

Ambuja Cement

Ref: ACL/NL/ENV/11-2021/ 134

24th November 2021

**Additional Director,
Regional Office (North Central Zone),
Ministry of Environment, Forests & Climate Change,
Government of India
25, Subhash Road, Dehradun - 248001**

Sub: Half Yearly compliance of conditions of Environmental Clearance.

Dear Sir,

This has reference to the Environmental Clearance granted to our plant by MoEFCC vide letter no. J-11011/173/2008-IA II (I) dated August 28th April 2020. We are sending a point-wise status report from April 2021 to September 2021 on compliance of the stipulated environmental conditions/safeguards of Environmental clearance letter referred above through e-mail address: **moef.ddn@gov.in** with a request to kindly acknowledge the receipt through return mail.

Hope you will find the information in order.

Thanking you.

Yours faithfully,
for **Ambuja Cements Limited**
(Unit: Nalagarh)



Unit Head



Encl: As above

CC – The Member Secretary, H.P. State Pollution Control Board, - Hard copy
Him Parivesh', Phase-III, New Shimla, Shimla-171009, HP

Regional Officer, HP State Pollution Control Board, -Hard Copy
Baddi, Distt. Solan (H.P.)

Additional Director
Central Pollution Control Board Regional Directorate (North) - Hard Copy
PICUP Bhawan, Vibhuti Khund, Gomti Nagar
Lucknow - 226010

AMBUJA CEMENTS LIMITED

(Unit - Nalagarh)

Village Navagraon, P.O. Jajhra, Teh. Nalagarh, Distt. Solan - 174 101 (H.P.)

Tel : 01795-226701, Fax : 01796-226702, Website : www.ambujacement.com

Regd. Off. : P. O. Ambuja Nagar, Taluka - Kodinar, Distt. Gir Somnath, Gujarat - 362715

CIN No. : L26942GJ1981PLC004717

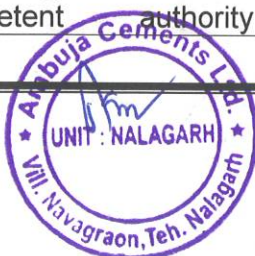
Compliance of Conditions of Environment Clearance

Name of the Project: Ambuja Cements Ltd., Village Navagraon, P.O. Jajhra, Tehsil Nalagarh, Distt. Solan (H.P.) - 174101
Expansion of Cement Plant by enhancing the cement production capacity (1.5 to 2.2 MTPA) in existing standalone grinding unit by Process Optimization

Clearance letter No.: J-11011/173/2008-IA-II(I) dated 28th April 2020

Period of Compliance: April 2021 to September 2021

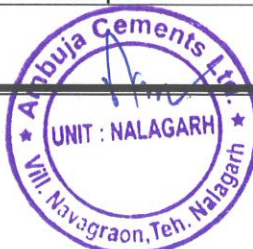
Sl. No.	Condition	Compliance Status
I. Statutory Compliance		
I	The project proponent shall prepare a site specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved site specific conservation plan/ Wildlife Management plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six monthly compliance report.	A site specific Conservation Plan & Wildlife Management Plan has been prepared and approved by the Chief Wildlife Warden. As per approved plan, a sum of 27.5 Lacs will be provided to HP State Forest Department for implementation of the recommendations of the approved site specific conservation plan/ Wildlife Management plan. The project has not been started so the implementation report shall be furnished along with the six monthly compliance report after getting consent to Establish. Copy of Approval letter already submitted
	The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board / Committee.	The project has not yet been started. Consent to Establish for expansion has been applied Project will be started only after getting Consent to Establish HP State Pollution Control Board.
	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from competent authority	No additional water will be required for the expansion project and we have already obtained the required permission. So no new



	concerned in case of drawl of surface water required for the project.	permission required.
	The project proponent shall obtain authorization under Hazardous and Other Waste management Rules, 2016 as amended from time to time.	Authorization under Hazardous and Other Waste management Rules, 2016 as amended from time to time has already been obtained and is valid up to 31.03.2024.
II Air Quality Monitoring and Preservation		
i.	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules, 1986 vide G.S.R. 612 (E) dated 25 th august 2014 (Cement) and subsequent amendment dated 9 th ay 2016 (Cement) and connected to SPCB and CPCB online servers and calibrates these systems from time to time according to the equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	A continuous emission monitoring system has been installed at the process stack to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules, 1986 vide G.S.R. 612 (E) dated 25 th august 2014 (Cement) and subsequent amendment dated 9 th ay 2016 (Cement) and connected to SPCB and CPCB online servers. The system is calibrated according to the equipment supplier specification.
ii.	The project proponent shall monitor fugitive emission in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.	Fugitive emission in the plant premises are being monitored regularly. Last monitoring done by M/s Shri Om Testing and Research Laboratory (a NABL accredited laboratory) on 22nd September 2021. Reports attached as Annexure 1
iii.	The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to main pollutants released (e.g. PM 10 and PM 2.5 in reference to PM emissions and SO ₂ and NO _x in reference to SO ₂ and NO _x emissions) within and outside the plant area at least at four locations (one within and	6 manual monitoring stations have already been fixed as per guidance of HP State Pollution Control Board for carrying out Ambient Air Monitoring out of which four are within plant and 2 outside plant. Last monitoring done by M/s Shri Om Testing and Research Laboratory (a NABL accredited laboratory)



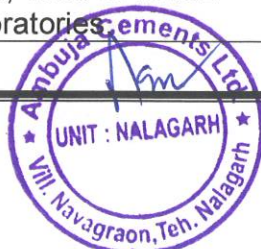
	three outside the plant area at an angle of 120° each) covering upwind and downwind directions.	on 22nd September 2021. All the results were within the prescribed limits. Reports attached as Annexure 2
iv.	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and the results of manual stack monitoring and manual monitoring of ambient air quality/ fugitive emissions to Regional Office of SPPCB along with six monthly monitoring report	The summary of monthly Ambient Air quality and Stack emissions is submitted to regional office HPSPCB on monthly basis and online Stack and CAAQMS are connected online with the HPSPCB server. A copy of this Half yearly compliance report is also being submitted to HPSPCB.
v.	Appropriate Air Pollution Control(APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable points, do as to comply prescribed stack emission and Fugitive emission standards	Each and every material transfer point is equipped with a bag filter to capture the dust generated during material conveying to maintain the Stack emission and Fugitive emissions within the prescribed standards.
vi.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Leakage detection is done through monitoring of false air entry to system. As far as bags cleaning is concerned, it is done automatically through air purging in the system and once the bag is damaged no maintenance done, it is replaced.
vii.	Pollution control system in the cement plant shall be provided as per CREP guidelines of CPCB.	CREP guidelines are followed and attached as Annexure – 3
viii.	Sufficient Number of mobile or stationary vacuum cleaners shall be provided to clean plant, roads, shop floors, roofs regularly.	Two numbers of Mobile vacuum cleaners (One Tenant machine and the other a truck mounted suction machine) have been provided in the plant for cleaning of plant and the roads inside plant. Apart from this one stationary Vacuum cleaning machine is provided for cleaning of dust generated in packing plant area.
ix.	Ensure covered transportation and	Clinker, Gypsum and wet ash



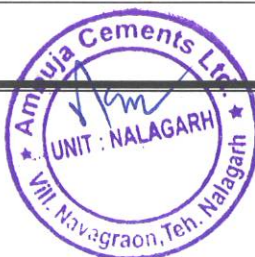
	conveying of raw materials to prevent spillage and dust generation; use closed bulkers for carrying fly ash.	are transported in covered body trucks. Fly ash is carried by Bulklers/Closed body trucks to prevent spillage and dust generation.
x.	Provide wind shelter fence and chemical spraying on the raw materials Stock piles; and	Clinker and dry Fly ash are stored in Silos and Gypsum, Wet ash are stored in covered shed. In the case of exigency, if any raw material is to be stored in open area, it will be kept properly covered to prevent any fugitive emission.
xi.	Have separate truck parking area and monitor vehicular emission at regular intervals.	We have a properly designed Truck parking area. Vehicular emission is monitored through random checking of PUC of the vehicle entering plant.
xii.	Efforts shall be made to reduce impact of transportation of raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transportation.	All the raw materials and the end product (cement) are transported in covered trucks. All the conveyor belts in the plant are completely covered
xiii.	Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants	Ventilation systems are designed for adequate air changes for all tunnels, motor houses, cement bagging plants

III. Water Quality Monitoring and Preservation

I	The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules, 1986 vide G.S.R. 612 (E) dated 25 th august 2014 (Cement) and subsequent amendment dated 9 th May 2016 (Cement) and connected to SPCB and CPCB online servers and calibrates these systems from time to time according to the equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories	This point is not applicable as there is no effluent generated from the cement manufacturing process. However domestic sewage generated is treated in the Sewage Treatment Plants and 100% reused in Greenery Development. Zero Liquid Discharge achieved.
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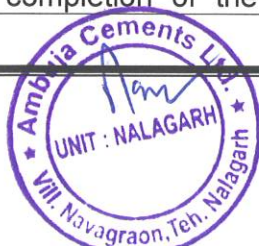
li	The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Testing Ground Water quality for the bore wells has been done latest on 22nd September 2021. The reports are attached as Annexure – 4
lii	The project proponent shall submit monthly summary report of continuous effluent monitoring and the results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional office of SPCB along with six monthly monitoring report	Continuous effluent Monitoring is not applicable as there is no effluent generated from the process. However the treated sewage water is 100% reused for greenery development. Last sampling done by M/s Shri Om Testing and Research Laboratory, a NABL laboratory on 22nd September 2021. The reports are well within the limits and attached as Annexure - 5
	Adhere to 'Zero Liquid Discharge'.	Zero liquid discharge is achieved.
	Sewage treatment plant shall be provided for treatment of domestic wastewater to meet the prescribed standards	Two numbers of Sewage treatment Plants have been provided for the treatment of domestic sewage and the treated sewage water is 100% re used for greenery development in plant.
	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.	There is no open stock pile. All the raw materials are either stored in Silos/sheds or kept covered.
	The project proponent shall practice rainwater harvesting to maximum possible extent.	Three rainwater harvesting structures are provided and connected with proper drainage system to collect the water.
	Water meters shall be provided at the inlets to all processes in the cement plant.	This is only a cement grinding unit. Water meter has been provided at the inlet of grinding mill to capture the



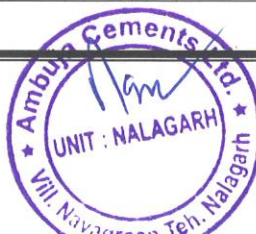
		water consumption in the grinding process.
	The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.	All the possible efforts are made to minimize the water consumption in the plant. 100% of treated water is reused for greenery development in the plant. Leakages are arrested in time.
IV. Noise Monitoring and Preservation		
	Noise Level survey shall be carried as per the prescribed guidelines and report in this regards, shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Noise Level monitoring done by M/s Shri Om Testing and Research Laboratory (a NABL accredited laboratory) on 22nd September 2021 on the plant boundary. Reports attached as Annexure - 6
	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time	Ambient Noise conform to the prescribed standards
V. Energy Conservation Measures		
	Provide Solar Power Generation on roof tops of the buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly	Solar Power lightings have been provided at roof top of Central Control Room Building and maintained regularly.
	Provide the project proponent for LED lights in their offices and residential areas.	LED lights/bulbs are provided almost in all the offices.
	Maximize utilization of Fly ash, slag and sweetener in the cement blend as per BIS standards.	Every effort is being made to maximize the usage of flyash in cement up to 35% as per BIS Standards. But availability of fly ash is an issue. So we are also exploring the possibility of using wet ash which is lying in abundance in the vicinity of Thermal Plants causing health and environmental problems to the community.
VI. Waste Management		
	The waste oil, Grease and other hazardous shall be disposed of as	All the Hazardous wastes generated in plant are



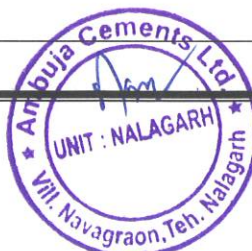
	per the Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016	disposed off to the authorized vendors as per the Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016
	Kitchen waste shall be composted or converted to biogas for further use.	Two numbers of Organic Bio-Composters have been installed in the plant to convert the Kitchen waste into Bio-compost. Leachate generated is also used as Bio-Pesticide.
VII. Green Belt		
	Green Belt shall be developed in an area equal to 33% of total plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	Greenbelt has been developed in the plant. Total Green cover is approximately 34%
	The project proponent shall prepare GHG emission inventory for the plant and shall submit the programme for reduction of the same including Carbon sequestration including plantation.	The condition will be complied.
VIII. Public Hearing and Human Health Issues		
	Emergency Preparedness plan based on the Hazard Identification and Risk Assessment (HIRA) and disaster Management Plan shall be implemented.	Emergency Preparedness plan based on the Hazard Identification and Risk Assessment (HIRA) and disaster Management Plan has been made and implemented.
	The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act	Personal Protective Equipment have been provided to each and every individual.
	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after completion of the	There will be no construction in the project so this point is not applicable. Provisions have already been made for the present manpower in the existing plant.



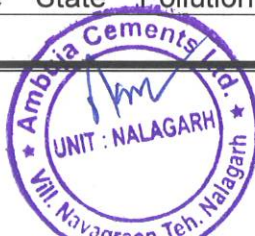
	project.	
	Occupational Health Surveillance of the workers shall be done on regular basis and records maintained as per the Factories Act.	
IX. Corporate Environment Responsibility.		
	The Project Proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017-IA.III dated 1 st May 2018, as applicable, regarding Corporate Environment Responsibility.	The provisions contained in this Ministry's OM vide F.No.22-65/2017-IA.III dated 1 st May 2018, as applicable; regarding Corporate Environment responsibility will be followed.
	The company shall have a well laid down environmental policy duly approved 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/ deviations/ violations 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.	The company has a well laid down Environmental Policy duly approved by Executive Committee of the Company. The same will be taken for Board's resolution.
	A separate Environmental Cell both at the project and company headquarter level with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of organization.	A separate Environmental Cell both at the project and company headquarter level with qualified personnel has been set up under the control of senior Executive who will directly to the head of organization.
	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose.	The project has not been started yet. The point shall be complied.



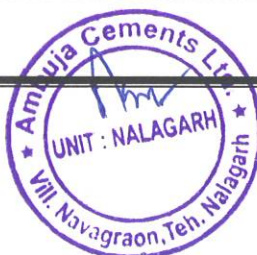
	Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the six-monthly compliance report.	
	Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	The project has not been started yet. The point shall be complied.
	All the recommendations made in the charter of Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented	All the recommendations made in the charter of Corporate Responsibility for Environment Protection (CREP) for the cement plants have already been implemented and attached as attached as Annexure – 3
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 news papers of the district or state of which one shall be in vernacular language within seven days and in addition this also be displayed in the project proponent's website permanently	Environmental clearance granted for the project along with the environmental conditions and safeguards was published in two local newspapers of the district or state, one in Hindi and the other one in English within seven days of issue i.e. on 6 th May 2020. The copies of newspaper cuttings have been submitted with half yearly compliance from April 2020 to September 2020 through email dated 30.09.2020. The same had also been displayed in the company's website.
ii.	The copies of the environmental clearance shall be submitted by the project proponent 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.	The copies of Environmental Clearance letter has been submitted to the concerned Governmental authorities as well as the local bodies/ Panchayats. The copies/ receipts have already being submitted with half yearly compliance from April 2020 to September 2020 through email dated 30.09.2020



iii.	The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitoring data on their website and update the same on half yearly basis.	This compliance report will be uploaded on the company's website.
iv.	The project proponent shall monitor the criteria pollutants level namely; PM10, So2, Nox (ambient level as well as stack emissions) or critical sectorial parameters, indicated for the project and display the same at a convenient location for disclosure to the public and put on the website of the company.	The Criteria pollutants level namely; PM10, So2, Nox (ambient level as well as stack emissions) are monitored through online monitoring stations and are connected with CPCB and HPSPCB online which is put at public domain by HP State Pollution Control Board for the disclosure to the public.
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, Forests and Climate Change at Environmental Clearance portal	The condition will be complied after submitting the compliance report.
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 Environment (Protection) Rules, 1986 as amended subsequently and put on the website of the company.	Environmental statement for each financial year in Form-V is filed online to the concerned State Pollution Control Board through the system designed by the State Board, as prescribed under Environment (Protection) Rules, 1986 as amended subsequently. The same will also be put on the company's website.
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 of the land development work and start of production operation by the project.	EC was granted by MoEF&CC on 28 th April 2020. The project activities have not yet been started.
viii.	The project authorities must strictly adhere to the stipulations made by the State Pollution	All the stipulations made by the State Pollution Control Board and the State



	Control Board and the State Government.	Government will be adhered.
ix.	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	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 shall be fulfilled.
x.	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC)	The point has been noted and complied.
xi.	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	The point has been noted and complied.
xii.	The ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	The point has been noted.
xiii.	The ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions.	The point has been noted and complied.
xiv.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full co-operation to the officer(s) of the Regional Office by furnishing the requisite data/ information/ monitoring Reports.	The point has been noted and complied.
xv.	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other	The point has been noted and complied.



	Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and other orders passed by Hon'ble Supreme Court of India/ High Courts and any other Court of Law relating to the subject matter.	
xvi.	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 This issues with the approval of Competent Authority.	The point has been noted.





SHRI OM TESTING & RESEARCH LABORATORY

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Web.: www.shriomlab.com, www.shriomlab.in

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TEST REPORT

Report Code no.: 30092021-15

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn on : 22/09/2021
Sample Drawn By : M/s Eco-Molecule Technologies & Soln.
Sample Description : Packing Floor
Sampling Time : 8 hrs
Source of Emission : Work Zone Air (Fugitive Emission)
Flow Rate : 1.03

TEST REPORT

S.No.	Parameters	Test Method	Results	Units	Emission Limits, µg/m3
1	SPM	IS:5182 Part-XXIII	4695.0	µg/m3	5000.0

*****End Of Report*****



Shri Om Testing & Research Laboratory

R. Sharma
Technical Manager

Authorized Signatory

- Note: 1. The results indicated only refer to the tested sample and listed parameters and do not endorse any product. The customer asked for the above tests only.
2. This certificate shall not be reproduced wholly or in part without prior written consent of the laboratory.
3. This certificate shall not be used in any advertising media or as evidence in the court of law without prior written consent of the laboratory.
4. The samples received shall be destroyed after 30 days from the date of issue of the certificate unless specified otherwise and sample for biological testing will be destroyed after 7 days of testing.

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TEST REPORT

Report Code no.: 30092021-17

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn on : 22/09/2021
Sample Drawn By : M/s Eco-Molecule Technologies & Soln.
Sample Description : Gypsum Storage Area
Sampling Time : 8 hrs
Source of Emission : Work Zone Air (Fugitive Emission)
Flow Rate : 1.03

TEST REPORT

S.No.	Parameters	Test Method	Results	Units	Emission Limits, µg/m ³
1	SPM	IS:5182 Part-XXIII	1516.0	µg/m ³	5000.0

*****End Of Report*****



Shri Om Testing & Research Laboratory

R. Shrivastava
Technical Manager

Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-18

Issue Date : 30.09.2021

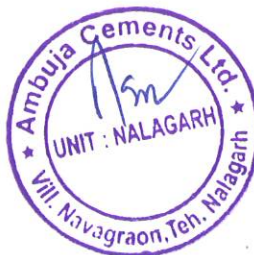
Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn on : 22/09/2021
Sample Drawn By : M/s Eco-Molecule Technologies & Soln.
Sample Description : Fly ash loading Area
Sampling Time : 8 hrs
Source of Emission : Work Zone Air (Fugitive Emission)
Flow Rate : 1.03

TEST REPORT					
S.No.	Parameters	Test Method	Results	Units	Emission Limits, µg/m ³
1	SPM	IS:5182 Part-XXIII	1850.0	µg/m ³	5000.0

*****End Of Report*****



Shri Om Testing & Research Laboratory

R. Sharma
Technical Manager

Authorized Signatory

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SHRI OM TESTING & RESEARCH LABORATORY

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TEST REPORT

Report Code no.: 30092021-16

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn on : 22/09/2021
Sample Drawn By : M/s Eco-Molecule Technologies & Soln.
Sample Description : Loading Floor
Sampling Time : 8 hrs
Source of Emission : Work Zone Air (Fugitive Emission)
Flow Rate : 1.03

TEST REPORT

S.No.	Parameters	Test Method	Results	Units	Emission Limits, $\mu\text{g}/\text{m}^3$
1	SPM	IS:5182 Part-XXIII	3150.0	$\mu\text{g}/\text{m}^3$	5000.0

*****End of Report*****



Shri Om Testing & Research Laboratory

R. Sharma
Technical Manager

Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-1

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

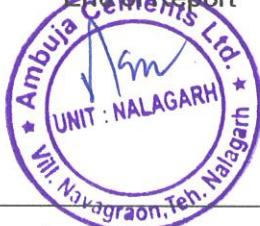
SAMPLING & ANALYSIS DATA

Sample Drawn on	:	22/09/2021
Sample Drawn By	:	M/s Eco-Molecule Technologies & Soln.
Sample Description	:	Ambient Air Monitoring
Location	:	Station No.1 (Labour Hutment Towards Jajhira)
Sampling Time	:	24 hrs
Analysis Duration	:	23/09/2021 to 26/09/2021
Flow Rate	:	1.01

TEST REPORT					
S.No.	Parameters	Test Method	Results	Units	Standard Limits
1.	RSPM (PM10)	IS:5182 Part-XXIII	74.0	µg/m3	100.0
2.	Particulate Matter (PM2.5)	CPCB Vol-I	30.0	µg/m3	60.0
3.	Sulphur Dioxide	IS:5182 Part-II	3.18	µg/m3	80.0
4.	Nitrogen Oxide	IS:5182 Part-VI	12.46	µg/m3	80.0
5.	Carbon Monoxide	IS:5182 Part-X	0.40	µg/m3	4.0
6.	Lead as Pb	IS:5182 Part-XXII	ND	µg/m3	1.0
7.	Ozone as O3	IS:5182 Part-IX	20.0	µg/m3	180.0
8.	Benzene as C6H6	IS:5182 Part-XI	ND	µg/m3	5.0
9.	Benzo(a) Pyrene	IS:5182 Part-XI	ND	µg/m3	1.0
10.	Ammonia as NH3	APHA-AIR402	ND	µg/m3	400.0
11.	Nickel as Ni	APHA-AIR420	ND	µg/m3	20.0
12.	Arsenic as As	APHA-AIR 302	ND	µg/m3	6.0

ND- Not Detectable

*****End of Report*****



Shri Om Testing & Research Laboratory

R. Sharma
Technical Manager
Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-2

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

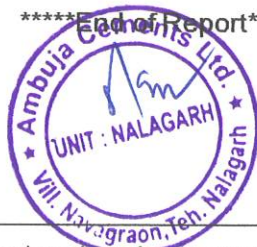
Sample Drawn on	:	22/09/2021
Sample Drawn By	:	M/s Eco-Molecule Technologies & Soln.
Sample Description	:	Ambient Air Monitoring
Location	:	Station No.2 (Rain Water Harvesting)
Sampling Time	:	24 hrs
Analysis Duration	:	23/09/2021 to 26/09/2021
Flow Rate	:	1.01

TEST REPORT

S.No.	Parameters	Test Method	Results	Units	Standard Limits
1.	Particulate Matter (PM10)	IS:5182 Part-XXIII	72.5	µg/m3	100.0
2.	Particulate Matter (PM2.5)	CPCB Vol-I	38.2	µg/m3	60.0
3.	Sulphur Dioxide	IS:5182 Part-II	1.68	µg/m3	80.0
4.	Nitrogen Oxide	IS:5182 Part-VI	8.20	µg/m3	80.0
5.	Carbon Monoxide	IS:5182 Part-X	1.40	µg/m3	4.0
6.	Lead as Pb	IS:5182 Part-XXII	ND	µg/m3	1.0
7.	Ozone as O3	IS:5182 Part-IX	22.6	µg/m3	180.0
8.	Benzene as C6H6	IS:5182 Part-XI	ND	µg/m3	5.0
9.	Benzo(a) Pyrene	IS:5182 Part-XI	ND	µg/m3	1.0
10.	Ammonia as NH3	APHA-AIR402	ND	µg/m3	400.0
11.	Nickel as Ni	APHA-AIR420	ND	µg/m3	20.0
12.	Arsenic as As	APHA-AIR 302	ND	µg/m3	6.0

Note- ND- Not Detectable

*****End of Report*****



Shri Om Testing & Research Laboratory

R. Sharma
Technical Manager
Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-3

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn on	:	22/09/2021
Sample Drawn By	:	M/s Eco-Molecule Technologies & Soln.
Sample Description	:	Ambient Air Monitoring
Location	:	Station No.3 (Administrative Building)
Sampling Time	:	24 hrs
Analysis Duration	:	23/09/2021 to 26/09/2021
Flow Rate	:	1.01

TEST RESULTS

S.No.	Parameters	Test Method	Results	Units	Standard Limits
1.	RSPM (PM10)	IS:5182 Part-XXIII	79.10	µg/m3	100.0
2.	Particulate Matter (PM2.5)	CPCB Vol-I	36.0	µg/m3	60.0
3.	Sulphur Dioxide	IS:5182 Part-II	2.28	µg/m3	80.0
4.	Nitrogen Oxide	IS:5182 Part-VI	20.33	µg/m3	80.0
5.	Carbon Monoxide	IS:5182 Part-X	1.12	mg/m3	4.0
6.	Lead as Pb	IS:5182 Part-XXII	ND	µg/m3	1.0
7.	Ozone as O3	IS:5182 Part-IX	26.8	µg/m3	180.0
8.	Benzene as C6H6	IS:5182 Part-XI	ND	µg/m3	5.0
9.	Benzo(a) Pyrene	IS:5182 Part-XI	ND	ng/m3	1.0
10.	Ammonia as NH3	APHA-AIR402	ND	µg/m3	400.0
11.	Nickel as Ni	APHA-AIR420	ND	ng/m3	20.0
12.	Arsenic as As	APHA-AIR 302	ND	ng/m3	6.0

ND- Not Detectable



Shri Om Testing & Research Laboratory

R. Sharma
Technical Manager
Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-4

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn on	:	22/09/2021
Sample Drawn By	:	M/s Eco-Molecule Technologies & Soln.
Sample Description	:	Ambient Air Monitoring
Location	:	Station No.4 (Roof Top Guest House)
Sampling Time	:	24 hrs
Analysis Duration	:	23/09/2021 to 26/09/2021
Flow Rate	:	1.01

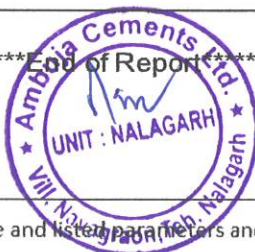
TEST REPORT

S.No.	Parameters	Test Method	Results	Units	Standard Limits
1.	RSPM (PM10)	IS:5182 Part-XXIII	68.4	µg/m3	100.0
2.	Particulate Matter (PM2.5)	CPCB Vol-I	28.20	µg/m3	60.0
3.	Sulphur Dioxide	IS:5182 Part-II	3.86	µg/m3	80.0
4.	Nitrogen Oxide	IS:5182 Part-VI	24.20	µg/m3	80.0
5.	Carbon Monoxide	IS:5182 Part-X	0.85	mg/m3	4.0
6.	Lead as Pb	IS:5182 Part-XXII	ND	µg/m3	1.0
7.	Ozone as O3	IS:5182 Part-IX	24.60	µg/m3	180.0
8.	Benzene as C6H6	IS:5182 Part-XI	ND	µg/m3	5.0
9.	Benzo(a) Pyrene	IS:5182 Part-XI	ND	ng/m3	1.0
10.	Ammonia as NH3	APHA-AIR402	ND	µg/m3	400.0
11.	Nickel as Ni	APHA-AIR420	ND	ng/m3	20.0
12.	Arsenic as As	APHA-AIR 302	ND	ng/m3	6.0

Note- ND- Not Detectable

*****End of Report*****

Shri Om Testing & Research Laboratory



R. Shree
Technical Manager
Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-5

Issue Date : 30.09.2021

**Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan**

SAMPLING & ANALYSIS DATA

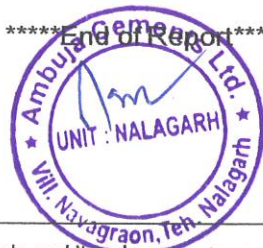
Sample Drawn on	:	22/09/2021
Sample Drawn By	:	M/s Eco-Molecule Technologies & Soln.
Sample Description	:	Ambient Air Monitoring
Location	:	Station No.5 (Near Nursery towards Pater Phaloo)
Sampling Time	:	24 hrs
Analysis Duration	:	23/09/2021 to 26/09/2021
Flow Rate	:	1.01

TEST REPORT

S.No.	Parameters	Test Method	Results	Units	Standard Limits
1.	Particulate Matter (PM10)	IS:5182 Part-XXIII	75.0	µg/m3	100.0
2.	Particulate Matter (PM2.5)	CPCB Vol-I	32.4	µg/m3	60.0
3.	Sulphur Dioxide	IS:5182 Part-II	2.16	µg/m3	80.0
4.	Nitrogen Oxide	IS:5182 Part-VI	23.0	µg/m3	80.0
5.	Carbon Monoxide	IS:5182 Part-X	1.20	µg/m3	4.0
6.	Lead as Pb	IS:5182 Part-XXII	ND	µg/m3	1.0
7.	Ozone as O3	IS:5182 Part-IX	20.4	µg/m3	180.0
8.	Benzene as C6H6	IS:5182 Part-XI	ND	µg/m3	5.0
9.	Benzo(a) Pyrene	IS:5182 Part-XI	ND	µg/m3	1.0
10.	Ammonia as NH3	APHA-AIR402	ND	µg/m3	400.0
11.	Nickel as Ni	APHA-AIR420	ND	µg/m3	20.0
12.	Arsenic as As	APHA-AIR 302	ND	µg/m3	6.0

Note- ND- Not Detectable

*****End of Report*****



Shri Om Testing & Research Laboratory

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Technical Manager
Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-6

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn on	:	22/09/2021
Sample Drawn By	:	M/s Eco-Molecule Technologies & Soln.
Sample Description	:	Ambient Air Monitoring
Location	:	Station No.6 (Near STP towards Ratyor)
Sampling Time	:	24 hrs
Analysis Duration	:	23/09/2021 to 26/09/2021
Flow Rate	:	1.01

TEST REPORT					
S.No.	Parameters	Test Method	Results	Units	Standard Limits
1	Particulate Matter (PM10)	IS:5182 Part-XXIII	73.40	µg/m ³	100.0
2.	Particulate Matter (PM2.5)	CPCB Vol-I	28.5	µg/m ³	60.0
3.	Sulphur Dioxide	IS:5182 Part-II	3.70	µg/m ³	80.0
4	Nitrogen Oxide	IS:5182 Part-VI	22.40	µg/m ³	80.0
5	Carbon Monoxide	IS:5182 Part-X	1.06	µg/m ³	4.0
6	Lead as Pb	IS:5182 Part-XXII	ND	µg/m ³	1.0
7	Ozone as O ₃	IS:5182 Part-IX	18.9	µg/m ³	180.0
8	Benzene as C ₆ H ₆	IS:5182 Part-XI	ND	µg/m ³	5.0
9	Benzo(a) Pyrene	IS:5182 Part-XI	ND	µg/m ³	1.0
10	Ammonia as NH ₃	APHA-AIR402	ND	µg/m ³	400.0
11	Nickel as Ni	APHA-AIR420	ND	µg/m ³	20.0
12	Arsenic as As	APHA-AIR 302	ND	µg/m ³	6.0

Note- ND- Not Detectable

***** End of Report *****



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Technical Manager
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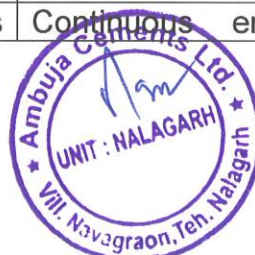
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**Compliance of Conditions of CREP recommendations
Ambuja Cements Limited Village Navagraon - Nalagarh (H.P.)**

Sl. No.	Recommendation	Compliance Status
1	Cement Plants, which are not complying with notified standards, shall do the following to meet the standards; Augmentation of existing Air Pollution Control Devices - by July 2003. Replacement of existing Air Pollution Control Devices - by July 2004	Unit is already meeting the notified emission standards.
2	Cement Plants located in critically polluted or urban areas (including 5 km distance outside urban boundary) will meet 100mg/ Nm ³ limit or particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/Nm ³ .	Emission level is maintained below 30 mg/Nm ³
3	The new cement kilns to be accorded NOC/Environmental Clearance w.e.f 1.04.2003 will meet the limit of 50 mg/Nm ³ for particulate matter emissions.	Not Applicable as there is a Standalone Grinding Unit.
4	CPCB will evolve load based standards by December 2003.	No load based standard for cement industry particularly applicable to grinding unit has been evolved
5	CPCB and NCBM will evolve SO ₂ and NO _x emission standards by June 2004.	Not Applicable as this is a standalone Grinding Unit.
6	The Cement industries will control fugitive emissions from all the raw material and products storage and transfer points by December 2003. However, the feasibility for the control of fugitive emissions from limestone and coal storage areas will be decided by the National Task Force (NTF). The NTF shall submit its recommendations within three months.	All the material transfer points are equipped with Bag Filters. Raw materials are stored in covered areas. Maximum area inside plant is either covered with Greenery or it has been concreted to prevent fugitive emission.
7	CPCB, NCBM, BIS and Oil refineries will jointly prepare the policy on use of petroleum cokes as fuel in cement kiln by July 2003.	Not Applicable as this is a standalone Grinding Unit.
8	After performance evaluation of various	Continuous emission monitoring



	types of continuous monitoring equipment and feedback form the industries and equipment manufactures, NTF will decide feasible unit operations/sections for installation of continuous monitoring equipment. The industry will install the continuous monitoring systems (CMS) by December 2003	system has been installed at Cement Mill Stack. Also a Continuous Ambient Air Quality Monitoring Station (CAAQMS) has been installed. Both the systems have been connected with CPCB and State Pollution Control Board for online data transmission.
9	Tripping in kiln ESP to be minimized by July 2003 as per the recommendations of NTF.	Not Applicable as this is a standalone Grinding Unit.
10	Industries will submit the target date to enhance the utilization of waste material by April, 2003.	All the particulate matter collected through APCEs is automatically recycled in the respected processes. More over we are using fly ash for making Pozolona Portland Cement (PPC) which is waste of Thermal Plants.
11	NCBM will carry out a study on hazardous waste utilization in cement kiln by December 2003.	Not Applicable as this is a standalone Grinding Unit.
12	Cement industries will carry out feasibility study and submit target dates to CPCB for co-generation of power by July 2003. * Non complying units shall given bank guarantee to respective SPCBs.	Not Applicable.





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TEST REPORT

Report Code no.: 30092021-27

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn on : 22/09/2021
Sample Drawn By : M/S Eco-Molecule Technologies & Solutions
Sample Quantity : 2.0 liters
Analysis Duration : 23/09/2021 to 29/09/2021
Sample Description : **Borewell Water (Borewell-1)**
Required Test Standard : IS 10500 : 2012

MICROBIOLOGICAL REQUIREMENT RESULT

S.No.	Parameter	Test Method	Results	Requirements as per IS-10500:2012
1.	<i>Escherichia coli</i>	IS-1622	Absent	Absent/100ml
2.	<i>Coliform Bacteria</i>	IS-1622	Absent	Absent/100ml

ORGANOLEPTIC & PHYSICAL PARAMETERS

S.No.	Parameter	Test Method	Result	Unit	Requirement (Acceptable Limit)	Permissible Limit in absence of alternate source
1.	Colour	IS-3025(P-04)	<1.0	Hazen Unit	5	15
2.	Odour	IS-3025(P-05)	Agreeable	-	Agreeable	Agreeable
3.	Taste	IS-3025(P-07 & 08)	Agreeable	-	Agreeable	-
4.	Turbidity	IS-3025(P-10)	<0.5	NTU	1	5
5.	pH value	IS-3025(P-11)	7.25	-	6.5-8.5	-
6.	Total dissolve solid (TDS)	IS-3025(P-16)	446.0	mg/l	500	2000

PARAMETERS CONCERNING TOXIC SUBSTANCES

S.No.	Parameter	Test method	Result	Unit	Requirement (Acceptable Limit)	Permissible Limit in absence of alternate source
1.	Cadmium (as Cd)	IS-3025(P-41)	ND	mg/l	0.003	No Relaxation
2.	Cyanide (as CN)	IS-3025(P-27)	Nil	mg/l	0.05	No Relaxation
3.	Lead (as Pb)	IS-3025(P-47)	ND	mg/l	0.01	No Relaxation
4.	Mercury (as Hg)	IS-3025(P-48)	ND	mg/l	0.001	No Relaxation
5.	Total Arsenic (as As)	IS-3025(P-37)	ND	mg/l	0.01	0.05
6.	Total Chromium (as Cr)	IS-3025(P-52)	ND	mg/l	0.05	No Relaxation

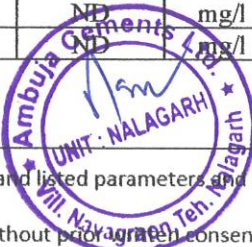
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Technical Manager

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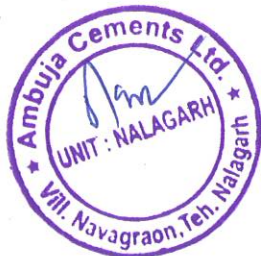
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GENERAL PARAMETERS CONCERNING SUBSTANCES UNDESIRABLE IN EXCESSIVE AMOUNTS

S.No.	Parameter	Test method	Result	Unit	Requirement (Acceptable Limit)	Permissible Limit in absence of alternate source
1.	Aluminium (as Al)	IS: 3025 (P- 55)	ND	mg/l	0.03	0.2
2.	Boron (as B)	IS: 3025 (P- 57)	ND	mg/l	0.5	1.0
3.	Calcium (as Ca)	IS: 3025 (P- 40)	33.6	mg/l	75.0	200
4.	Chloride (as Cl)	IS: 3025 (P- 32)	33.0	mg/l	250.0	1000
5.	Copper (as Cu)	IS: 3025 (P-42)	0.002	mg/l	0.05	1.5
6.	Fluoride (as F)	IS: 3025 (P-60)	0.12	mg/l	1.0	1.5
7.	Free Residual Chlorine	IS: 3025 (P-26)	Nil	mg/l	0.2	1.0
8.	Iron (as Fe)	IS: 3025(P-53)	0.124	mg/l	0.3	No Relaxation
9.	Magnesium (as Mg)	IS: 3025 (P-46)	24.8	mg/l	30	100
10.	Manganese (as Mn)	IS: 3025 (P-59)	BDL	mg/l	0.1	0.3
11.	Mineral Oil	Clause 6 of IS: 3025	0.01	mg/l	0.5	No Relaxation
12.	Nitrate (as NO ₃)	IS: 3025 (P- 34)	0.40	mg/l	45	No Relaxation
13.	Selenium (as Se)	IS: 3025 (P- 56)	Nil	mg/l	0.01	No Relaxation
14.	Sulphate (as SO ₄)	IS: 3025 (P- 24)	32.0	mg/l	200.0	400
15.	Sulphide (as H ₂ S)	IS-3025 (P-29)	Nil	mg/l	0.05	No Relaxation
16.	Alkalinity (as Ca CO ₃)	IS: 3025 (P- 23)	180	mg/l	200.0	600
17.	Total Hardness (as CaCO ₃)	IS: 3025 (P- 21)	268.0	mg/l	200.0	600
18.	Zinc (as Zn)	IS: 3025 (P- 49)	0.038	mg/l	7.0	15
19.	Phenolic Compound as (C ₆ H ₅ OH)	IS: 3025 (P- 43)	Nil	mg/l	0.001	0.002
20.	Surfactants (Anionic as MBAS)	EPA Method 425.1	<0.01	mg/l	0.2	0.1

Remarks – As per IS 10500: 2012, standards the sampled water is suitable for potable, purpose.

*****End Of Report*****



Shri Om Testing & Research Laboratory

R. Shree
Technical Manager
Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-28

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn on : 22/09/2021
Sample Drawn By : M/S Eco-Molecule Technologies & Solutions
Sample Quantity : 2.0 liters
Analysis Duration : 23/09/2021 to 29/09/2021
Sample Description : **Borewell Water (Borewell-2)**
Required Test Standard : IS 10500 : 2012

MICROBIOLOGICAL REQUIREMENT RESULT

S.No.	Parameter	Test Method	Results	Requirements as per IS-10500:2012
1.	<i>Escherichia coli</i>	IS-1622	Absent	Absent/100ml
2.	<i>Coliform Bacteria</i>	IS-1622	Absent	Absent/100ml

ORGANOLEPTIC & PHYSICAL PARAMETERS

S.No.	Parameter	Test Method	Result	Unit	Requirement (Acceptable Limit)	Permissible Limit in absence of alternate source
1.	Colour	IS-3025(P-04)	<1.0	Hazen Unit	5	15
2.	Odour	IS-3025(P-05)	Agreeable	-	Agreeable	Agreeable
3.	Taste	IS-3025(P-07 & 08)	Agreeable	-	Agreeable	-
4.	Turbidity	IS-3025(P-10)	<0.5	NTU	1	5
5.	pH value	IS-3025(P-11)	7.28	-	6.5-8.5	-
6.	Total dissolve solid (TDS)	IS-3025(P-16)	450.0	mg/l	500	2000

PARAMETERS CONCERNING TOXIC SUBSTANCES

S.No.	Parameter	Test method	Result	Unit	Requirement (Acceptable Limit)	Permissible Limit in absence of alternate source
1.	Cadmium (as Cd)	IS-3025(P-41)	ND	mg/l	0.003	No Relaxation
2.	Cyanide (as CN)	IS-3025(P-27)	Nil	mg/l	0.05	No Relaxation
3.	Lead (as Pb)	IS-3025(P-47)	ND	mg/l	0.01	No Relaxation
4.	Mercury (as Hg)	IS-3025(P-48)	ND	mg/l	0.001	No Relaxation
5.	Total Arsenic (as As)	IS-3025(P-37)	ND	mg/l	0.01	0.05
6.	Total Chromium (as Cr)	IS-3025(P-52)	ND	mg/l	0.05	No Relaxation

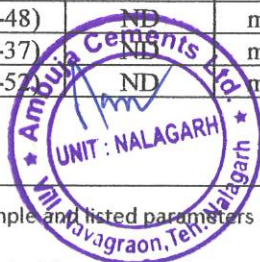
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R. S. Singh
Technical Manager

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GENERAL PARAMETERS CONCERNING SUBSTANCES UNDESIRABLE IN EXCESSIVE AMOUNTS

S.No.	Parameter	Test method	Result	Unit	Requirement (Acceptable Limit)	Permissible Limit in absence of alternate source
1.	Aluminium (as Al)	IS: 3025 (P- 55)	ND	mg/l	0.03	0.2
2.	Boron (as B)	IS: 3025 (P- 57)	ND	mg/l	0.5	1.0
3.	Calcium (as Ca)	IS: 3025 (P- 40)	32.3	mg/l	75.0	200
4.	Chloride (as Cl)	IS: 3025 (P- 32)	33.5	mg/l	250.0	1000
5.	Copper (as Cu)	IS: 3025 (P-42)	0.003	mg/l	0.05	1.5
6.	Fluoride (as F)	IS: 3025 (P-60)	0.14	mg/l	1.0	1.5
7.	Free Residual Chlorine	IS: 3025 (P-26)	Nil	mg/l	0.2	1.0
8.	Iron (as Fe)	IS: 3025(P-53)	0.127	mg/l	0.3	No Relaxation
9.	Magnesium (as Mg)	IS: 3025 (P-46)	24.4	mg/l	30	100
10.	Manganese (as Mn)	IS: 3025 (P-59)	BDL	mg/l	0.1	0.3
11.	Mineral Oil	Clause 6 of IS: 3025	0.01	mg/l	0.5	No Relaxation
12.	Nitrate (as NO ₃)	IS: 3025 (P- 34)	0.41	mg/l	45	No Relaxation
13.	Selenium (as Se)	IS: 3025 (P- 56)	Nil	mg/l	0.01	No Relaxation
14.	Sulphate (as SO ₄)	IS: 3025 (P- 24)	33.0	mg/l	200.0	400
15.	Sulphide (as H ₂ S)	IS-3025 (P-29)	Nil	mg/l	0.05	No Relaxation
16.	Alkalinity (as Ca CO ₃)	IS: 3025 (P- 23)	1740	mg/l	200.0	600
17.	Total Hardness (as CaCO ₃)	IS: 3025 (P- 21)	272.0	mg/l	200.0	600
18.	Zinc (as Zn)	IS: 3025 (P- 49)	0.040	mg/l	8.0	15
19.	Phenolic Compound as (C ₆ H ₅ OH)	IS: 3025 (P- 43)	Nil	mg/l	0.001	0.002
20.	Surfactants (Anionic as MBAS)	EPA Method 425.1	<0.01	mg/l	0.2	0.1

Remarks – As per IS 10500: 2012, standards the sampled water is suitable for potable, purpose.

*****End Of Report*****



Shri Om Testing & Research Laboratory

R. S. S. S.
Technical Manager
Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-13

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn By : M/S Eco-Molecule team
Sample Description : STP -2 Outlet Outside Plant
Sample Drawn On : 22/09/2021
Sample Quantity/Packing detail : 2 lit/Plastic Cane
Weather Conditions : Normal

S.No	Parameters	Units	Test Method	Results	Prescribed Standard Limits
1	pH	--	IS:3025(Part-11)	7.46	5.5 to 8.5
2	Conductivity	μmoh-1	APHA-5220 B-2017	1036.0	Not specified
3	TDS	mg/l	IS:3025(Part-17)	728.0	2100.0
4	TSS	mg/l	IS-3025(P-16)	22.0	100.0
5	Oil & Grease	mg/l	IS:3025(Part-44)	0.12	10.0
6	Sulfide	mg/l	APHA-5220 B-2017	Nil	1.0
7	Cyanide	mg/l	APHA-23 rd Ed.-2017	ND	0.20
8	Phosphate	mg/l	APHA-23 rd Ed.-2017	0.12	5.0
9	Chemical Oxygen Demand	Mg/l	APHA-23 rd Ed.-2017	48.0	250.0
10	Biological Oxygen Demand	mg/l	APHA-23 rd Ed.-2017	8.0	30.0
11	Phenolic Comp.	mg/l	APHA-23 rd Ed.-2017	0.012	1.0
12	Mercury	mg/l	APHA-23 rd Ed.-2017	ND	0.10
13	Lead	Mg/l	APHA-23 rd Ed.-2017	ND	0.10
Microbiological Test					
14	Fecal Coliform, MPN	MPN/ 100ml	APHA-23 rd Ed.-2017	28	1000.0

*****End of Report*****



Shri Om Testing & Research Laboratory

R. Shrivastava
Technical Manager
Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-14

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

SAMPLING & ANALYSIS DATA

Sample Drawn By : M/S Eco-Molecule team
Sample Description : STP -1 Outlet Inside Plant
Sample Drawn On : 22/09/2021
Sample Quantity/Packing detail : 2 lit/Plastic Cane
Weather Conditions : Normal

S.No	Parameters	Units	Test Method	Results	Prescribed Standard Limits
1	pH	--	IS:3025(Part-11)	7.26	5.5 to 8.5
2	Conductivity	μmoh-1	APHA-5220 B-2017	1104.0	Not specified
3	TDS	mg/l	IS:3025(Part-17)	920.0	2100.0
4	TSS	mg/l	IS-3025(P-16)	21.0	100.0
5	Oil & Grease	mg/l	IS:3025(Part-44)	0.12	10.0
6	Sulfide	mg/l	APHA-5220 B-2017	Nil	1.0
7	Cyanide	mg/l	APHA-23 rd Ed.-2017	ND	0.20
8	Phosphate	mg/l	APHA-23 rd Ed.-2017	0.10	5.0
9	Chemical Oxygen Demand	Mg/l	APHA-23 rd Ed.-2017	76.0	250.0
10	Biological Oxygen Demand	mg/l	APHA-23 rd Ed.-2017	10.0	30.0
11	Phenolic Comp.	mg/l	APHA-23 rd Ed.-2017	0.010	1.0
12	Mercury	mg/l	APHA-23 rd Ed.-2017	ND	0.10
13	Lead	Mg/l	APHA-23 rd Ed.-2017	ND	0.10
Microbiological Test					
14	Fecal Coliform, MPN	MPN/ 100ml	APHA-23 rd Ed.-2017	24	1000.0

*****End of Report*****



Shri Om Testing & Research Laboratory

R. Shalini
Technical Manager
Authorized Signatory

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TEST REPORT

Report Code no.: 30092021-22

Issue Date : 30.09.2021

Issue to: M/s Ambuja Cement Ltd.,
Nalagarh, Distt. Solan

AMBIENT NOISE MONITORING DATA

Sample Drawn on : 22/09/2021
Sample Drawn By : M/s Eco-Molecule Technologies & Soln.
Sample Description : Cement Manufacturing
Sampling Time : Day & Night
Source of Emission : Ambient Noise

S.No.	Location Name	Method	Results	Standard Limits Leq dB(A)
1	Near Material Gate (Day Time), Leq dB (A)	IS:9989 (Reaffirmed 2014)	60.4	75.0
	Near Material Gate (Night Time), Leq dB(A)		29.4	70.0
2	Near Admin Building (Day Time), Leq dB(A)		54.6	75.0
	Near Admin Building (Night Time), Leq dB (A)		42.8	70.0
3	Near Scrap Yard (Day Time), Leq dB (A)		69.2	75.0
	Near Scrap Yard (Night Time), Leq dB (A)		43.4	70.0
4	Near STP on Road (Day Time), Leq dB (A)		65.2	75.0
	Near STP on Road (Night Time), Leq dB (A)		46.0	70.0
5	Near MPSS Building (Day Time), Leq dB (A)		68.5	75.0
	Near MPSS Building (Night Time), Leq dB (A)		46.2	70.0
6	In front of DO (Day Time), Leq dB (A)		68.3	75.0
	In front of DO (Night Time), Leq dB (A)		58.6	70.0
7	Near Borewell Dispensary (Day Time), Leq dB (A)		64.3	75.0
	Near Borewell Dispensary (Night Time), Leq dB(A)		52.0	70.0
8	Near Store Building (Day Time), Leq dB (A)		66.0	75.0
	Near Store Building (Night Time), Leq dB (A)		56.4	70.0
9	Near Weigh Bridge (Day Time), Leq dB (A)		61.7	75.0
	Near Weigh Bridge (Night Time), Leq dB (A)		52.6	70.0
10	Near Rain Water Harvesting Structure (Day Time), Leq dB(A)		68.4	75.0
	Near Rain Water Harvesting Structure (Night Time), Leq dB(A)		42.7	70.0

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R. Sharma
Technical Manager
Authorized Signatory

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