

# Environmental and Social Due Diligence Report

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Project Number: 47083-004  
September 2021

## INDIA: Accelerating Infrastructure Investment Facility in India – Tranche 3

Ashoka Ankleshwar Manubar Expressway Private Limited (Part 11 of 24)

Prepared by India Infrastructure Finance Company Limited for the India Infrastructure Finance Company Limited and the Asian Development Bank.

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### 3. EIA COMPLIANCE MITIGATION MATRIX

Environmental Issue	Mitigation Measures	Cross Reference to Documents	Time Frame
Utility Relocation	All utilities identified for relocation at Project Highway to be shifted after prior approval of respective agencies. Utility relocation shall be All utilities identified for relocation in the DPR or as required by the Authority for construction to be carried out in the shortest possible time to reduce inconvenience to public. Prior approval of The concerned utility agencies to be obtained by Concessionaire/NHAI.	Concession Agreement / MoRTH 110	Start of construction of relevant section
Impact on land use outside ROW	Construction related activities shall be preferably restricted within project Highway ROW.	Concession Agreement / MoRTH 201.2	During entire site clearance and construction phases
Ecological impacts due to tree cutting	Trees falling within the alignment which are to Be removed before Commencement of Construction shall be identified and approved by the Concerned Authority. Prior permission from Forest Authorities/concerned tree Authority Shall be obtained by the Concessionaire/NHAI.		start of construction of relevant section
Local Traffic Arrangement	Temporary traffic arrangement during Construction within ROW shall be planned as per guidelines of the Concession Agreement. This plan shall be periodically reviewed with respect to site conditions. During site clearance activity, the demolition debris shall be preferably removed as quickly as possible and with Deployment of more vehicles for the purpose.	Concession Agreement / MoRTH: 112	During site clearance and construction
Traffic Control and Safety	All necessary measures to be taken for the safety of traffic during demolition and site clearing Activities. Shall provide, erect and maintain such barricades, including signs, markings, flags, lights and flagmen as may be required for the information and protection of traffic	MoRTH: 112.4 MoRTH: 112	During Construction
Safety of Pedestrians	Special consideration shall be given to local traffic management for safety of pedestrians	MoRTH: 112.2	During Construction
Plying vehicles on unpaved roads	Unpaved roads, if used by the Contractor, shall be sprinkled with water periodically to control the fugitive dust emissions.	MoRTH 111.10	During Construction Phase
Material Spill	All vehicles delivering construction material to the site shall be protected/covered to avoid material spillage	MoRTH 111.9 MoRTH 111.11 MoRTH 111.12	During Construction Phase
Using. Hot mix/Concrete /Asphalt Plants	Ensure that all new Crushing plants, Batching Plants and Hot Mix plants which are installed, are licensed for operation by concerned authorities.	MoRTH 111.5	During Construction Phase

Environmental Issue	Mitigation Measures	Cross Reference to Documents	Time Frame
Watering to control dust at site	Construction site to be watered periodically to minimize fugitive dust generation	MoRTH111.8	During construction phase
Roads used for transport	Ensure that the transport vehicles used to ferry materials and dispose debris does not create Hazardous conditions for general traffic.	MoRTH111.9	During construction phase
Barricading site	The construction site should be barricaded at all times with adequate marking, flags, reflectors etc. for the safety of general traffic and movement and Pedestrians	MoRTH112	During construction phase
Earthwork	All earthwork and construction material shall be dumped in such a manner to minimize generation of dust and spillage on roads.	MoRTH201.4	During construction phase
Idling of vehicles	Idling of delivery trucks or other equipment, preferably, shall not be permitted for parking when they are not in active use. This practice must be ensured especially near sensitive receptors like places of worship.	MoRTH201.2	During construction phase
Drilling Operations	All possible and practical measures to control noise emission during drilling operations shall be employed.	MoRTH111	During construction phase
Construction equipment emissions	Exhaust emissions of construction equipment shall adhere to pollution control emission norms. Of Govt.	Legal requirement	During construction
Noise impact construction related plants & equipments.	All construction equipments shall be fitted with exhaust silencers. Damaged silencers to be promptly replaced by Concessionaire.	MoRTH111	During construction
Noise impact due to operation of DG sets.	DG sets, if used, shall adhere to noise standards.	MoRTH 111	During construction
Exposure to Loud Noise	Workers exposed to loud noise (As per Factory Act requirements) shall wear earplugs/earmuffs	MoRTH 111.6	During construction
Storage of construction material	Construction material containing fine particles shall be stored in such a manner, so that sediment laden water does not drain into nearby storm water drains and underground sewage pipes. If the channel/drain get blocked, concessionaire should ensure that they are cleaned especially during monsoon	MoRTH:306	During construction
Silting of water bodies	Silting of soil into water bodies viz., River, Nallah/Drain, shall be prevented as far as possible by adopting soil erosion control	MoRTH Guidelines 305 through 309	During construction
Foundation excavation debris	Bentonite slurry or similar debris generated from pile driving or other construction activities shall be disposed such that it does not flow into surface water bodies.	Project requirement	During construction
Work during monsoon near water bodies	Construction work at sections close to water bodies shall be avoided or minimized during monsoon, as far as possible.	Project requirement	During construction

Environmental Issue	Mitigation Measures	Cross Reference to Documents	Time Frame
Inspection of site	Daily inspection at construction site should be carried out to ensure removal of construction debris	MORTH 301.3	During construction Phase
Earthwork debris disposal	As soon as construction is over the surplus earth should be utilized to fill up low-lying areas or from the dumping area. In no case, loose earth should be allowed to pile up along alignment.	MoRTH 301.3	During construction Phase
Debris Disposal	Debris generated due to dismantling of existing pavement/structures shall suitably be disposed of to avoid inconvenience to General Public. Good disposal practices recommended by various agencies/authorities	MORTH 301.3	During construction Phase
Soil contamination by construction wastes, fuel etc.	Oil and fuel spills from construction equipment shall be minimized. Silt/sediment should be collected and stockpiled for possible reuse as surfacing of slopes. All the diversion and bunds shall be removed such that there should be minimum amount of sediment generation. At the construction camps, the sewage system shall be properly designed and built so that no water pollution takes place to any water body or watercourse.	Project requirement	During construction
Sourcing Quarry materials	Sand, aggregates and other quarry material shall be sourced from licensed / approved quarries.	MoRTH 111.3	During construction Phase
Aesthetics and Landscape	Landscaping of the median, embankment slopes, be carried out as provided in the Concession Agreement.	Project requirement	During fag end of construction Phase
Providing Labour camps and facilities	Shall provide facilities with respect to location of labor camps, providing sanitation facilities and labor welfare issues etc.	MoRTH 105.2	During construction
Occupational Health and Safety	Shall supply all necessary safety appliances such as safety goggles, helmets, safety belts, ear plugs, masks etc. to the worker and staff.	MoRTH 105.2	During construction
Safety Precautions	Adequate precautions shall be taken to prevent danger from electrical equipment. All machines / equipment used shall conform to the relevant		During construction
Availability of first aid kit at construction site	A readily available first aid unit including an adequate supply of sterilized dressing material and appliances shall be provided as per the Requirement under the Factory Act. First Aid Kit to be kept at Project Offices and Plant Area	MoRTH 105.2	During construction
Workers health and hygiene	All anti-malarial measures shall be complied with, including filling up of burrow pits.	MoRTH 105.2	During construction

#### **4. EXECUTIVE SUMMARY**

Good transportation systems are lifeline to the area they serve. Provision of efficient Road Network will have significant impact on all-round development of the region. A good road network helps in the success of all development activities, be it in the sphere of movement of people and goods, agriculture, commerce, education, health, and social welfare, or even maintenance of law and order and security.

National Highways Authority of India has taken up Vadodara-Mumbai Expressway which is one of proposed Eight lane expressways in India.

The proposed Main Expressway passes through the states of Maharashtra, Gujarat and Union territory of Dadra & Nagar Haveli which is a part of Bharatmala Pariyojana which will have all the new expressways developed as Greenfield eight-lane access-controlled expressways. The total length of the proposed expressway is about 379 Km. and runs generally parallel to the existing NH-8. The alignment of this package passes mainly through plain cultivated and barren areas. It passes through Vadodara, Bharuch, Surat districts in the state of Gujarat. Rice and various types of fruits are main agriculture production of this state. These districts are also rich in industrial production. There are many industrial estates and factories in these states both in public and private sectors, which will be benefited from this expressway being consolidated movement is expected to improve efficiency of freight movement on existing corridors and reduce logistics cost by 25%.

National Highways Authority of India has awarded the project for "Construction of Eight Lane Vadodara Kim Expressway from Km 279.00 to Km 292.00 (Ankleshwar to Manubar Section of Vadodara Mumbai Expressway) in the State of Gujarat under NHDP Phase - VI to bidder i.e. M/s Ashoka Concessions Limited.

The bidder pursuant to condition of Concession Agreement has formed a SPV Company i.e. M/s Ashoka Ankleshwar Manubar Expressway Private Limited (Concessionaire)

## 5. LOCATION MAP



## 6. SALIENT FEATURES OF PROJECT

Sr. No.	Description	Details
1	Name of Project	“Construction of Eight Lane of Vadodara Kim Expressway from Km 279.00 to Km 292.00 (Ankleshwar to Manubar Section of Vadodara Mumbai Expressway) in the State of Gujarat under NHDP Phase -VI on HAM mode (Phase IA-Package IV)”.
2	Authority	National Highways Authority of India
3	Independent Engineer	M/s SA Infrastructure Consultants Pvt Ltd.
4	Concessionaire	M/s Ashoka Ankleshwar Manubar Expressway Private Limited
5	EPC Contractor	M/s Ashoka Buildcon Limited
6	Letter Of Award	28-Mar-2018
7	Date of Agreement	11-May-2018
8	Appointed Date	10-Dec-2018
9	Construction Period	910 days from Appointed date and as per the condition set forth in CA
10	Scheduled Completion Date	7-June-2021
11	Concession period	910 days + 15 years from COD
12	Bid Project Cost	Rs.1687.00 Cr
13	Length of the project Expressway	13.00 KM
14	Type of Pavement	Rigid Pavement



## 7. GUJARAT POLLUTION CONTROL BOARD NOC & CONSENT TO OPERATE DETAILS



### Gujarat Pollution Control Board

C-1/119/3, GIDC, Phase-II, Narmadanagar, BHARUCH-392 015. Phone : (02642) 246333

Email : ro-gpcb-bhar@gujarat.gov.in Web site : www.gpcb.gujarat.gov.in

**Bv R.P.A.D**

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution) Act-1981 and Authorization under rule 6(2) of the Hazardous and Other Waste (Management and Trans Boundary Movement) Rules, 2016 Framed under Environment Protection Act, 1986.

And whereas Board has received consolidated **Application No: 149225 dated 05/01/2019** for the consolidated consent and authorization (CC&A) Fresh of this board under the provisions/ rules of the aforesaid Acts consent & Authorization is hereby granted as under.

#### **CONSOLIDATED CONSENT AND AUTHORIZATION:**

(Under the provisions / rules of the aforesaid environmental acts)

**TO,**

✓ **ASHOKA BUILDCON LIMITED(66112),  
PLOT NO: 184,185,186,190,191,193,194,203,202/1,202/3 \u0026 201/2,  
DAHEGAM- 392012,  
TAL & DIST: BHARUCH.**

1. **Consent order No. AWH-34209, Date of Issue: 30/01/2019.**
2. The consent under Water Act 1974, shall be valid up to **31/12/2023** for the use of outlet for the discharge of treated effluent and Authorization under Environment (Protection) Act, 1986 shall be valid up to **31/12/2023** to operation of industrial plan for manufacture of the following products:

Sr. No.	Name of product	Quantity
1	READY MIX CONCRETE	36585 MT/Month

#### **3. CONDITIONS UNDER WATER ACT 1974:**

- 3.1 Source of water: **Tankers**
- 3.2 The Total Quantity of Water consumption shall not exceed **89 KL/day** ( Break up as below )
  - a) **Domestic : 10 KL/day**
  - b) **Industrial: 79 KL/day**
- 3.3 The Total Quantity of Waste Water generation shall not exceed **7 KL/day** (Break up as below)
  - a) **Domestic : 7 KL/Day**
  - b) **Industrial: NIL**
- 3.4 There shall be no generation/discharge of the industrial effluent from the manufacturing process and other ancillary industrial operations.
- 3.5 Sewage shall be disposed off through Septic tank/soak pit system.
- 3.6 The unit shall affix of water meters as per Section 4 (1) of the water (Prevention and Control of Pollution) Cess Act - 1977 for the purpose of measuring and recording the quantity of water Consumed at such places as may be required, within 15 days and it shall be presumed that the quantity indicated by the meter has been consumed by the industry until the contrary is proved.

Outward No:1540

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# Gujarat Pollution Control Board

C-1/119/3, GIDC, Phase-II, Narmadanagar, BHARUCH-392 015. Phone : (02642) 246333  
Email : ro-gpcb-bhar@gujarat.gov.in Web site : www.gpcb.gujarat.gov.in

## 4. CONDITIONS UNDER THE AIR ACT:

4.1 The following shall be used as a fuel in Boiler.

Sr. No.	Fuel	Quantity
1	Diesel	616 Lit/Hour

4.2 The flue gas emission through stack attached to D.G sets (320 KVA) shall conform to following standards.

Stack no.	Stack Attached to	Stack height in meter	APCM	Parameter	Permissible Limit
1	D.G set (320 KVA) 2 Nos.	3	-----	Particulate matter SO <sub>2</sub> NO <sub>x</sub>	< 150 mg/NM <sup>3</sup> < 100 ppm < 50 ppm

4.3 There shall be no process gas emission from the manufacturing process and other ancillary industrial operations.

4.4 Ambient air quality within the premises of the unit shall conform to the following standards: -

PARAMETER	PERMISSIBLE LIMIT **
Particulate matter (size less than 10 µm)	100 Microgram per cubic meter
Particulate matter (size less than 2.5 µm)	060 Microgram per cubic meter
Oxides of Sulphur	080 Microgram per cubic meter
Oxides of Nitrogen	080 Microgram per cubic meter

\*\* 24 hourly mentioned values, shall be complied with 98 % of the time in a year 2 % of the time, they may exceed the limits but not on two consecutive days of monitoring.

4.5 The Industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75 dB(a) during day time and 70 dB (A) during night time. Daytime is reckoned in between 6a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.

4.6 The applicant shall provide proper ventilation and exhaust facilities so as to maintain healthy working atmosphere within the factory premises.

## 5. AUTHORIZATION AS PER HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY) RULES, 2016 Form-2 [See rule 6 (2)]

5.1 Number of authorization: AWH-34209.

5.2 ASHOKA BUILDCON LIMITED(66112) is hereby granted an authorization to operate facility for following hazardous waste on the premises situated at PLOT NO. 184, 185, 186, 190, 191, 193, 194, 203, 202/1,202/3 u0026 201/2, DAHEGAM- 392012, TAL & DIST: BHARUCH.

Sr. No.	Waste	Schedule & Category	Quantity	Facility
1	Used or spent oil	1-5,1	0.050 MT/year	Collection, Storage, Reuse

5.3 The authorization shall be in force for a period up to 31/12/2023.

5.4 The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

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## Gujarat Pollution Control Board

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- 5.5 The authorization is granted to operate a facility for collection, storage within factory premises transportation and ultimate disposal of Hazardous wastes as per condition no. 5.2 to the industry having valid CCA of this Board.

### 6. TERMS AND CONDITIONS OF AUTHORIZATION:

- The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.
- The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
- The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
- Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a breach of this authorization.
- It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
- An application for the renewal of an authorization shall be made as laid down in rules 6(2) under Hazardous Waste and Other Waste Rules, 2016.
- Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.

### 7. GENERAL CONDITION:

- Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is at least 1000 trees per acre of land and a green belt of 10/20/30 meters width is developed.
- The applicant shall have to submit the returns in prescribed form regarding water consumption and shall have to make payment of water cess to the Board under the Water Cess Act- 1977.
- In case of change of ownership/management the name and address of the new owners/partners/directors/proprietor should immediately be intimated to the Board.
- The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gaseous emission or sewage waste from the proposed Industrial plant.
- The applicant is required to make applications to this Board for this purpose in the prescribed forms under the provisions of the Water Act-1974, the Air Act-1981 and the Environment (Protection) Act-1986.
- The applicant also comply with the General conditions as per Annexure - I attached herewith (No.1 to 38) (whichever applicable).
- The concentration of Noise in ambient air within the premises of industrial unit shall not exceed following levels:  
Between 6 A.M. and 10 P.M: 75 dB (A)  
Between 10 P.M. and 6 A.M: 70 dB (A)
- Applicant is required to comply with the manufacturing, Storage and Import of Hazardous Chemicals Rules-1989 framed under the Environment (Protection) Act-1986.

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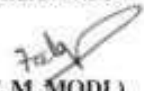


## Gujarat Pollution Control Board

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- 7.9 If it is established by any competent authority that the damage is caused due to their industrial activities to any person or his property, in that case they are obliged to pay the compensation as determined by the competent authority.
- 7.10 In Future in case of any new Acts/Rules, Circular Unit will have to follow the same.

For and on behalf of  
GUJARAT POLLUTION CONTROL BOARD

  
( F. M. MODI )  
REGIONAL OFFICER

NO: GPCB / BRCH / CCA / ID-66112/2019/

Date:

**ISSUED TO:**

ASHOKA BUILDCON LIMITED(66112),

PLOT NO: 184,185,186,190,191,193,194,203,202/1,202/3 u0026 201/2,

DAHEGAM- 392012,

TAL & DIST: BHARUCH.

Outward No: 15484, 27/02/2019



## Gujarat Pollution Control Board

C-1/119/3, GIDC, Phase-II, Narmadanagar, BHARUCH-392 015. Phone : (02642) 246333.  
Email : ro-gpcb-bhar@gujarat.gov.in Web site : www.gpcb.gujarat.gov.in

**By R.P.A.D**

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution) Act-1981 and Authorization under rule 6(2) of the Hazardous and Other Waste (Management and Trans Boundary Movement) Rules, 2016 Framed under Environment Protection Act, 1986.

And whereas Board has received Application No: 150841 dated 13/02/2019 for the consolidated consent and authorization (CC&A) of this board under the provisions/ rules of the aforesaid Acts consent & Authorization is hereby granted as under.

### **CONSOLIDATED CONSENT AND AUTHORIZATION:**

(Under the provisions / rules of the aforesaid environmental acts)

TO,  
M/S. ASHOKA BUILDCON LTD. (65902)  
SURVEY NO.: 156,  
VILL.: KUKARWADA-392130,  
TAL & DIST: BHARUCH

1. Consent order No.AWH-34629, Date of Issue: 22/02/2019.
2. The consent under Water Act 1974, shall be valid up to 31/12/2023, the consent under Air Act-1981& Authorization under Environment (Protection) Act, 1986 shall be valid up to 31/12/2023 to operation of industrial plan for manufacture of the following products:

Sr. No	Product	Quantity
1	READY MIX CONCRETE	17280 M <sup>3</sup> /Month

### **SPECIFIC CONDITION:**

- Applicant shall not produce any products as well as not carry out any activities for products/process listed in the EIA Notification 14/09/2006 as amended from time to time, requiring prior Environmental Clearance from competent authority.

### **3. CONDITIONS UNDER WATER ACT:**

- 3.1. Water source: Tankers
- 3.2. The quantity of total water consumption shall not exceed 96 KL/Day. (break up as below)
  - a) Domestic - 4 KL/Day
  - b) Industrial - 92 KL/Day
- 3.3. The quantity of total waste water generation shall not exceed 1.5 KL/Day. (break up as below)
  - a) Domestic - 1.5 KL/Day
  - b) Industrial - NIL
- 3.4. There shall be no generation /discharge of the industrial effluent from the manufacturing process and other ancillary industrial operations.
- 3.5. Sewage shall be disposed off through septic tank/soak pit system.
- 3.6. The unit shall affix of water meters as per Section 4 (1) of the water (Prevention and Control of Pollution) Cess Act - 1977 for the purpose of measuring and recording the quantity of water Consumed at such places as may be required, within 15 days and it shall be presumed that the quantity indicated by the meter has been consumed by the industry until the contrary is proved.





# Gujarat Pollution Control Board

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## 4. CONDITIONS UNDER AIR ACT:

4.1. The following shall be used as fuel in D. G. set.

Sr. No.	Fuel	Quantity
1	Diesel	16 Lit/Hr

4.2. The flue gas emission through stack attached to D.G. set shall conform to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Parameter	Permissible Limit
1	D.G. set (2 no.) (125 kVA each)	1	Particulate matter SO <sub>2</sub> NO <sub>x</sub>	150 mg/NM <sup>3</sup> 100 ppm 50 ppm

4.3. There shall be no process gas emission from the manufacturing process and other ancillary industrial operations.

4.4. Ambient air quality within the premises of the industry shall conform to the following standards

PARAMETERS	PERMISSIBLE LIMIT (Microgram/M <sup>3</sup> )	
	Annual	24 Hrs Average
Particulate Matter-10 (PM <sub>10</sub> )	60	100
Particulate Matter- 2.5 (PM <sub>2.5</sub> )	40	60
SO <sub>2</sub>	50	80
NO <sub>x</sub>	40	80

## 5. AUTHORIZATION AS PER HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY) RULES, 2016 Form-2 [See rule 6 (2)]

5.1. Number of authorization: AWH-34629

5.2. **M/S. ASHOKA BUILDCON LTD.** is hereby granted an authorization to operate facility for following hazardous waste on the premises situated at SURVEY NO.: 156, VILL: KUKARWADA-392130, TAL & DIST: BHARUCH

Sr. No.	Waste	Sch. & Cat.	Quantity per Annum	Facility
1	Used or spent oil	1-5.1	1 KL	Collection, storage, transportation, reuse as lubricant or sell to authorized re-processor

5.3. The authorization shall be in force for a period up to dated 31/12/2023.

5.4. The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

5.5. The authorization is granted to operate a facility for collection, storage within factory premises transportation and ultimate disposal of Hazardous wastes as per condition no. 5.2 to the industry having valid CC&A of this Board.

## 5.6. TERMS AND CONDITIONS OF AUTHORIZATION:

- The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.
- The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
- The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
- Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a breach of this authorization.
- The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site specific possible scenarios such as spillage.

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## Gujarat Pollution Control Board

C-1/119/3, GIDC, Phase-II, Narmadanagar, BHARUCH-392 015.

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leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;

- f) The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Wastes and Penalty"
- g) It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
- h) An application for the renewal of an authorization shall be made as laid down in rules 6(2) under Hazardous Waste and Other Waste Rules, 2016.
- i) The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
- j) The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
- k) The hazardous and other wastes which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
- l) The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
- m) Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
- n) The waste generator shall be totally responsible for (i.e. collection, storage, transportation and ultimate disposal) the wastes generated.
- o) Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form-4 by 30<sup>th</sup> day of June of every year for the preceding period April to March.
- p) In case of any accident, details of the same shall be submitted in Form-11 to Gujarat Pollution Control Board.
- q) As per "Public Liability Insurance Act-91" company shall get Insurance Policy, if applicable.
- r) Empty drums and containers of toxic and hazard material shall be treated as per guideline published for "Management & Handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.
- s) In case of transport of hazardous wastes to a facility for (i.e. treatment, storage and disposal) existing in a State other than the State where hazardous wastes are generated, the occupier shall obtain "No Objection Certificate" from the State Pollution Control Board or Committee of the concerned State of Union Territory Administration where the facility exists.
- t) Unit shall take all concrete measures to show tangible results in waste generation, reduction, avoidance, reuse and recycle. Actions taken in this regard shall be submitted within three months and also along with Form-4.
- u) Industry shall have to display the relevant information with regards to hazardous waste as indicated in the Hon. Supreme Court's Order in W.P. No.637 of 1993 dated 14<sup>th</sup> October, 2003.
- v) Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.

### 6. GENERAL CONDITION:

- 6.1 Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is at least 1000 trees per acre of land and a green belt of 10/20/30 meters width is developed.
- 6.2 In case of change of ownership/management the name and address of the new owners/partners/directors/proprietor should immediately be intimated to the Board.
- 6.3 The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gaseous emission or sewage waste from the proposed industrial plant.
- 6.4 The applicant is required to make applications to this Board for this purpose in the prescribed forms under the provisions of the Water Act-1974, the Air Act-1981 and the Environment (Protection) Act-1986.

Page 3 of 4



## Gujarat Pollution Control Board

C-1/119/3, GIDC, Phase-II, Narmadanagar, BHARUCH-392 015. Phone : (02642) 246333  
Email : ro-gpcb-bhar@gujarat.gov.in Web site : www.gpcb.gujarat.gov.in

- 6.5 The applicant also comply with the General conditions as per Annexure - I attached herewith (No. 1 to 38) (whichever applicable).
- 6.6 The concentration of Noise in ambient air within the premises of industrial unit shall not exceed following levels:  
Between 6 A.M. and 10 P.M. : 75 dB(A)  
Between 10 P.M. and 6 A.M. : 70 dB(A)
- 6.7 Applicant is required to comply with the manufacturing, Storage and Import of Hazardous Chemicals Rules-1989 framed under the Environment (Protection) Act-1986.
- 6.8 If it is established by any competent authority that the damage is caused due to their industrial activities to any person or his property in that case they are obliged to pay the compensation as determined by the competent authority.
- 6.9 In Future in case of any new Acts/Rules, Circular Unit will have to follow the same.

For and on behalf of  
GUJARAT POLLUTION CONTROL BOARD

(F.M.Modi)  
REGIONAL OFFICER

NO: GPCB / BRCH / ID-65902/2019/ 15551

Date: 25/07/2019

**ISSUED TO:**

TO,  
M/S. ASHOKA BUILDCON LTD. (65902)  
SURVEY NO.: 156,  
VILL: KUKARWADA-392130,  
TAL & DIST: BHARUCH

**COPY TO :**

1. The Member Secretary, Gujarat Pollution control Board, Gandhinagar-  
(Bharuch Unit - For information Please)
2. Respective file.



## Annexure-I

### Environmental Monitoring Test Report


## **Details of Environmental Monitoring**

**Study Period:** This report is prepared for the period of Aug-2020 to Jan-2021 as per EC conditions. The samples were Analyzed at NABL approved environmental laboratory Comet Consultancy Services, Rajkot, Gujarat.

The following environmental components has been monitored and analyzed.

1. Ambient Air Quality Analysis
2. Ambient Noise Quality Analysis
3. Stack Emission Analysis of Diesel Generators
4. Diesel Generator Noise Quality Analysis
5. Water Quality Analysis

## 1. Ambient Air Quality Analysis Test Reports



# COMET

## CONSULTANCY SERVICES

Ref No : 112/06/2020-2021

**Registered Office:**  
 201/2/3/4, 2<sup>nd</sup> Floor, Sterling  
 Apartments, Opp. Alfred High School,  
 Jawahar Road, Rajkot - 360 001.  
 Tel.: +91 281 2225676, 2226399  
 E-mail: rjt@cometconserve.com  
 Website: www.cometconserve.com

Date : 02/07/2020

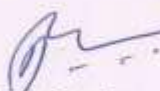
**Report of Ambient Air Monitoring :**

Name of Industry : M/s. Ashoka Buildcon Limited,  
 ADDRESS : Plot No. 184,185,186,190,191,193,194,203,202/1,201/2,  
 DAHEGAM - 392 012, Dist. BHARUCH


Sr. No.	PARTICULAR	SAMPLE NO.1	GPCB LIMIT In ug/m3
01.	Date & Time of Sampling	26/06/2020. 10 : 35	
02.	Location of Sampling.	Near the Q.C. Lab. Area.(RMC Plant)	
03.	Duration of Sampling. In Hrs.	24	
04.	Avg. Flow Rate of R. D. S. during Sampling. M3/min.	1.20	
05.	Avg. Concentration of P.M., (PM10) ug/m3.	94.27	100
06.	Avg. Concentration of P.M., (PM2.5) ug/m3.	46.72	60
07.	Concentration of SOx, ug/m3	13.14	80
08.	Concentration of NOx, ug/m3	21.98	80
09.	Concentration of CO, ug/m3	118	5000
10.	Concentration of HCL, ug/m3	ND	200

RSPM(PM10) : IS : 5182 ( Part-IV & 23) 2006, (PM2.5) : as per manufacturing method, Sox : IS : 5182 ( Part-II), Nox : IS : 5182 ( Part-VI), ..

**ND = Not Detecable**



Comet Consultancy Services



Analyst

Ahmedabad Office & Lab.	1B, Block - B, Amrapali Complex, Bopal-Ambli Cross Road, Ahmedabad - 380 015. Email: nhj@cometconserve.com
Ankleshwar Office	A-43, Ramvatika, Hasot Road, Ankleshwar - 393 001. Phone (02646) 245263 Email: ccs.ankleshwar@gmail.com

**Conclusion:** All parameters (PM 10, PM 2.5, Sox, Nox, CO, HCL) are within the GPCB Limits at the monitoring locations and location wise variations of Ambient Air Quality parameters has been pictorially shown in Figure No. 1

Ref No. : 13/11/2020-2021

Date : 11/11/2020

### Report of Ambient Air Monitoring :

Name of Industry : M/s. Ashoka Buildcon Limited.  
ADDRESS : Plot No. 184,185,186,190,191,193,194,203,202/1,201/2,  
DAHEGAM - 392 012, Dist. BHARUCH

Sr. No.	PARTICULAR	SAMPLE NO.1	GPCB LIMIT in ug/m <sup>3</sup>
01.	Date & Time of Sampling	03/11/2020 10 : 15	
02.	Location of Sampling	Near the Q.C. Lab Area (RMC Plant)	
03.	Duration of Sampling in Hrs.	24	
04.	Avg. Flow Rate of R.D.S. during Sampling M <sup>3</sup> /min.	1.20	
05.	Avg. Concentration of P.M. (PM10) ug/m <sup>3</sup>	97.82	100
06.	Avg. Concentration of P.M. (PM2.5) ug/m <sup>3</sup>	54.95	60
07.	Concentration of SO <sub>x</sub> ug/m <sup>3</sup>	14.71	80
08.	Concentration of NO <sub>x</sub> ug/m <sup>3</sup>	20.45	80
09.	Concentration of CO ug/m <sup>3</sup>	145	5000
10.	Concentration of HCL ug/m <sup>3</sup>	ND	200

RSPM(PM10) : IS : 5182 ( Part-IV & 23) 2006. (PM2.5) : as per manufacturing method. Sox : IS : 5182 ( Part-II), Nox : IS : 5182 ( Part-VI)...

ND = Not Detectable

CCS Enviro Control LLP



Analyst

Ahmedabad Office & Lab.	15, Block - B, Annapuri Complex, Bopal-Ahli Cross Road, Ahmedabad - 380 015. Email: ahj@ccsmetrocontrol.com
Ankleshwar Office	A-43, RanvadiKa, Masat Road, Ankleshwar - 393 001. Phone (02846) 343263 Email: ccx.ankleshwar@gmail.com

**Conclusion:** All parameters (PM 10, PM 2.5, SO<sub>x</sub>, NO<sub>x</sub>, CO, HCL) are within the GPCB Limits at the monitoring locations and location wise variations of Ambient Air Quality parameters has been pictorially shown in Figure No. 1

## 2. Ambient Noise Quality Analysis Test Reports



**Registered Office:**  
201/2/3/4, 2<sup>nd</sup> Floor, Sterling  
Apartments, Opp. Alfred High School,  
Jawahar Road, Rajkot - 360 001.  
Tel.: +91 281 2225676, 2226399  
E-mail: rjt@cometconserve.com  
Website: [www.cometconserve.com](http://www.cometconserve.com)

Ref No. : 109/06/2020-2021

Date : 01/07/2020.

### Report of Noise Level Measurement

Name of Industry : M/s. Ashoka Buildcon Limited,  
Plot No. 184,185,186,190,191,193,194,203,202/1,201/2,  
DAHEGAM - 392 012., Dist. BHARUCH

Date of Sampling : On 26<sup>th</sup> of June, 2020.

Sr. No.	LOCATION	NOISE LEVEL ( in dB (A) ) ( Day Time )	NOISE LEVEL ( in dB (A) ) ( Night Time )
01.	Near Lab. (Q.C.)	62-65	55-56
02.	Nr Workshop Area	67-69	56-57
03.	RMC Plant	72-74	64-65
04.	Nr. DG Set Area ( RMC Plant)	74-76	65-66
05.	Nr. DG set ( Behind Main Office)	68-70	61-62
06.	Near Residence Camp	56-58	43-45
07.	Near Main Office	53-55	44-46
08.	Nr. Canteen	62-64	45-46
09.	Nr. Main Gate No. 1	56-59	46-48
10.	Nr. Main Gate No. 4	56-62	45-47

#### GPCB Limits

Ambient from 6.00 am to 10.00 pm  
Ambient from 10.00 pm to 6.00 am

75 dB ( A )  
70 dB ( A )

Comet Consultancy Services

Analyst

Ahmedabad Office & Lab.	18, Block - B, Amrapali Complex, Bopal-Ambli Cross Road, Ahmedabad - 380 015. Email: nhj@cometconserve.com
Ankleshwar Office	A-43, Ramvatika, Hasot Road, Ankleshwar - 393 001. Phone (02646) 245263 Email: ccs.ankleshwar@gmail.com

**Conclusion:** Noise levels on Day time and Night time are within the GPCB limits at the monitoring locations and location wise variations of Ambient Noise Quality parameters has been pictorially shown in Figure No. 2

Ref No : 02/11/2020-2021

Date : 07/11/2020.

### Report of Noise Level Measurement

Name of Industry : M/s. Ashoka Buildcon Limited,  
Plot No. 184,185,186,190,191,193,194,203,202/1,201/2,  
DAHEGAM - 392 012, Dist. BHARUCH

Date of Sampling : On 3<sup>rd</sup> of November, 2020

Sr. No.	LOCATION	NOISE LEVEL ( in dB (A) ) ( Day Time )	NOISE LEVEL ( in dB (A) ) ( Night Time )
01.	Near Lab. (Q.C.)	56-58	51-53
02.	Nr. Workshop Area	62-66	53-55
03.	RMC Plant Nr. Workshop DG Set Side	70-73	62-64
04.	RMC Plant 1. Running 2. Without Running	68-73 55-60	63-66 52-54
05.	Nr. Store Room	54-58	48-48
06.	Nr. Residence Colony	48-51	42-44
07.	Near Main Office	55-58	45-47
08.	Nr. Canteen	51-54	43-45
09.	Nr. Main Gate No. 1	58-62	47-49
10.	Nr. Main Gate No. 2	59-61	48-48

#### GPCB Limits

Ambient from 6.00 am to 10.00 pm  
Ambient from 10.00 pm to 6.00 am

75 dB ( A )  
70 dB ( A )

  
CCS Enviro Control LLP



  
Analyst

Ahmedabad Office & Lab.	18, Block - B, Annapali Complex, Bopal-Antili Cross Road, Ahmedabad - 380 015. Email: info@cometconserve.com
Ankleshwar Office	A-41, Ramvatika, Hasol Road, Ankleshwar - 363 001. Phone (02646) 345263 Email: ccx.ankleshwar@gmail.com

**Conclusion:** Noise levels on Day time and Night time are within the GPCB limits at the monitoring locations and location wise variations of Ambient Noise Quality parameters has been pictorially shown in Figure No. 2



### 3. DG set Stack Emission Analysis Test Reports



Ref No. : 111/06/2020-2021

**Registered Office:**  
201/2/3/4, 2<sup>nd</sup> Floor, Sterling  
Apartments, Opp. Alfred High School,  
Jawahar Road, Rajkot - 360 001.  
Tel.: +91 281 2225676, 2226399  
E-mail: rjt@cometconserve.com  
Website: www.cometconserve.com  
Date : 02/07/2020.

#### Analysis Report of Stack Emission Measurement

Name of Industry : M/s. Ashoka Buildcon Limited,  
Plot No. 184,185,186,190,191,193,194,203,202/1,201/2,  
DAHEGAM - 392 012., Dist. BHARUCH

Sr. No.	Parameters	Sample No.1	Sample No.2	GPCB Limit
01.	Date of Sampling.	26/06/2020.	26/06/2020.	
02.	Stack/Duct attached to	D. G. Set No.1	D. G. Set No. 2 (RMC Plant)	
03.	Stack Height, Meter	---	---	
04.	Stack Diameter, mm	---	---	
05.	Type of Fuel used,	Diesel	Diesel	
06.	Stack Temperature, Centigrade	179	349	
07.	Avg. Velocity of Fuel Gases, m/sec.	13.5121	16.7081	
08.	Isokinetic flow rate for P. M. Sampling., L.P.M.,	18	16	
09.	Gaseous Sampling flow rate, L.P.M.	02	02	
10.	Avg. Concentration of P.M.,mg/Nm <sup>3</sup> .	86	97	150
11.	Concentration of SO <sub>2</sub> , ppm,	31.64	33.42	100
12.	Concentration of NO <sub>x</sub> , ppm,	42.67	44.69	50
13.	Concentration of CO, ppm,	874	674	---

Sampling: PM : IS : 11255 ( Part-I, 1985 ) ;SO<sub>2</sub> : IS : 11255 ( Part - II, 1985), NO<sub>x</sub> : IS 5182 ( Part - 7, 2005).

Comet Consultancy Services

Analyst.

Ahmedabad Office & Lab.	18, Block - B, Amrapali Complex, Bopal-Ambli Cross Road, Ahmedabad - 380 015. Email:nhj@cometconserve.com
Ankleshwar Office	A-43, Ramvatika, Hasot Road, Ankleshwar - 393 001. Email: ccs.ankleshwar@gmail.com

**Conclusion:** All parameters (Gaseous, PM, SO<sub>2</sub>, NO<sub>x</sub>, CO) are within the GPCB limits at the monitoring locations and location wise variations of DG stack emission parameters has been pictorially shown in Figure No.4



**CCS**  
Enviro Control LLP

Registered Office:  
301 To 304, 3rd Floor, Sterling Apartments,  
Opp. Ashok High School, Janakia Road,  
Rajkot - 360 001.  
Tel : + 91 291 2229676, 2226349  
Email : [info@cometconserve.com](mailto:info@cometconserve.com)  
Web : [www.cometconserve.com](http://www.cometconserve.com)

Ref No : 12/11/2020-2021

Date : 11/11/2020

### Analysis Report of Stack Emission Measurement

Name of Industry

M/s. Ashoka Buildcon Limited,  
Plot No. 184, 185, 186, 190, 191, 193, 194, 203, 202/1, 201/2,  
DAHEGAM - 392 012, Dist. BHARUCH

Sr No.	Parameters	Sample No.1	Sample No.2	GPCB Limit
01	Date of Sampling.	03/11/2020	03/11/2020	
02	Stack/Duct attached to	D. G. Set No.1	D. G. Set No. 2 (RMC Plant)	
03	Stack Height. Meter	---	---	
04	Stack Diameter. mm	---	---	
05	Type of Fuel used.	Diesal	Diesal	
06	Stack Temperature. Centigrade	193	296	
07	Avg. Velocity of Fuel Gases. m/sec.	13.7198	15.9805	
08	Isokinetic flow rate for P. M. Sampling. L.P.M.	17	16	
09	Gaseous Sampling flow rate. L.P.M.	02	02	
10	Avg. Concentration of P.M. mg/Nm <sup>3</sup>	81	89	150
11	Concentration of SO <sub>2</sub> . ppm.	30.94	32.63	100
12	Concentration of NO <sub>x</sub> . ppm.	43.31	45.74	50
13	Concentration of CO. ppm.	488	726	---

Sampling: PM : IS 11255 ( Part-I, 1985 ) SO<sub>2</sub> : IS 11255 ( Part - II, 1985 ) NO<sub>x</sub> : IS 5182 ( Part - 7, 2005 ).

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Analyst

Ahmedabad Office & Lab.	18, Block - B, Amrapali Complex, Bopal-Ambli Cross Road, Ahmedabad - 380 015. Email: <a href="mailto:info@cometconserve.com">info@cometconserve.com</a>
Ankleshwar Office	A-43, Ramsatika, Haveli Road, Ankleshwar - 393 001. Email: <a href="mailto:ccs.ankleshwar@gmail.com">ccs.ankleshwar@gmail.com</a>

**Conclusion:** All parameters (Gaseous flow rate, PM, SO<sub>2</sub>, NO<sub>x</sub>, CO) are within the GPCB limits at the monitoring locations and location wise variations of DG stack emission parameters has been pictorially shown in Figure No.4



#### 4. Water Quality Analysis Test Reports



Ref No. : 15/03/2019-2020..

**Registered Office:**  
201/2/3/4, 2<sup>nd</sup> Floor, Sterling  
Apartments, Opp. Alfred High School,  
Jawahar Road, Rajkot - 360 001.  
Tel.: +91 281 2225676, 2226399  
E-mail: rjt@cometconserve.com  
Website: www.cometconserve.com

Date : 26/03/2020.

### Report of Water Analysis

Name of Industry : M/s. Ashoka Buildcon Limited,  
Plot No. 184,185,186,190,191,193,194,203,202/1,201/2,  
DAHEGAM - 392 012., Dist. BHARUCH

Source of Sample Collection : Drinking Water.( Canteen )

Sr. No.	Parameters	Unit	* Requirement (Acceptable Limits)	* Permissible Limit	Result
01.	Date of Sample	---	---	---	18/03/2020
02.	Colour	Hazen Units	5.0	15	Colourless
03.	Odour	---	Agreeable	Agreeable	Agreeable
04.	Taste	---	Agreeable	Agreeable	Agreeable
05.	pH	pH Unit.	6.5 to 8.5	No Relaxation	7.13
06.	Total Dissolved Solids ( TDS )	mg/l.	500	2000	130
07.	Suspended Solids(SS)	mg/l.	---	---	NIL
08.	Total Solids (TS)	mg/l.	---	---	130
09.	Chloride ( as Cl )	mg/l.	250	1000	49.6
10.	Sulphates ( as SO <sub>4</sub> )	mg/l.	200	400	17.6
11.	Total Hardness ( as CaCO <sub>3</sub> )	mg/l.	200	600	50
12.	Calcium ( as Ca )	mg/l.	75	100	08
13.	Magnesium ( as Mg )	mg/l.	30	1000	7.32
14.	Total Alkalinity	mg/l.	200	600	30
15.	Turbidity	NTU	1.0	5.0	NIL
16.	Fluoride ( as F )	mg/l.	01	1.5	NIL
17.	Free Residual Chlorine	mg/l.	0.2	1.0	NIL
18.	Nitrate ( as NO <sub>3</sub> )	mg/l.	45	100	NIL
19.	Iron ( as Fe )	mg/l.	0.3	1.0	0.08
20.	Zinc ( as Zn )	mg/l.	05	15	0.098

**Test Method :** Reference Standard Methods for the Examination of Water & Waste Water – Prepared & Published jointly By American Public Health Asso. American Water Works Asso. & Water Env. Federation ( 23<sup>rd</sup> Edn.)  
\* Desirable & Permissible Limits as per IS 10907-2012 Guidelines for Drinking Water Specification ( Second Revision).

Comet Consultancy Services

Ahmedabad Office & Lab. 18, Block – B, Amrapali Complex, Bopal-Ambli Cross Road, Ahmedabad – 380 015. Email: nhj@cometconserve.com

Ankleshwar Office A-43, Ramvatika, Hasot Road, Ankleshwar – 393 001. Phone (02646) 245263 Email: ccs.ankleshwar@gmail.com

Analyst

**Conclusion:** All parameters (TDS, SS, TS, Cl, SO<sub>4</sub>, CaCO<sub>3</sub>, Ca, Mg, F, NO<sub>3</sub>, Fe, Zn) are within the GPCB limits at the monitoring locations.



Ref No : 01/11/2020-2021

Date : 12/11/2020

## Report of Water Analysis

Name of Industry :

M/s. Ashoka Buildcon Limited,  
Plot No. 184,185,186,190,191,193,194,203,202/1,201/2,  
DAHEGAM - 392 012, Dist. BHARUCH

Source of Sample Collection :

Drinking Water ( QC. Lab)

Sr. No.	Parameters	Unit	* Requirement (Acceptable Limits)	* Permissible Limit	Result
01.	Date of Sample	---	---	---	03/11/2020
02.	Colour	Hazen Units	5.0	15	Colourless
03.	Odour	---	Agreeable	Agreeable	Agreeable
04.	Taste	---	Agreeable	Agreeable	Agreeable
05.	pH	pH Unit	6.5 to 8.5	No Relaxation	6.98
06.	Total Dissolved Solids ( TDS)	mg/l.	500	2000	116
07.	Suspended Solids(SS)	mg/l.	---	---	NIL
08.	Total Solids (TS)	mg/l.	---	---	118
09.	Chloride ( as Cl )	mg/l.	250	1000	55.9
10.	Sulphates ( as SO <sub>4</sub> )	mg/l.	200	400	BDL
11.	Total Hardness (as CaCO <sub>3</sub> )	mg/l.	200	600	BDL
12.	Calcium ( as Ca )	mg/l.	75	100	BDL
13.	Magnesium ( as Mg )	mg/l.	30	1000	BDL
14.	Total Alkalinity	mg/l.	200	600	20
15.	Turbidity	NTU	1.0	5.0	NIL
16.	Fluoride ( as F )	mg/l.	01	1.5	0.24
17.	Free Residual Chlorine	mg/l.	0.2	1.0	NIL
18.	Nitrate ( as NO <sub>3</sub> )	mg/l.	45	100	NIL
19.	Iron ( as Fe )	mg/l.	0.3	1.0	0.034
20.	Zinc ( as Zn )	mg/l.	05	15	0.12

Test Method : Reference Standard Methods for the Examination of Water & Waste Water - Prepared & Published jointly By American Public Health Asso. American Water Works Asso. & Water Env. Federation ( 23<sup>rd</sup> Edn.)  
\* Desirable & Permissible Limits as per IS 10500 : 2012. Guidelines for Drinking Water Specification ( Second Revision)

CCS Enviro Control LLP



Analyst

Ahmedabad Office & Lab.	18, Block - E, Amrapali Complex, Sapar-Ahmedabad Road, Ahmedabad - 380 015. Email: <a href="mailto:ahj@cometconserve.com">ahj@cometconserve.com</a>
Ankleshwar Office	A-42, RamvatiKa, Hazrat Road, Ankleshwar - 392 001, Phone (02646) 343263 Email: <a href="mailto:cca.ankleshwar@gmail.com">cca.ankleshwar@gmail.com</a>

**Conclusion:** All parameters (TDS, SS, TS, Cl, SO<sub>4</sub>, CaCO<sub>3</sub>, Ca, Mg, F, NO<sub>3</sub>, Fe, Zn) are within the GPCB limits at the monitoring locations.

## Report of Water Analysis

Name of Industry : M/s. Ashoka Buildcon Limited,  
Plot No. 184,185,186,190,191,193,194,203,202/1,201/2,  
DAHEGAM - 392 012., Dist. BHARUCH

Source of Sample Collection : Drinking Water.( Canteen )

Sr. No.	Parameters	Unit	* Requirement (Acceptable Limits)	*Permissible Limit	Result
01.	Date of Sample	----	----	----	26/06/2020
02.	Colour	Hazen Units	5.0	15	Colourless
03.	Odour	-----	Agreeable	Agreeable	Agreeable
04.	Taste	-----	Agreeable	Agreeable	Agreeable
05.	pH	pH Unit.	6.5 to 8.5	No Relaxation	7.57
06.	Total Dissolved Solids ( TDS)	mg/l.	500	2000	189
07.	Suspended Solids(SS)	mg/l.	---	---	NIL
08.	Total Solids (TS)	mg/l.	---	---	189
09.	Chloride ( as Cl )	mg/l.	250	1000	69.4
10.	Sulphates ( as SO <sub>4</sub> )	mg/l.	200	400	21.8
11.	Total Hardness (as CaCO <sub>3</sub> )	mg/l.	200	600	90
12.	Calcium ( as Ca )	mg/l.	75	100	20
13.	Magnesium ( as Mg )	mg/l.	30	1000	9.76
14.	Total Alkalinity	mg/l.	200	600	50
15.	Turbidity	NTU	1.0	5.0	NIL
16.	Fluoride ( as F )	mg/l.	01	1.5	0.082
17.	Free Residual Chlorine	mg/l.	0.2	1.0	NIL
18.	Nitrate ( as NO <sub>3</sub> )	mg/l.	45	100	NIL
19.	Iron (as Fe )	mg/l.	0.3	1.0	0.024
20.	Zinc ( as Zn )	mg/l.	05	15	0.16

**Test Method :** Reference Standard Methods for the Examination of Water & Waste Water – Prepared & Published jointly By American Public Health Asso. American Water Works Asso. & Water Env. Federation ( 23<sup>rd</sup> Edn.)  
\* Desirable & Permissible Limits as per IS 10500 : 2012 – Guidelines for Drinking Water Specification ( Second Revision).

Comet Consultancy Services

Analyst

Ahmedabad Office & Lab.	18, Block – B, Amrapali Complex, Bopal-Ambli Cross Road, Ahmedabad – 380 015. Email: nhj@cometconserve.com
Ankleshwar Office	A-43, Ramvatika, Hasot Road, Ankleshwar – 393 001. Phone (02646) 245263 Email: ccs.ankleshwar@gmail.com

**Conclusion:** All parameters (TDS, SS, TS, Cl, SO<sub>4</sub>, CaCO<sub>3</sub>, Ca, Mg, F, NO<sub>3</sub>, Fe, Zn) are within the GPCB limits at the monitoring locations.





Ref No : 02/11/2020-2021.

Date : 12/11/2020.

## Report of Water Analysis

Name of Industry : M/s. Ashoka Buildcon Limited,  
Plot No. 184, 185, 186, 190, 191, 193, 194, 203, 202/1, 201/2,  
DAHEGAM - 392 012, Dist. BHARUCH

Source of Sample Collection : Drinking Water ( RMC Plant )

Sr. No	Parameters	Unit	* Requirement (Acceptable Limits)	* Permissible Limit	Result
01	Date of Sample	---	---	---	03/11/2020
02	Colour	Hazen Units	5.0	15	Colourless
03	Odour	---	Agreeable	Agreeable	Agreeable
04	Taste	---	Agreeable	Agreeable	Agreeable
05	pH	pH Unit	6.5 to 8.5	No Relaxation	6.68
06	Total Dissolved Solids ( TDS )	mg/l.	500	2000	92
07	Suspended Solids (SS)	mg/l.	---	---	NIL
08	Total Solids (TS)	mg/l.	---	---	92
09	Chloride ( as Cl )	mg/l.	250	1000	34.9
10	Sulphates ( as SO <sub>4</sub> )	mg/l.	200	400	BDL
11	Total Hardness ( as CaCO <sub>3</sub> )	mg/l.	200	600	BDL
12	Calcium ( as Ca )	mg/l.	75	100	BDL
13	Magnesium ( as Mg )	mg/l.	30	1000	BDL
14	Total Alkalinity	mg/l.	200	600	10
15	Turbidity	NTU	1.0	5.0	NIL
16	Fluoride ( as F )	mg/l.	01	1.5	0.18
17	Free Residual Chlorine	mg/l.	0.2	1.0	NIL
18	Nitrate ( as NO <sub>3</sub> )	mg/l.	45	100	NIL
19	Iron ( as Fe )	mg/l.	0.3	1.0	0.031
20	Zinc ( as Zn )	mg/l.	05	15	0.109

**Test Method :** Reference Standard Methods for the Examination of Water & Waste Water – Prepared & Published jointly By American Public Health Assn. American Water Works Assn. & Water Env. Federation ( 23<sup>rd</sup> Edn.)  
\* Desirable & Permissible Limits as per IS 10500 : 2012, Guidelines for Drinking Water Specification ( Second Revision )

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**Conclusion:** All parameters (TDS, SS, TS, Cl, SO<sub>4</sub>, CaCO<sub>3</sub>, Ca, Mg, F, NO<sub>3</sub>, Fe, Zn) are within the GPCB limits at the monitoring locations.