satellite map showing the proposed STP site.

1
2
3

4
5
6



Conclusions

Decadal analysis of rainfall in the Nagaur district shows that the Yearly Average Rainfall from 01-Jan-2014 to 31-Dec-2023 using IMD GRID data is measured to be 497 mm. The area surrounding the plant site including the Gotan village is occupied by 79.6 % of crops land and 18.1 % of built area.

As per the issue of Environmental Clearance EC Identification No. EC22A009RJ183791 & File No. IA-J-11011/63/2008-IA-II(I) under the specific condition-A (xi) of J K. Cement Works, **“1166 KLD water after expansion shall be met from ground water sources as approved by the competent Authority. Surface water sources like mine pit water, rain water harvested water and use of treated sewage water from nearby municipal corporations shall be explored and action plan in this regard shall be submitted to the Regional Office of the MoEF & CC for gradual phase out of ground water in a time frame of two years from the date of issue.”** Based on the present investigation, the following results has been observed.

There is no prominent surface water bodies nor perennial rivers within the 10 km buffer of the plant site. There is no sufficient rainwater/groundwater in the existing mines pits. However, there is a sufficient amount of groundwater recharge pits within and surrounding the plant site as per above details. There are no municipal corporations within ~30 km of the plant site. The gram panchayats have not developed any natural drainage system anywhere in villages, except that of a wastewater of every house which is going to be disposed through household soak pits. In Gotan gram panchayat, wastewater from sources like market shops, government offices, schools, hospitals are accumulated in a small pit in front of the bus stand which has behaved like a pond and in this location, water is available in monsoon and winter seasons only. The water quantity of which is very less due to which cannot propose installation of STP.

In near future if the Gram panchayat develop the water drainage for wastewater collection in which a wastewater needs to be collected through a proper channel system, then an STP proposal can be made for wastewater treatment and reuse of its water for plant process.

Sewage Treatment Plant (STP) of capacity 300 KLD has been already installed at the plant premises. So, out of the total freshwater (groundwater source) requirement of 1166 KLD, 115 KLD will be met from the treated water from the existing STP for used in greenbelt development / plantation. While the remaining 1051 KLD requires freshwater from groundwater source for Industrial, Domestic (Residential Colony & Plant) and green belt/plantations. So, the gradual phase out of groundwater in a time frame of two years may not be feasible.

Based on the present study, one STP site has been proposed of ~574 KLD capacity with proper channel path as shown in map (Fig. 21).

Overall, awareness program for the general public is a necessity. Engaging local communities in the planning process can enhance the effectiveness of the project. Maintaining the channel system leading to the STP through local body exercise could help.

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Quality Council of India
National Accreditation Board for Education and Training
ITPI Building, 6th Floor, 4 - A, Ring Road, I P Estate, New Delhi - 110002

CERTIFICATE OF ACCREDITATION

Under the QCI-NABET Scheme
for
Ground Water Consultant Organisation

★ ★

J.M. EnviroNet Private Limited

Address: Unit No. 1517, Tower - B, EMAAR DIGITAL GREENS, Golf Course Extension Road, Sector-61,
Gurugram-122011 (Haryana)

S.No.	SCOPE COVERAGE		
	Industrial Use	Mining Projects	Infrastructure Projects
1	Hydrogeological report: Comprehensive report on groundwater condition/situation		
2	Impact Assessment Reports with modelling studies		

Note: Names of approved Project Coordinators and Technical Area Experts are mentioned in IA AC Minutes dated Sep 09, 2021 on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in NABET's letter of accreditation bearing no. QCI/NABET/ENP/GWCO: (CO-21/5) dated Sep 23, 2021. The accreditation needs to be renewed before the expiry date by Sep 08, 2026 following due process of assessment



Sr. Director, NABET
Issue Date : Sep 23, 2021



Certificate No.
NABET/GWCO/T/A/GW018

Valid upto
Sep 08, 2026



ENVIRONMENTAL
CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive,
and Virtuous Environment Single-Window Hub)

Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The UNITHEAD
J K CEMENT WORKS GOTAN
VPO GOTAN TEHSIL MERTA CITY,,Nagaur,Rajasthan-342902

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/RJ/IND/261790/2022 dated 06 Apr 2022. The particulars of the environmental clearance granted to the project are as below.

- | | |
|---|---|
| 1. EC Identification No. | EC22A009RJ183791 |
| 2. File No. | IA-J-11011/63/2008-IA-II(I) |
| 3. Project Type | Expansion7 |
| 4. Category | A |
| 5. Project/Activity including Schedule No. | 3(b) Cement plants |
| 6. Name of Project | Expansion of Gray Cement production capacity from 13,33,530 TPA to 13,69,830 TPA by debottlenecking / internal modification and product mix change of Line-1 (i.e. production of both grey and white clinker & cement from existing grey facility) by implementation of white & grey convertible facility in both Line - I & Line- II without any change in total granted capacity of Grey Clinker (8,77,950 TPA), White Clinker (4,95,000 TPA) & White Cement (5,54,400 TPA) at Village: Gotan, Tehsil: Merta, Dis |
| 7. Name of Company/Organization | J K CEMENT WORKS GOTAN |
| 8. Location of Project | Rajasthan |
| 9. TOR Date | N/A |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 27/05/2022

(e-signed)
Dr. R. B. Lal
Scientist E
IA - (Industrial Projects - 1 sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

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F. No. IA-J-11011/63/2008-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(I.A. Division – Industry I sector)

Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj,
New Delhi – 110003

Dated: 27th May, 2022

To

M/s. J.K. Cement Works, Gotan (Unit of JK Cement Ltd.),
VPO GOTAN TEHSIL MERTA CITY,
Mertacity, Nagaur, Rajasthan-342 902,
Email: jk_gotan_grey_env@jkcement.com

Subject: Expansion in Grey Cement Production Capacity from 13,33,530 TPA to 13,69,830 TPA by debottlenecking / internal modification and product mix change of line-1 (i.e. production of both grey and white clinker & cement from existing grey facility) by implementing white and grey convertible facility in both Line - I & Line - II without any change in total granted capacity of Grey Clinker (8,77,950 TPA), White Clinker (4,95,000 TPA & White Cement (5,54,400 TPA) by M/s. J.K. Cement Works, Gotan (Unit of JK Cement Ltd.) located at Village Gotan, Tehsil Merta, District Nagaur, Rajasthan. Environment Clearance under the provision of para 7(ii) of EIA Notification, 2006 regarding.

Sir,

This refers to your proposal no. IA/RJ/IND/261790/2022 dated 06/04/2022 received through PARIVESH Portal for grant of Environmental Clearance (EC) for the project mentioned above.

2. As per the provisions of the Environment Impact Assessment (EIA) Notification, 2006, the above-mentioned project/activity is covered under category 'A' of item 3(b) Cement Plants, and appraised at Central level.

3. The details of Implementation status of the existing EC are as under:

S No	Facilities	Units	As per EC dated 18/08/2008	As per EC dated 06/12/2021 and EC amendment dated 07/02/2022	Implementation Status on 06/04/2022	Production as per CTO
1.	Clinker	TPA	Grey: 2,62,500	Grey -8,77,950; OR White - 4,95,000	Grey: 2,62,500	Grey:2,62,500
2.	Cement	TPA	Grey: 4,71,900	Grey -13,33,530; OR White - 5,54,400	Grey: 4,71,900	Grey:4,71,900

4. The above-mentioned proposal was considered in 4th meeting of Re-constituted Expert Appraisal Committee (Industry 1 Sector) held on 27th -28th April 2022. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at <https://parivesh.nic.in/>.

5. The details of the proposal are as per the EIA report submitted by the proponent. The salient features of the proposal as presented during the above-mentioned meetings of EAC (Industry 1) are as under: -

S. No.	Particulars	Details																																																																																																												
a.	Terms of Reference for undertaking EIA study	-																																																																																																												
b.	Period of baseline data collection	June to December, 2021 (Post project monitoring data)																																																																																																												
c.	Date of Public Consultation	17 th January, 2020																																																																																																												
d.	Action plan to address the PH issues	Attached as Annexure I																																																																																																												
e.	Location of the project	Village Gotan, Tehsil Merta, District Nagaur, Rajasthan.																																																																																																												
f.	Latitude and Longitude of the project site	<table border="1"> <thead> <tr> <th>Point</th> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr><td></td><td>26°38'43.09" N</td><td>73°44'05.42" E</td></tr> <tr><td></td><td>26°38'40.81" N</td><td>73°44'6.40" E</td></tr> <tr><td></td><td>26°38'39.69" N</td><td>73°44'0.59" E</td></tr> <tr><td></td><td>26°38'38.41" N</td><td>73°44'0.93" E</td></tr> <tr><td></td><td>26°38'35.81" N</td><td>73°43'55.59" E</td></tr> <tr><td></td><td>26°38'34.43" N</td><td>73°43'54.13" E</td></tr> <tr><td></td><td>26°38'31.74" N</td><td>73°43'55.33" E</td></tr> <tr><td></td><td>26°38'30.60" N</td><td>73°43'51.57" E</td></tr> <tr><td></td><td>26°38'33.87" N</td><td>73°43'50.26" E</td></tr> <tr><td></td><td>26°38'32.26" N</td><td>73°43'44.83" E</td></tr> <tr><td></td><td>26°38'30.08" N</td><td>73°43'45.60" E</td></tr> <tr><td></td><td>26°38'28.43" N</td><td>73°43'39.97" E</td></tr> <tr><td></td><td>26°38'30.44" N</td><td>73°43'39.18" E</td></tr> <tr><td></td><td>26°38'29.59" N</td><td>73°43'35.92" E</td></tr> <tr><td></td><td>26°38'26.56" N</td><td>73°43'36.08" E</td></tr> <tr><td></td><td>26°38'27.61" N</td><td>73°43'31.34" E</td></tr> <tr><td></td><td>26°38'30.10" N</td><td>73°43'30.20" E</td></tr> <tr><td></td><td>26°38'27.54" N</td><td>73°43'22.32" E</td></tr> <tr><td></td><td>26°38'24.28" N</td><td>73°43'22.79" E</td></tr> <tr><td></td><td>26°38'23.18" N</td><td>73°43'18.78" E</td></tr> <tr><td></td><td>26°38'22.39" N</td><td>73°43'18.69" E</td></tr> <tr><td></td><td>26°38'16.25" N</td><td>73°43'20.09" E</td></tr> <tr><td></td><td>26°38'15.32" N</td><td>73°43'16.26" E</td></tr> <tr><td></td><td>26°38'15.13" N</td><td>73°43'16.19" E</td></tr> <tr><td></td><td>26°38'14.00" N</td><td>73°43'10.69" E</td></tr> <tr><td></td><td>26°38'16.26" N</td><td>73°43'10.94" E</td></tr> <tr><td></td><td>26°38'27.30" N</td><td>73°43'6.93" E</td></tr> <tr><td></td><td>26°38'43.34" N</td><td>73°43'25.98" E</td></tr> <tr><td></td><td>26°38'54.19" N</td><td>73°43'47.11" E</td></tr> <tr><td></td><td>26°38'52.97" N</td><td>73°43'48.03" E</td></tr> <tr><td></td><td>26°38'51.38" N</td><td>73°43'45.23" E</td></tr> <tr><td></td><td>26°38'45.26" N</td><td>73°43'48.47" E</td></tr> <tr><td></td><td>26°38'44.88" N</td><td>73°43'49.41" E</td></tr> <tr><td></td><td>26°38'45.87" N</td><td>73°43'53.21" E</td></tr> <tr><td></td><td>26°38'40.66" N</td><td>73°43'55.60" E</td></tr> </tbody> </table>	Point	Latitude	Longitude		26°38'43.09" N	73°44'05.42" E		26°38'40.81" N	73°44'6.40" E		26°38'39.69" N	73°44'0.59" E		26°38'38.41" N	73°44'0.93" E		26°38'35.81" N	73°43'55.59" E		26°38'34.43" N	73°43'54.13" E		26°38'31.74" N	73°43'55.33" E		26°38'30.60" N	73°43'51.57" E		26°38'33.87" N	73°43'50.26" E		26°38'32.26" N	73°43'44.83" E		26°38'30.08" N	73°43'45.60" E		26°38'28.43" N	73°43'39.97" E		26°38'30.44" N	73°43'39.18" E		26°38'29.59" N	73°43'35.92" E		26°38'26.56" N	73°43'36.08" E		26°38'27.61" N	73°43'31.34" E		26°38'30.10" N	73°43'30.20" E		26°38'27.54" N	73°43'22.32" E		26°38'24.28" N	73°43'22.79" E		26°38'23.18" N	73°43'18.78" E		26°38'22.39" N	73°43'18.69" E		26°38'16.25" N	73°43'20.09" E		26°38'15.32" N	73°43'16.26" E		26°38'15.13" N	73°43'16.19" E		26°38'14.00" N	73°43'10.69" E		26°38'16.26" N	73°43'10.94" E		26°38'27.30" N	73°43'6.93" E		26°38'43.34" N	73°43'25.98" E		26°38'54.19" N	73°43'47.11" E		26°38'52.97" N	73°43'48.03" E		26°38'51.38" N	73°43'45.23" E		26°38'45.26" N	73°43'48.47" E		26°38'44.88" N	73°43'49.41" E		26°38'45.87" N	73°43'53.21" E		26°38'40.66" N	73°43'55.60" E
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g.	Total land	68.99 ha																																																																																																												
h.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Modification activities under para 7 (ii) are proposed within existing project area of 68.99 ha only. Total land of 68.99 ha is under the possession of the company. No additional land is required for proposed modification under para 7(ii).																																																																																																												

S. No.	Particulars	Details																								
i.	Existence of habitation & involvement of R&R, if any	Plant Site: NIL Study Area: <table border="1"> <thead> <tr> <th>Habitation</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Gotan</td> <td>1.0 km</td> <td>NE</td> </tr> <tr> <td>Maganwali Dhani</td> <td>2.7 km</td> <td>South</td> </tr> <tr> <td>Khokharon ki Dhani</td> <td>2.4 km</td> <td>NNE</td> </tr> <tr> <td>Chandawatan Ki Dhani</td> <td>2.0 km</td> <td>South</td> </tr> <tr> <td>Matwon ki Dhani</td> <td>3.0 km</td> <td>ENE</td> </tr> <tr> <td>Tukliyan</td> <td>3.6 km</td> <td>East</td> </tr> <tr> <td>Bhilawas</td> <td>3.3 Km</td> <td>NE</td> </tr> </tbody> </table> <p>There are approx. 30 villages in 10 km radius study area.</p>	Habitation	Distance	Direction	Gotan	1.0 km	NE	Maganwali Dhani	2.7 km	South	Khokharon ki Dhani	2.4 km	NNE	Chandawatan Ki Dhani	2.0 km	South	Matwon ki Dhani	3.0 km	ENE	Tukliyan	3.6 km	East	Bhilawas	3.3 Km	NE
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j.	Elevation of the project site	324 to 333 m above mean sea level																								
k.	Involvement of Forest land if any.	Nil																								
l.	Water body exists within the project site as well as study area	Project site: Nil. Study area: <table border="1"> <thead> <tr> <th>Water Body</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Banka Bala Nadi</td> <td>8.0 km</td> <td>SE</td> </tr> <tr> <td>Ratri Nadi</td> <td>9.0 km</td> <td>NW</td> </tr> </tbody> </table>	Water Body	Distance	Direction	Banka Bala Nadi	8.0 km	SE	Ratri Nadi	9.0 km	NW															
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m.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	Nil.																								
n.	Project cost	INR 0.70 Crores																								
o.	EMP cost	Nil.																								
p.	Employment opportunity	2250																								
q.	Water and Power requirement	Water – 1166 m ³ /day, Power – 15.2 MW																								

Unit configuration and capacity:

S No	Plant Equipment/Facility	Existing Facilities as per EC dated 06/12/2021 and corrigendum dated 07/02/2022 (A)		Proposed amendment under para 7 (ii) (B)		After proposed amendment (A+B)		Remarks
		Configuration (TPH)	Capacity (TPA)	Configuration (TPH)	Capacity (TPA)	Configuration (TPH)	Capacity (TPA)	
1.	Clinker	Line-I Kiln-1: 35	Grey - 2,62,500	No change	Production of either Grey Clinker (2,62,500) or White Clinker (2,16,660) at a time	Kiln- 1: 35	Production of either Grey Clinker (2,62,500) or White Clinker (2,16,660) at a time	Production of either grey clinker or white clinker at a time with convertible facility in both the lines Total white and grey clinker production will remain same as per existing granted EC. Total white clinker
		Line-II Kiln-2: 80	Grey - 6,15,450 or White - 4,95,000	No change	No change		Kiln-2: 80	

S No	Plant Equipment/ Facility	Existing Facilities as per EC dated 06/12/2021 and corrigendum dated 07/02/2022 (A)		Proposed amendment under para 7 (ii) (B)		After proposed amendment (A+B)		Remarks
		Configuration (TPH)	Capacity (TPA)	Configuration (TPH)	Capacity (TPA)	Configuration (TPH)	Capacity (TPA)	
	Total Clinker	Kiln-1: 35 Kiln-2: 80	Grey- 8,77,950; White- 4,95,000	No Change	Production of either Grey Clinker (2,62,500) or White Clinker (2,16,660) at a time.	Kiln-1: 35 Kiln-2: 80	Grey- 8,77,950; White- 4,95,000	production in both the lines (Line - I and Line - II) will not exceed the 4,95,000 TPA capacity No change in overall production.
2.	Cement	Line - I Mill: 65	Grey - 4,71,900	Increase Mill capacity from 65 to 70 TPH	Grey - 5,08,200 or White- 2,42,659	Mill: 70	Grey - 5,08,200 or White- 2,42,659	Expansion in grey cement production by debottlenecking/ internal modification of Line-1.
		Line - II Mill: 2x150	Grey - 8,61,630; White - 5,54,400	No change	No change	Mill: 2x150	Grey - 8,61,630; White - 5,54,400	Production of either grey cement or white cement at a time with convertible facility in both the lines. Production of white cement from line-1 by changing raw mix and keeping white cement capacity same for both lines-I & II as granted in exiting EC i.e. 5,54,400 TPA.
	Total Cement	Mill: 65 Mill: 2x150	Grey - 13,33,530; White- 5,54,400	Increase Mill capacity from 65 to 70 TPH	Grey Cement (5,08,200) or White Cement (2,42,659) at a time	Mill: 70 Mill: 2x150	Grey - 13,69,830; White- 5,54,400	Increase the Grey cement production by 36,300 TPA

6. The EAC, in its 4th meeting of Re-Constituted Expert Appraisal Committee (Industry-1 Sector) held on 27-28th April, 2022, based on information & clarifications provided by the project proponent and after detailed deliberations recommended the proposal for grant of Environment Clearance subject to stipulation of specific and general conditions as detailed in the paragraph given below.

7. The MoEF&CC has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1) hereby decided to grant Environment Clearance for instant proposal of **M/s. J.K. Cement Works, Gotan (Unit of JK Cement Ltd.)** under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions:

A. Specific Conditions:

- i. Three tier Green Belt area from 19 ha to 23 ha to achieve 33% of the project area shall be completed by monsoon season 2022 with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concern Regional Office of the MoEF&CC.
- ii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
- iii. Ammonia Gas Detectors shall be installed at the storage site and at the kiln stack for detecting leakage/seepage of ammonia gas.
- iv. Particulate matter emission from all the stacks shall not exceed 30 mg/Nm³.
- v. All stockyards shall have impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
- vi. All internal road and connecting road from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project.
- vii. Slip roads shall be provided at the gates and along crossings on main roads.
- viii. Covered sheds and toe walls shall be provided for raw material storage to check any attrition of raw materials. Storage sheds shall have garland drains, material traps and shall be built on concrete platforms.
- ix. Performance monitoring of all Pollution Control Devices shall be carried out annually and report shall be submitted to MoEF&CC, Regional Office.
- x. Following additional arrangements to control fugitive dust shall be provided:
 - a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.
 - b. Proper covered vehicle shall be used while transport of materials.
 - c. Wheel Washing mechanism shall be provided in entry and exit gates.
- xi. 1166 KLD water after expansion shall be met from ground water sources as approved by the competent Authority. Surface water sources like mine pit water, rain water harvested water and use of treated sewage water from nearby municipal corporations shall be explored and action plan in this regard shall be submitted to the Regional Office of the MoEF&CC for gradual phase out of ground water in a time frame of two years from the date of issue of EC.

- xii. Rain Water Harvesting shall be carried out to recharge 200 % of annual ground water withdrawal as committed by the PP.
- xiii. Particulate matter emissions from all the stacks shall be less than 30 mg/Nm³.
- xiv. Petcoke dosing shall be controlled automatically to control SO₂ emission from chimney within the prescribed limits.
- xv. Dioxin and furans shall be monitored twice a year during co-processing of hazardous waste and report shall be submitted to the Regional Office of the MoEF&CC.
- xvi. Develop a control strategy and plan that incorporates the pollution control measures. The Clean Air practices shall be adopted like mechanical collectors, wet scrubbers, fabric filters (baghouses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels.

B. General Conditions

I. Statutory compliance

- i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
- iii. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- iv. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;
- v. The project proponent shall provide wind shelter fence and chemical spraying on the raw material stock piles;
- vi. Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, and cement bagging plants.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement)

and 10th May, 2016 (in case of Co-processing Cement) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- ii. The project proponent shall regularly monitor ground water quality at least twice a year (pre and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- v. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- vi. The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.
- vii. Tyre washing facilities shall be provided at the entrance and exit of the plant gates.

IV. Noise monitoring and prevention

- i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

- i. Waste heat recovery system shall be provided for kiln and cooler.
- ii. The project proponent makes efforts to achieve power consumption less than 65 units/ton for Portland Pozzolona Cement (PPC) and 85 units/ton for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- iv. Provide the project proponent for LED lights in their offices and residential areas.

VI. Waste management

- i. Used refractories shall be recycled as far as possible.

VII. Green Belt

- i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration by trees in the plant premises.
- ii. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable

energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
- ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/ violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

- vii. The project proponent 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, commencing the land development work and start of production operation by the project.
 - viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
 - ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
 - x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 - xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
 - xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
 - xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
8. This issues with the approval of the Competent Authority.


(Dr. R. B. Lal)
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Encl. as above at Annexure

Copy to: -

1. The Principal Secretary, Environment & Forests Department, Government of Rajasthan, Secretariat, Jaipur, Rajasthan
2. The Regional Officer, Ministry of Env., Forest and Climate Change, Integrated Regional Office, Jaipur, A-209 & 218, Aranya Bhawan, Mahatma Gandhi Road, Jhalana Institutional Area, Jaipur - 304002, Rajasthan
3. The Member Secretary, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
4. The Member Secretary, Rajasthan State Pollution Control Board, 4, Jhalana Institutional Area, Jhalana Doongri, Jaipur, Rajasthan.
5. Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
6. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi

7. District Collector, Nagaur, Rajasthan
8. Guard File/Monitoring File/ Pariyesh Portal /Record File.



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Annexure-1

S No	Concerns raised during the Public Hearing	Physical activity to be done	Unit of Measurement			Cost (in Lacs)
			01 st Year	02 nd Year	03 rd Year	
1.	Education	Renovation of existing School Buildings	05 (Village Gotan)	01 (Village Tukanliya) 01 (Village Dhannapa)	01 (Village Talanpur) 01 (Village Harslav)	105
		Provide Interactive smart classes equipment / gadgets	05 (Village Gotan)	05 (Village Tukanliya) 05 (Village Dhannapa)	05 (Village Talanpur) 05 (Village Harslav)	50
		Providing sports equipment to Govt. school	Village Gotan	Village Tukanliya & Village Dhannapa	Village Talanpur & Village Harslav	50
2.	Health	Providing Oxygen Machine, Bed, Wheel Chair, Stretcher in Public Health Centre	01 Nos. each (Village Gotan)	01 Nos. each (Village Tukanliya) & (Village Dhannapa)	01 Nos. each (Village Talanpur) & (Village Harslav)	60
3.	Skill Development	Establishment of Skill Development centre for Youth (III)	1 Nos. (Village Gotan)	-	-	35
		Establishment of training facilities (Achar making, basket & flower pot making, sewing & tailoring, Dairy farming etc.)	1 Nos. (Village Gotan)	1 Nos. (Village Tukanliya) & (Village Dhannapa)	1 Nos. (Village Talanpur) & (Village Dhannapa)	85
4.	Goshala Development	Renovation of Ghoshala	1 Nos. (Village Gotan)	1 Nos. (Village Tukanliya)	1 Nos. (Village Dhannapa)	30
5.	Infrastructure Development	Construction of playground at school	1 Nos. (Village Gotan)	-	-	10
		Construction of Rain Water Harvesting Structure	05 (Village Gotan)	05 (Village Tukanliya) 05 (Village Dhannapa)	05 (Village Talanpur) 05 (Village Harslav)	35
		Establishment of water plant for safe drinking water	01 (Village Tukanliya)	01 (Village Dhannapa) 01 (Village Talanpur)	01 (Village Harslav)	30
		Installation of Solar Lights along roads	20 (Village Gotan)	20 (Village Tukanliya) 20 (Village Dhannapa)	20 (Village Talanpur) 20 (Village Harslav)	25
6.	Plantation	Distribution/Plantation of saplings and tree guard in the village Govt. offices and schools	1000 (Village Gotan)	800 Nos. (Village Tukanliya) 800 (Village Dhannapa)	800 Nos. (Village Harslav)	17

S No	Concerns raised during the Public Hearing	Physical activity to be done	Unit of Measurement			Cost (in Lacs)
			01 st Year	02 nd Year	03 rd Year	
				Dhannapa)		
<i>Total</i>						532



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