Bhagwat Swaroop Sharma

From: Bhagwat Swaroop Sharma
Sent: Wednesday, November 30, 2022 7:11 PM
To: eccompliance-guj@gov.in; iro.gandhingr-mefcc@gov.in
Cc: ec-rdw.cpcb@gov.in; ro-gpcb-kute@gujarat.gov.in; ms-gpcb@gujarat.gov.in; mefcc.ia3@gmail.com; monitoring-ec@nic.in; direnv@gujarat.gov.in; Snehal Jariwala
Subject: Half Yearly EC Compliance Report Submission -MPT 1995 (Period : April,2022 to Sept.'2022)
Attachments: 1995 - EC Compliance Report April2022 to Sep'2022_MPT APSEZ Mundra.pdf

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Ports and Logistics

APSEZL/EnvCell/2022-23/074

To
The Inspector General of Forest / Scientist C,
Integrated Regional Office (IRO),
Ministry of Environment, Forest and Climate Change,
Aranya Bhawan, A Wing, Room No. 409,
Near CH 3 Circle, Sector – 10A,
Gandhinagar – 382007.
E-mail: eccompliance-guj@gov.in, iro.gandhingr-mefcc@gov.in

Sub : Half yearly Compliance report of Environment and CRZ Clearance for Cargo / LPG /Chemicals and their storage terminal at Navinal Island, Mu Gujarat"

Ref : Environment and CRZ clearance granted to M/s Adani Ports & SEZ L August, 1995 bearing no. J-16011/13/95-IA.III

Dear Sir,

Please refer to the above cited reference for the said subject matter. In connection t copy of the compliance report for the Environmental and CRZ Clearance for September 2022 is being submitted through soft copy (e-mail communication & CD).

Kindly consider above submission and acknowledge.

Thank you,
Yours Faithfully,
For, **M/s Adani Ports and Special Economic Zone Limited**

Douglas Charles Smith

Thanks & Regards,

Bhagwat Swaroop Sharma
Sr. Manager - Environment
Mundra & Tuna port

Adani Ports & Special Economic Zone Ltd.

Environment Cell | 1st floor | Adani House | Mundra Kutch | 370421 | Gujarat | India
Mob +91 6357231713 | Ext. 52474 | www.adani.com

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Logistics

APSEZL/EnvCell/2022-23/074 **Date:** 21.11.2022

To
The Inspector General of Forest / Scientist C,
Integrated Regional Office (IRO),
Ministry of Environment, Forest and Climate Change,
Aranya Bhawan, A Wing, Room No. 409,
Near CH 3 Circle, Sector – 10A,
Gandhinagar – 382007.
E-mail: eccompliance-guj@gov.in, iro.gandhingr-mefcc@gov.in

Sub : Half yearly Compliance report of Environment and CRZ Clearance for "Handling facility of General Cargo / LPG /Chemicals and their storage terminal at Navinal Island, Mundra taluka of Kutch district, Gujarat"

Ref : Environment and CRZ clearance granted to M/s Adani Ports & SEZ Limited vide letter dated 25th August, 1995 bearing no. J-16011/13/95-IA.III

Dear Sir,

Please refer to the above cited reference for the said subject matter. In connection to the same, it is to state that copy of the compliance report for the Environmental and CRZ Clearance for the period of April-2022 to September 2022 is being submitted through soft copy (e-mail communication & CD).

Kindly consider above submission and acknowledge.

Thank you,
Yours Faithfully,
For, **M/s Adani Ports and Special Economic Zone Limited**

Douglas Charles Smith
Chief Executive Officer
Mundra & Tuna Port

Encl: As above

Copy to:

1) The Director (IA Division), Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003.
2) The Zonal Officer, Regional Office, CPCB – Western Region, Parivesh Bhawan, Opp. VMC Ward Office No. 10, Subhanpura, Vadodara – 390023.
3) The Member Secretary, GPCB – Head Office, Paryavaran Bhavan, Sector 10 A, Gandhi Nagar – 382010.
4) The Director, Forests & Environment Department, Block – 14, 8th floor, Sachivalaya, Gandhi Nagar – 382010.
5) The Regional Officer, Regional Office GPCB (Kutch-East), Gandhidham – 370201.

Adani Ports and Special Economic Zone Ltd
Adani House,
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Mundra, Kutch 370 421
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Environmental Clearance Compliance Report

Multi-Purpose Jetty and Storage Facilities at Navinal Island, Mundra, Dist. Kutch, Gujarat

of

Adani Ports and Special Economic Zone Limited

For the Period of:

April-2022 to September-2022

Index

EC & CRZ Clearance Compliance Report

- Chronology of company name change from **M/s. Adani Port Limited** to **M/s. Adani Ports and Special Economic Zone Ltd.** was submitted along with half yearly EC Compliance report for the period Oct'20 to Mar'21.

Half yearly Compliance report of Environment and CRZ Clearance for "Handling facility of General Cargo / LPG /Chemicals and their storage terminal at Navinal Island, Mundra taluka of Kutch district, Gujarat" issued vide letter no. J-16011/13/95-IA.III dated 25th Aug., 1995.

Sr. No.	Conditions	Compliance Status as on 30-09-2022
2(i)	All construction designs / drawings relating to various project activities should have the approval of the concerned State Government departments / Agencies.	Complied All construction and operation activities are being carried out in line with the CRZ recommendation and permissions granted.
2(ii)	To prevent discharge of bilge wastes, sewage and other liquid wastes from the oil tankers / ships into marine environment, adequate system for collection, treatment and disposal of liquid wastes including shoreline installation and special hose connections for ships to allow for discharge of sewage must be provided.	Complied Ships berthing at Mundra Port comply with MARPOL regulations. No discharge such as bilge wastes, sewage or any other liquid wastewater is allowed into marine environment inside port limits. APSEZ has adequate Waste Reception facility as per MARPOL and DG Shipping regulations. The port has reception facility for all MARPOL waste streams (Annex-I, Annex-II, Annex-IV & Annex-V) except Annex-VI that is generated from vessels. APSEZL has not received any sewage/liquid waste from ships / vessels till date. As a general practice APSEZ provide facility for receiving slop / waste oil from vessels through hose connection with oil tankers. These tankers divert slop / waste oil to Oil water separator system where water and oil particles are separated. Separated oil is being sold to authorized recycler /re-processor. However, no slope / waste oil was received during the compliance period.
2(iii)	The quality of treated effluents, solid wastes, emissions and noise levels etc. must confirm to the standards laid down by the competent authorities	Complied. ETP is provided to treat the wastewater/wash water. Also the sewage generated from port is being treated in designated ETP. Treated water is used for horticultural purposes. Quality of treated water confirm to the

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30-09-2022</th></tr>
<tr><td></td><td>including the central and State Pollution Control Boards under the Environment (Protection) act, 1986 whichever are more stringent.</td><td>
standard laid down by Gujarat Pollution Control Board.
<table>
<tr><th>Location</th><th>Capacity</th><th>Quantity of Treated Water (Avg. from Apr'22 to Sep'22)</th><th>Type of ETP / STP</th></tr>
<tr><td>LT</td><td>265 KLD</td><td>106 KLD</td><td>Activated Sludge</td></tr>
</table>
Entire treated water from ETP / STP is being utilized on land for horticulture purpose within port premises after achieving prescribed permissible limit.

Summary of ETP treated water analysis results during compliance period as mentioned below.

Frequency of Analysis: Once in a month
<table>
<tr><th>Parameter</th><th>Unit</th><th>Min</th><th>Max</th><th>Average</th><th>Perm. Limit[$]</th></tr>
<tr><td>pH</td><td>--</td><td>7.14</td><td>7.46</td><td>7.32</td><td>6.5 – 8.5</td></tr>
<tr><td>SS</td><td>mg/L</td><td>36</td><td>46</td><td>41.67</td><td>100</td></tr>
<tr><td>TDS</td><td>mg/L</td><td>1462</td><td>1524</td><td>1496</td><td>2100</td></tr>
<tr><td>COD</td><td>mg/L</td><td>72.6</td><td>89.1</td><td>82.63</td><td>100</td></tr>
<tr><td>BOD</td><td>mg/L</td><td>20</td><td>25</td><td>22.83</td><td>30</td></tr>
<tr><td>Ammonical Nitrogen as NH_3-N</td><td>mg/L</td><td>22.2</td><td>28.6</td><td>25.23</td><td>50</td></tr>
</table>
[$] as per CC&A granted by GPCB

The quality of marine water, treated effluents, air emissions and noise levels are being regularly analyzed by NABL accredited and MoEF&CC recognized agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Please refer Annexure – 1 for detailed analysis reports for the period Apr'22 to Sep'22. Approx. INR 6.37 Lakh is spent for all environmental monitoring activities during the FY 2022-23 till Sep'22 for overall APSEZ.

It is also noted that GPCB is doing regular site inspection along with wastewater sampling and analysis. The last GPCB sample analysis report were submitted as part of compliance report submission for the duration of Apr'21 to Sep'21 which shows all the parameters are well within the permissible limit.

<u>Waste Management</u> – APSEZ has adopted 5R concept
</td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 30-09-2022
		for environmentally sound management of different types of solid & liquid wastes. Please refer below details about management of each type of waste. **Non-Hazardous Solid Waste**: A well-established system for segregation of dry & wet waste is in place. All wet waste (Organic waste) is being segregated & utilized for compost manufacturing and/or biogas generation for cooking purpose. The compost is further used by in house horticulture team for greenbelt development. Whereas dry recyclable waste is being sorted in various categories. Presently manual sorting is being done for sorting of different types of solid waste. Segregated recyclable materials such as Paper, Plastic, Cardboard, PET Bottles, and Glasses, etc. are then sent to respective recycling units, whereas remaining non-recyclable waste is bailed and sent to cement plant (M/s. Ambuja Cement Ltd., Kodinar) for Co-processing as RDF (Refused Derived Fuel). APSEZ, Mundra is certified for Zero Waste to Landfill management system (ZWTL MS 2020) by TUVRheinland India Pvt. Ltd. (valid up to 31.05.2024). Details of the same were submitted as part of compliance report submission for the duration of Apr'21 to Sep'21. **Hazardous & Other Waste**: • Bio medical waste generated from OHCs and Adani Hospital is being disposed at Common Bio Medical Waste Treatment Facility namely M/s. Distromed Kutch Services Pvt. Ltd., Bhuj. • E – Waste & Used Batteries are being sold to GPCB registered recyclers namely M/s. Galaxy Recycling, Rajkot and Sabnam Enterprise, Kutch respectively. • Solid Hazardous Waste is being disposed through co-processing / incineration/landfilling through common facility i.e. M/s. Saurashtra Enviro Projects Pvt. Ltd., Bhachau, Safe Enviro Private Limited, Bharuch and/or cement industries of Ambuja Cement Ltd., Kodinar. Used/Waste Oil is being sold to GPCB authorized recyclers / re-processors namely M/s. Western India Petro Chem Ind - Bhavnagar, Aviation Corporation - Kutch & Aroma Petrochem - Bhavnagar. It is also being

Sr. No.	Conditions	Compliance Status as on 30-09-2022
		reused within organization for lubrication purpose. • Discarded drums / barrels are being sold to authorized decontamination facility i.e. M/s. Jawrawala Petroleum, Ahmedabad. It is also being reused within organization for filling hazardous waste. • Solid hazardous waste i.e. Tank bottom sludge is being sold to authorized recycler namely M/s. Mundra Oil Pvt. Ltd., Mundra for recycling. • Expired paint materials is being disposed by incineration through common facility i.e. M/s. Saurashtra Enviro Projects Pvt. Ltd., Bhachau. • Downgrade chemicals generated from cleaning of storage tanks / pipelines are being sold to authorized solvent recovery facilities namely M/s. Acquire Chemicals, Ankleshwar however during the compliance period, there was no disposal of downgrade chemicals. • Slop Oil received from vessels is treated to separate water and oil particles in Oil Water Separator system. Separated oil from the same is being sold to authorized recycler / reprocessor namely M/s. Western India Petro Chem Ind - Bhavnagar, Aviation Corporation - Kutch & Aroma Petrochem - Bhavnagar and water is sent to ETP for further treatment. However, during the compliance period i.e. Apr'22 to Sep'22, there was no received or disposal of Slope Oil. • Horticulture waste is collected from various green belt areas and it is using for making of manure and manure is being utilizing in horticulture purpose within plant premises. Details of permissions / agreements of hazardous waste authorized vendors were submitted along with pervious half yearly EC Compliance Reports. And there is no further change. The following table summarizes the waste management practice (from Apr'22 to Sep'22) for different types of wastes at APSEZ:

Type of Waste	Quantity in MT	Disposal method
Hazardous Waste		
Pig Waste	5.93	Co-processing at cement industries
ETP Sludge	1.91	

Sr. No.	Conditions	Compliance Status as on 30-09-2022

Oily Cotton waste	53.03	
Used / Spent Oil	74.13	Sell to registered recycler
Glass Wool	24.09	Send to Authorized common TSDF
Other Waste		
Bio Medical Waste	4.02	To approved CBWTF Site
E-Waste	58.49	Sell to register recycler
Non-Hazardous Waste		
Recyclables Dry Waste / Scrap	1583.10	After recovery sent for recycling / Reuse within premises
Non-Recyclable Dry Waste (RDF)	314.16	Co-processing at Cement Industries
Wet Waste (Food waste + Organic waste)	431.96	Converted to Manure for Horticulture use / Biogas for cooking purpose
Horticulture Waste	397.00	Used for making of manure and utilize for horticulture purpose

Ambient Air Quality (twice in a week) and **Noise** (once in a month) monitoring are being carried out by NABL accredited and MoEF&CC approved agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Quality of Ambient Air and Noise level confirm to the standard laid down by SPCB / CPCB. Summary of the same for duration from Apr'22 to Sep'22 is mentioned below.

Total Ambient Air & Noise Sampling Locations: 4 Nos.

Parameter	Unit	Min	Max	Average	Perm. Limit$
AAQM					
PM_{10}	µg/m³	25.67	89.73	74.2	100
$PM_{2.5}$	µg/m³	8.65	46.26	32.02	60
SO_2	µg/m³	5.89	41.48	26.89	80
NO_2	µg/m³	8.24	47.24	32.46	80
Noise	**Unit**	**Leq Min**	**Leq Max**	**Leq Avg.**	**Leq Perm. Limit***
Day Time	dB(A)	58.5	69.8	65.16	75
Night Time	dB(A)	53.7	64.7	60.47	70

$ as per NAAQ standards, 2009
* as per CC&A granted by SPCB
Values recorded confirms to the stipulated standards.

Please refer **Annexure – 1** for detailed analysis reports for the period Apr'22 to Sep'22. Approx. INR 6.37 Lakh is spent for all environmental monitoring activities during the FY 2022-23 till Sep'22 for overall APSEZ.

Sr. No.	Conditions	Compliance Status as on 30-09-2022
2(iv)	Adequate provision for infrastructure facilities such as water supply, roads, sanitation etc. should be ensured so as to avoid environmental degradation in the surrounding areas. These facilities should be brought into existence during the construction phase and will remain in existence thereafter as part of the infrastructure build up in the area for local developmental purposes.	Complied. Construction activity is already completed. Adequate infrastructure facility was provided to labours during construction phase and those are in existence. The facility for drinking water, toilet and rest shelter are provided for the dignity of operation labours. Photographs of the same were submitted along with the compliance report submission for the period Oct'16 to Mar'17.
2(v)	Adequate noise control measures should be ensured in various project activities and due to increase in the traffic which is likely to take place during construction and operational phases.	Complied. Construction phase is completed. For operation phase, following noise control measures are taken: • All DG sets are installed with acoustic enclosure confirming EPA norms. • Proper maintenance of equipments / plant machineries is being done on regular basis. • Green Belt has been developed at road sides and operational areas. • Traffic control measures such as signage, speed regulation, traffic guides etc. are in place to reduce the unnecessary honking by cargo vehicles.
2(vi)	The water quality parameters such as dissolved oxygen, ammonical nitrogen and other nutrients etc. should be measured at regular intervals to ensure adherence to the prescribed standards of water qualities. Suitable ground water monitoring should also be undertaken around the sludge lagoons and regular reports to be submitted to the Ministry for evaluation.	Complied. ETP having 265 KLD capacity is provided for treatment of wastewater. Treated water is used for horticulture purpose within premises after confirming permissible limit. The watery sludge is transferred to sludge drying bed, where the excess wastewater is recirculated to ETP. Third party analysis of the treated water is being carried out twice in a month by NABL accredited and MoEF&CC approved agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Summary of the same for duration of Apr'22 to Sep'22 is mentioned in compliance condition no. 2(iii) above.

Sr. No.	Conditions	Compliance Status as on 30-09-2022

Marine Monitoring:

Marine monitoring (Surface, Bottom and Sediment) is being carried out once in a month by NABL accredited and MoEF&CC approved agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Summary of the same for duration from Apr'22 to Sep'22 is mentioned below. Monitoring Reports are attached as **Annexure – 1** for the same.

Total Sampling Locations: 09 Nos.

Parameter	Unit	Surface			Bottom		
		Min	Max	Avg.	Min	Max	Avg.
pH	--	8.04	8.31	8.21	7.92	8.16	8.07
BOD (3 Days @ 27 °C)	mg/L	2.4	6.02	2.89	BDL (MDL: 1.0)	BDL (MDL: 1.0)	BDL (MDL: 1.0)
TSS	mg/L	94	156	126.28	78	132	107.94
DO	mg/L	5.85	6.27	6.08	5.7	6.17	5.91
Salinity	ppt	35.06	35.74	35.34	35.68	36.92	35.93
TDS	mg/L	35810	36942	36246	35984	37624	36751

*BDL – Below Detection Limit
*MDL – Minimum Detection Limit

Ground Water Monitoring:

There are no sludge lagoons however, to monitor the ground water quality, bore wells are provided at various location in the port and SEZ areas. Third party analysis of the ground water is being carried out twice a year by NABL accredited and MoEF&CC approved agency namely M/s. Unistar Environment and Research Labs Private Limited., Vapi. Summary of the same for duration of Apr'22 to Sep'22 is mentioned below.

Sampling Locations: 5 Nos.

Parameters	Unit	MIN	MAX	AVERAGE
pH @ 25 ° C	--	7.60	8.44	7.98
Salinity	ppt	0.79	11.64	3.55
Oil & Grease	mg/L	ND*	ND*	ND*
Hydrocarbon	mg/L	ND*	ND*	ND*
Lead as Pb	mg/L	0.03	0.07	0.05
Arsenic as As	mg/L	ND*	ND*	ND*
Nickel as Ni	mg/L	0.07	0.11	0.10
Total Chromium as Cr	mg/L	ND*	ND*	ND*
Cadmium as Cd	mg/L	ND*	ND*	ND*
Mercury as Hg	mg/L	ND*	ND*	ND*

Sr. No.	Conditions	Compliance Status as on 30-09-2022
		<table><tr><td>Zinc as Zn</td><td>mg/L</td><td>0.12</td><td>0.25</td><td>0.17</td></tr><tr><td>Copper as Cu</td><td>mg/L</td><td>ND*</td><td>ND*</td><td>ND*</td></tr><tr><td>Iron as Fe</td><td>mg/L</td><td>0.12</td><td>1.12</td><td>0.76</td></tr><tr><td>Insecticides/Pesticides</td><td>µg/L</td><td>ND*</td><td>ND*</td><td>ND*</td></tr><tr><td>Depth of Water Level from Ground Level</td><td>meter</td><td>1.90</td><td>2.15</td><td>2.02</td></tr></table> ND*= Not Detectable *BDL – Below Detection Limit *MDL – Minimum Detection Limit Please refer **Annexure – 1** for detailed analysis reports. Approx. INR 6.37 Lakh is spent for all environmental monitoring activities during the compliance period i.e. Apr'22 to Sep'22 till Sep'22 for overall APSEZ, Mundra.
2(vii)	Adequate culverts should be provided for smaller creeks so that breeding grounds for crabs, mud snappers and other marine organisms are not cut off by road construction activities.	Complied. Adequate culverts are provided on prominent creek system named as (1) Kotdi (2) Baradimata (3) Navinal (4) Bocha (5) Mundra (Oldest port (Juna Bandar) leading to Bhukhi river). All above creeks are in existence allowing free flow of water and there is no filling or reclamation of any creek area. APSEZL has so far constructed 19 culverts having total length of approx. 1100 m with total cost of INR 20 Crores. Apart from that three RCC Bridges have been constructed over Kotdi creek with total length of 230 m and cost of INR 10 Crores. Photographs of the same were submitted as part of compliance report submission for the duration of Apr'17 to Sep'17.
2(viii)	A hundred meter wide mangrove belt should be created all along the west of Navinal Creek till its junction up to new road. Green belt of 50 M width should also be provided all along the periphery of the plant site and along the roads, storage tanks etc. at 1500 trees per hectare. All details regarding the Mangrove belt and other afforestation work must be worked out in consultation	Complied. 24 hectare of Mangrove afforestation was carried out with a cost of INR 25.0 Lac at west of Navinal creek. All Mangrove plantations were done in consultation with Dr. Maity, Mangrove consultant of India. Green belt was developed 72.81 ha. Total 149959 trees were planted with the density of 2060 trees per hectare within the port area. So, far APSEZ has developed 486.19 ha. area as greenbelt with plantation of more than 9.5 Lacs saplings within the APSEZ area.

Sr. No.	Conditions	Compliance Status as on 30-09-2022
	with the State Forest Department, and details sent to the Ministry.	To enhance the marine biodiversity, till date APSEZ has carried out mangrove afforestation in 3140 ha. area across the coast of Gujarat. Total expenditure for the same till date is INR 847.8 lakh. Details on Mangroves afforestation & Green belt development carried out by APSEZ till date is annexed as **Annexure – 2**. Other than this Adani Foundation – CSR Arm of Adani Group at Mundra-Kutch has initiated multi-species plantation of mangroves in Luni village in association with GUIDE, Gujarat. During 2018-2019 (Phase-I) multi-species mangrove plantation was carried out in 10 ha, during Phase-II (2019-2020) it was 02 ha and during Phase III (2020-2021) it is 01 ha. During current FY 2021-22, 03 ha area coastal stretches have been planted with species. Total 16 Ha. multi-species mangrove plantation has been carried out till March-22 association with M/s. GUIDE, Gujarat. Current year 4 Hector plantation is in progress which will be resulted in 20 Hector. Please refer attached **Annexure – 3** for CSR activity report carried out by Adani Foundation.
2(ix)	Arrangements should be made for ensuring fresh water availability for various project related activities. Special water harvesting programs should be undertaken in the project impact area. Details of these activities should be reported to the Ministry.	Complied. During the project phase, GWIL was the source of water to ensure freshwater availability. Present source of water for various project activities is desalination plant of APSEZ and/or through Gujarat Water Infrastructure Limited (GWIL). Average water consumption for entire APSEZ area is 4.23 MLD during compliance period i.e. Apr'22 to Sep'22. Groundwater recharge cannot be done at the project site since the entire project is in the intertidal / sub tidal areas. Rain water within project area is managed through storm water drainage. We have installed Rain water recharge bore well (4 Nos.) within our township to recharge ground water. Details of the same were submitted along with half yearly EC compliance report for the period Apr'19 to Sep'19. During this monsoon period (June to Sep-22) approx. 5.56 ML of

Sr. No.	Conditions	Compliance Status as on 30-09-2022
		rainwater has been recharged to increase the ground water table. We have also connected roof top rain water duct of operational building (Tug berth building within MPT) with u/g water tank for utilization of collected rain water for gardening / horticulture purpose. Details of the same were submitted along with EC Compliance report for the period Oct'18 to Mar'19. However, Adani Foundation – CSR arm of Adani Group has carried out rainwater harvesting activities in the nearby villages for benefit of the locals. Water conservation Projects i.e. Roof Top Rain Water Harvesting, Desilting of Check dams, Bore Well Recharge and Pond deepening were taken up in past years, review and monitoring of all water harvesting structures had been taken up. To make connections between human actions and the level of biological diversity found within a habitat and/or ecosystem, this year Adani Foundation launch project "Sanrakshan" in coordination with GUIDE and Sahjeevan. Since 10 years considerable Water Conservation Work carried out in Mundra Taluka. Due to satisfactory rain in current year 1.11 mtr ground water table increased as per increased in coastal belt of Mundra as per Government Figures. **Our water conservation work is as below.** • Large number of water harvesting structure (18 Nos. of check dams in coordination with salinity department) and Augmentation of 3 check dams • Ground recharge activities (pond deepening work for more than 56 ponds) individually and 26 ponds under Sujlam Suflam Jal Abhiyan were built leading to a significant increase in water table and higher returns to the farmers. • Roof Top Rain Water Harvesting 145 Nos. (40 Nos. current FY 2022-23) which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family. • Recharge Borewell 201 Nos (12 Nos. current FY 2022-23) which is best ever option to.

Sr. No.	Conditions	Compliance Status as on 30-09-2022
		• Drip Irrigation approx. 1156 Farmers benefitted in coordination with Gujrat Green Revolution Company till date. • Bund construction on way of Nagmati River could save more than 575 MCFT water quantity which recharged in ground due to which borewell depth decreased by 50-100 Ft in Zarpara, Bhujpur and Navinal Vadi Vistar. • Pond Pipe line work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area. • Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year. • Luni Pond Bund Repairing Work is completed. With the objective of to preserve the rain water to reduce the impact of salinity and recharge the ground water (the main source of water) to facilitate the Agricultural activities as well as for drinking water. Please refer **Annexure – 3** for full details of CSR activities carried out by Adani Foundation in the Kutch region. Budget for CSR Activity for the FY 2022-23 is to the tune of INR 1317.36 lakh. Out of which, Approx. INR 495.65 lakh are spent till Sep'22.
2(x)	While filling the storage tanks, compatibility of the chemicals should be ensured for chemical safety. Since 5000 MT capacity is proposed to be created for cryogenic conditions, necessary HAZOP study should be initiated and submitted to the Ministry within three months. Calculations carried out on the basis of EFFECT MODEL for this storage should be rechecked for various accident scenarios. Keeping in view the safety aspects, Horton spheres of 1250 MT capacity each should be preferred.	Complied. Risk assessment study was carried out by M/s. Comet Consultancy Services in January 1995 as a part of EIA for storage of various chemicals in tanks for chemical safety and the same was submitted to MoEF&CC while processing EC application. Risk assessment study was carried out by iFluids Engineering for handling and storage of LPG in three parts as mentioned below. 1. QRA for LPG Jetty Area 2. QRA for LPG Pipeline 3. QRA for LPG Tank farm A copy of the same was submitted as part of compliance report for the duration of Apr'17 to Sep'17. Recommendations of the risk assessment have been implemented as part of the construction activity and

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30-09-2022</th></tr>
<tr><td></td><td></td><td>details of the same were submitted along with half yearly compliance report for the period Oct'18 to Mar'19.
Implementation report of risk assessment recommendations during operational activity was submitted along with half yearly compliance report for the period Oct'19 to Mar'20.</td></tr>
<tr><td>2(xi)</td><td>The measures suggested by the Gujarat State Pollution Control Board in February, 1995 while according "No Objection Certificate" should be strictly followed and authorization certificate required for converting NOC into "consent to operate" should be submitted within three months.</td><td>Complied.

Consent to operate (CC&A) has been renewed from GPCB vide consent no. AWH-117045 valid till 20th November, 2026. The copy of CtO renewal was submitted along with last half yearly compliance report for the period Oct'21 to Mar'22.

Consent to Establish (CtE) and Consent to Operate (CtO) are obtained from GPCB and renewed/amended from time to time as per the progress of the project activity. The present in-force CtE / CtO are mentioned below.

<table>
<tr><th>Sr. No.</th><th>Permission</th><th>Project</th><th>Ref. No. / Order No.</th><th>Valid till</th></tr>
<tr><td>1</td><td>CtO – Renewal</td><td>Mundra Port Terminal</td><td>AWH-117045</td><td>20.11.2026</td></tr>
<tr><td>2</td><td>CtE – Amendment</td><td>WFDP</td><td>17739 / 15618</td><td>18.05.2027</td></tr>
</table>

The permission mentioned above (Sr. No. 2) was submitted along with earlier compliance report submission. The copy of CtO renewal order was submitted along with last half yearly compliance report for the period Oct'21 to Mar'22.</td></tr>
<tr><td>2(xii)</td><td>For ensuring the acceptance of the project by the local people, a Resolution of the Official Panchayat of the Region should be obtained offering their concurrence in writing by the project proponents and submitted to the Ministry by 31st October, 1995.</td><td>Complied.

Resolution from the Panchayat has been obtained and submitted to the Ministry of Environment, Forest & Climate Change on 31st July, 2012.</td></tr>
<tr><td>2(xiii)</td><td>A permanent staff structure should be created with latest R&D facilities and suitable equipments for</td><td>Complied.

APSEZ has a well-structured Environment Management Cell, staffed with qualified manpower for</td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 30-09-2022
	environmental and forestry activities through creation of Environmental cell. Adequate funds should be earmarked for this cell.	implementation of the Environment Management Plan at site. Site team report to Sr. Manager (Environment), who heads the Environment Management Cell who directly reports to the top management. Environment Management Cell Organogram were submitted as part of previous compliance report submission for the duration of Apr'21 to Sep'21. And there is no further change. Budget for environmental management measures (including horticulture) for the FY 2022-23 is to the tune of INR 1414.23 lakh. Out of which, Approx. INR 757.85 lakh are spent during the year FY 2022-23 till Sep'22. Detailed breakup of the expenditures for the past 3 years is attached as **Annexure – 4**.
2(xiv)	Landsat imagery should be obtained on a continuous basis covering various seasons to study the change in the land use pattern due to the project and project related activities.	Complied. Project is in operation phase since many years and there is no change in the land use pattern.
2(xv)	With a view to providing adequate job opportunities to local people, facilities for technical training and development of skills should be made available in consultation with the state Harbour Department, and to this end it must be ensured that there is allocation of adequate funds. The local people should be involved in the afforestation program proposed for the scheme to ensure public participation and success of vegetation programmes.	Complied. Adani Foundation – CSR Arm of Adani Group is doing following activities as a part of Skill Development in surrounding communities in Kutch area. • Adani Skill Development Center (ASDC), Mundra & Bhuj is providing skill development training to the locals for Soft Skill, Technical Training and Carrier Guidance & knowledge-based training. • Adani Skill Development Centre (ASDC) is playing a pivotal role in implementing sustainable development in the state. ASDC is envisioned to be playing a major role in elevating the socio-economic status of the people belonging to the lowest strata of the society by empowering them with various skill development training for employability and livelihood. • Over the last few years, ASDC has assessed various aspects of the technical, leadership and soft skills gaps that organizations, in general, face and accordingly focuses on imparting required training in those areas in partnership with various colleges and institutes.

Sr. No.	Conditions	Compliance Status as on 30-09-2022
		• ASDC imparted various soft skilled and technical training to make Atma Nirbhar India. • During FY 2022-23 till Sep'22, Total 1836 people trained in various trainings to enhance socio economic development. • Preference is given to local people for employment based on their qualification and experience. • All Mangrove plantations are done in consultation with GUIDE and Local forest dept. • 24 hectare of mangrove afforestation at Mundra was done through active participation of local fishermen at the cost of INR 25.0 Lac. Details on skill development training imparted during compliance period i.e. Apr'22 to Sep'22 by Adani Foundation are available in CSR report enclosed as **Annexure – 3**.
2(xvi)	Prior clearance must be taken under the Hazardous Chemicals (manufacture, import and storage) Rules 1989, as amended up to date, from the competent authority. Such clearance will have to be taken prior to the commissioning of the project.	Complied. Permissions for storage of Hazardous Chemicals were obtained from MSIHC against the application made on 01.05.1999 through letter reference no. Kutch-HAZ/CHEM-23(2)/9713 while chemical storage permission against application made on 18.09.1999 was provided through letter reference no. Kutch-HAZ/CHEM-23(2)/9711. Approval from the PESO is obtained for import of hazardous chemicals as per License No. P/HQ/GJ/15/2050 (P12369) dated 18/07/2016 which is valid up to 31/12/2024 for Class A & Class C petroleum. A copy of the same was submitted along with the compliance report submission for the period of Oct'16 to Mar'17 and there is no further change. Please refer point no. 2 (xi) regarding GPCB permissions. License under Factories Act is taken dated 07.10.1998 and last renewed vide license no. 0102 on 20.04.2017 (Sr. No. 70707) is valid up to 31.12.2022. Details were submitted along with previous half yearly EC compliance report for the period of Oct'20 to Mar'21.

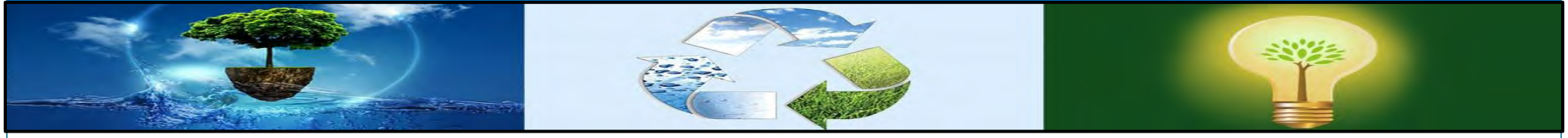
<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30-09-2022</th></tr>
<tr><td>2(xvii)</td><td>A detailed progress report should be submitted to the Ministry on each of the conditions stipulated above in respect of the follow-up action taken every six months. The first of these two reports should be sent in by 31.3.1996.</td><td>Complied.

Compliance report of EC conditions is uploaded regularly. Previous compliance report including results of monitoring data for the period of Oct'21 to Mar'22 was submitted to Integrated Regional Office (IRO) @ Gandhinagar, Zonal Office of CPCB @ Baroda, GPCB @ Gandhinagar & Gandhidham and Dept. of Forests & Env., Gandhinagar vide our letter dated 27.05.2022. Copy of the same is also available on our web site https://www.adaniports.com /ports-downloads. A soft copy of the same was also submitted through e-mail on 30.05.2022 to all the concern authorities. Please refer below for the details regarding past six compliance submissions.

<table>
<tr><th>Sr. No.</th><th>Compliance period</th><th>Date of submission</th></tr>
<tr><td>1</td><td>Apr'19 to Sep'19</td><td>28.11.2019</td></tr>
<tr><td>2</td><td>Oct'19 to Mar'20</td><td>20.05.2020</td></tr>
<tr><td>3</td><td>Apr'20 to Sep'20</td><td>26.11.2020</td></tr>
<tr><td>4</td><td>Oct'20 to Mar'21</td><td>25.05.2021</td></tr>
<tr><td>5</td><td>Apr'21 to Sep'21</td><td>30.11.2021</td></tr>
<tr><td>6</td><td>Oct'21 to Mar'22</td><td>30.05.2022</td></tr>
</table>
</td></tr>
<tr><td>2(xviii)</td><td>Financial requirements for implementation of the above indicated environmental mitigative measures should be worked out and included in the total cost of the project. Provision for enhancing this allocation in future should also be made.</td><td>Complied.

Separate budget for the Environment protection measures is earmarked every year. All the expenses are recorded in advanced accounting system of the organization. Details regarding environmental expenditures are as per compliance condition no. 2(xiii) above.</td></tr>
</table>

Annexure – 1



"Half Yearly Environmental Monitoring Reports "

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Monitoring Period: April – 2022 to September - 2022

Submitted By

UniStar
Environment and Research Labs Pvt. Ltd.

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MARINE WATER MONITORING SUMMARY REPORT

RESULTS OF MARINE WATER [M1 LEFT SIDE OF BOCHA CREEK - N 22°45'183" E 069°43'241"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022		MAY-2022		JUNE-2022		JULY-2022		AUGUST-2022		SEPTEMBER-2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.16	8.07	8.12	7.98	8.24	8.04	8.18	8.08	8.22	8.13	8.19	8.14	IS 3025 (Part11)1983
2.	Temperature	°C	30.1	30	30.2	30.1	30.3	30.2	30.1	30	30.1	30	30.2	30	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	124	116	128	114	128	114	132	122	140	124	154	132	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.4	BDL	2.6	BDL	2.5	BDL	2.6	BDL	2.8	BDL	2.6	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.07	5.87	6.12	5.92	6.02	5.82	6.17	5.96	6.17	5.96	6.05	5.85	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.24	35.68	35.32	35.81	35.42	35.94	35.64	36.02	35.56	35.98	35.48	35.94	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.33	2.15	2.49	2.32	2.32	1.72	1.94	1.72	2.37	2.24	3.45	3.02	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.235	0.17	0.259	0.215	0.379	0.312	0.344	0.293	0.328	0.293	0.302	0.276	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	2.37	2.28	2.28	2.16	2.59	2.16	2.37	2.32	2.5	2.37	3.19	2.84	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	5.52	5.47	5.029	4.695	5.289	4.19	4.654	4.333	5.198	4.903	6.942	6.136	APHA 23rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36428	36962	36128	36788	35922	36464	35864	36124	35810	35984	35846	36012	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	12.02	8.02	15.9	11.9	15.8	11.8	24.05	16.03	11.99	7.99	16.1	12.07	APHA 23rd Ed.,2017, 5220-B

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RESULTS OF MARINE WATER [M1 LEFT SIDE OF BOCHA CREEK - N 22°45'183" E 069°43'241"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton														
1.	Chlorophyll	mg/m³	2.4	3.25	2.98	2.88	2.88	3.21	3.21	3.15	2.36	3.25	1.98	3.25	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m³	0.47	0.74	0.84	0.67	0.9	0.87	0.89	0.97	1.23	0.84	0.58	0.84	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10^3/L	123	75	105	89	96	98	106	58	98	69	71	69	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Navicula*	*Pinnularia*	*Navicula*	*Pinnularia*	*Biddulphia*	*Coscinodiscus*	*Pinnularia*	*Navicula*	*Pinnularia*	*Odontella*	*Ceratium*	*Nitzschia*	APHA (23rd Ed. 2017)10200 F
			Fragillaria	*Navicula*	*Fragillaria*	*Surirella*	*Fragillaria*	*Thalassionema*	*Surirella*	*Fragillaria*	*Surirella*	*Rhizosolenia*	*Diploneis*	*Pinnularia*	
			Thalassiothrix	*Odontella*	*Skeletonema*	*Odontella*	*Odontella*	*Rhizosolenia*	*Odontella*	*Thalassiothrix*	*Odontella*	*Coscinodiscus*	*Odontella*	*Odontella*	
			Grammatophora	*Grammatophora*	*Grammatophora*	*Grammatophora*	*Grammatophora*	*Dinophysis*	*Grammatophora*	*Grammatophora*	*Grammatophora*	*Grammatophora*	*Grammatophora*	*Dinophysis*	
			Surirella	*Melosira*	*Odontella*	*Melosira*	*Melosira*	*Skeletonema*	*Melosira*	*Surirella*	*Melosira*	*Thallassiosira*	*Melosira*	*Surirella*	

B	Zooplankton								
1	Abudance(Population)	noX103/ 100 m3	25	32	30	42	35	40	APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Copepods*	*Copepods*	*Crustacean Larvae*	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	
			Oikoplura	***Egg(Fish and Shrimps)***	***Decapoda***	***Oikoplura***	***Oikoplura***	***Oikoplura***	
			Crustacean Larvae	***Crustacean Larvae***	***Copepods***	***Copepods nauplii***	***Copepods nauplii***	***Copepods nauplii***	
			Crustacean	***Crustacean***	***Crustacean***	***Crustacean***	***Crustacean***	***Crustacean***	
			Bivalve Larvae	***Bivalve Larvae***	***Bivalve Larvae***	***Bivalve Larvae***	***Bivalve Larvae***	***Bivalve Larvae***	
3	Total Biomass	ml/100 m³	14.69	15.3	18.4	17.41	15.63	14.32	

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RESULTS OF MARINE WATER [M1 LEFT SIDE OF BOCHA CREEK - N 22°45'183" E 069°43'241"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological														
1	Total Bacterial Count	CFU/ml	201		142		214		128		100		234		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	35		30		28		40		27		44		APHA 23rd Ed.2017,9222-B
3	Ecoli	/100ml	12		24		18		20		14		20		IS :15185:2016
4	Enterococcus	/100ml	8		12		6		14		8		14		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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RESULTS OF SEDIMENT ANALYSIS [M1 LEFT SIDE OF BOCHA CREEK - N 22°45'183" E 069°43'241"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022	MAY-2022	JUNE-2022	JULY-2022	AUGUST-2022	SEPTEMBER-2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT		
1.	Organic Matter	%	0.76	0.62	0.68	0.56	0.48	0.52	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	512.6	546.2	536.2	546.2	502.4	518.1	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	2.86	3.02	3.18	3.32	3.38	3.44	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	88.2	102.1	111.4	118.1	125.4	120.2	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	539.8	556.3	542.6	586.3	602.5	614.5	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	3.21	3.28	3.49	4.06	4.12	4.18	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	33.16	36.24	35.68	36.12	33.24	40.36	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	30.25	32.45	32.58	34.12	32.46	36.25	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	78.64	82.14	84.86	92.46	96.54	104.2	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	4.18	3.94	3.85	3.42	3.21	3.12	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

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RESULTS OF SEDIMENT ANALYSIS [M1 LEFT SIDE OF BOCHA CREEK - N 22°45'183" E 069°43'241"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022 SEDIMENT	MAY-2022 SEDIMENT	JUNE-2022 SEDIMENT	JULY-2022 SEDIMENT	AUGUST-2022 SEDIMENT	SEPTEMBER-2022 SEDIMENT	TEST METHOD
D	Benthic Organisms								
1	Macrobenthos	--	*Gastropods*	*Decapods Larvae*	*Gastropods*	*Turbellarians*	*Amphipods*	*Amphipods*	APHA (23rd Ed. 2017)10500 C
			Isopods	*Isopods*	*Isopods*	*Isopods*	*Decapod Larvae*	*Decapod Larvae*	
			Amphipods	*Amphipods*	*Amphipods*	*Gastropods*	*Isopods*	*Isopods*	
			Sipunculids	*Sipunculids*	*Sipunculids*	*Sipunculids*	*Gastropods*	*Gastropods*	
2	MeioBenthos	--	*Polychates*	*Foraminiferan*	*Polychates*	*Polychates*	*Turbellarians*	*Turbellarians*	
			Herpectacoids	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	
3	Population	no/m²	*308*	300	280	268	302	*356*	

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RESULTS OF MARINE WATER [M2 MOUTH OF BOCHA & NAVINAL CREEK - N 22°44'239" E 069°43'757"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022		MAY-2022		JUNE-2022		JULY-2022		AUGUST-2022		SEPTEMBER-2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.14	8.05	8.25	8.11	8.19	8.05	8.21	8.12	8.19	8.05	8.21	8.09	IS 3025 (Part11)1983
2.	Temperature	°C	30.2	30.1	30.3	30.1	30.2	30	30.2	30.1	30.1	30	30.2	30.1	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	126	112	132	106	132	106	124	98	136	106	144	112	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.8	BDL	2.7	BDL	2.8	BDL	3	BDL	2.9	BDL	2.8	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.17	5.97	6.22	5.92	6.12	5.92	6.06	5.86	6.06	5.86	5.95	5.75	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.22	35.86	35.41	35.91	35.55	36.05	3542	36.11	35.36	36.05	35.42	36.11	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.67	2.41	2.84	2.59	3.45	2.59	3.23	2.59	2.8	2.59	3.02	2.37	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.54	0.475	0.56	0.517	0.431	0.328	0.413	0.379	0.362	0.345	0.345	0.302	APHA 23rd Ed.,2017,4500NO_2 B
10.	Ammonical Nitrogen as NH_3	µmol/L	2.67	2.54	2.32	2.28	2.84	2.62	3.66	2.93	2.8	2.5	3.79	3.36	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	5.38	5.34	5.72	5.387	6.721	5.538	7.303	5.899	5.962	5.435	7.155	6.032	APHA 23rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36426	36832	36342	36744	36124	36580	36210	36742	36150	36544	36110	36540	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	20.04	12.02	23.9	15.9	19.7	11.8	16.03	12.02	15.98	11.99	24.14	16.1	APHA 23rd Ed.,2017, 5220-B

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RESULTS OF MARINE WATER [M2 MOUTH OF BOCHA & NAVINAL CREEK - N 22°44'239" E 069°43'757"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton														
1.	Chlorophyll	mg/m³	3.14	2.97	2.87	3.21	2.74	2.98	2.85	2.78	2.78	2.05	3	2.05	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m³	0.59	0.36	0.75	2.96	0.63	1.87	0.95	0.56	1	0.48	1.85	0.58	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10³/L	99	63	101	70	100	110	96	102	100	100	109	100	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Ceratium*	*Coscinodiscus*	*Pinnularia*	*Nitzschia*	*Cyclotella*	*Pleurosigma*	*Nitzschia*	*Ceratium*	*Melosira*	*Gramma tophora*	*Thalassiothrix*	*Odentella*	APHA (23rd Ed. 2017)10200 F
			Diploneis	*Diplotella*	*Pleurosigma*	*Pinnularia*	*Pinnularia*	*Cyclotella*	*Pinnularia*	*Diploneis*	*Pinnularia*	*Rhizosolenia*	*Surirella*	*Rhizosolenia*	
			Odentella	*Odontella*	*Odentella*	*Odontella*	*Skeletonema*	*Biddulphia*	*Odontella*	*Odentella*	*Skeletonema*	*Nitzschia*	*Navicula*	*Coscinodiscus*	
			Gramma tophora	*Dinophysis*	*Gramma tophora*	*Dinophysis*	*Thallassiosira*	*Skeletonema*	*Dinophysis*	*Gramma tophora*	*Rhizosolenia*	*Thallassiosira*	*Thallassiosira*	*Gramma tophora*	
			Melosira	*Surirella*	*Melosira*	*Surirella*	*Thalassionema*	*Thallassiosira*	*Surirella*	*Melosira*	*Pleurosigma*	*Pleurosigma*	*Skeletonema*	*Thallassiosira*	

B	Zooplankton								
1	Abudance(Population)	noX103 / 100 m3	50	41	38	40	42	36	APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Copepods nauplii*	*Copepods nauplii*	*Crustacean*	*Crustacean Larvae*	*Copepods nauplii*	*Crustacean Larvae*	
			Crustacean Larvae	*Crustacean Larvae*	*Oikoplura*	*Egg(Fish and Shrimps)*	*Oikoplura*	*Egg(Fish and Shrimps)*	
			Oikoplura	*Oikoplura*	*Crustacean Larvae*	*Copepods*	*Crustacean Larvae*	*Copepods*	
			Bivalve Larvae	*Bivalve Larvae*	*Oikoplura*	*Crustacean*	*Oikoplura*	*Crustacean*	
			Oikoplura	*Oikoplura*	*Bivalve Larvae*	*Bivalve Larvae*	*Bivalve Larvae*	*Bivalve Larvae*	
3	Total Biomass	ml/100 m³	15.89	14.36	15.89	16.95	16.23	15.46	

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RESULTS OF MARINE WATER [M2 MOUTH OF BOCHA & NAVINAL CREEK - N 22°44'239" E 069°43'757"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022		MAY-2022		JUNE-2022		JULY-2022		AUGUST-2022		SEPTEMBER-2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological														
1	Total Bacterial Count	CFU/ml	152		168		150		136		184		184		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	41		36		47		52		40		40		APHA 23rd Ed.2017,9222-B
3	E.coli	/100ml	20		29		12		27		20		20		IS :15185:2016
4	Enterococcus	/100ml	12		15		9		13		12		12		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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RESULTS OF SEDIMENT ANALYSIS [M2 MOUTH OF BOCHA & NAVINAL CREEK - N 22°44'239" E 069°43'757"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022	MAY-2022	JUNE-2022	JULY-2022	AUGUST-2022	SEPTEMBER-2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT		
1.	Organic Matter	%	0.52	0.46	0.52	0.42	0.39	0.42	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	602.4	586.1	544.6	534.6	558.5	564.2	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	2.52	2.84	3.01	3.25	3.43	3.52	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	68.2	79.2	80.4	94.8	104.5	111.5	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	492.1	512.4	528.5	567.9	588.4	602.8	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	2.86	2.96	3.24	3.52	3.59	3.68	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	36.89	42.12	44.19	41.4	38.9	42.5	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	36.82	42.84	41.28	39.86	39.58	40.12	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	56.85	60.12	55.64	64.23	70.45	78.94	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	2.94	2.83	2.88	2.65	2.58	2.46	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

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RESULTS OF SEDIMENT ANALYSIS [M2 MOUTH OF BOCHA & NAVINAL CREEK - N 22°44'239" E 069°43'757"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D			Benthic Organisms						
1	Macrobenthos	--	*Sipunculids*	*Sipunculids*	Sipunculids	*Foraminiferan*	*Amphipods*	*Gastropods*	APHA (23rd Ed. 2017)10500 C
			Decapods Larvae	*Decapods Larvae*	Decapods Larvae	Decapods Larvae	Isopods	Isopods	
			Amphipods	*Polychates*	Amphipods	*Amphipods*	*Sipunculids*	*Amphipods*	
			Isopods	*Isopods*	Isopods	*Polychates*	*Decapod Larvae*	*Sipunculids*	
2	MeioBenthos	--	*Turbellarians*	*Turbellarians*	Turbellarians	*Turbellarians*	*Herpectacoids*	*Polychates*	
			Herpectacoids	*Herpectacoids*	Herpectacoids	*Foraminiferan*	*Polychates*	*Herpectacoids*	
3	Population	no/m²	356	298	302	200	249	301	

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RESULTS OF MARINE WATER [M3 EAST OF BOCHAISLANOT DETECTED - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022		MAY-2022		JUNE-2022		JULY-2022		AUGUST-2022		SEPTEMBER-2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.17	8.04	8.26	8.09	8.23	8.14	8.25	8.16	8.24	8.14	8.14	7.98	IS 3025 (Part11)1983
2.	Temperature	°C	30.1	30	30.2	30.1	30.3	30.2	30.1	30	30.2	30.1	30.1	30	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	134	114	112	98	112	98	118	94	116	94	118	102	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.6	BDL	2.9	BDL	3.1	BDL	2.9	BDL	2.8	BDL	2.7	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.07	5.97	6.02	5.92	6.02	5.8	6.17	6.1	6.17	6.1	5.85	5.7	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.28	35.88	35.52	36.12	35.44	35.94	35.26	35.86	35.22	35.89	35.28	35.94	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.93	2.76	2.84	2.67	2.49	2.15	3.23	3.02	3.02	2.8	3.23	2.8	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.3	0.235	0.345	0.284	0.259	0.13	0.344	0.259	0.362	0.293	0.328	0.276	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	2.54	2.45	2.49	2.28	2.28	1.81	3.62	2.84	3.32	3.1	3.53	2.97	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	5.55	5.47	5.675	5.234	5.029	2.461	7.194	6.119	6.702	6.193	7.088	6.046	APHA 23rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36344	36854	35984	36768	36002	36648	36118	36748	35986	36422	36080	36640	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	24.05	16.03	19.9	11.9	23.7	15.8	20.04	16.03	19.98	15.98	20.12	12.07	APHA 23rd Ed.,2017, 5220-B

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RESULTS OF MARINE WATER [M3 EAST OF BOCHAISLANOT DETECTED - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	3	2.56	3.1	2.79	3.1	2.87	3.1	3.14	3.25	3.06	2.36	2.89	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m³	1.2	0.97	0.93	1.23	85	0.99	78	1.03	1.42	1.45	0.96	1.25	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10³/L	84	102	98	120	100	130	95	124	105	109	102	118	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Pinnularia*	*Fragillaria*	*Fragillaria*	*Odentella*	*Odentella*	*Skeletonema*	*Odentella*	*Pinnularia*	*Cyclotella*	*Coscinodiscus*	*Cyclotella*	*Dinophysis*	APHA (23rd Ed. 2017)10200 F
			Thalassionema	*Rhizosolenia*	*Thalassionema*	*Rhizosolenia*	*Cyclotella*	*Diplotella*	*Rhizosolenia*	*Thalassionema*	*Pinnularia*	*Diploneis*	*Pinnularia*	*Pinnularia*	
			Navicula	*Pinnularia*	*Navicula*	*Coscinodiscus*	*Pinnularia*	*Odontella*	*Coscinodiscus*	*Navicula*	*Skeletonema*	*Rhizosolenia*	*Skeletonema*	*Thalassiothrix*	
			Thallassiosira	*Grammatophora*	*Thallassiosira*	*Grammatophora*	*Biddulphia*	*Dinophysis*	*Grammatophora*	*Thallassiosira*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	*Grammatophora*	
			Skeletonema	*Thallassiosira*	*Skeletonema*	*Thallassiosira*	*Thallassiosira*	*Surirella*	*Thallassiosira*	*Skeletonema*	*Thalassionema*	*Thalassionema*	*Thalassionema*	*Ceratium*	

B			Zooplankton												
1	Abudance(Population)	noX103 / 100 m3	32		45		51		39		28		37		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Copepods nauplii*		*Copepods nauplii*		*Copepods nauplii*		*Crustacean*		*Egg(Fish and Shrimps)*		*Copepods nauplii*		
			Oikoplura		*Copepods*		*Copepods*		*Copepods nauplii*		*Copepods*		*Crustacean Larvae*		
			Crustacean Larvae		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		*Oikoplura*		
			Crustacean		*Bivalve Larvae*		*Bivalve Larvae*		*Crustacean*		*Oikoplura*		*Bivalve Larvae*		
			Bivalve Larvae		*Crustacean*		*Crustacean*		*Bivalve Larvae*		*Crustacean*		*Oikoplura*		
3	Total Biomass	ml/100 m³	13.25		15.68		15.74		17.45		15.42		16.32		

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RESULTS OF MARINE WATER [M3 EAST OF BOCHAISLANOT DETECTED - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
C			Microbiological												
1	Total Bacterial Count	CFU/ml	198		200		190		200		245		245		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	39		28		40		36		42		42		APHA 23rd Ed.2017,9222-B
3	E.coli	/100ml	22		11		27		21		20		20		IS :15185:2016
4	Enterococcus	/100ml	15		18		15		20		14		14		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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RESULTS OF SEDIMENT ANALYSIS [M3 EAST OF BOCHAISLANOT DETECTED - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022	MAY-2022	JUNE-2022	JULY-2022	AUGUST-2022	SEPTEMBER-2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.66	0.59	0.62	0.59	0.56	0.52	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	574.4	588.2	594.6	574.2	562.4	542.2	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	2.83	2.98	3.32	3.49	3.52	3.64	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	82.4	94.2	92.2	104.2	110.5	118.4	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	402.1	424.6	462.4	489.6	510.5	522.4	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	2.89	3.05	3.15	3.35	3.42	3.58	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	38.94	40.1	42.5	46.32	44.26	52.24	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	34.29	41.36	44.4	40.25	38.56	42.85	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	64.97	70.19	65.2	75.94	78.24	82.85	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	4.43	4.05	3.86	3.52	3.45	3.28	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

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RESULTS OF SEDIMENT ANALYSIS [M3 EAST OF BOCHAISLANOT DETECTED - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms								
1	Macrobenthos	--	*Isopods*	*Gastropods*	*Isopods*	*Sipunculids*	*Polychates*	*Sipunculids*	APHA (23rd Ed. 2017)10500 C
			Polychates	*Polychates*	*Polychates*	*Polychates*	*Gastropods*	*Decapods Larvae*	
			Sipunculids	*Sipunculids*	*Sipunculids*	*Gastropods*	*Isopods*	*Amphipods*	
			Amphipods	*Amphipods*	*Amphipods*	*Isopods*	*Sipunculids*	*Isopods*	
2	MeioBenthos	--	*Polychates*	*Herpectacoids*	*Polychates*	*Herpectacoids*	*Herpectacoids*	*Turbellarians*	
			Foraminiferan	*Foraminiferan*	*Foraminiferan*	*Foraminiferan*	*Polychates*	*Herpectacoids*	
3	Population	no/m²	*300*	320	380	352	360	*355*	

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Mr. Nitin Tandel
Technical Manager

RESULTS OF MARINE WATER [M4 JUNA BANOT DETECTEDAR N 22°47'577" E 069°43'620"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022		MAY-2022		JUNE-2022		JULY-2022		AUGUST-2022		SEPTEMBER-2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.04	7.92	8.18	8.01	8.24	8.08	8.19	8.04	8.21	8.08	8.24	8.12	IS 3025 (Part11)1983
2.	Temperature	°C	30.1	30	30.3	30.2	30.4	30.2	30.2	30.1	30.2	30.1	30.2	30.1	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	128	102	124	108	124	108	126	88	130	112	124	106	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.1	BDL	2.8	BDL	2.9	BDL	2.8	BDL	3.1	BDL	2.9	BDL	IS 3025(Part 4)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.07	5.86	5.92	5.71	6.02	5.82	6.06	5.86	6.17	5.96	6.15	6.05	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.29	35.94	35.36	35.82	35.74	36.24	35.62	35.98	35.45	36.02	35.43	35.94	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991,Amd.2
8.	Nitrate as NO_3	µmol/L	2.84	2.5	2.32	2.93	2.84	2.59	2.37	2.16	2.59	2.24	3.66	3.23	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.365	0.325	0.379	0.31	0.345	0.3	0.207	0.189	0.241	0.198	0.276	0.259	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	2.62	2.49	2.59	2.32	2.49	2.06	2.75	2.62	3.84	3.32	3.62	3.28	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	5.68	5.55	5.289	5.56	5.675	4.95	5.327	4.969	6.671	5.758	7.556	6.769	APHA 23rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36524	37042	36204	36944	36312	36864	36422	36894	36128	36750	35988	36520	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	20.04	16.03	23.9	19.9	19.7	11.8	24.05	12.02	23.98	15.98	20.12	16.1	APHA 23rd Ed.,2017, 5220-B

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RESULTS OF MARINE WATER [M4 JUNA BANOT DETECTEDAR N 22°47'577" E 069°43'620"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton														
1.	Chlorophyll	mg/m³	2.24	3.06	2.68	3.06	2.44	2.8	2.44	2.74	2.36	2.78	2.69	3.21	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m³	0.48	0.48	0.8	0.48	0.79	0.65	0.87	0.68	0.84	0.62	1.32	0.52	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10³/L	129	86	109	86	114	70	98	100	101	120	95	123	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Melosira*	*Diploneis*	*Melosira*	*Gramma tophora*	*Diploneis*	*Cyclotella*	*Gramma tophora*	*Melosira*	*Gramma tophora*	*Rhizosolenia*	*Coscinodiscus*	*Ceratium*	APHA (23rd Ed. 2017)10200 F
			Pinnularia	*Rhizosolenia*	*Pinnularia*	*Rhizosolenia*	*Rhizosolenia*	*Fragillaria*	*Rhizosolenia*	*Pinnularia*	*Rhizosolenia*	*Pinnularia*	*Diploneis*	*Pinnularia*	
			Skeletonema	*Nitzschia*	*Skeletonema*	*Nitzschia*	*Nitzschia*	*Diniphysis*	*Nitzschia*	*Skeletonema*	*Nitzschia*	*Thalassiothrix*	*Rhizosolenia*	*Odontella*	
			Rhizosolenia	*Thalassiothrix*	*Nitzschia*	*Thallassiosira*	*Cyclotella*	*Thallassiosira*	*Thallassiosira*	*Rhizosolenia*	*Thallassiosira*	*Gramma tophora*	*Dinophysis*	*Thalassiothrix*	
			Pleurosigma	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	*Skeletonema*	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	*Ceratium*	*Thalassionema*	*Thallassiosira*	
B	Zooplankton														
1	Abudance(Population)	noX103 / 100 m3	45		38		41		40		31		40		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		*Copepods nauplii*		*Copepods nauplii*		*Pinnularia*		
			Oikoplura		*Oikoplura*		*Oikoplura*		*Crustacean Larvae*		*Crustacean Larvae*		*Surirella*		
			Copepods nauplii		*Copepods nauplii*		*Copepods nauplii*		*Oikoplura*		*Oikoplura*		*Odentella*		
			Crustacean		*Crustacean*		*Crustacean*		*Bivalve Larvae*		*Bivalve Larvae*		*Grammatophora*		
			Bivalve Larvae		*Bivalve Larvae*		*Bivalve Larvae*		*Oikoplura*		*Oikoplura*		*Melosira*		
3	Total Biomass	ml/100 m³	17.24		16.35		13.98		14.74		16.48		16.54		

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RESULTS OF MARINE WATER [M4 JUNA BANOT DETECTEDAR N 22°47'577" E 069°43'620"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
C			Microbiological												
1	Total Bacterial Count	CFU/ml	150		188		128		148		200		204		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	30		42		24		28		41		35		APHA 23rd Ed.2017,9222-B
3	E.coli	/100ml	28		30		12		10		23		22		IS :15185:2016
4	Enterococcus	/100ml	10		21		8		6		17		21		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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RESULTS OF SEDIMENT ANALYSIS [M4 JUNA BANOT DETECTEDAR N 22°47'577" E 069°43'620"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022	MAY-2022	JUNE-2022	JULY-2022	AUGUST-2022	SEPTEMBER-2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.52	0.49	0.56	2.46	1.84	1.51	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	622.1	638.2	612.4	586.4	582.5	544.1	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	3.12	3.31	3.16	3.39	3.44	3.48	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	58.64	71.2	68.6	76.9	80.4	91.2	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	404.1	419.8	435.6	486.2	502.2	513.4	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	3.12	3.26	3.52	3.75	3.84	4.02	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	42.16	44.39	44.82	42.62	40.26	44.36	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	28.94	36.84	38.24	39.84	36.58	35.26	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	52.12	58.57	55.64	64.85	68.52	76.94	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	4.16	3.94	3.85	3.42	3.25	2.89	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

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RESULTS OF SEDIMENT ANALYSIS [M4 JUNA BANOT DETECTEDAR N 22°47'577" E 069°43'620"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms								
1	Macrobenthos	--	*Amphipods*	*Amphipods*	*Amphipods*	*Amphipods*	*Amphipods*	*Isopods*	APHA (23rd Ed. 2017)10500 C
			Decapod Larvae	*Decapod Larvae*	Sipunculids	Sipunculids	Sipunculids	Polychates	
			Isopods	*Isopods*	*Isopods*	*Isopods*	*Isopods*	*Sipunculids*	
			Gastropods	*Gastropods*	*Gastropods*	*Gastropods*	*Gastropods*	*Amphipods*	
2	MeioBenthos	--	*Foraminiferan*	*Turbellarians*	*Decapods Larvae*	*Decapods Larvae*	*Decapods Larvae*	*Polychates*	
			Herpectacoids	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Foraminiferan*	
3	Population	no/m²	278	265	290	321	342	289	

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RESULTS OF MARINE WATER [M5 TOWARDS WESTERN SIDE OF EAST PORT – N 22°46'041" E 069°47'296"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022		MAY-2022		JUNE-2022		JULY-2022		AUGUST-2022		SEPTEMBER-2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.12	8.02	8.31	8.12	8.24	8.11	8.21	8.04	8.25	8.09	8.22	8.12	IS 3025 (Part11)1983
2.	Temperature	°C	30.2	30.1	30.2	30.1	30.3	30.1	30.2	30.1	30.1	30	30.2	30.1	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	94	88	106	96	106	96	102	90	142	114	138	110	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.9	BDL	3	BDL	3.2	BDL	3.2	BDL	3	BDL	3.1	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	5.97	5.87	6.02	5.81	6.12	5.92	5.96	5.85	6.07	5.86	6.15	5.85	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.18	35.68	35.29	35.89	35.36	36.92	35.28	36.12	35.22	35.98	35.34	36.05	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39)1991, Amd.2
8.	Nitrate as NO_3	µmol/L	2.76	2.67	3.45	2.76	2.32	1.72	3.23	2.8	3.36	3.02	3.88	3.45	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.39	0.365	0.431	0.345	0.379	0.276	0.379	0.344	0.632	0.31	0.302	0.224	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	2.37	2.24	2.84	2.49	2.59	2.24	3.96	2.93	3.84	3.62	3.19	2.84	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	5.77	5.6	6.721	5.595	5.289	4.24	7.569	6.074	7.832	6.95	7.372	6.514	APHA 23rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36710	36944	36528	37002	36244	36948	36008	36644	35866	36542	35920	36610	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	16.03	8.02	15.9	11.9	15.8	7.9	20.04	16.03	7.99	4	24.14	12.07	APHA 23rd Ed.,2017, 5220-B

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RESULTS OF MARINE WATER [M5 TOWARDS WESTERN SIDE OF EAST PORT – N 22°46'041" E 069°47'296"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	3.16	2.36	2.9	3.1	3.12	2.94	2.68	3.41	2.47	2.98	2.47	2.87	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m³	0.93	1.25	0.88	1.25	0.85	1.3	0.97	2.14	1.23	0.98	0.97	0.85	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10³/L	107	135	89	96	69	90	79	87	59	104	74	96	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Cyclotella*	*Pinnularia*	*Rhizosolenia*	*Thalassiothrix*	*Pinnularia*	*Ceratium*	*Thalassiothrix*	*Cyclotella*	*Rhizosolenia*	*Diploneis*	*Fragillaria*	*Surirella*	APHA (23rd Ed. 2017)10200 F
			Pinnularia	*Surirella*	*Biddulphia*	*Surirella*	*Biddulphia*	*Melosira*	*Surirella*	*Pinnularia*	*Biddulphia*	*Rhizosolenia*	*Thalassionema*	*Thalassiothrix*	
			Skeletonema	*Navicula*	*Skeletonema*	*Navicula*	*Navicula*	*Nitzschia*	*Navicula*	*Skeletonema*	*Skeletonema*	*Nitzschia*	*Navicula*	*Navicula*	
			Thallassiosira	*Thallassiosira*	*Thallassiosira*	*Thallassiosira*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	*Thallassiosira*	*Thallassiosira*	*Thalassiothrix*	*Thallassiosira*	*Skeletonema*	
			Thalassionema	*Skeletonema*	*Thalassionema*	*Skeletonema*	*Skeletonema*	*Pleurosigma*	*Skeletonema*	*Thalassionema*	*Thalassionema*	*Pleurosigma*	*Skeletonema*	*Thallassiosira*	
B			Zooplankton												
1	Abudance(Population)	noX103 / 100 m3	29		32		32		51		47		51		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Crustacean Larvae*		*Crustacean Larvae*		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		*Copepods*		*Nitzschia*		
			Decapoda		*Egg(Fish and Shrimps)*		*Copepods*		*Copepods*		*Oikoplura*		*Pinnularia*		
			Copepods		*Copepods*		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		*Odontella*		
			Crustacean		*Crustacean*		*Oikoplura*		*Oikoplura*		*Crustacean*		*Dinophysis*		
			Bivalve Larvae		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		*Surirella*		
3	Total Biomass	ml/100 m³	15.74		14.78		16.78		15.48		17.86		18.23		

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RESULTS OF MARINE WATER [M5 TOWARDS WESTERN SIDE OF EAST PORT – N 22°46'041" E 069°47'296"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
C			Microbiological												
1	Total Bacterial Count	CFU/ml	142		170		200		209		176		158		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	50		44		39		42		39		23		APHA 23rd Ed.2017,9222-B
3	E.coli	/100ml	29		31		29		30		25		20		IS :15185:2016
4	Enterococcus	/100ml	18		20		22		20		16		10		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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RESULTS OF SEDIMENT ANALYSIS [M5 TOWARDS WESTERN SIDE OF EAST PORT – N 22°46'041" E 069°47'296"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022	MAY-2022	JUNE-2022	JULY-2022	AUGUST-2022	SEPTEMBER-2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.49	0.52	0.56	0.49	0.45	0.44	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	588.2	574.2	564.8	542.5	535.2	554.1	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	2.61	2.86	3.16	3.39	3.46	3.51	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	38.94	44.23	42.64	46.25	48.9	56.4	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	388.5	402.2	388.6	402.4	410.8	424.1	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	2.69	2.75	2.84	3.12	3.28	3.35	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	33.28	36.85	36.88	38.62	36.24	41.25	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	18.96	24.21	24.82	26.89	28.64	33.28	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	35.24	40.28	41.28	49.84	52.4	64.82	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	3.56	3.24	3.64	3.38	3.12	2.82	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

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RESULTS OF SEDIMENT ANALYSIS [M5 TOWARDS WESTERN SIDE OF EAST PORT – N 22°46'041" E 069°47'296"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D			Benthic Organisms						
1	Macrobenthos	--	Decapod Larvae	*Decapod Larvae*	*Polychates*	*Polychates*	*Polychates*	Amphipods	APHA (23rd Ed. 2017)10500 C
			Gastropods	*Gastropods*	*Gastropods*	*Gastropods*	*Gastropods*	*Decapod Larvae*	
			Isopods	*Isopods*	*Isopods*	*Isopods*	*Isopods*	*Isopods*	
			Amphipods	*Sipunculids*	*Sipunculids*	*Sipunculids*	*Sipunculids*	*Gastropods*	
2	MeioBenthos	--	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Foraminiferan*	
			Polychates	*Polychates*	*Polychates*	*Polychates*	*Polychates*	*Herpectacoids*	
3	Population	no/m²	250	278	284	384	325	306	

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Mr. Nitin Tandel
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RESULTS OF MARINE WATER [M7 EAST PORT N 22°47'120" E 069°47'110"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022		MAY-2022		JUNE-2022		JULY-2022		AUGUST-2022		SEPTEMBER-2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.21	8.08	8.26	8.11	8.26	8.02	8.24	8.11	8.15	8.02	8.16	7.97	IS 3025 (Part11)1983
2.	Temperature	°C	30.2	30.1	30.3	30.2	30.2	30.1	30.1	30	30.2	30.1	30.3	30.2	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	122	114	132	112	132	112	122	108	128	114	136	112	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.7	BDL	3.1	BDL	2.8	BDL	2.6	BDL	2.8	BDL	3	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	5.97	5.77	5.92	5.81	5.92	5.8	6.06	6	6.17	5.96	6.05	5.95	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.26	35.86	35.44	36.02	35.26	35.86	35.44	35.94	35.38	35.92	35.42	36.12	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39)1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.84	2.67	2.93	2.67	2.76	2.59	2.8	2.37	3.23	2.59	3.66	3.02	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.235	0.17	0.241	0.198	0.379	0.276	0.259	0.189	0.293	0.259	0.328	0.259	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	2.58	2.54	2.41	2.24	2.32	1.56	4.05	3.83	3.97	3.84	3.79	3.36	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	5.81	5.64	5.581	5.108	5.459	4.426	7.109	6.389	7.493	6.689	7.778	6.639	APHA 23rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36128	36620	36442	36714	36244	36824	36102	36558	35956	36444	36020	36580	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	16.03	8.02	19.9	11.9	15.8	11.8	20.04	12.02	15.98	7.99	20.12	16.1	APHA 23rd Ed.,2017, 5220-B

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RESULTS OF MARINE WATER [M7 EAST PORT N 22°47'120" E 069°47'110"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	2.14	2.48	2.14	2.65	2.59	2.65	3.25	2.87	3	3.14	3	3	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m³	0.74	0.96	0.74	1.1	0.78	1.85	0.96	2	0.78	2.03	0.9	1.75	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10³/L	110	140	110	128	83	115	90	109	98	114	108	106	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Gramma tophora*	*Coscinodiscus*	*Thallassiosira*	*Navicula*	*Coscinodiscus*	*Navicula*	*Navicula*	*Gramma tophora*	*Thallassiosira*	*Gramma tophora*	*Thallassiosira*	*Gramma tophora*	APHA (23rd Ed. 2017)10200 F
			Rhizosolenia	*Diploneis*	*Melosira*	*Skeletonema*	*Diploneis*	*Cyclotella*	*Skeletonema*	*Rhizosolenia*	*Melosira*	*Rhizosolenia*	*Melosira*	*Rhizosolenia*	
			Nitzschia	*Rhizosolenia*	*Nitzschia*	*Rhizosolenia*	*Rhizosolenia*	*Pinnularia*	*Rhizosolenia*	*Nitzschia*	*Nitzschia*	*Nitzschia*	*Nitzschia*	*Nitzschia*	
			Thalassionema	*Dinophysis*	*Rhizosolenia*	*Dinophysis*	*Dinophysis*	*Skeletonema*	*Dinophysis*	*Thalassionema*	*Rhizosolenia*	*Thalassionema*	*Rhizosolenia*	*Thallassiosira*	
			Pleurosigma	*Thalassionema*	*Pleurosigma*	*Thalassionema*	*Thalassionema*	*Thallassiosira*	*Thalassionema*	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	

B			Zooplankton												
1	Abudance(Population)	noX103 / 100 m3	30		27		36		47		41		48		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Crustacean*		*Copepods nauplii*		*Oikoplura*		*Oikoplura*		*Copepods nauplii*		*Copepods nauplii*		
			Oikoplura		*Oikoplura*		*Copepods nauplii*		*Copepods nauplii*		*Crustacean Larvae*		*Crustacean Larvae*		
			Crustacean Larvae		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		*Oikoplura*		*Oikoplura*		
			Oikoplura		*Oikoplura*		*Crustacean*		*Crustacean*		*Bivalve Larvae*		*Bivalve Larvae*		
			Bivalve Larvae		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		*Oikoplura*		*Oikoplura*		
3	Total Biomass	ml/100 m³	16.54		15.38		14.98		16.98		16.32		15.36		

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RESULTS OF MARINE WATER [M7 EAST PORT N 22°47'120" E 069°47'110"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	178		198		196		180		202		200		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	39		32		47		36		32		30		APHA 23rd Ed.2017,9222-B
3	E.coli	/100ml	20		21		25		21		24		21		IS :15185:2016
4	Enterococcus	/100ml	17		14		20		14		15		17		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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RESULTS OF MARINE WATER [M8 RIGHT SIDE OF BOCHA CREEK N 22°45'987" E 069°43'119"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022		MAY-2022		JUNE-2022		JULY-2022		AUGUST-2022		SEPTEMBER-2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.22	8.09	8.19	8.12	8.24	8.16	8.18	8.06	8.22	8.02	8.05	7.92	IS 3025 (Part11)1983
2.	Temperature	°C	30.3	30.2	30.2	30.1	30.3	30.1	30.2	30.1	30.2	30.1	30.3	30.2	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	118	104	134	106	134	106	144	126	156	130	134	112	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.9	BDL	2.8	BDL	2.9	BDL	2.5	BDL	2.6	BDL	2.8	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	5.97	5.87	6.12	5.92	6.02	5.92	6.06	5.96	6.07	5.96	5.95	5.75	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.31	35.82	35.46	35.94	35.28	35.88	35.14	35.72	35.18	35.74	35.28	35.94	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.67	2.41	2.59	2.32	2.84	2.59	3.66	3.44	3.45	3.02	3.45	2.8	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.475	0.365	0.56	0.431	0.474	0.31	0.413	0.379	0.379	0.328	0.345	0.276	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	2.62	2.58	2.49	2.24	2.41	1.89	3.96	3.62	3.84	3.62	3.28	3.1	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	5.68	5.52	5.64	4.991	5.724	4.79	8.033	7.439	7.669	6.968	7.075	6.176	APHA 23rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36284	36622	36846	37124	36564	37056	36124	36786	36020	36594	36110	36630	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	16.03	12.02	15.9	11.9	19.7	11.8	24.05	16.03	11.99	7.99	16.1	12.07	APHA 23rd Ed.,2017, 5220-B

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RESULTS OF MARINE WATER [M8 RIGHT SIDE OF BOCHA CREEK N 22°45'987" E 069°43'119"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	2.09	3.21	3.14	3	3.14	2.69	2.98	2.47	3.01	2.85	3.01	2.85	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m³	1.32	1.41	1.3	1.12	1.3	0.86	1.97	0.96	2.38	0.86	2.38	0.86	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10³/L	131	100	125	103	125	100	120	67	115	96	113	102	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Skeletonema*	*Rhizosolenia*	*Odontella*	*Dinophysis*	*Rhizosolenia*	*Surirella*	*Dinophysis*	*Skeletonema*	*Dinophysis*	*Skeletonema*	*Gramma tophora*	*Pinnularia*	APHA (23rd Ed. 2017)10200 F
			Gramma tophora	*Pinnularia*	*Gramma tophora*	*Pinnularia*	*Fragillaria*	*Rhizosolenia*	*Pinnularia*	*Gramma tophora*	*Pinnularia*	*Gramma tophora*	*Rhizosolenia*	*Thalassionema*	
			Nitzschia	*Thalassiothrix*	*Nitzschia*	*Thalassiothrix*	*Thalassiothrix*	*Nitzschia*	*Thalassiothrix*	*Nitzschia*	*Thalassiothrix*	*Nitzschia*	*Nitzschia*	*Navicula*	
			Thalassiothrix	*Gramma tophora*	*Thalassiothrix*	*Gramma tophora*	*Gramma tophora*	*Thalassionema*	*Gramma tophora*	*Thalassiothrix*	*Gramma tophora*	*Thalassiothrix*	*Thalassionema*	*Thallassiosira*	
			Pleurosigma	*Ceratium*	*Pleurosigma*	*Ceratium*	*Ceratium*	*Pleurosigma*	*Ceratium*	*Pleurosigma*	*Ceratium*	*Pleurosigma*	*Pleurosigma*	*Skeletonema*	
B			Zooplankton												
1	Abudance(Population)	noX103 / 100 m3	41		39		47		58		60		54		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		*Decapoda*		*Crustacean Larvae*		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		
			Copepods		*Copepods*		*Copepods*		*Decapoda*		*Oikoplura*		*Oikoplura*		
			Crustacean Larvae		*Crustacean Larvae*		*Crustacean Larvae*		*Copepods*		*Copepods nauplii*		*Copepods nauplii*		
			Oikoplura		*Oikoplura*		*Crustacean*		*Crustacean*		*Crustacean*		*Crustacean*		
			Bivalve Larvae		*Crustacean*		*Oikoplura*		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		
3	Total Biomass	ml/100 m³	17.21		16.21		15.36		14.52		15.23		14.68		

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RESULTS OF MARINE WATER [M8 RIGHT SIDE OF BOCHA CREEK N 22°45'987" E 069°43'119"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
C			Microbiological												
1	Total Bacterial Count	CFU/ml	200		202		214		208		216		264		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	32		37		29		28		30		47		APHA 23rd Ed.2017,9222-B
3	E.coli	/100ml	19		22		20		20		17		31		IS :15185:2016
4	Enterococcus	/100ml	11		10		12		12		10		24		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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RESULTS OF SEDIMENT ANALYSIS [M8 RIGHT SIDE OF BOCHA CREEK N 22°45'987" E 069°43'119"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022	MAY-2022	JUNE-2022	JULY-2022	AUGUST-2022	SEPTEMBER-2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.42	0.48	0.52	0.49	0.52	0.54	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	594.2	601.2	609.8	611.2	594.5	560.5	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	2.58	2.74	2.88	3.16	3.24	3.38	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	42.41	48.9	44.6	56.58	59.54	66.8	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	431.2	444.1	452	487	497	510	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	2.61	2.73	2.84	3.25	3.35	3.42	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	32.62	36.94	34.85	36.92	35.24	37.16	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	22.21	26.24	26.38	29.85	30.25	32.19	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	46.82	52.22	55	65	70	78	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	4.74	4.29	4.11	3.86	3.42	3.25	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

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RESULTS OF SEDIMENT ANALYSIS [M8 RIGHT SIDE OF BOCHA CREEK N 22°45'987" E 069°43'119"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D			Benthic Organisms						
1	Macrobenthos	--	*Amphipods*	*Gastropods*	*Gastropods*	*Sipunculids*	*Sipunculids*	*Sipunculids*	APHA (23rd Ed. 2017)10500 C
			Sipunculids	*Isopods*	*Isopods*	*Isopods*	*Isopods*	*Decapods Larvae*	
			Isopods	*Amphipods*	*Amphipods*	*Foraminiferan*	*Foraminiferan*	*Polychates*	
			Decapod Larvae	*Decapod Larvae*	*Decapod Larvae*	*Decapod Larvae*	*Decapod Larvae*	*Isopods*	
2	MeioBenthos	--	*Herpectacoids*	*Polychates*	*Polychates*	*Herpectacoids*	*Herpectacoids*	*Turbellarians*	
			Polychates	*Turbellarians*	*Turbellarians*	*Turbellarians*	*Turbellarians*	*Herpectacoids*	
3	Population	no/m²	326	330	330	385	340	325	

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RESULTS OF MARINE WATER [M11 MPT T1 JETTY N 22°42'278" E 069°43'450"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022		MAY-2022		JUNE-2022		JULY-2022		AUGUST-2022		SEPTEMBER-2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.16	7.94	8.22	7.99	8.3	8.13	8.28	8.14	8.24	8.09	8.18	8.05	IS 3025 (Part11)1983
2.	Temperature	°C	30.3	30.2	30.4	30.3	30.3	30.2	30.1	30	30.1	30	30.2	30.1	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	119	111	122	114	122	114	134	118	144	124	122	104	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.8	BDL	2.8	BDL	2.9	BDL	2.7	BDL	2.5	BDL	2.6	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.07	5.87	6.22	6.02	6.12	6	6.17	6.1	6.17	5.96	6.15	5.95	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.22	35.74	35.28	35.82	35.42	35.94	35.19	35.82	35.24	35.78	35.22	35.95	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.67	2.33	2.76	2.59	2.93	2.67	3.23	3.02	2.93	2.37	3.02	2.59	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.325	0.235	0.379	0.31	0.241	0.22	0.293	0.259	0.241	0.198	0.276	0.215	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	2.67	2.58	2.32	2.16	2.41	1.94	3.66	3.18	3.32	3.1	3.79	3.36	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	5.55	5.47	5.459	5.06	5.581	4.83	7.183	6.459	6.491	5.668	7.086	6.165	APHA 23rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36112	36624	36628	37250	36524	37146	36262	36860	36124	36762	36140	36640	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	24.05	20.04	27.9	19.9	23.7	15.8	20.04	12.02	19.98	11.99	12.07	8.05	APHA 23rd Ed.,2017, 5220-B

Continue…

RESULTS OF MARINE WATER [M11 MPT T1 JETTY N 22°42'278" E 069°43'450"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	2.78	2.85	2.78	2.79	2.78	2.74	2.48	2.41	2.69	2.41	2.69	2.58	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m³	1.1	1.32	0.97	1.2	0.97	1.32	0.91	2.14	1.02	1.65	1.02	1.78	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10³/L	90	98	98	101	98	98	90	108	86	106	97	114	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Ceratium*	*Melosira*	*Thalassiothrix*	*Ceratium*	*Melosira*	*Cyclotella*	*Ceratium*	*Ceratium*	*Diploneis*	*Ceratium*	*Diploneis*	*Pinnularia*	APHA (23rd Ed. 2017)10200 F
			Melosira	*Cyclotella*	*Melosira*	*Pinnularia*	*Pinnularia*	*Fragillaria*	*Pinnularia*	*Melosira*	*Rhizosolenia*	*Pinnularia*	*Rhizosolenia*	*Surirella*	
			Odentella	*Odontella*	*Odentella*	*Odontella*	*Skeletonema*	*Navicula*	*Odontella*	*Odentella*	*Nitzschia*	*Odontella*	*Nitzschia*	*Odentella*	
			Dinophysis	*Skeletonema*	*Dinophysis*	*Thalassiothrix*	*Thallassiosira*	*Thallassiosira*	*Thalassiothrix*	*Dinophysis*	*Cyclotella*	*Thalassiothrix*	*Cyclotella*	*Grammatophora*	
			Pleurosigma	*Thallassiosira*	*Pleurosigma*	*Thallassiosira*	*Thalassionema*	*Skeletonema*	*Thallassiosira*	*Pleurosigma*	*Pleurosigma*	*Thallassiosira*	*Pleurosigma*	*Melosira*	
B			Zooplankton												
1	Abudance(Population)	noX103 / 100 m3	32		44		50		43		36		44		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Oikoplura*		*Oikoplura*		*Egg(Fish and Shrimps)*		*Decapoda*		*Crustacean Larvae*		*Grammatophora*		
			Copepods nauplii		*Copepods nauplii*		*Oikoplura*		*Copepods*		*Decapoda*		*Rhizosolenia*		
			Crustacean Larvae		*Crustacean Larvae*		*Copepods nauplii*		*Crustacean Larvae*		*Copepods*		*Nitzschia*		
			Crustacean		*Crustacean*		*Crustacean*		*Crustacean*		*Crustacean*		*Thalassionema*		
			Bivalve Larvae		*Bivalve Larvae*		*Bivalve Larvae*		*Oikoplura*		*Bivalve Larvae*		*Pleurosigma*		
3	Total Biomass	ml/100 m³	15.36		14.96		17.58		16.85		17.86		15.26		

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RESULTS OF MARINE WATER [M11 MPT T1 JETTY N 22°42'278" E 069°43'450"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
C			Microbiological												
1	Total Bacterial Count	CFU/ml	214		200		190		190		184		202		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	40		30		35		35		33		36		APHA 23rd Ed.2017,9222-B
3	E.coli	/100ml	25		20		20		26		29		30		IS :15185:2016
4	Enterococcus	/100ml	16		9		18		21		19		24		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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RESULTS OF MARINE WATER [M12 SPM N 22°40'938" E 069°39'191"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL-2022		MAY-2022		JUNE-2022		JULY-2022		AUGUST-2022		SEPTEMBER-2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.19	8.06	8.28	8.11	8.26	8.09	8.25	8.12	8.23	8.05	8.24	8.08	IS 3025 (Part11)1983
2.	Temperature	°C	30.3	30.2	30.3	30.1	30.2	30.1	30.1	30	30.2	30.1	30.1	30	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	118	112	126	108	126	108	106	78	120	104	114	98	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.2	BDL	2.9	BDL	3.1	BDL	2.9	BDL	2.8	BDL)	2.7	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	5.97	5.77	6.12	6.02	6.12	5.92	6.27	6.17	6.17	6.07	6.15	6.05	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.27	35.86	35.33	35.74	35.28	35.83	35.21	35.78	35.19	35.68	35.06	35.76	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.5	2.24	2.84	2.76	2.59	2.15	3.44	2.59	3.36	2.8	3.23	2.37	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.3	0.17	0.474	0.431	0.56	0.379	0.344	0.293	0.328	0.276	0.345	0.302	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	2.54	2.49	2.41	2.28	2.49	2.24	3.83	2.75	3.62	3.32	3.62	3.28	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	5.68	5.55	5.724	5.471	5.64	4.77	7.614	5.633	7.308	6.396	7.195	5.952	APHA 23rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36638	36912	36942	37624	36842	37122	36520	37160	36442	36988	36520	36840	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	16.03	12.02	23.9	15.9	23.7	19.7	16.03	8.01	15.98	11.99	20.12	12.07	APHA 23rd Ed.,2017, 5220-B

Continue…

RESULTS OF MARINE WATER [M12 SPM N 22°40'938" E 069°39'191"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	2.69	2.41	2.78	2.97	2.78	2.56	2.78	3.1	2.78	2.7	2.89	2.45	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m³	0.82	0.85	0.95	1.11	0.95	0.88	1.25	0.85	0.78	0.78	1.25	0.87	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10³/L	105	126	100	113	100	90	96	86	87	91	90	108	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Biddulphia*	*Grammatophora*	*Pleurosigma*	*Surirella*	*Grammatophora*	*Coscinodiscus*	*Surirella*	*Biddulphia*	*Pinnularia*	*Surirella*	*Thallassiosira*	*Nitzschia*	APHA (23rd Ed. 2017)10200 F
			Fragillaria	*Dinophysis*	*Dinophysis*	*Thalassiothrix*	*Dinophysis*	*Diploneis*	*Thalassiothrix*	*Fragillaria*	*Biddulphia*	*Thalassiothrix*	*Melosira*	*Pinnularia*	
			Odentella	*Navicula*	*Odentella*	*Navicula*	*Navicula*	*Nitzschia*	*Navicula*	*Odentella*	*Navicula*	*Navicula*	*Nitzschia*	*Odontella*	
			Grammatophora	*Fragillaria*	*Grammatophora*	*Skeletonema*	*Fragillaria*	*Dinophysis*	*Skeletonema*	*Grammatophora*	*Thallassiosira*	*Skeletonema*	*Rhizosolenia*	*Dinophysis*	
			Melosira	*Thallassiosira*	*Melosira*	*Thallassiosira*	*Biddulphia*	*Thalassionema*	*Thallassiosira*	*Melosira*	*Skeletonema*	*Thallassiosira*	*Pleurosigma*	*Surirella*	

B			Zooplankton												
1	Abudance(Population)	noX103 / 100 m3	35		51		48		50		45		50		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Decapoda*		*Decapoda*		*Decapoda*		*Decapoda*		*Crustacean*		*Coscinodiscus*		
			Copepods		*Copepods*		*Oikoplura*		*Oikoplura*		*Oikoplura*		*Diploneis*		
			Crustacean Larvae		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		*Rhizosolenia*		
			Crustacean		*Crustacean*		*Bivalve Larvae*		*Bivalve Larvae*		*Oikoplura*		*Dinophysis*		
			Oikoplura	*Oikoplura*	*Oikoplura*	*Oikoplura*	*Oikoplura*	*Oikoplura*	*Oikoplura*	*Oikoplura*	*Bivalve Larvae*	*Bivalve Larvae*	*Thalassionema*	*Thalassionema*	
3	Total Biomass	ml/100 m³	13.45		15.78		16.34		17.36		16.9		17.1		

Continue...

RESULTS OF MARINE WATER [M12 SPM N 22°40'938" E 069°39'191"]

SR. NO.	TEST PARAMETERS	UNIT	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
C			Microbiological												
1	Total Bacterial Count	CFU/ml	110		142		230		222		212		196		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	24		31		40		41		46		52		APHA 23rd Ed.2017,9222-B
3	E.coli	/100ml	16		23		28		31		26		32		IS :15185:2016
4	Enterococcus	/100ml	8		10		18		12		18		22		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	110		142		230		222		212		196		IS: 5887 (Part V):1976

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RESULTS OF ETP OUTLET WATER

SR.NO.	TEST PARAMETERS	UNIT	LIQUID TERMINAL						GPCB Limit	TEST METHOD
			APRIL-2022	MAY-2022	JUNE-2022	JULY-2022	AUGUST-2022	SEPTEMBER-2022		
			25-04-2022	30-05-2022	28-06-2022	21-07-2022	26-08-2022	27-09-2022		
1.	Colour	Pt. Co. Scale	20	25	30	20	25	30	100	IS 3025(Part 4)
2.	pH @ 27 ° C	--	7.14	7.34	7.46	7.14	7.38	7.44	6.5 to 8.5	APHA 23rd Ed.,2017,4500-H+B
3.	Temperature	^{0}C	30.5	31	31	30	30	30.5	40	IS 3025(Part 9)1984
4.	Total Suspended Solid	mg/L	46	38	44	36	42	44	100	APHA 23rd Ed.,2017,2540 –D
5.	Total Dissolved Solids	mg/L	1462	1486	1494	1502	1510	1524	2100	APHA 23rd Ed.,2017,2540- C
6.	COD	mg/L	72.6	88.4	89.1	76.4	80.8	88.5	100	IS 3025(Part 58)2006
7.	BOD (3 days at 27 ^{0}C)	mg/L	20	24	24	21	23	25	30	IS 3025(Part 44)1993Amd.01
8.	Chloride (as Cl) $^-$	mg/L	480.9	502.2	516.9	520.6	510.6	524.2	600	IS 3025(PART 32) 1988
9.	Oil & Grease	mg/L	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	10	IS 3025(Part39)1991, Amd. 2
10.	Sulphate (as SO_4)	mg/L	150.4	124.2	110.6	108	112	122	1000	IS 3025(Part 24)1986
11.	Ammonical Nitrogen	mg/L	22.2	26.8	24.8	28.6	26.5	22.5	50	IS 3025(Part 34)1988,
12.	Phenolic Compound	mg/L	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	1	IS 3025(Part 43)1992, Amd.2
13.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	3	IS 3025(Part 42)1992amd.01,
14.	Lead as Pb	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	0.1	APHA 23rd Ed.,2017,3111-B

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SR.NO.	TEST PARAMETERS	UNIT	LIQUID TERMINAL						GPCB Limit	TEST METHOD
			APRIL-2022	MAY-2022	JUNE-2022	JULY-2022	AUGUST-2022	SEPTEMBER-2022		
			25-04-2022	30-05-2022	28-06-2022	21-07-2022	26-08-2022	27-09-2022		
15.	Sulphide as S	mg/L	0.54	0.86	0.54	1.12	1.19	1.24	2	APHA 23rd Ed.,2017,4500 S^{-2} F
16.	Cadmium as Cd	mg/L	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	2	APHA 23rd Ed.,2017,3111-B
17.	Fluoride as F	mg/L	1.03	0.84	0.86	1.03	0.94	0.82	2	APHA 23rd Ed.,2017,4500 F, D
18.	Residual Chlorine	mg/L	0.74	0.77	0.69	0.65	0.68	0.74	0.5 Min.	APHA 23rd Ed.,2017,4500-Cl-B
19.	Percent Sodium	%	45.59	46.92	47.84	46.57	46.52	45.46	60	By Calculation
20.	Sodium Absorption ratio	--	6.87	6.52	6.45	6.25	6.29	6.29	26	By Calculation

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Results of Ambient Air Quality Monitoring

Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
1.	07-04-2022	87.56	35.43	35.43	41.25	1.2	5.12	NOT DETECTED
2.	08-04-2022	84.53	30.21	31.48	38.95	0.78	4.76	NOT DETECTED
3.	11-04-2022	88.43	43.25	37.25	44.56	1.25	3.54	NOT DETECTED
4.	12-04-2022	78.97	37.65	38.25	42.35	1.00	5.12	NOT DETECTED
5.	18-04-2022	88.24	41.25	35.67	40.17	0.98	4.43	NOT DETECTED
6.	21-04-2022	81.46	44.2	40.13	42.68	1.23	3.10	NOT DETECTED
7.	25-04-2022	85.52	45.21	36.54	41.45	1.00	5.00	NOT DETECTED
8.	28-04-2022	87.32	39.34	38.23	40.87	1.43	4.85	NOT DETECTED
9.	02-05-2022	78.34	40.25	36.73	43.56	1.00	4.12	NOT DETECTED
10.	05-05-2022	82.34	37.65	34.15	39.25	1.35	6.75	NOT DETECTED
11.	09-05-2022	88.76	34.56	35.25	41.78	1.16	4.25	NOT DETECTED
12.	12-05-2022	80.23	37.85	32.34	37.51	1.20	3.1	NOT DETECTED
13.	16-05-2022	75.67	36.12	31.56	37.25	1.15	5.25	NOT DETECTED
14.	18-05-2022	84.32	29.45	36.72	42.39	1.00	4.1	NOT DETECTED
15.	23-05-2022	79.54	35.21	34.84	40.44	1.26	3.9	NOT DETECTED

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Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
16.	26-05-2022	85.21	30.25	36.17	43.52	1.40	5.45	NOT DETECTED
17.	30-05-2022	72.34	34.21	35.38	41.15	1.30	6.1	NOT DETECTED
18.	02-06-2022	84.51	34.56	31.23	38.23	1.24	5.37	NOT DETECTED
19.	06-06-2022	80.12	37.68	35.43	40.44	1.00	5.1	NOT DETECTED
20.	09-06-2022	76.55	31.25	30.25	36.78	1.4	6.25	NOT DETECTED
21.	13-06-2022	71.95	32.56	33.28	39.15	1.7	6.45	NOT DETECTED
22.	15-06-2022	69.45	30.18	29.47	34.55	1.34	5.12	NOT DETECTED
23.	20-06-2022	76.84	31.68	34.68	40.12	1.55	4.17	NOT DETECTED
24.	23-06-2022	85.43	33.21	31.94	38.45	1.2	6.15	NOT DETECTED
25.	27-06-2022	72.34	37.89	35.7	40.17	1.56	4.25	NOT DETECTED
26.	29-06-2022	88.75	34.52	32.17	37.95	1.23	5.12	NOT DETECTED
27.	04-07-2022	68.95	20.15	14.56	17.89	0.02	2.5	NOT DETECTED
28.	07-07-2022	37.67	12.56	7.68	11.25	NOT DETECTED	NOT DETECTED	NOT DETECTED
29.	11-07-2022	32.34	10.25	9.12	12.46	NOT DETECTED	NOT DETECTED	NOT DETECTED
30.	14-07-2022	31.23	9.23	8.12	11.21	NOT DETECTED	NOT DETECTED	NOT DETECTED
31.	18-07-2022	37.89	12.45	6.15	8.79	NOT DETECTED	NOT DETECTED	NOT DETECTED

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Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
32.	21-07-2022	35.32	11.1	8.23	11.32	NOT DETECTED	NOT DETECTED	NOT DETECTED
33.	25-07-2022	40.15	14.28	7.15	9.33	NOT DETECTED	NOT DETECTED	NOT DETECTED
34.	28-07-2022	31.45	10.15	6.93	8.25	NOT DETECTED	NOT DETECTED	NOT DETECTED
35.	01-08-2022	75.47	46.26	29.47	36.55	1.13	3.79	NOT DETECTED
36.	04-08-2022	69.74	37.63	36.31	43.54	1.25	7.27	NOT DETECTED
37.	08-08-2022	86.69	41.22	34.65	38.79	1.05	5.83	NOT DETECTED
38.	11-08-2022	89.46	34.74	36.19	41.68	1.32	4.76	NOT DETECTED
39.	15-08-2022	72.18	39.12	37.64	43.84	1.21	4.39	NOT DETECTED
40.	18-08-2022	84.26	32.48	31.38	38.28	0.96	6.1	NOT DETECTED
41.	22-08-2022	81.94	37.93	32.89	42.37	1.2	3.96	NOT DETECTED
42.	25-08-2022	79.57	31.26	38.57	46.32	1.32	7.62	NOT DETECTED
43.	29-08-2022	64.34	37.63	34.75	40.14	1.28	4.26	NOT DETECTED
44.	01-09-2022	66.37	36.73	23.68	28.34	1.15	3.16	NOT DETECTED
45.	05-09-2022	86.37	28.69	26.41	32.29	1.00	6.38	NOT DETECTED
46.	08-09-2022	83.16	37.26	29.74	36.18	0.93	4.38	NOT DETECTED
47.	12-09-2022	81.84	26.93	32.94	38.63	1.24	3.95	NOT DETECTED

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Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
48.	15-09-2022	87.52	41.69	34.84	39.59	1.18	4.83	NOT DETECTED
49.	19-09-2022	89.73	27.81	26.48	32.74	1.00	5.38	NOT DETECTED
50.	22-09-2022	75.05	34.72	28.15	34.38	1.15	4.37	NOT DETECTED
51.	26-09-2022	86.19	28.47	31.92	36.52	1.08	6.03	NOT DETECTED
52.	29-09-2022	84.39	31.29	27.3	34.49	1.16	5.71	NOT DETECTED
Permissible Value as per NAAQMS		**100.0**	**60.0**	**80.0**	**80.0**	**2.0**	**---**	**5.0**
Test Method		**IS - 5182, Part-23**	**UERL/AIR/SOP/11**	**IS - 5182, Part - 2**	**IS - 5182, Part - 6**	**IS - 5182, Part - 10**	**Gas analyzer**	**IS – 5182, Part – 11**

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Results of Ambient Air Quality Monitoring

Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
1.	07-04-2022	87.25	35.67	34.67	41.23	1.25	3.45	NOT DETECTED
2.	08-04-2022	81.23	32.19	30.14	37.65	1.00	1.78	NOT DETECTED
3.	11-04-2022	76.45	39.76	36.15	40.25	0.45	4.56	NOT DETECTED
4.	12-04-2022	82.34	35.45	29.17	34.58	0.73	6.12	NOT DETECTED
5.	18-04-2022	77.35	28.23	35.31	42.45	1.00	4.35	NOT DETECTED
6.	21-04-2022	89.34	42.1	38.67	44.12	1.15	5.5	NOT DETECTED
7.	25-04-2022	82.57	30.14	34.56	40.25	0.85	3.12	NOT DETECTED
8.	28-04-2022	87.34	36.74	28.78	36.75	1.00	4.17	NOT DETECTED
9.	02-05-2022	73.22	40.25	36.12	42.35	1.15	2.45	NOT DETECTED
10.	05-05-2022	84.53	37.15	33.21	38.23	1.3	2.35	NOT DETECTED
11.	09-05-2022	87.65	34.12	37.34	43.18	1.00	3.1	NOT DETECTED
12.	12-05-2022	85.43	32.15	30.14	36.25	1.15	4.13	NOT DETECTED
13.	16-05-2022	72.17	39.25	27.25	33.45	1.25	2.25	NOT DETECTED
14.	18-05-2022	75.86	45.12	34.56	40.25	1.00	3.17	NOT DETECTED
15.	23-05-2022	81.34	36.15	37.12	42.15	0.94	4.00	NOT DETECTED

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Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
16.	26-05-2022	85.23	32.45	33.15	38.26	1.15	5.15	NOT DETECTED
17.	30-05-2022	75.89	35.15	37.23	41.25	1.00	3.25	NOT DETECTED
18.	02-06-2022	78.95	35.17	32.15	38.16	1.2	4.1	NOT DETECTED
19.	06-06-2022	81.18	38.25	31.26	37.12	1.25	3.76	NOT DETECTED
20.	09-06-2022	84.56	33.45	35.45	40.19	1.00	2.55	NOT DETECTED
21.	13-06-2022	88.56	34.57	34.56	40.12	1.2	5.0	NOT DETECTED
22.	15-06-2022	80.24	41.28	30.18	36.78	1.15	4.2	NOT DETECTED
23.	20-06-2022	85.19	40.25	35.18	41.19	1.00	2.8	NOT DETECTED
24.	23-06-2022	77.87	32.88	36.12	42.35	1.00	4.15	NOT DETECTED
25.	27-06-2022	89.24	38.11	33.19	38.93	1.25	3.78	NOT DETECTED
26.	29-06-2022	81.23	32.45	34.55	40.15	1	2.75	NOT DETECTED
27.	04-07-2022	61.23	18.44	12.34	14.56	0.05	2.15	NOT DETECTED
28.	07-07-2022	30.17	12.34	8.12	10.23	NOT DETECTED	NOT DETECTED	NOT DETECTED
29.	11-07-2022	27.67	10.45	8.45	11.35	NOT DETECTED	NOT DETECTED	NOT DETECTED
30.	14-07-2022	25.67	8.65	7.68	9.45	NOT DETECTED	NOT DETECTED	NOT DETECTED
31.	18-07-2022	30.16	9.45	7.12	11.24	NOT DETECTED	NOT DETECTED	NOT DETECTED

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Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
32.	21-07-2022	32.45	10.25	7.45	10.12	NOT DETECTED	NOT DETECTED	NOT DETECTED
33.	25-07-2022	36.78	12.26	6.15	8.78	NOT DETECTED	NOT DETECTED	NOT DETECTED
34.	28-07-2022	29.76	10.43	5.89	9.15	NOT DETECTED	NOT DETECTED	NOT DETECTED
35.	01-08-2022	85.78	36.78	32.79	41.67	1.2	3.72	NOT DETECTED
36.	04-08-2022	70.08	34.64	37.27	43.6	1.05	4.29	NOT DETECTED
37.	08-08-2022	81.49	32.16	34.11	38.24	1.25	4.7	NOT DETECTED
38.	11-08-2022	87.91	36.28	28.74	34.49	1.00	6.72	NOT DETECTED
39.	15-08-2022	83.91	41.39	34.7	40.82	1.12	3.74	NOT DETECTED
40.	18-08-2022	70.58	39.65	29.04	32.46	1.24	4.69	NOT DETECTED
41.	22-08-2022	84.19	31.36	39.16	46.89	1.15	3.27	NOT DETECTED
42.	25-08-2022	89.48	42.63	35.94	41.39	1.32	7.52	NOT DETECTED
43.	29-08-2022	74.33	37.47	41.48	47.24	0.91	5.21	NOT DETECTED
44.	01-09-2022	67.84	32.48	27.36	34.76	1.00	4.27	NOT DETECTED
45.	05-09-2022	83.86	28.36	32.58	36.87	0.9	5.83	NOT DETECTED
46.	08-09-2022	86.25	26.58	28.47	33.13	1.05	6.83	NOT DETECTED
47.	12-09-2022	72.73	33.49	24.83	27.37	1.15	7.18	NOT DETECTED

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Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
48.	15-09-2022	76.28	38.72	29.71	35.63	1.17	2.95	NOT DETECTED
49.	19-09-2022	81.27	33.62	32.47	38.31	1.1	6.73	NOT DETECTED
50.	22-09-2022	75.88	27.91	34.83	40.27	1.00	4.36	NOT DETECTED
51.	26-09-2022	78.94	34.39	31.18	37.49	1.25	5.98	NOT DETECTED
52.	29-09-2022	84.94	35.74	36.49	43.65	1.15	4.19	NOT DETECTED
Permissible Value as per NAAQMS		**100.0**	**60.0**	**80.0**	**80.0**	**2.0**	**---**	**5.0**
Test Method		**IS - 5182, Part-23**	**UERL/AIR/SOP/11**	**IS - 5182, Part - 2**	**IS - 5182, Part - 6**	**IS - 5182, Part - 10**	**Gas analyzer**	**IS – 5182, Part – 11**

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Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
1.	07-04-2022	84.35	31.46	32.45	39.23	1.00	3.12	NOT DETECTED
2.	08-04-2022	80.54	37.68	37.65	44.56	1.00	2.15	NOT DETECTED
3.	11-04-2022	78.45	29.21	33.45	40.21	0.75	2.67	NOT DETECTED
4.	12-04-2022	88.56	36.78	38.12	45.2	0.98	4.1	NOT DETECTED
5.	18-04-2022	83.45	42.57	37.34	43.67	1.15	1.34	NOT DETECTED
6.	21-04-2022	79.54	43.12	36.11	40.34	0.86	2.5	NOT DETECTED
7.	25-04-2022	84.56	37.97	34.5	38.21	0.9	3.12	NOT DETECTED
8.	28-04-2022	87.12	42.45	39.12	43.45	1.00	6.7	NOT DETECTED
9.	02-05-2022	78.77	35.67	35.13	41.35	1.25	4.58	NOT DETECTED
10.	05-05-2022	82.34	43.56	34.21	40.25	1.15	3.12	NOT DETECTED
11.	09-05-2022	85.67	37.89	36.85	42.67	1.8	5.16	NOT DETECTED
12.	12-05-2022	75.54	41.56	35.12	40.15	1.00	3.15	NOT DETECTED
13.	16-05-2022	70.12	42.56	35.45	38.85	1.35	1.5	NOT DETECTED
14.	18-05-2022	84.56	37.12	38.13	44.25	1.25	1.00	NOT DETECTED
15.	23-05-2022	88.34	45.92	34.00	40.15	1.14	1.25	NOT DETECTED

Continue…

Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
16.	26-05-2022	74.23	37.84	38.13	44.52	1.00	1.4	NOT DETECTED
17.	30-05-2022	87.25	35.91	34.87	40.85	1.25	1.15	NOT DETECTED
18.	02-06-2022	80.34	42.35	33.75	39.12	1.1	4.5	NOT DETECTED
19.	06-06-2022	82.36	37.25	36.72	42.19	1.34	3.15	NOT DETECTED
20.	09-06-2022	78.23	40.15	35.12	41.25	1.25	4.27	NOT DETECTED
21.	13-06-2022	75.43	44.58	36.71	42.78	1.24	3.15	NOT DETECTED
22.	15-06-2022	83.21	40.15	34.89	40.25	1.4	2.65	NOT DETECTED
23.	20-06-2022	89.17	36.25	32.15	36.75	1.25	4.15	NOT DETECTED
24.	23-06-2022	82.95	38.15	37.2	43.45	1.00	3.84	NOT DETECTED
25.	27-06-2022	74.2	42.55	32.38	38.44	1.32	2.25	NOT DETECTED
26.	29-06-2022	82.18	37.45	34.21	40.15	1.25	3.15	NOT DETECTED
27.	04-07-2022	68.78	19.89	14.56	16.23	0.05	2.15	NOT DETECTED
28.	07-07-2022	34.56	14.23	11.23	13.25	NOT DETECTED	NOT DETECTED	NOT DETECTED
29.	11-07-2022	30.12	11.21	10.45	12.36	NOT DETECTED	NOT DETECTED	NOT DETECTED
30.	14-07-2022	34.56	9.34	10.21	12.68	NOT DETECTED	NOT DETECTED	NOT DETECTED
31.	18-07-2022	37.89	10.23	9.12	11.21	NOT DETECTED	NOT DETECTED	NOT DETECTED

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Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
32.	21-07-2022	30.12	11.23	8.15	11.23	NOT DETECTED	NOT DETECTED	NOT DETECTED
33.	25-07-2022	41.25	13.45	8.45	9.15	NOT DETECTED	NOT DETECTED	NOT DETECTED
34.	28-07-2022	33.24	11.25	7.25	10.25	NOT DETECTED	NOT DETECTED	NOT DETECTED
35.	01-08-2022	86.84	32.87	31.26	43.74	1.25	6.12	NOT DETECTED
36.	04-08-2022	81.21	38.32	36.1	42.54	1.13	2.6	NOT DETECTED
37.	08-08-2022	72.86	42.86	29.97	36.38	1.28	4.82	NOT DETECTED
38.	11-08-2022	78.25	43.67	34.27	41.53	1.05	6.64	NOT DETECTED
39.	15-08-2022	69.52	46.21	38.54	46.38	1.3	3.23	NOT DETECTED
40.	18-08-2022	85.87	39.58	33.82	37.89	1.18	2.69	NOT DETECTED
41.	22-08-2022	89.57	41.37	36.49	43.61	1.15	1.00	NOT DETECTED
42.	25-08-2022	73.66	38.94	35.31	38.25	1.00	1.94	NOT DETECTED
43.	29-08-2022	84.49	43.73	37.69	44.84	1.34	4.74	NOT DETECTED
44.	01-09-2022	81.69	29.37	24.85	31.91	1.06	5.27	NOT DETECTED
45.	05-09-2022	74.61	33.46	28.18	36.48	1.00	3.85	NOT DETECTED
46.	08-09-2022	86.47	37.59	25.9	32.86	0.93	3.48	NOT DETECTED
47.	12-09-2022	72.84	36.92	31.24	38.71	1.18	5.93	NOT DETECTED

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Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
48.	15-09-2022	70.97	32.46	28.74	35.79	1.15	4.19	NOT DETECTED
49.	19-09-2022	76.48	38.28	21.93	28.31	1.07	3.75	NOT DETECTED
50.	22-09-2022	81.48	42.36	32.68	37.42	1.05	2.79	NOT DETECTED
51.	26-09-2022	73.63	28.72	24.38	28.63	1.00	3.82	NOT DETECTED
52.	29-09-2022	86.38	36.04	29.16	36.2	1.15	5.15	NOT DETECTED
Permissible Value as per NAAQMS		**100.0**	**60.0**	**80.0**	**80.0**	**2.0**	**---**	**5.0**
Test Method		**IS - 5182, Part-23**	**UERL/AIR/SOP/11**	**IS - 5182, Part - 2**	**IS - 5182, Part - 6**	**IS - 5182, Part - 10**	**Gas analyzer**	**IS – 5182, Part – 11**

Nikunj D. Patel
(Chemist)

UNISTAR ENVIRONMENT & RESEARCH LABS PVT. LTD. * GUJARAT VAPI.

Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
1.	07-04-2022	75.67	28.94	10.26	16.75	NOT DETECTED	2.12	NOT DETECTED
2.	08-04-2022	84.56	31.45	14.56	21.35	0.05	NOT DETECTED	NOT DETECTED
3.	11-04-2022	81.23	29.56	12.34	18.25	0.43	1.54	NOT DETECTED
4.	12-04-2022	79.23	34.55	17.20	23.45	0.20	1.00	NOT DETECTED
5.	18-04-2022	86.12	30.90	15.45	20.17	1.00	2.45	NOT DETECTED
6.	21-04-2022	81.45	28.75	13.45	21.23	0.25	NOT DETECTED	NOT DETECTED
7.	25-04-2022	88.34	34.62	16.21	25.67	0.04	1.67	NOT DETECTED
8.	28-04-2022	80.26	31.25	18.34	23.85	0.75	2.10	NOT DETECTED
9.	02-05-2022	84.24	30.25	14.56	21.34	1.00	3.15	NOT DETECTED
10.	05-05-2022	74.88	37.12	12.35	18.75	1.04	1.56	NOT DETECTED
11.	09-05-2022	80.12	32.45	17.34	23.92	1.00	2.85	NOT DETECTED
12.	12-05-2022	83.45	29.15	21.34	26.15	0.50	4.10	NOT DETECTED
13.	16-05-2022	78.15	27.94	18.45	24.55	0.80	3.35	NOT DETECTED
14.	18-05-2022	81.54	32.45	24.32	30.12	1.00	2.15	NOT DETECTED
15.	23-05-2022	86.54	29.15	20.17	27.13	1.10	4.15	NOT DETECTED

Continue…

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
16.	26-05-2022	88.73	31.24	23.45	28.21	1.00	2.45	NOT DETECTED
17.	30-05-2022	80.56	34.27	21.15	27.12	1.25	3.25	NOT DETECTED
18.	02-06-2022	76.85	34.56	18.76	25.44	1.00	2.15	NOT DETECTED
19.	06-06-2022	88.95	35.67	23.18	28.74	1.00	1.00	NOT DETECTED
20.	09-06-2022	70.23	24.56	11.24	18.95	1.20	3.12	NOT DETECTED
21.	13-06-2022	85.34	36.76	19.23	26.73	0.50	2.50	NOT DETECTED
22.	15-06-2022	89.12	33.56	21.23	27.45	1.00	3.41	NOT DETECTED
23.	20-06-2022	81.90	36.75	25.21	30.21	0.50	3.75	NOT DETECTED
24.	23-06-2022	76.85	28.75	22.44	28.75	1.00	4.00	NOT DETECTED
25.	27-06-2022	84.10	30.15	17.85	23.45	0.70	2.76	NOT DETECTED
26.	29-06-2022	88.23	34.21	20.24	26.19	0.50	2.00	NOT DETECTED
27.	04-07-2022	56.78	17.89	12.14	15.45	0.05	NOT DETECTED	NOT DETECTED
28.	07-07-2022	30.12	9.23	8.67	11.23	NOT DETECTED	NOT DETECTED	NOT DETECTED
29.	11-07-2022	37.68	12.45	7.23	8.24	NOT DETECTED	NOT DETECTED	NOT DETECTED
30.	14-07-2022	32.14	10.15	9.34	10.26	NOT DETECTED	NOT DETECTED	NOT DETECTED
31.	18-07-2022	35.67	11.23	6.78	8.35	NOT DETECTED	NOT DETECTED	NOT DETECTED

Continue…

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Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
32.	21-07-2022	32.45	9.85	8.24	10.21	NOT DETECTED	NOT DETECTED	NOT DETECTED
33.	25-07-2022	42.14	12.45	7.21	9.45	NOT DETECTED	NOT DETECTED	NOT DETECTED
34.	28-07-2022	34.56	11.29	6.34	8.33	NOT DETECTED	NOT DETECTED	NOT DETECTED
35.	01-08-2022	68.99	28.59	11.28	24.28	1.18	4.39	NOT DETECTED
36.	04-08-2022	87.93	34.35	14.07	20.93	1.15	2.86	NOT DETECTED
37.	08-08-2022	76.37	36.30	21.69	27.64	1.25	3.82	NOT DETECTED
38.	11-08-2022	89.47	27.84	26.46	32.18	1.00	6.2	NOT DETECTED
39.	15-08-2022	84.17	29.49	16.30	22.32	0.94	4.85	NOT DETECTED
40.	18-08-2022	68.23	38.31	19.98	28.58	1.21	1.79	NOT DETECTED
41.	22-08-2022	72.17	26.40	27.38	36.73	1.09	5.83	NOT DETECTED
42.	25-08-2022	80.74	36.47	21.71	27.47	1.15	4.2	NOT DETECTED
43.	29-08-2022	84.19	39.74	23.31	31.38	1.00	2.05	NOT DETECTED
44.	01-09-2022	72.47	25.73	14.28	18.29	1.05	3.84	NOT DETECTED
45.	05-09-2022	85.39	31.37	16.72	24.47	1.00	3.17	NOT DETECTED
46.	08-09-2022	79.18	33.78	19.34	26.82	1.13	4.82	NOT DETECTED
47.	12-09-2022	69.68	26.39	24.73	28.02	1.16	5.38	NOT DETECTED

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Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
48.	15-09-2022	74.18	25.47	22.86	28.63	1.06	5.93	NOT DETECTED
49.	19-09-2022	83.69	34.83	21.28	32.19	1.20	3.1	NOT DETECTED
50.	22-09-2022	81.32	24.49	24.75	30.92	1.00	3.69	NOT DETECTED
51.	26-09-2022	78.61	29.35	18.63	24.31	0.95	5.25	NOT DETECTED
52.	29-09-2022	80.74	36.50	27.62	36.58	1.15	3.93	NOT DETECTED
Permissible Value as per NAAQMS		**100.0**	**60.0**	**80.0**	**80.0**	**2.0**	**---**	**5.0**
Test Method		**IS - 5182, Part-23**	**UERL/AIR/SOP/11**	**IS - 5182, Part - 2**	**IS - 5182, Part - 6**	**IS - 5182, Part - 10**	**Gas analyzer**	**IS – 5182, Part – 11**

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Results of Noise Level Monitoring

Location Name		CT3 RMU-2					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		01-04-2022	06-05-2022	10-06-2022	10-07-2022	10-08-2022	12-09-2022
1	06:00 to 07:00	63.4	62.8	64.2	64.5	64.1	63.9
2	07:00 to 08:00	66.9	63.5	67.8	69.2	64.9	67.8
3	08:00 to 09:00	65.5	64.5	68.9	67.8	66.7	68.9
4	09:00 to 10:00	69.6	66.9	67.3	69.5	62.1	67.1
5	10:00 to 11:00	65.2	66.5	68.5	65.3	63.8	68.5
6	11:00 to 12:00	66.5	66.7	69.1	60.6	67.9	69.1
7	12:00 to 13:00	69.5	68.5	67.5	65.5	65.4	67.5
8	13:00 to 14:00	67.5	65.5	66.9	67.2	66.2	66.9
9	14:00 to 15:00	68.2	62.6	67.2	68.5	64	67.2
10	15:00 to 16:00	69.5	63.5	65.5	66.5	60.9	65.5
11	16:00 to 17:00	68.5	66.7	68.2	65.5	64.6	68.2
12	17:00 to 18:00	68.2	62.4	64.7	68.9	65.4	64.7
13	18:00 to 19:00	69.5	61.5	63.2	67.2	63.2	63.2
14	19:00 to 20:00	65.5	60.5	62.6	66.7	64.6	63.6
15	20:00 to 21:00	61.5	60.3	65.4	65.4	60.4	65.4
16	21:00 to 22:00	64.5	60.1	64.2	63.9	64.6	63.7
Day Time		<75 dB (A)					

Continue...

Location Name		CT3 RMU-2					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		01-04-2022	06-05-2022	10-06-2022	10-07-2022	10-08-2022	12-09-2022
1	22:00 to 23:00	64.6	60.3	63.1	62.5	60.9	59.3
2	23:00 to 24:00	64.1	60.2	62.5	61.7	61.5	62.7
3	24:00 to 01:00	63.8	62.5	62.5	64.5	62.5	63.9
4	01:00 to 02:00	63.4	60.4	62.8	60.5	60.4	61.9
5	02:00 to 03:00	62.7	60.4	61.7	63.2	62.4	59.6
6	03:00 to 04:00	60.16	60.2	61.0	61.8	60.2	62.4
7	04:00 to 05:00	58.4	62.3	62.4	64.5	63.3	64.7
8	05:00 to 06:00	59.9	62.3	64.5	63.6	60.4	62.4
Night Time		<70 dB (A)					

Test Method	IS: 9989 : 1981

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Results of Noise Level Monitoring

Location Name		Near Fire Station					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		12-04-2022	03-05-2022	03-06-2022	07-07-2022	05-08-2022	05-09-2022
1	06:00 to 07:00	62.8	62.5	64.3	65.8	64.7	63.9
2	07:00 to 08:00	63.5	68.5	66.7	67.9	66.2	65.8
3	08:00 to 09:00	64.5	65.5	68.9	69.3	61.3	68.9
4	09:00 to 10:00	66.9	64.2	65.5	68.6	63.8	63.8
5	10:00 to 11:00	66.5	66.8	67.2	68.3	68.5	67.2
6	11:00 to 12:00	66.7	62.8	65.5	67.3	63.2	64.2
7	12:00 to 13:00	68.5	66.9	68.9	66.2	61.6	68.9
8	13:00 to 14:00	65.5	65.6	66.7	68.2	67.2	68.3
9	14:00 to 15:00	62.6	65.2	69.4	67.5	66.1	69.4
10	15:00 to 16:00	63.5	68.2	67.5	62.9	65.8	66.2
11	16:00 to 17:00	66.7	64.2	66.2	66.4	63.6	66.2
12	17:00 to 18:00	62.4	67.2	67.2	62.6	66.4	61.3
13	18:00 to 19:00	61.5	66.5	65.2	65.5	64.1	65.2
14	19:00 to 20:00	60.5	68.5	64.2	68.5	66.9	63
15	20:00 to 21:00	60.3	63.2	62.1	66.7	65.6	62.1
16	21:00 to 22:00	60.1	59.7	60.5	62.8	62.2	61.2
Day Time		<75 dB (A)					

Continue…

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Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

Location Name		Near Fire Station					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		12-04-2022	03-05-2022	03-06-2022	07-07-2022	05-08-2022	05-09-2022
1	22:00 to 23:00	60.3	60.5	61.3	63.5	61.1	57.3
2	23:00 to 24:00	61.3	62.8	60.5	62.5	62.9	63.2
3	24:00 to 01:00	62.3	63.6	60.2	61.9	63.6	64.3
4	01:00 to 02:00	55.2	60.1	61.3	62.8	60.1	61.6
5	02:00 to 03:00	62.9	57.5	60.4	60.5	58.4	59.4
6	03:00 to 04:00	60.7	58.2	59.4	59.6	58.2	60.2
7	04:00 to 05:00	60.4	59.5	60.4	58.5	59.5	58.4
8	05:00 to 06:00	60.5	60.6	61.6	59.7	61.8	62.7
Night Time		<70 dB (A)					

Test Method	IS: 9989 : 1981

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Results of Noise Level Monitoring

Location Name		ADANI PORT – TUG Berth 600 KL Pump House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		04-04-2022	05-05-2022	07-06-2022	08-07-2022	08-08-2022	08-09-2022
1	06:00 to 07:00	62.6	61.3	62.5	63.4	64.3	62.1
2	07:00 to 08:00	68.3	63.5	66.7	66.9	65.1	66.7
3	08:00 to 09:00	64.2	66.7	68.5	65.5	67.4	67.3
4	09:00 to 10:00	69.8	65.5	66.2	69.6	66	66.2
5	10:00 to 11:00	62.2	68.2	69.5	65.2	63.8	69.5
6	11:00 to 12:00	68.8	64.5	66.7	66.5	60.1	62.8
7	12:00 to 13:00	67.2	63.9	65.4	69.5	62.3	65.4
8	13:00 to 14:00	62.5	66.7	68.2	67.5	65.7	69.3
9	14:00 to 15:00	67.1	62.6	65.1	68.2	63.3	65.1
10	15:00 to 16:00	61.5	65.5	68.3	69.5	64.8	69.1
11	16:00 to 17:00	66.8	69.1	67.5	68.5	66.9	68.9
12	17:00 to 18:00	69.2	69.2	68.6	68.2	68.5	68.6
13	18:00 to 19:00	68.1	64.5	65.5	69.5	62.4	63.4
14	19:00 to 20:00	65.2	62.3	66.2	65.5	63.6	66.2
15	20:00 to 21:00	64.1	60.6	63.2	61.5	61.9	63.7
16	21:00 to 22:00	61.2	60.5	62.8	64.5	63.2	61.9
Day Time		<75 dB (A)					

Continue…

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Location Name		ADANI PORT – TUG Berth 600 KL Pump House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		04-04-2022	05-05-2022	07-06-2022	08-07-2022	08-08-2022	08-09-2022
1	22:00 to 23:00	61.9	60.5	62.5	61.5	59.3	58.8
2	23:00 to 24:00	62.8	58.6	60.5	62.5	58.6	58.6
3	24:00 to 01:00	63.8	57.5	61.2	62.3	57.5	57.0
4	01:00 to 02:00	60.1	58.2	59.5	62.3	59.0	61.1
5	02:00 to 03:00	61.9	56.9	60.2	61.6	56.9	57.4
6	03:00 to 04:00	63.7	58.5	60.5	60.3	58.5	59.5
7	04:00 to 05:00	63.5	57.5	61.5	64.4	60.6	62.8
8	05:00 to 06:00	57.9	60.5	62.3	61.8	58.5	59.4
Day Time		<70 dB (A)					

Test Method	IS: 9989 : 1981

GUJARAT VAPI. ENVIRONMENT & RESEARCH LABS PVT. LTD. UNISTAR

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Results of Noise Level Monitoring

Location Name		PUB/Adani House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		13-04-2022	02-05-2022	02-06-2022	05-07-2022	02-08-2022	01-09-2022
1	06:00 to 07:00	65.8	61.5	60.2	62.6	63.8	61.8
2	07:00 to 08:00	67.9	66.7	64.5	65.6	64.7	64.5
3	08:00 to 09:00	69.3	60.5	62.7	68.6	63.5	63.7
4	09:00 to 10:00	68.6	63.9	61.9	65.5	66.2	61.9
5	10:00 to 11:00	68.3	64.5	63.5	68.3	61.1	63.0
6	11:00 to 12:00	67.3	65.2	66.1	68.9	63.3	65.2
7	12:00 to 13:00	66.2	66.1	67.8	65.4	63.9	65.3
8	13:00 to 14:00	68.2	60.6	62.4	66.3	65.6	62.4
9	14:00 to 15:00	67.5	61.8	65.4	68.5	60.8	63.1
10	15:00 to 16:00	62.9	62.5	63.9	64.5	66.5	62.9
11	16:00 to 17:00	66.4	63.2	64.5	68.3	64.2	63.6
12	17:00 to 18:00	62.6	65.4	64.3	65.6	63.7	63.8
13	18:00 to 19:00	65.5	62.1	60.7	67.2	60.1	60.7
14	19:00 to 20:00	68.5	60.2	61.3	63.5	64.0	62.1
15	20:00 to 21:00	66.7	58.9	59.4	60.5	62.4	62.8
16	21:00 to 22:00	62.8	59.2	58.5	62.8	59.2	60.2
Day Time		<75 dB (A)					

Continue…

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Location Name		PUB/Adani House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		13-04-2022	02-05-2022	02-06-2022	05-07-2022	02-08-2022	01-09-2022
1	22:00 to 23:00	62.1	58.5	59.2	61.6	59.3	57.3
2	23:00 to 24:00	64.2	56.5	55.4	60.5	56.5	54.7
3	24:00 to 01:00	64.5	57.2	59.8	59.5	58.2	58.9
4	01:00 to 02:00	64.1	55.5	56.7	60.5	63.9	62.4
5	02:00 to 03:00	55.4	55.2	57.2	58.1	55.2	56.4
6	03:00 to 04:00	59.3	54.1	55.5	60.5	54.1	53.7
7	04:00 to 05:00	64.2	59.5	58.4	62.3	58.3	59.2
8	05:00 to 06:00	63.2	60.2	59.8	61.5	59.1	60.4
Day Time		<70 dB (A)					

Test Method	IS: 9989 : 1981

Nikunj D. Patel
(Chemist)

UNISTAR ENVIRONMENT & RESEARCH LABS PVT. LTD. * GUJARAT VAPI.

Jaivik S. Tandel
(Manager - Operations)

Results of Stack Monitoring

Sr. No.	Parameter	Unit	Hot Water System-1 (Liquid Terminal)	Hot Water System-2 (Liquid Terminal)	Thermic Fluid Heater (Bitumin-1)	Thermic Fluid Heater (Bitumin-2)	GPCB LIMIT	Method of Test
Apr-22								
1	Particulate Matter	mg/Nm^3	24.56	22.35	20.14	18.15	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	6.42	7.18	7.15	6.15	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	19.45	23.78	21.18	20.64	50	IS 11255 (Part - 7)
May-22								
1	Particulate Matter	mg/Nm^3	20.17	21.34	22.34	20.14	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO2	ppm	6.10	7.45	8.15	7.23	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NOX	ppm	20.15	22.90	23.16	22.15	50	IS 11255 (Part - 7)
Jun-22								
1	Particulate Matter	mg/Nm^3	24.52	17.65	20.14	21.67	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	7.23	6.15	7.86	8.12	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	21.50	18.54	19.23	21.62	50	IS 11255 (Part - 7)
Jul-22								
1	Particulate Matter	mg/Nm^3	20.15	20.45	18.76	22.40	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	6.15	7.12	6.45	7.89	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	17.89	19.87	17.89	19.76	50	IS 11255 (Part - 7)

Continue…

Sr. No.	Parameter	Unit	Hot Water System-1 (Liquid Terminal)	Hot Water System-2 (Liquid Terminal)	Thermic Fluid Heater (Bitumin-1)	Thermic Fluid Heater (Bitumin-2)	GPCB LIMIT	Method of Test
Aug-22								
1	Particulate Matter	mg/Nm^3	22.27	22.74	24.28	19.82	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	8.12	6.74	9.72	9.02	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	21.96	21.39	21.51	21.30	50	IS 11255 (Part - 7)
Sep-22								
1	Particulate Matter	mg/Nm^3	23.62	19.27	21.46	20.35	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	7.53	7.48	8.24	8.79	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	19.23	22.27	20.63	20.13	50	IS 11255 (Part - 7)

Nikunj D. Patel
(Chemist)

UNISTAR ENVIRONMENT & RESEARCH LABS PVT. LTD. * GUJARAT VAPI.

Jaivik S. Tandel
(Manager - Operations)

Results of Stack Monitoring

Sr. No.	Parameter	Unit	D.G. Set-6, 7 & 8 (1250 KVA - CT2) Common Stack	D.G. Set-9 (1500 KVA - CT3)	D.G. Set-10 (1500 KVA - CT3)	D.G. Set-11 (1500 KVA - CT3)	GPCB LIMIT	Method of Test
			Jul-22					
			19-09-2022	16-07-2022	16-07-2022	16-07-2022		
1	Particulate Matter	mg/Nm^3	24.8	18.64	18.35	20.4	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	7.13	9.3	6.8	7.5	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	38.25	34.5	29.5	33.1	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm3	3.86	3.8	3.5	3.3	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	Not Detected	Not Detected	Not Detected	--	UERL/AIR/SOP/27
Sr. No.	Parameter	Unit	D.G. Set-12 (1500 KVA) - CT4	D.G. Set-13 (1500 KVA) - CT4	D.G. Set-14 (1500 KVA) - CT4	D.G. Set-1 (500 KVA) - DG House - MPT	GPCB LIMIT	Method of Test
			Sep-22					
			30-09-2022	30-09-2022	30-09-2022	30-09-2022		
1	Particulate Matter	mg/Nm^3	21.45	24.56	20.14	16.24	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	8.7	9.13	8.2	6.48	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	18.5	21.45	17.85	21.36	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm3	3.4	4.1	3.5	3.74	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	Not Detected	Not Detected	Not Detected	--	UERL/AIR/SOP/27

Continue…

Sr. No.	Parameter	Unit	D.G. Set-2 (500 KVA) - DG House - MPT	D.G. Set-3 (500 KVA) - DG House - MPT	D.G. Set-4 (500 KVA) - DG House - MPT	D.G. Set-5 (500 KVA) - DG House - MPT	GPCB LIMIT	Method of Test
			Sep-22					
			11-09-2022	11-09-2022	11-09-2022	11-09-2022		
1	Particulate Matter	mg/Nm^3	22.16	18.58	22.73	20.58	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	7.83	7.16	7.26	8.37	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	29.67	24.27	28.83	26.13	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm3	4.79	4.26	5.27	4.82	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	Not Detected	Not Detected	Not Detected	--	UERL/AIR/SOP/27

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(Chemist)

ENVIRONMENT & RESEARCH LABS PVT. LTD. * UNISTAR
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RESULTS OF BORE HOLE WATER

SR.NO.	TEST PARAMETERS	UNIT	Pump House-1	Pump House-2	Pump House-3	TEST METHOD
			16-05-2022	16-05-2022	16-05-2022	
1.	pH @ 25 ° C	--	8.48	8.12	8.16	IS 3025(Part 11)1983
2.	Salinity	ppt	4.94	5.08	5.16	APHA 23rd Ed.,2017,2520 B
3.	Oil & Grease	mg/L	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	IS 3025(Part39)1991, Amd. 2
4.	Hydrocarbon	mg/L	Not Detected	Not Detected	Not Detected	GC/GCMS
5.	Lead as Pb	mg/L	0.072	0.084	0.064	IS 3025 (PART 47) 1994
6.	Arsenic as As	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	APHA 23rd Ed.,2017,3114-C
7.	Nickel as Ni	mg/L	0.012	0.012	0.098	IS 3025 (PART 54) 2003
8.	Total Chromium as Cr	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	IS 3025 (PART 52) 2003
9.	Cadmium as Cd	mg/L	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	IS 3025(PART 41) 1992
10.	Mercury as Hg	mg/L	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	APHA 23rd Ed.,2017, 3112-B
11.	Zinc as Zn	mg/L	0.152	0.289	0.155	IS 3025(PART 49) 1994
12.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	IS 3025 (PART 42) 1992
13.	Iron as Fe	mg/L	0.18	0.98	0.88	IS 3025(PART 53) 2003
14.	Insecticides/Pesticides	µg/L	Absent	Absent	Absent	USEPA 8081 B
15.	Depth of Water Level from Ground Level	meter	1.9	2.1	1.95	--

ENVIRONMENT & RESEARCH LABS PVT. LTD. * UNISTAR GUJARAT VAPI.

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RESULTS OF BORE HOLE WATER

SR.NO.	TEST PARAMETERS	UNIT	Pump House-1	Pump House-2	Pump House-3	Near Unloading bays	Near ETP	TEST METHOD
			04-08-2022	04-08-2022	04-08-2022	04-08-2022	04-08-2022	
1.	pH @ 25 ° C	--	8.44	8.02	8.06	7.79	7.6	IS 3025(Part 11)1983
2.	Salinity	ppt	3.4	0.79	0.81	1.12	11.64	APHA 23rd Ed.,2017,2520 B
3.	Oil & Grease	mg/L	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	IS 3025(Part39)1991, Amd. 2
4.	Hydrocarbon	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	GC/GCMS
5.	Lead as Pb	mg/L	0.064	0.072	0.044	0.034	0.042	IS 3025 (PART 47) 1994
6.	Arsenic as As	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	APHA 23rd Ed.,2017,3114-C
7.	Nickel as Ni	mg/L	0.114	0.101	0.09	0.069	0.105	IS 3025 (PART 54) 2003
8.	Total Chromium as Cr	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	IS 3025 (PART 52) 2003
9.	Cadmium as Cd	mg/L	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	IS 3025(PART 41) 1992
10.	Mercury as Hg	mg/L	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	APHA 23rd Ed.,2017, 3112-B
11.	Zinc as Zn	mg/L	0.132	0.246	0.129	0.122	0.197	IS 3025(PART 49) 1994
12.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	IS 3025 (PART 42) 1992
13.	Iron as Fe	mg/L	0.12	0.85	0.79	1.12	0.94	IS 3025(PART 53) 2003
14.	Insecticides/Pesticides	µg/L	Absent	Absent	Absent	Absent	Absent	USEPA 8081 B
15.	Depth of Water Level from Ground Level	meter	1.9	2.1	1.95	2.15	2	--

GUJARAT VAPI. ENVIRONMENT & RESEARCH LABS PVT. LTD. UNISTAR

Mr. Nilesh Patel
Sr. Chemist

Mr. Nitin Tandel
Technical Manager

Minimum Detection Limit			
Ambient Air Quality Monitoring			
Sr. No.	**Test Parameter**	**Unit**	**MDL**
1	Particulate Matter (PM10)	µg/m3	5 µg/m3
2	Particulate Matter (PM2.5)	µg/m3	5 µg/m3
3	Sulphur Dioxide (SO2)	µg/m3	4 µg/m3
4	Nitrogen Dioxide (NO2)	µg/m3	5 µg/m3
5	Carbon Monoxide (CO)	mg/m3	0.01 mg/m3
6	Ammonia (NH3)	µg/m3	5 µg/m3
7	Ozone (O3)	µg/m3	5 µg/m3
8	Lead (Pb)	µg/m3	0.5 µg/m3
9	Nickle (Ni)	ng/m3	1 ng/m3
10	Arsenic (As)	ng/m3	1 ng/m3
11	Benzene	µg/m3	1µg/m3
12	Benzo(o)Pyrene	ng/m3	0.1 ng/m3
14	Hydro Carbon	µg/m3	1 µg/m3
Stack Emission Monitoring			
Sr. No.	**Test Parameter**	**Unit**	**MDL**
1	Suspended particulate matter	mg/Nm3	2 mg/Nm3
2	Sulphur Dioxide SOX	mg/Nm3	4 mg/Nm3
3	Oxides of Nitrogen NOX	mg/Nm3	5 mg/Nm3

ETP Water			
Sr. No.	**Test Parameter**	**Unit**	**MDL**
1	Colour	Pt. Co. Scale	5
2	pH @ 27 ° C	--	2
3	Temperature	0C	5
4	Total Suspended Solids	mg/L	4
5	Total Dissolved Solids	mg/L	4
6	COD	mg/L	2
7	BOD (3 days at 27 0C)	mg/L	1
8	Chloride (as Cl) -	mg/L	1
9	Oil & Grease	mg/L	2
10	Sulphate (as SO4)	mg/L	1
11	Ammonical Nitrogen	mg/L	2
12	Phenolic Compound	mg/L	0.1
13	Copper as Cu	mg/L	0.05
14	Lead as Pb	mg/L	0.01
15	Sulphide as S	mg/L	0.05
16	Cadmium as Cd	mg/L	0.003
17	Fluoride as F	mg/L	0.2
18	Residual Chlorine	mg/L	0.1
19	Percent Sodium	%	--
20	Sodium Absorption ratio	--	--

MARINE WATER			
Sr. No.	**Test Parameter**	**Unit**	**MDL**
1	pH	--	5
2	Temperature	oC	5
3	Total Suspended Solids	mg/L	4
4	BOD (3 Days @ 27oC)	mg/L	1
5	Dissolved Oxygen	mg/L	0.2
6	Salinity	ppt	0.01
7	Oil & Grease	mg/L	2
8	Nitrate as NO_3	µmol/L	0.4
9	Nitrite as NO_2	µmol/L	0.04
10	Ammonical Nitrogen as NH_3	µmol/L	0.8
11	Phosphates as PO_4	µmol/L	0.4
12	Total Nitrogen	µmol/L	2.2
13	Petroleum Hydrocarbon	µg/L	0.1
14	Total Dissolved Solids	mg/L	4
15	COD	mg/L	2

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Sea SEDIMENT			
Sr. No.	**Test Parameter**	**Unit**	**MDL**
1	Organic Matter	%	0.5
2	Phosphorus as P	µg/g	1
3	Texture	--	--
4	Petroleum Hydrocarbon	µg/g	0.1
5	Aluminum as Al	%	0.1
6	Total Chromium as Cr+3	µg/g	2
7	Manganese as Mn	µg/g	1
8	Iron as Fe	%	0.1
9	Nickel as Ni	µg/g	1
10	Copper as Cu	µg/g	1
11	Zinc as Zn	µg/g	1
12	Lead as Pb	µg/g	1
13	Mercury as Hg	µg/g	0.05

BORE HOLE WATER			
Sr. No.	**Test Parameter**	**Unit**	**MDL**
1	pH @ 25 ° C	--	5
2	Salinity	ppt	--
3	Oil & Grease	mg/L	2
4	Hydrocarbon	mg/L	0.1
5	Lead as Pb	mg/L	0.01
6	Arsenic as As	mg/L	0.01
7	Nickel as Ni	mg/L	0.02
8	Total Chromium as Cr	mg/L	0.05
9	Cadmium as Cd	mg/L	0.003
10	Mercury as Hg	mg/L	0.001
11	Zinc as Zn	mg/L	0.05
12	Copper as Cu	mg/L	0.05
13	Iron as Fe	mg/L	0.1
14	Insecticides/Pesticides	µg/L	0.1
15	Depth of Water Level from Ground Level	meter	--

Annexure – 2

Details of Greenbelt Development at APSEZ, Mundra

Total Green Zone Detail Till Up to September – 2022					
LOCATION	**Area (In Ha.)**	**Trees (Nos.)**	**Palm (Nos.)**	**Shrubs (SQM)**	**Lawn (SQM)**
SV COLONY	71.66	34920.00	7962.00	69696.00	100646.00
PORT & NON SEZ	81.61	149359.00	19220.00	75061.78	62966.38
SEZ	116.60	227120.00	20489.00	220583.60	28162.03
MITAP	2.52	8168.00	33.00	3340.00	4036.00
WEST PORT	109.37	258252.00	70831.00	24612.00	22854.15
AGRI PARK	8.94	17244.00	1332.00	5400.00	2121.44
SOUTH PORT	14.45	27530.00	3470.00	3882.00	3327.26
SAMUDRA TOWNSHIP	57.27	63722.00	11834.00	23908.89	47520.07
PRODUCTIVE FARMING (VADALA FARM)	23.79	27976.00	0.00	0.00	0.00
TOTAL (APSEZL)	**486.19**	**814291.00**	**135171.00**	**426484.27**	**271633.33**
		Total Saplings: 949462.00 Nos.			

Details of Mangrove Afforestation done by APSEZ

Sl. no.	Location	District	Area (Ha)	Duration	Species	Implementation agency
1	Mundra Port	Kutch	24	-	Avicennia marina	Dr. Maity, Mangrove consultant of India
2	Mundra Port	Kutch	25	-	Avicennia marina	Dr. Maity, Mangrove consultant of India
3	Luni/Hamirmora (Mundra,)	Kutch	160.8	2007 - 2015	Avicennia marina, Rhizophora mucronata, Ceriops tagal	GUIDE, Bhuj
4	Kukadsar (Mundra)	Kutch	66.5	2012 - 2014	Avicennia marina	GUIDE, Bhuj
5	Forest Area (Mundra)	Kutch	298	2011 - 2013	Avicennia marina	Forest Dept, Bhuj
6	Jangi Village (Bhachau)	Kutch	50	2012 - 2014	Avicennia marina	GUIDE, Bhuj
7	Jakhau Village (Abdasa)	Kutch	310.6	2007-08 & 2011-13	Avicennia marina, Rhizophora mucronata, Ceriops tagal	GUIDE, Bhuj
8	Sat Saida Bet	Kutch	255	2014-15 & 2016-17	Avicennia marina & Bio diversity	GUIDE, Bhuj
9	Dandi Village	Navsari	800	2006 - 2011	Avicennia marina, Rhizophora mucronata, Ceriops tagal	GEC, Gandhinagar
10	Talaja Village	Bhavnagar	50	2011-12	Avicennia marina	Forest Dept, Talaja
11	Narmada Village	Bhavnagar	250	2014 - 2015	Avicennia marina	GEC, Gandhinagar
12	Malpur Village	Bharuch	200	2012-14	Avicennia marina	SAVE, Ahmedabad
13	Kantiyajal Village	Bharuch	50	2014-15	Avicennia marina	SAVE, Ahmedabad
14	Devla Village	Bharuch	150	210-16	Avicennia marina	SAVE, Ahmedabad
15	Village Tala Talav (Khambhat)	Anand	100	2015 - 2016	Avicennia marina	SAVE, Ahmedabad
16	Village Tala Talav (Khambhat)	Anand	38	2015 - 2016	Avicennia marina	GEC, Gandhinagar
17	Aliya Bet, Village Katpor (Hansot)	Bharuch	62	2017-18	Avicennia marina & Rhizophora spp.	GEC, Gandhinagar
18	Kukadsar-(Bhadeswar-Mundra)	Kutch	250	2021-22	Avicennia marina	Shreeji Enterprise
Total			**3140**			

Annexure – 3

adani
Foundation

CSR GUJRAT

Six Monthly Report 2022-23

Adani Foundation
Adani House, Port Road, Mundra – Kutch 370 421
[info@adanifoundation.com] [www.adanifoundation.com]

Taking inspiration from the Gandhian philosophy of trusteeship, the Adani Foundation strives to create sustainable opportunities. It does so by facilitating quality education, enabling the youth with income-generating skills, promoting a healthy society by women empowerment and supporting infrastructure development.

With an aim to contribute to the holistic development of communities, the Adani Foundation is contributing to the global agenda of meeting Sustainable Development Goals (SDGs).

Adani Foundation Gujrat sites are catalyst for rural communities residing in villages of Kutch,, Surat and Bharuch District. AF has transformed thousands of lives by serving community to uplift their standard of living by performing CSR activities in various in terms of Infrastructure, Social development, Education, Agriculture, Women empowerment, Water conservation and management and empowering fishermen and Tribal community.

Inside

CSR KUTCH

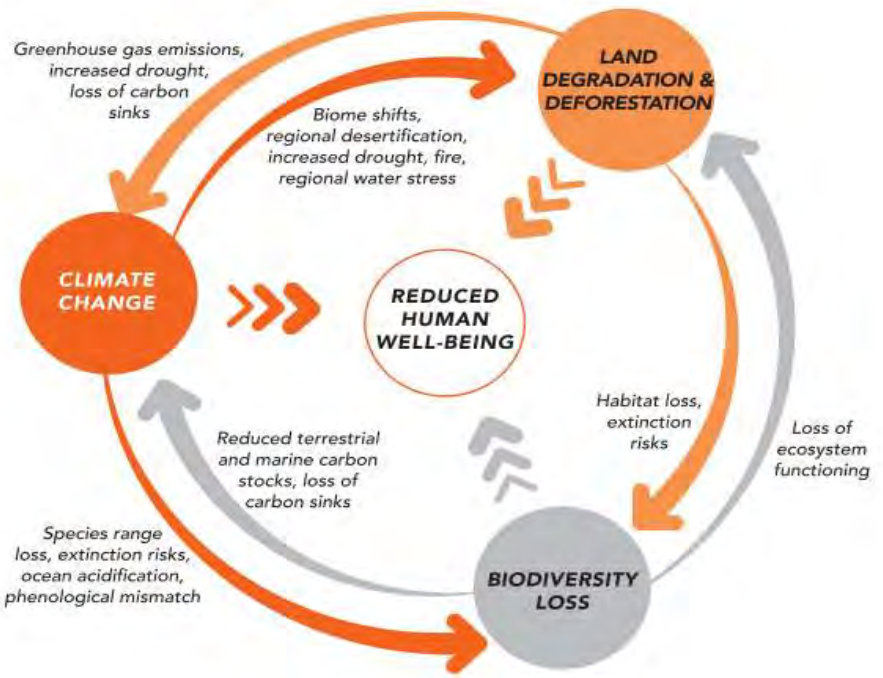
ENVIRONMENT SUSTAINABILITY

Environmental sustainability is the responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing for present and future. These components are closely interrelated and mutually re-enforcing Under Corporate Environmental responsibility.

To make connections between human actions Environment & biological diversity found within a habitat and/or ecosystem, Adani Foundation executing various Project as Below

Biodiversity conservation: to preserve biodiversity and Natural Resources.

Regenerative capacity: Protect the depletion of natural resources and keep the harvest rate of renewable resources within the capacity of regeneration.



Environment Sustainability Projects : Ensuring ecological balance, protection of flora and fauna, terrestrial and coastal spices conservation, welfare, agro forestry, conservation of natural resources and maintaining quality of soil, air and water

REDUCING CARBON FOOTPRINT

1. Miyawaki – Nana Kapaya

Miyawaki- Dense Plantation is developed n year 2021-22 at Nana Kapaya Village in 2.0 acre land. Miyawaki plot is very close to sewage water tank so watering to plantation by the same.

As discussed with villagers and Adani Foundation, we proposed the close or dense plantation at site- called Miyawaki Types of Plantations with following **four major compartments** (45X20 meters approx.) and with following strategies:

1. Mixed Plantation dominant Drought Resistant Plants
2. Mixed Plantation dominant by Larger Leaves
3. Mixed Plantation dominant by Saline Resistant Plants
4. Mixed Plantation dominant by Medicinal Values.

Plantation of 5880 saplings of different 42 spices is completed which will resulted in dense forest due to good rain this year.

2. **Smritivan Memorial park**– Bhuj

Smritivan Memorial park is a unique initiative by Prime Minister in order to commemorate the death of about 13,805 people during this massive earthquake which had its epicenter in Bhuj District.

The memorial will occupy around 406 acres of space of the **Bhujia Dungar near Bhuj, Kutch** that will show people's **oppressive response to a natural disaster**.

Adani Foundation has supported for 47000 saplings in Smriti van @ 100 Las INR
In September 2022, Prime Minister had inaugurated smriti van which is the biggest Miyawaki Forest in Gujrat.

3. Mangroves Biodiversity Park

Mangroves are complex ecosystems that provide coastal bio-shield to habitats and societies from natural disasters. Important roles played by the mangroves are; stabilizing the coastline, protect water quality, reduce coastal flooding, reduce the effect of coastal cyclone, etc.

Mangroves are one of the productive ecosystems which contribute a number of ecosystem services to the nature as well as to human and are integral in the control of climate on the Earth.

With a vision to Enhance the diversity of mangrove and its associated species in suitable coastal region of Kachchh, which in turn would enhance the faunal diversity and fishery resources of the area by providing suitable habitats and breeding ground. The ultimate aim of the project is to improve overall coastal biodiversity of the region which in turn assist in improving the livelihood of the coastal populace. Further, the area will serve as a base model for researchers, knowledge center for students and promote awareness for conservation and management of mangroves for the benefit of human and the environment.

REDUCING CARBON FOOTPRINT

Total five mangrove species, such as Ceriops, Aegiceras and Rhizophora were selected which in turn enhanced the dependent faunal diversity of the area. Thereby, there will be an increase considerable biodiversity of the area. **The initial pilot trails were undertaken in an area of approximately 16 hector during the period between 2018 and 2021 with the active participation of local communities.** Current year 4 Hector plantation is in progress which will be resulted in 20 Hector Mangroves Biodiversity Park within one year

S. NO	Mangrove Associate	Life form
1	Suaeda Spp.	Herb
2	Porteresia coarctata	Herb
3	Opuntia elatior	Shrub
4	Sesuvium portulacastrum	Herb
5	Ipomoea biloba	Climber
6	Salvadora persica L.	Shrub
7	Urochondra setulosa	Herb




REDUCING CARBON FOOTPRINT

Sr. No	Species	Common Name
1.	Boleophthalmus dussumieri (Valenciennes, 1837)	Levti Mud Skipper
2.	Scartelaos histophorus (Valenciennes, 1837)	Walking goby
3.	Periophthalmus waltoni Koumans, 1941	Walton's mudskipper
4.	Austruca iranica (Pretzmann, 1971).	Arabian Fiddler Crab
5.	Austruca sindensis (Alcock, 1900)	Indus Fiddler Crab
6.	Austruca lactea (De Haan, 1835)	Milky Fiddler Crab
7.	Parasesarma plicatum (Latreille, 1803)	Mudflat crab
8.	Dotilla blanfordi Alcock, 1900	Sand bubbler crab
9.	Scylla serrata (Forskål, 1775)	Mud Crab
10.	Eurycarcinus orientalis A. Milne-Edwards, 1867	Violet Crab
11.	Pirenella cingulata (Gmelin, 1791)	Horn snail
12.	Telescopium telescopium (Linnaeus, 1758)	Telescope snail
13.	Mitrella blanda (G. B. Sowerby I, 1844)	Dove snail
14.	Bakawan rotundata (A. Adams, 1850)	Mangrove dweller
15.	Protapes cor (G. B. Sowerby II, 1853)	Venus clam
16.	Callista umbonella (Lamarck, 1818)	Striped venus clam
17	Solen digitalis Jousseaume, 1891	Razor clam

1. *Boleophthalmus dussumieri*

2. *Scartelaos histophorus*

3. *Periophthalmus waltoni*

4. *Austruca sindensis*

5. *Austruca lactea*

6. *Parasesarma plicatum*

REDUCING CARBON FOOTPRINT

4. Home biogas -

4,176 TONS OF ANIMAL MANURE TREATED

359,687 HOURS OF CLEAN COOKING;
9.3 TONS OF BIOGAS CREATED
325 TONS OF FIREWOOD REPLACED;
47,375 HOURS SAVED ON REDUCTION OF FIREWOOD &COLLECTION
1225 TONS CO2 EMISSION REDUCTION

Reducing organic waste,
Transitioning to renewable energy
Motivation for reduction in use for fertilizer

Home biogas is the Israel based company was founded in 2012 manufactures dynamic biogas unit not only for farm waste but for kitchen waste too. Under Gram Utthan Project, Adani Foundation is supporting home biogas to farmers periphery Villages.

Promotion of Natural Farming–Home biogas And Improving the health and living conditions for the millions of families that are still cooking on charcoal and wood. Adani Foundation is not only supporting but creating awareness to save environment and health of the community who regularly cooking on Chula. **It is proven that one hour cooking on Chula is as dangerous as smoking 40 cigrates**.

Till date 225 farmers are utilizing it with satisfaction and considerable outcome by saving Average Rs. 23,400 for gas and fertilizer as well – with Economic benefit of Rs,52.65 Lacs.

135 Farmers are linked up with Gobardhan Yojana in which DRDA is providing Biogas with Rs. 5000 Contribution. Adani Foundation has worked as a facilitator between DRDA and Beneficiaries farmers in filling and submission of forms. Total 360 farmers are supported with Biogas as sustainable environment protection

5. Water Conservation Project

Since 10 years considerable Water Conservation Work carried out in Mundra Taluka. Due to satisfactory rain in current year 1.11 mtr ground water table increased in coastal belt of Mundra as per Government Figures. Our water conservation work is as Below.

- Large number of water harvesting structure (18 Nos. of check dams in coordination with salinity department) and Augmentation of 3 check dams
- Ground recharge activities (pond deepening work for more than 56 ponds) individually and 26 ponds under Sujlam Suflam Jal Abhiyan were built leading to a significant increase in water table and higher returns to the farmers
- Roof Top Rain Water Harvesting 145 Nos. **(40 Nos current year)** which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family.
- Recharge Bore well 201 Nos **(12 Nos current yr)** which is best ever option to direct recharge the soil
- Drip Irrigation approx. 1156 Farmers benefitted in coordination with Gujrat Green Revolution Company till date
- Bund construction on way of Nagmati River could save more than 575 MCFT water quantity which recharged in ground due to which bore well depth decreased by 50-100 Ft in Zarpara, Bhujpur and Navinal Vadi Vistar.
- **Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year.**
- **Pond Pipe line work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area.**

Water conservation and Management

Process Flow for Rooftop Rain Water Harvesting System

Social Survey & TDS mapping

Community Contribution

RRWHS

Impact

- Portable water at door step
- Cost saving for portable water
- Improved water quality with
- Creates water conservation awareness in rural community
- Improves standard of living of rural community

Total Target for 2022-23	40
RRWHS Constructed in Q1	25
Population Impacted	300+
Savings per household	15000+

TDS difference between Ground water and RRWHS water

REDUCING CARBON FOOTPRINT

6. Tree Plantation

Till the date 1,40,000 Tree have been planted at various Public places , Schools, GP and crematorium with their responsibility to nurture and maintain regularly.

For this passionate work our team Member Mr. Karshan Gadhvi was Felicited with Van Mitra Award by Forest department and Government of Gujarat.

EDUCATION PROJECT

Adani Vidya Mandir, Bhadreshwar (SDG - 4/4.1)

EDUCATION: FREE AND COMPULSORY - vision of Adani Foundation to provide cost-free education, food, uniform, books to the children of economically challenged families of Mundra Bock. Adani Vidya Mandir, Bhadreshwar was established in June 2012, with aim of uplifting the communities through education. The school is equipped with excellent infrastructure and resources required for all-round development of the student. The child is given admission in class 1 and is molded to be an educated and a good human being by experienced and compassionate teachers. The school follows a curriculum designed by GSEB. **507 underprivileged students of Fisherman & Maldhari communities from 8 villages benefitted costfree education at the school**

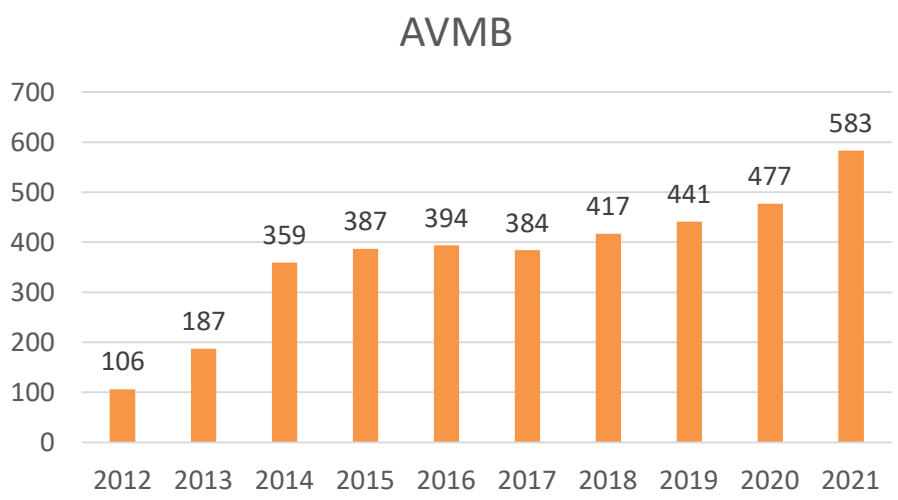
Teachers Day Celebration with facilitation of all teachers and awarded 5 best teachers in academics. District Education Officer Mr. Prajapati graced the occasion and motivated the staff.

EDUCATION PROJECT

Two milestone achievement in this six months

- Adani Vidya Mandir Bhadreshwar Gujrat Board Standard 10th Examination Result is 100%.
- NABET Certification received after rigorous process of documentation and audit committee visit.

Adani Vidya Mandir Bhadreshwar		
2021-22 (10th Board)		
NO	GRADE	STUDENTS
1	Above 80 %	3
2	60-80%	18
3	40-60%	10
	TOTAL	31
Result		100%



PROJECT UTTHAN

To provide learning exposure. Utthan project encourages students to gain knowledge and read books.

Along with reading, various competitions and exercises are conducted like reading, fluency, book reviews, vocab building to hone their reading skills.

Utthan believes in creating atmosphere for students which fulfills need of holistic learning of rural students who are devoid of advanced education.

Activities like movie showing and discussing its morale helps students to increase their analytical skills.

PROJECT UTTHAN

Total village covered	Total School	Total Students	Priya Vidhyarthi	Book issue by library	Language reach (English)	Mother's meet	IT on wheel	Students participate in summer camp	Competitive exam
33	59	9895	2600	41316	5221	4253	2101 (std.6to8)	5316	898 (JNV, NMMS & PSE)

૨૦૨૦-૨૧ના જિલ્લામાં તાલુકા વાઇઝ ગુણોત્સવના ગ્રેડ

તાલુકો	A+	A	B	C	D	કુલ
અબડાસા	૦૧	૨૮	૧૧૬	૨૬	૦૨	૧૭૩
અંજાર	૦૦	૦૫	૯૯	૨૫	૦૦	૧૨૯
ભચાઉ	૦૦	૦૨	૧૨૧	૪૬	૦૩	૧૭૨
ભુજ	૦૧	૧૪	૧૭૮	૧૩૮	૧૧	૩૪૨
ગાંધીધામ	૦૦	૦૫	૪૩	૦૭	૦૧	૫૬
લખપત	૦૦	૦૦	૫૩	૪૭	૦૭	૧૦૭
માંડવી	૦૦	૦૯	૧૨૫	૩૩	૦૦	૧૬૭
મુન્દ્રા	૦૦	૦૨	૮૩	૨૦	૦૦	૧૦૫
નખત્રાણા	૦૧	૨૦	૧૨૮	૨૧	૦૦	૧૭૦
રાપર	૦૦	૦૪	૧૮૦	૮૭	૨૭	૨૯૮
કુલ	૦૩	૮૯	૧૧૨૬	૪૫૦	૫૧	૧૭૧૯

૨૦૨૧-૨૨ના જિલ્લામાં તાલુકા વાઇઝ ગુણોત્સવના ગ્રેડ

તાલુકો	A+	A	B	C	D	કુલ
અબડાસા	૦૫	૧૫	૧૨૫	૨૫	૦૦	૧૭૦
અંજાર	૦૨	૧૬	૮૯	૨૦	૦૨	૧૨૯
ભચાઉ	૦૦	૦૮	૧૨૬	૩૪	૦૪	૧૭૨
ભુજ	૨૦	૫૮	૧૮૦	૭૭	૦૯	૩૪૪
ગાંધીધામ	૦૦	૦૭	૩૮	૧૧	૦૦	૫૬
લખપત	૦૧	૧૭	૬૩	૨૫	૦૨	૧૦૮
માંડવી	૦૬	૨૭	૧૦૭	૨૫	૦૧	૧૬૬
મુન્દ્રા	૧૪	૪૫	૩૯	૦૭	૦૦	૧૦૫
નખત્રાણા	૦૬	૩૪	૧૧૬	૧૪	૦૧	૧૭૧
રાપર	૦૩	૦૪	૧૬૦	૧૦૫	૨૨	૨૯૪
કુલ	૫૭	૨૩૧	૧૦૪૩	૩૪૩	૪૧	૧૭૧૫

- ✓ Government of Gujarat for strengthening the quality outcomes, launched a programe called Gunotsav, or 'Celebrating Quality'.
- ✓ Mundra - A+ : 14/105; in which 7/34 Utthan schools
- ✓ Increase gunotsav result in almost all schools.
- ✓ Teachers, Principals, SMC members & Village leaders appreciate effort of Utthan Sahayak

PROJECT UTTHAN

- ✓ MOU between DPEO, Kutch and Adani foundation for include new 17 schools – Total 59 Schools.
- ✓ Conduct Baseline assessment & Utthan Sahayak Start teaching to progressive learner. 96 students Mainstreamed from progressive Learner this year. 730 students mainstreamed last year.
- ✓ Promoting co-curricular activities.
- ✓ Students write Letter to Supermom on Mothers day.
- ✓ Creating joyful learning spaces: Smart TV & Software, Sports kit, Music kit & Book supports.
- ✓ All Utthan School Linked Up with Google Map
- ✓ Various day were celebrated by Utthan Sahayak like, Yoga day, Gurupurnima, Rakshabandhan, Sports day, Azadika Amrit Mahotsav. Children from all classes participated enthusiastically

WOMEN EMPOWERMENT PROJECT

"You can tell the condition of a nation by looking at the status of its women" – Women are central to the entire development process, be it in an individual family, village, state and to the whole nation.

The below mentioned figure shows determinants associated with the empowerment of women and these are the challenges for us as a CSR to work upon.

Adani Foundation is considering all parameters as a part of Empowerment.

- Education – Uthhan Project promotes girl child education, Creating awareness through various Govt schemes i.e. Vahali Dikri Yojana, Sukanya Samriddhi Yojana etc. till date covered more than 1200 girl child to get benefit out of it.
- Health and Nutrition – Home biogas is the best example of intervention of women health – 225 home biogas is supported to farmers which is good for lungs health
- Skill Development and Income Generation – Adani Foundation is working with 15 Self help group and supporting to develop entrepreneur skills to become self reliant, sourcing more than 500 women to absorb in various job – this will give them identity, confidence and right to speak in any decision for home, village and working area.
- Drinking Water and Sanitation – Total 145 Roof Top Rain Water Harvesting is supported for reducing hassle of the women to fetch the water as well as making clean water available.

UDAAN - MUNDRA

Dashboard (June - Sep) sustainable project revenue generated

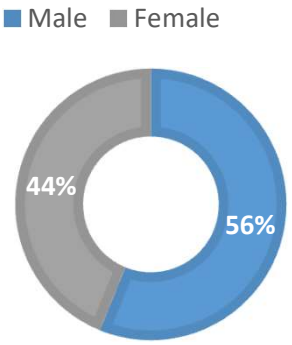
Total Institutes engaged 177

School	College	ITI	ASDC
125	45	2	5

Total Visitors

11464 participants

GENDER RATIO



Impact

INSPIRE TO ASPIRE

Igniting thoughts for the bright future.

INDUCING KNOWLEDGE

Widening of knowledge horizon.

UNFORGETABLE EXPERIENCE

Visitors get to observe and experience the operations on sites.

THOUGHT PROVOKING

Stimulating young minds to think out of the box.

ENCOURAGE TOWARDS GOAL

APSEZ existence proves that dreams come true if we convert them in GOALS.

INFUSE CREATIVITY

Students gets exposure which enable them to provoke ideas in them during visits.

Project Udaan

Under this project exposure tours are organised wherein school students are given a chance to visit the Adani Group facilities such as Adani Port, Adani Power and Adani Wilmar refinery at Mundra, Hazira, Dahanu, Kawai, Tirorda and Dhamra to get an insight into the large-scale business operations and thus get inspired to dream big in life. The exercise stimulates the young minds to dream big and help them become entrepreneurs, innovatores and achievers of tomorrow, and thus play an active role in the process of nation building

UDAAN - MUNDRA

Awards & Recognitions

10,000+ **Positive Feedbacks**

100+ **Mementos received**

55+ **Certificates received**

Adani Foundation, Udaan Project invited the members of self-finance School Association, Gujarat for an exposure visit. 90 participants were facilitated with extraordinary experience of Port, Power, Wilmar and Solar plants visit.

FARMERS SUSTAINABLE LIVELIHOOD PROJECTS

Promotion of Natural Farming

- To promote Natural farming Adani Foundation has originated cow based farming initiative with interconnected techniques which can increase farmer yield – our main objective is to improve quality of soil.

- **Implementation**
- Survey and identification of farmers to adopt Natural farming –Total **950 Farmers are selected as criteria – coordinated with ATMA for support of 10,800 INR per year by Direct Bank Transfer.**
- **135 farmers facilitated by DRDA Scheme – Gobardhan Yojana of Biogas with Contribution of Rs. 5000.**
- Water & Soil Testing- Most of Farm soil contain low organic carbon.
- Arranged Workshop & Hands on training for them which was conducted by Agri expert ,KVK and Progressive farmers with 1000+ farmers
- 325 Jivamrut unit have been set-up. Which is facilitated through with farmer Contribution.
- 257 Farmers have started to preparing JivaMrut & Gaukrupa Amrutam Bio-fertilizer and using in agri crop. Series of Training is arranged by ATMA and Adani Foundation

FARMERS SUSTAINABLE LIVELIHOOD PROJECTS

Prakrutik Sahkari Mandli

Formation of Shree Raj Shakti Prakrutik Kheti sahkari Mandali Limited Mangara and register Under Gujarat CO-operative SOCIETY act-1961 with 29 Members which is the First Organic Company of Registered across Kutch.

Objective

1.To promote natural Farming practices as group and individual

2.Value addition of Agri Produce and find out common Market to sell.

3.Set Up Cleaning, Grading Packaging and Processing Unit.

4. Established stall for input and output of Agri Produce ,Medicine ,Agri equipment.

5. Avail Agri machinery and equipment on rent to Farmers.

6.Facilittaion of Government Scheme.

7.Arrnged Exposure and Agri Training Program.

8. Laboratory et-up for soil and water Analysis

Shree Raj Mandli is planning to sale Organic Vegetables, Fruits, Grains, jevamrut and Mineral mixture. Rented Shredder Machine and preparation of bio mass is also next level planning of Mandli.

FARMERS SUSTAINABLE LIVELIHOOD PROJECTS

Farmer's Producer Organization

Kutch Kalpaturu Producer Company (KKPC) is established in the year of 2020 to address the challenges faced by the farmers, particularly to provide common platform for inputs & out put The company has been set up with 237 Farmers shareholders. Half year Turn Over of the company is 7.18 lacs

Vision –

Promotion of rural livelihood through sustainable & innovative agricultural and allied practices in the collective manner through Input and Out Support.

Mission:-

- Reduce Transaction cost per unit area through linking farmer with Kutch Kalpaturu Producer Company (KKPC) to Procure Input at reasonable prize.
- Imbibe Knowledge to adopt Modern Agri technology through training, Exposures and demonstration to Increase Production & Productivity.
- Enhance value of Agri produces and set up sustainable arrangement to sell their Produces.
- Sorting, grading and value addition for Proper Marketing of Agri Produces to fetch High value for the Betterment of farmers and shareholder in a sustainable way.
- Aware and Facilitation of Government Agriculture scheme over Farmers.
- Establishment of Agro Center at Various Village

WIP:-

In past six months KKPC worked for Date Packaging box, Milk Supply in Colonies and Shantivihar ,NB 21 Off suits Supply, Vegetable Seed Mineral Mixture and Cattle feed.

FARMERS SUSTAINABLE LIVELIHOOD PROJECTS

Pashudhan : " Fodder Support Programme, Individual Fodder Cultivation and Preventive Health Care

- Adani Foundation provides Good Quality dry and green fodder to 29 Villages. Project is covering total 14116 Cattels / AF Provide Dry and green Fodder to 29 Villages of our vicinity which covering 33072 cattle of 2747 farmers.

- Fodder Cultivation- To made fodder sustain villages - 100 Acre Gauchar land of Zarpara and 25 Acre in Siracha village is being cultivated for the same.

- To protect Cattles against Bovine Brucellosis zoonotic disease, Awareness and vaccination program is ongoing with Kutch fodder fruit & Forest development trust (KFFT) in our 11 Villages. In end of the year 100 percentage female calves will be benefitted by this initiative.

FARMERS SUSTAINABLE LIVELIHOOD PROJECTS

Pashudhan : Fodder Cultivation

Village Gauchar land development for the fodder cultivation to made fodder sustain village & Avail green fodder in scarcity phase.

With the support of Gauchar Seva Samiti Grassland development in Siracha-40 Acre & Zarpara 165 Acre done which resulted in total production 82 ton.

Zarpara Gauchar Land Development will become the change maker model for other villages too. 165-acre land with Shorghum, Rajko, Maize, Zinzvo etc. different types of fodder due to this nutrition value of milk will be improved and average one liter milk quantity will be increased.
Average 2450 cattle get benefitted of green fodder for 65 days months which –which increase 0.5 litre milk quantity of 50% cattle
(1225 cattle x0.5 litre milk quantity Increase x 40 INR per litre = 1592000)

Apart that due to natural grazing Benefit save farmer cost to purchase Fodder .
(2450 cattle x 7kg /Day X 65 Days = Rs. 2786875

This Intervention could save Rs.4378875

Adani Foundation is planning to expand this model from 125 acre to 500 acre up to next year monsoon.

FISHERFOLK SUSTAINABLE LIVELIHOOD PROJECTS

❖ **Balwadi**

- Mental and Physical Cognitive Education with Joy full learning activities to 2.5- to 6-year-old children.
- Provide Nutritional Food Facilities.
- Capacity Building program for Balwadi teachers.

❖ **Vehicle Transportation Facilities**

Vehicle Transportation facilities to 25 school Going Children from Juan Bandar to Nearest Government School Education Kit Support
(Note Book , Guide, Etc) To Secondary and Higher secondary Fisherfolk students as Motivation

❖ Free education in Adani Vidya Mandir school.

❖ Due to This Efforts First generation of Fisherfolk Community get in the Main stream of education.

FISHERFOLK SUSTAINABLE LIVELIHOOD PROJECTS

- **Mangrove plantation** and Nursery development work has created a two facet impact by providing Livelihood to Fisherfolk during two months Fishing during Off season and developing **162** hector dense mangrove afforestation. **4430 Men days work** provide to 284 Fisherfolk of Luni ,Sekhdiya and Bhadreswar Villages.

- **Youth Employment :-** Adani Foundation is committed for youth employment with imparting technical and Non-Technical Training for Fisherfolk Youth and started Electrical ,Welder ad Masson work training under Adani Skill Development Centre.
  - **35** Youth get Employed in GPVC,AWL,MSPVL and KCL WinTech and Other CFS.
  - **194** - Fisherfolk men and women were supported with skilled and unskilled Job and Contract work in various APSEZ Department.
- **Government scheme** Awareness session was held in association with Fisheries department Bhuj to facilitate pagadiya fishermen by providing fishing kits to seven Fishermen. The coordination was made by Adani Foundation to process application.

FISHERFOLK SUSTAINABLE LIVELIHOOD PROJECTS

- Adani Foundation supports fisherfolk community by distributing Potable water to Luni, Bavdi and Randh Bandar on daily bases. Moreover Kutdi Zarpra, Vira bandar and Juna Bandar is also supported by Adani Foundation in association with Mundra Nagarpalika.

Sr. No	Vasaht name	Population	Quantity Of water
1	Luni Bandar	384	15000
2	Bavdi Bandar	476	20000
3	Ranbdh bandar	930	25000

WOMEN SUSTAINABLE LIVELIHOOD PROJECT

- Total 82 Active SHG Group – 834 women are engaged with Adani Foundation for Savings activity. Among 15 SHG groups are involved in income generation. We facilitate them capacity building training for quality, Marketing Finance and team work to made them self sustain.
- Saheli Swa Sahay Juth have completed order of 10,000 Sanitary pad from District Health Department.
- "Shradhha Saheli Sva sahay Juth" is won the tender to provide Catering service in Block level Government
- Tejasvini SHG has received order of 3000 traditional dress preparation worth 3.25 Lacks
- Sonal Saheli Women SHG had supplied 1000 KG washing powder to Adani port & Willmar.
- Meghdhanush Saheli group had opened a stall of eco friendly Ganpati and did sale of 55000 INR. They have also participated in "Sartha" Exhibition in which they did sale of 15000 INR.

WOMEN SUSTAINABLE LIVELIHOOD PROJECT

"Pragati" – 75 Stories of Empowered Women to Celebrate Azadi ka Amrut Mahotsav
Over the past two decades, Adani Foundation Mundra takes a privilege to showcase journey of women to uplift and encourage contribution in local business, services and small enterprises in nation building through this book.
The book was launched by Respected Chairman Sir Gautam Adani sir on 1st day of Auspicious Navratri Parv.

WOMEN SUSTAINABLE LIVELIHOOD PROJECT

Gram Bharti : Women Sustainable Livelihood Projects

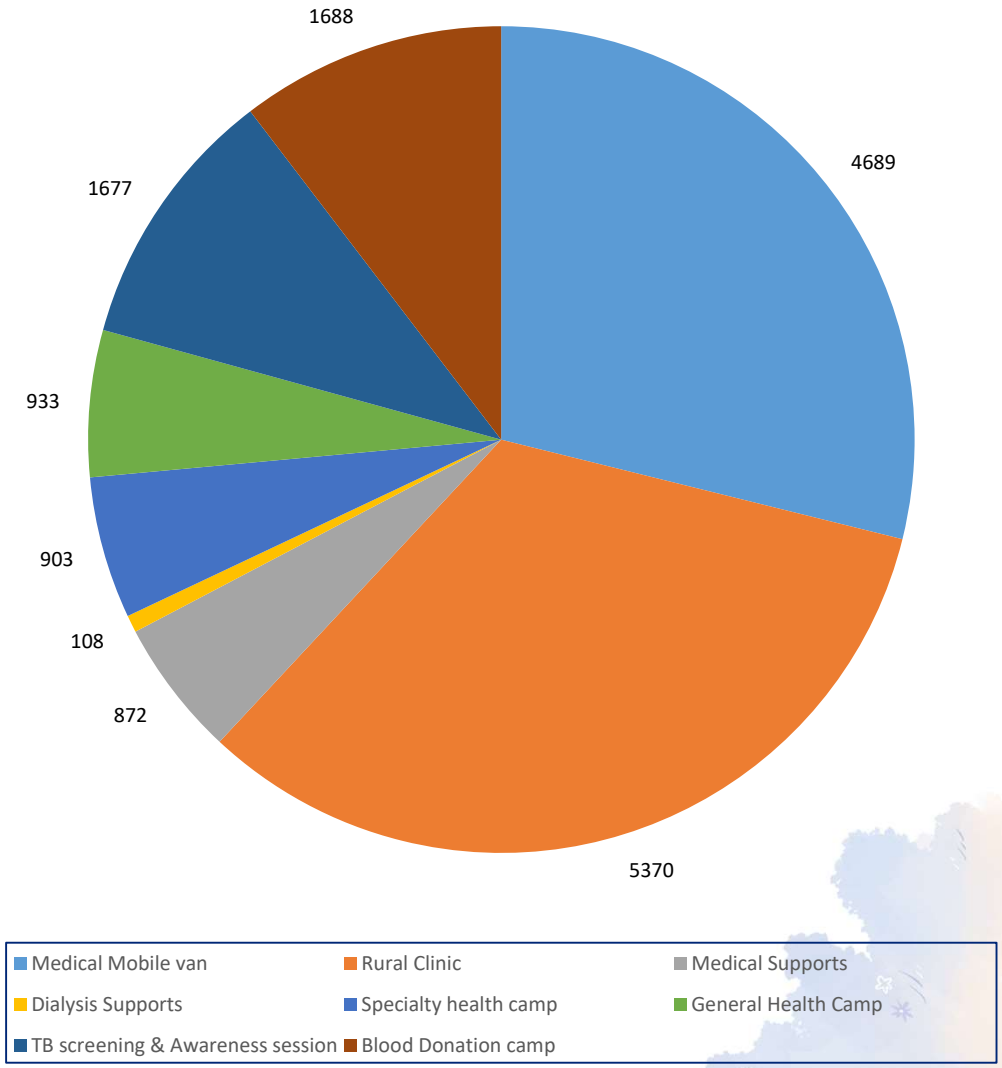
The SHG mela (exhibition cum sale) Gram Bharti, was planned between 26th to 28th September main reception lobby Adani Corporate House Ahmedabad. The inauguration session was on 26th September 2022 by Respected Chairman Gautam Adani sir with Mrs. Shilin Adani mam and Mr. Vasant Gadhavi sir.

From Mundra
Tejaswi Saheli SHG
Shraddha Saheli SHG
Pragpar Saheli SHG
Meghdhanush Saheli SHG
Radhe Saheli SHG
Umang Saheli SHG
Jyot Saheli SHG had participated with lots of enthusiasm and zeal.

Total Sale @ 3.2 Lacs with further order of Rs. 1.1 Lacs to Meghdhanush, Jyot and Pragpar Saheli Group.

COMMUNITY HEALTH

Health is the basic need for any individual and community Development considering various kind of Project are being executed as per the need and assessment to ensure good health for all citizen of Mundra villages. Like Mobile health van, Rural Clinics, support to dialysis patients and poor patients and health Camp Frequently and During disease outbreak.



COMMUNITY HEALTH

- The Adani Foundation runs Rural Clinic and Mobile health care Unit to render basic Medical Facilities to Interior Villages and Fishermen vasahat since 10 Year.
- Equipped with 94 types of general and life saving medicines with Potable ECG machine.
- **Rural Clinic**:- 09 Villages
  06 villages of Mundra block, 02 villages of Anjar block and 01 village of Mandvi block)
- **Mobile health care Unit:-** Covered 30 Villages.
- Total Patients Benefitted:- 10059.
- **Apart that Adani Foundation facilitates early diagnosis and screening for non communicable disease during MHCU & Rural clinic visit**

COMMUNITY HEALTH

Dialysis Support:-

Awareness camps are conducted in community for Prevention and Care against Kidney Stone followed by support for dialysis if more criticality is there. Patients are provided with dialysis support for months and years as per their needs and medical condition.

5 financially challenged patients has been supported with Dialysis treatment at 108 Times which added day in their Life.

Economically underprivileged Patients Support:-

Medical support is a service by foundation which includes, consultation, medicine, vaccination drives and immediate care to the needy patients **872** Patients from Mundra, Mandavi and Anjar Block are Benefitted at adani hospital.

National TB Elimination Programme (NTEP) aims to meet the ambitious goal, announced by the Honorable Prime Minister Shri. Narendra Modi, of ending the TB epidemic by 2025.

Adani foundation with APSEZ, APML, AWL and MSPVL HR department has started cluster based screening program to eliminate TB in labors under Dignity of workforce program. Adani Ports and SEZ Limited has initiated screening Total 3200 work force screened in first & Second phase with target of screening more than 10,000 workforce of all group businesses and SEZ Industries.

COMMUNITY HEALTH

Health camp

specialty camps , Eye checkup camps ,Blood donation camp, Anti-tobacco awareness camp, TB screening, and other are conducted in core villages as well as in labour colonies.

Specialty health(Gynec , Pediatric eye specialty health camp) :- 04 camp – 903 Patients.

General health camp :- 05 camp -1041 Patients

Awareness Session

1.Health & Hygiene for School Students- - 432 Students.

2. Malnourished Child and Adolescent Girl- 108 Child and Girls.

Blood Donation camp was held at various location on the Occasion of Respected Chairman sir's birthday on 24th June.

Total 590800 CC quantity of Blood had been donated by 1088 Employees.

Patients who are suspected with critical illness directed towards G.K General Hospital.

COMMUNITY INFRASTRUCTURE DEVELOPMENT

Adani Foundation has designed, planned and built a strong infrastructure to improve the Standard of Education, Health, Agriculture and Basic facilities for the betterment of Community.

All initiatives were fulfilled according to the official requests and demands of people of the community and the Gram Panchayat.

COMMUNITY INFRASTRUCTURE DEVELOPMENT

❖ **Work completed.**

1. Percolation well Recharging work at Bhadiya & Mota Kandgra village.
2. Sluice gate Construction to Control Flood during Flooding at Khoydivadi Vistar Bhujpur.
3. Pond Beatification and Bund Strengthening at Bhujpur village.
4. commissioning of Community Training Centre at Shekhadiya.
5. Two Pond Deepening at Zarpara under Amrut Sarovar Yojna.
6. JCB & Hitachi Machine Support for Pre-Moonson activities.
7. Repairing and Maintenance work of Approach at Luni, Bavdi and Navinal Fishermen Bandar.

❖ **Work in Progress.**

1. Development of Vegetable Market Development at Mundra with 128 Stall Work in Progress.
2. Pond Pipe Line Work at Pranshla vadi vistar Zarpara village.
3. Sluice gate Construction & Pipe line work to Control Flood during Flooding at Pranshlavadi Vistar Zarpara.
4. Check dam Restrengthening and Road restoration at Bharudiya village
5. Development of Cricket Ground at Hatdi Village.
6. Renovation and reaparing work Community Center , Mundra.
7. Renovation and Road reparing work at All Fishermen Vasahat.

ADANI SKILL DEVELOPMENT CENTRE

ASDC Bhuj - Total Centre Admissions FY 22 - 23

Courses	Female	Male	Total	Revenue Generated
Interview Skills	21	9	30	0
General Duty Assistant	21	7	28	1,93,714
Disaster Management	0	2	2	3,998
Basic Functional English	0	2	2	1,198
Beauty Therapist	2	0	2	3,998
Assistant Beauty Therapist	1	0	1	1,499
Self Employed Tailor	8	0	8	7,992
Digital Literacy	5	1	6	3,349
Domestic Data Entry Operator	0	1	1	4,720
Non Domain Employability Skills	21	8	29	0
Understanding Operating System	21	7	28	0
Entrepreneurship	23	7	30	20,800
Financial Literacy	45	1	46	0
Total	**168**	**45**	**213**	**2,41,268**

MOU with Kachchh District Education Office. In this MOU we will provide training of Digital Literacy and Basic Functional English in Kachchh District Schools. As per MOU Kachchh District Education Office will provide minimum 5000 candidates to us for training (Adani Skill Development Centre).

Courses	Total
Basic Functional English	1387
Digital Literacy	211
Total	**1598**

ADANI SKILL DEVELOPMENT CENTRE

Soft Launching of
Self Employed Tailor – Outreach Batch at Meghpar
Soft Launched Self-Employed Tailor Batch at Meghpar (Out-reach). Total 25 candidates are enrolled.

Soft Launch of General Duty Assistant Batch
Soft launched General Duty Assistant Batch with 30 candidates under DDU-GKY scheme as per instruction by GLPC.

Soft Launch of Entrepreneurship Development Program
Soft Launch of Entrepreneurship Development Program Training at Centre under CED with 30 candidates.

Soft Launch of FL Training under Special Project
Launching Special Project Jointly with KMVS NGO for FSW (Female Sex Worker) Financial Literacy training Inaugurated on 22-07-2022 Total 37 women participant

ADANI SKILL DEVELOPMENT CENTRE

ASDC Mundra

ASDC and Thermax Foundation Done MoU

- ASDC and Thermax Foundation Jointly Organised , Skill Development training program for " Dhrab Village youth"
- Today we have Inaugurated this training program at Dhrab Village . In 1st phase We are starting Domestic Data Entry Opertor training with 50 students (25 girls and 25 boys)
- Chief Guest of this program was Mr.Anees Shaikh- Head ,ER& Administration , Thermax,
- Ashlam bhai Turk- Dhrab Village Sarpanch
- Mavji Sir , Manhar Bhai & Deval Ben was presented from Adani Foundation.
- Mr. Jayesh was presented from Thermax Foundation.
- Mr. Sagar Kotak has done anchoring of this program.
- Mr.Praful Garoda has done all coordination of this program and setup the computer lab.
- Mr.Harshid and Raj also supported in this program.

Tie Ups with (Thermax Foundation, Empazer, Navin Group and DEO Kutch @ Rs.21.58 lacs.

Course Name	Total Admissions
Pedicurist and Manicurist	68
Self Employed Tailor	01
Assistant Electrician	30
Bar Bender and Steel Fixer	29
Meson General	29
Domestic Data Entry Operator	55
Junior Crane Operator	23
Interview Skills	32
Self Employed Tailor	30
Basic Functional English & Digital Literacy	1539
	1836

ADANI SKILL DEVELOPMENT CENTRE

ASDC Mundra

Success of completion of batch 1 of Pragati was celebrated today (29th April) at Adani House, Mundra in esteemed presence of Mr Vikram Tandon, Chief Human Resource Officer, Adani Group, Shri Vasant Gadhavi ,Executive Director, Adani Foundation and Mr Rakshit Shah, Executive Director, APSEZ. Other dignitaries who graced the occasion were Mr. Anil Kumar Kalaga, , Mr. Charles Douglas, CEO, Mundra and Tuna Ports, Jatin Trivedi, COO, Adani Skill Development Centre and all HR and Department heads of APSEZ, Power, Solar and Wilmar.

The event celebrated by distributing skill training certificate to 52 fisher folk students, who were trained under Mason and Assistant Electrician job roles under Adani Saksham. Event also included batch 2 launch ceremony by providing training kits to trainees.

All trainees got the privilege to meet Mr. Vikram Tandon and received words of encouragement and guidance from him for their bright future ahead. Highlight of the Project Pragati is All 52 students who underwent trainees got placed with decent income. This will transform not just their lives but also will gradually lead to socio economic shift in fisher folk community of Mundra, Kutch.

ADANI KANDLA BULK TERMINAL PVT LTD - TUNA

Fodder Support

Support of Dry & Green Fodder to Tuna and Rampar Village Gaushala Cattles during Scarcity which impacted on Cattle health and Milk Productivity ultimately Farmers Income as well. Total 643825 Kg green Fodder Supported for 900 Cattles of Tuna & Rampar.

Tree –Plantation

Total 200 Tree was planted and ensure responsibility for watering and Gurdning Public place and Schools Premises with involving Community and School students and sensitized to plant more trees and nurture.

Water at Fisherfolk settlement

Potable water (18 KL per Day) Distribution to Vira and Dhavlvaro Bandar through Water tanker Regularly which improve Hygiene and Health standard and reduce Women drudgery ,Cost and Time to get water by **Linkages through AKBTPL and GWIL daily bases.**

ADANI GREEN ENERGY LTD - ABDASA

Adani Solar Plant Bitta is under Adani Green Energy Limited. Adani Foundation is doing regular support of JCB during monsoon or any accident cases as and when required.

Apart from it Celebrated Chairperson's Birthday by distribution of school bags to the children taking admission in class 1 along with necessary books and Education Material. Which includes Bitta School, Nani Dhufi School and Moti Dhufi School.

SUPOSHAN

fortune Suposhan

A CSR initiative by Adani Wilmar Ltd.

SUPOSHAN

Activities	Beneficiary
Family counselling	1728
Anthropometry	4644
Focus Group Discussion	535
Cooking demo	43
Poshan Vatika	165
Plantation (Moringa, Papaya, Lemon etc.)	220
CMTC / NRC admission	04
CMTC / NRC discharge	04
New Pregnant women identified	148
Newborn Identified	114
No. of WASH Kit Distributed	03
Village level Events	68
No of Sanginis	23

SUCCESS STORY

Amrutaben desired to ask God for one thing, a new pushcart ! - Mundra

Jiluben is an elderly woman with physical limitations and a terrible economic state. She's been widowed for thirty years. Jiluben's son is 50 years old, unmarried and almost face continuously ill. while her daughter Amrutaben is divorced (she got married 20 years ago). Jiluben, who is 70 years old only has her daughter Amrutaben is working. Amrutaben used to use her old pushcart but it was heavy and too old for her to carry around everywhere, plus she didn't have enough money to buy a new one. Amrutaben only desired to ask God for one thing, a new pushcart ! because everything else she could take care of on her own despite such bad situation.

An employee of the Adani foundation have spoken with Sarpanch Hawaben about the work being done by the Foundation on support of people with disabilities. As soon as she informed & requested that to make visit at Jiluben house. Their pushcart needs were discussed by representative from the visited, verified all the necessary paperwork, and spoke with Jiluben and her family about government programs for widows and people with disabilities. And a week later the entire process was completed and the new pushcart was provided to them. She is now able to work promptly and help their family in overcoming this difficulty.

SUCCESS STORY

Only a teacher can turn the disability into a talent ! - Mundra

Challenges are what make life interesting. Overcoming them is what makes life meaningful". Halepotra sadiya studying in class 4 of Dhrub primary school is the SEN - special education needed .she is not able to see clearly through her eyes that is having the problem of vision by birth , she underwent 4 operations but have a great IQ level which never stopped her from learning new things. sadiya's parents never stopped her coming to school. she had a problem in basic maths ,gujarati reading and writing but within an year she worked continuously during her free time and now is able to read write and perform basic calculation. Her favourite hobby is learning new things , colouring and listening new rhymes from YouTube. she can now stand up in morning assembly and give her introduction in English . "only a teacher can turn the disability into a talent through hard work and self confidence". Her dream is to become a teacher.

SUCCESS STORY

Journey of Transformation in the Lives of Umarpada Tribal Women - Hazira

Umarpada is a Town and Taluka in Surat District of Gujarat. According to census 2011 there are 17,338 houses and 83,723 people living in the taluka. In terms of literacy, 58.56% of people in Umarpada Taluka are educated. From 2022 to 2023, the Adani Foundation's Hazira unit begin its CSR efforts in the Umarpada block as part of the Tribal Development Initiative. empowerment of women is One of the most significant aspects of this project. In Ghanawad village, most of the women used to do household work and often went into the forest and nearby villages for agriculture related work. They labour 8 to 10 hours and actually earn between Rs. 100 and Rs.130. This group, which is entirely made up of tribal people, also includes one of the oldest still-existing primitive tribes, the Kotwadiya community. Due to the majority of their hours being spent at work, they are unable to emphasise on the health and education of their child.

Ten potential SHGs have been uncovered by AF Hazira Team. A group of women were encountered and trained by the AF Hazira staff. In the initial batch, 35 tribal women were Trained in the production of papad, pickles, and masala. These women thought they could manage this business unit after ten days of training. With the help of the hygienic standards they have begun preparing pickles and papads in their own kitchens. They have partnerships with Surat-based businesses to supply their items to their canteen as well as local markets where they sell their products. They have a fixed source of additional income. They gather around and talk about one other's challenges in order to discover solutions as a group. The other villager's women have looked up to this group of women as a role model.

SUCCESS STORY

Impact of silage in Income of Maheshbhai - Dahej

Maheshbhai Haribhai Ahir lives in the Atali village of Dahej Taluka with his family. His primary source of income comes from the production and distribution of milk. His family has owned 3 cows and 23 buffaloes in addition to 5 acres of agricultural land. Twenty buffalos and two cows are currently lactating. This is the second generation of the family working in animal husbandry. In the summer, they suffer from a lack of green fodder due to irrigation systems being insufficient. There is plenty of green animal feed available during the rainy season. In order to produce milk, green feed is crucial.

Adani Foundation held farmer meetings in the village of Atali on January 18, 2012. Give details about making silage for animal feeding at this meeting. Making silage would solve the problem of summer time green fodder shortage. Maheshbhai received 10 50kg silage bags in March 2022. Silage feeding increased milk production by 2 litres per day (from current milk production 6 litres). In just 60 days, milk production has increased by a total of 120 litres, and income has increased by a total of Rs. 7200. Production of milk increased by 480 litres from the following year to 300 litres in 2021.

SUCCESS STORY

health care service is to save the lives !

Mohammad Sadik Turk, 16, of Dhrub arrived in critical condition because of pain in the area of his kidneys. The condition was treated as an intestinal problem by doctors. The specialists tried their best to treat him & offering variety of medications. Support him for his routine dialysis for six to eight months while paying attention to his condition. He no longer needs dialysis after complete therapy, but he still needs to regularly administer injections three times every month.

Many young children pass away each year from insufficient medical care and inability to pay for necessary treatments. As long as there is only one source of income for the family and everyone depends on him, it is hard to provide costs for those who are living below the poverty line. Although India has more than 50,000 patients who receive long term dialysis, it has only a thousand kidney specialists in the entire country. Furthermore, treatment can be expensive. In situation like this Foundation pays for the child's injections in light of his financial situation and wishes him a quick recovery and a long and healthy life. The main goal of the Adani Foundation's community health care service is to save the lives of children like Sadik.

SUCCESS STORY

Hope and Faith from the Mobile health Unit Justify!

Jorubha Bapubha Jadeja, age 70 of Hatadi village has been suffering severe weakness. He was short of Money and means of transportation to go to the hospital. thereafter waits for the Adani Foundation's mobile health care unit to arrive. A foundation initiative to provide primary facility at door by the mobile health care unit. Since everyone in the village is aware of this, they regularly choose to come here for primary health problems. After giving them basic care, transfer them to a hospital facility if required, and if not, doctors follow up with them until they recovered. Jorubha anticipated the arrival of the Mobile Unit of the Foundation in his village because he was unable to get to the hospital & he has faith in Mobile unit as he has earlier recovered from illness without visiting a hospital.

The prospect of meeting with a doctor gave them hope for improvement in his health. His health had become a little worse since it had been a few days. Jorubha entered worth of headache, nausea, and vomiting symptoms. His blood pressure was 168/90 mmHg at the moment, so he needed symptomatic and other necessary treatment. Along with medication, the doctor encourages him to take care of himself by avoiding unhealthy food that is fried or oily, applying salt sparingly, and engaging in light activity like walking. yoga. Doctor take ongoing telephone follow-up with Jorubha & providing them with the information they wanted. The mobile health unit returned on Friday to check blood pressure once more; it was 155/85mmHg. then Antihypertensive medication was started. Blood pressure is periodically checked every Friday and is continuously monitored after 20 days when it enters the usual range of 123/80 mmHg. Jorubha was delighted when he saw how much the doctor cared like his son and also how his health had improved. The Adani Foundation received blessing from him.

SUCCESS STORY

Suf Handicraft : Conserving "VIRASAT" of Decades

Parvati Ben's earliest memory of stitching delicate handicrafts is from when she was as little as 5-years-old. Since then, she has followed this art with an immense dedication that shows through her intricate and precise handiwork. Parvati is a resident of Pragpar-2 village. She lives in a house with 5 other people and is the sole breadwinner. Even so, Parvati is a humble, loving and welcoming individual.

Parvati Ben had been practising her intricate Suf handicraft all along, making scarves, table cloths, garments and more for her fellow villagers and the occasional visitors. Her artwork had consistently been worth more than what she sold it for- her only desire being that her art finds an expression, a space in the world, however small it may be. One day, Adani Foundation discovered this diligent, rigorous woman. Parvati Ben now works on projects brought to her by Adani Foundation and is hence able to sustain her entire family on her own. She has risen to be an aspirational figure, looked upon as a role model by her fellow village women. Parvati Ben is playing a major role in now setting up a federation for the village women across Mundra district to practise their handicraft work and earn a livelihood. But more than all the titles and positions, what Parvati Ben deems sacred is the sheer recognition of her art. All she ever wanted was to be known as an artist and now she is the voice of this very own art, inspiring dozens of women like her to become independent.

EVENTS

Support of Biogas kits on Earth Day

Participation Krishi Mela in presence of Central Agricultural minister

Utthan students prepared cards on Mother's Day

World Health Day celebrated by creating health awareness programs and schools and at Adani wilmar.

No Tobacco day celebrated by creating awareness to take preventive measures for workforce

Tree plantation at Zarpara village on 'Word Environment Day' in presence of SDM

International coastal clean-up day was celebrated in association with National Coast Guard department at mandavi with Cleanliness Drive.

The International Mangrove Day for the Conservation of the Mangrove Ecosystem is celebrated every year on **26th July**,

Teacher Day Celebration on 5th September in all Utthan School.

AWARDS

Adani Foundation received Diamond Award in participatory ground water management organized by Quality circle forum of India - QCFI

Jyoti ben tank received Award from Vice Precident in Amazing Indians Awards who is member of Prakrutik Sahkari Mandali supported by Adani Foundation which is matter of Proud

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નાયબ પશુપાલન નિયામકશ્રીની કચેરી,

આભાર સહ અભિનંદન પત્ર

આપનો

નાયબ પશુપાલન નિયામક

જીલ્લા પંચાયત, કચ્છ-ભુજ

Received appreciation letter from District Animal Welfare Departent for commendable work for Cattles affected by Lumpy Virus

અદાણી ફાઉન્ડેશન દ્વારા સ્વંત્રતા દિવસે ૧૭ શાળાઓમાં સ્પોર્ટસ અને મ્યુઝિક કીટનું વિતરણ

જળસંરક્ષણ ક્ષેત્રે અસામાન્ય કામગીરી બદલ સન્માન
અદાણી ફાઉન્ડેશનને જળશક્તિ મંત્રાલય તરફથી એવોર્ડ એનાયત

ભાસ્કર ન્યૂઝ | મુન્દ્રા

સમગ્ર જિલ્લામાં જળ સંરક્ષણ ક્ષેત્રે ઉત્કૃષ્ઠ કામગીરી બદલ અદાણી ફાઉન્ડેશન ને જળશક્તિ મંત્રાલય તરફથી એવોર્ડ વડે સન્માનિત કરાયું હતું.

29 માર્ચ 2022 ના રોજ નવી દિલ્હી સ્થિત પ્લેનરી હોલ ખાતે રાષ્ટ્રપતિ રામનાથ કોવિંદ ફૂડ પ્રોસેસીંગ ઉદ્યોગ ના રાજ્યકક્ષા ના મંત્રી ગજેન્દ્રસિંહ શેખાવત અને આદિ જાતિ બાબતોના મંત્રી બિશ્વેશ્વર ટુડુ ની ઉપસ્થતિમાં યોજાયેલ ત્રીજા નેશનલ વોટર

માં સ્વજલ પ્રોજેક્ટ અંતર્ગત રૂફટોપ રેઈન વોટર ના 115 યુનિટ સ્થાપિત કર્યા છે. 31 કુવા 189 બોરવેલ રિચાર્જ ઉપરાંત 56 તળાવો ઉંડા

બાળકો ને અસર કરતા પાણી સંરક્ષણ ની દિશા માં કામ કર્યું છે. જેના પરિણામે ભૂગર્ભ જળના ટીડીએસ માં 19.6 ટકા નો ઘટાડો

મુન્દ્રાના 7 ગામના 51 ખેડૂતોએ ગાય આધારિત ખેતી અપનાવી

અદાણી ફાઉન્ડેશન 5000 જેટલા કિસાનોને પ્રોત્સાહિત કરશે

ભાસ્કર ન્યૂઝ . મુન્દ્રા

આધુનિક યુગ માં રસાયણિક ખાતરમુક્ત આહાર મેળવવો એ માનવમાત્ર માટે પડકારરૂપ બન્યું છે ત્યારે મુન્દ્રા પંથકના સાત ગામના 51 ખેડૂતોએ ગાય આધારિત ખેતીનો પ્રારંભ કરી નવો રાહ ચીંધ્યો છે.

ખેડૂતો પોતાના આંગણે બે પ્રકારના ખાતરો ઉત્પન્ન કરી ગાય આધારિત ખેતી કરી શકે તે માટે સતત પ્રયત્નશીલ અદાણી ફાઉન્ડેશન દ્વારા એક દેશી ગાયથી 30 એકર જમીનમાં જીવામૃત ખેતી કરી શકાય જ્યારે સજીવ ખેતીમાં 30 ગાયોથી એક એકર માં પાક ઉગાડી શકાય તે અંગેની સમજ આપતાં ભૂમિપુત્રોને તે અંગેની રીતથી અવગત કર્યા હતા. હાલ અદાણી ગ્રુપના સહયોગ થી કિસાનોને ત્યાં મોડેલ ફાર્મ બનાવી ગાય આધારિત ખેતી શરૂ કરવામાં આવી છે અને આ પ્રોજેક્ટનો વિસ્તાર કરવા

અદાણી ફાઉન્ડેશન આઈસીડીએસ અને ઈન્નરવ્હીલ કલબ ઓફ મુંદરાના સંયુક્ત ઉપક્રમે મહિલા દિવસની અનોખી ઉજવણી

મુંદરા (કચ્છ પત્રિકા) મુંદરા ખાતે આંતરરાષ્ટ્રીય મહિલા દિવસની અનોખી ઉજવણી કરવામાં આવી હતી. ઉપરોક્ત ત્રણેય સંસ્થાઓના સંયુક્ત ઉપક્રમે મહિલા દિન ઉત્સાહભેર ઉજવાયો હતો. આ પ્રસંગે સામાજિક પ્રવૃતિઓમાં ઉત્કૃષ્ટ યોગદાન આપનાર સન્નારીઓનું સન્માન કરવામાં આવ્યું હતું. મહિલાઓને સ્વાસ્થ્યની સુરક્ષા પ્રદાન કરતી હેલ્થ કીટનું વિતરણ કરવામાં આવ્યું હતું.

ઈન્નરવ્હીલ કલબના પ્રમુખ શ્રીમતી હિમીબેન દિલીપભાઈ ગોર દ્વારા વિરાંગના ફોર્સના પોલીસ બહેનોનું સન્માન કરવામાં આવ્યું હતું. અદાણી ફાઉન્ડેશનના સ્ત્રી સશક્તિકરણના પ્રોજેક્ટ સાથે જોડાયેલા દેવલબેન ગઢવી તેમજ જાગૃતિબેન જોશીનું સન્માન પ્રમુખ હિમીબેન ગોર તેમજ તેમની સમગ્ર ટીમે કર્યું હતું. ઈન્નરવ્હીલ કલબ તરફથી ડો. પૂજાબેન જોશી, આશાબેન ચાવડા, ગીતાબેન ઐયર, નીલીમાબેન મહેતા, મોહિનીબેન ચુડાસમા, ઉપસ્થિત રહ્યા હતા. ટીમ ઈન્નરવ્હીલે બહેનોની કાર્યશક્તિને બિરદાવી હતી.

આ કાર્યક્રમના મુખ્ય વક્તાઓ તરીકે રાષ્ટ્રસેવિકા સમિતા હેતલબેન ભટ્ટ તેમજ ડો. પૂજાબેન જોશી અને નગર પાલિકા કાઉન્સેલર મોહીનીબેન ચુડાસમા રહ્યા હતા. ત્રણેય બહેનોએ પોતાના પ્રવચનમાં સ્ત્રીઓને રાષ્ટ્રની આધારભુત શક્તિ ગણાવી તેમને સ્વસ્થ અને નિરોગી જીવન જીવવાની પ્રેરણા આપી હતી. હેતલબેને શૂરવિરતાને સ્ત્રીઓનું મુખ્ય ગુણ ગણાવ્યું હતું. ડો. પૂજાબેને પ્રાચીન સમયથી શરૂ કરી આધુનિક સમયની ભારતીય સ્ત્રીઓનો ગૌરવાન્વિત ઈતિહાસનો ચિતાર આપેલો હતો. મોહિનીબેને આધુનિક સમયમાં નારીનું સમાજમાં સ્થાન એ વિષય પર વક્તવ્ય આપેલ હતું.

આઈસીડીએસના સીડીપીઓ બહેન તેમની ટીમ સાથે ઉપસ્થિત રહ્યા હતા. નગરપાલિકાના કાઉન્સીલર બહેનો રચનાબેન જોશી, તૃપ્તિબેન ઠક્કર, આશાબેન સોરઠીયા, ચાગબાઈબેન ફફલ, નજમા અલનશીન ખોજા, નિમિતાબેન પાતારીયા, નયનાબેન કાનજી સુરા, ઉપસ્થિત રહ્યા હતા.

સમગ્ર કાર્યક્રમનું સંચાલન અદાણી ફાઉન્ડેશનના દેવલબેન ગઢવી અને જાગૃતિબેન જોશીએ કર્યું હતું. કાર્યક્રમને સફળ બનાવવા શ્રી મનહરભાઈ પારસભાઈ, પ્રકાશભાઈ, ડો. ડોડિયા, જશરાજભાઈ, રાજુભાઈએ જહેમત ઉઠાવી હતી. બહોળી સંખ્યામાં બહેનો ઉપસ્થિત રહ્યા હતા.

તુર્ક મેડીકલ ટ્રસ્ટ ધ્રબ

મુંદરા પોર્ટની અદાણી વિલમાર કંપનીમાં વિશ્વ મેલેરિયા દિવસની ઉજવણી કરાઈ

મેલેરિયા કેવી રીતે ફેલાય છે?

મેલેરિયા અટકાવવા માટે શું કરવું જોઈએ

સાવચેતીઓ મેલેરિયા સામે રક્ષણ આપશે

કચ્છમિત્ર

વિશ્વ મેલેરિયા દિવસ ઉજવણીએ મુંદરા પોર્ટ ખાતે યોજાયેલા કેમ્પમાં ઉપસ્થિતોને માહિતી આપતા અગ્રણીઓ.

વાહકજન્ય રોગો અંગે સમજ આપી સંપૂર્ણ સારવાર પર ભાર મુકાયો

મુંદરા પોર્ટ ખાતે વિશ્વ મેલેરિયા દિવસ ઉજવણીએ જનરલ આરોગ્ય નિદાન કેમ્પ યોજાયો

કલ્પતરુ પ્રોજેક્ટ હેઠળ ૫૦ લાખ વૃક્ષોનું વાવેતર કરવાનું લક્ષ્ય

બોરાણામાં મુન્દ્રાની બ્રહ્માકુમારીઝ સંસ્થા દ્વારા ૧૧૦૦ રોપાંઓનું વાવેતર

। મુન્દ્રા । (સંદેશ બ્યૂરો)

મુન્દ્રા પ્રજાપિતા બ્રહ્માકુમારી ઈશ્વરીય વિશ્વવિદ્યાલય તેમજ અદાણી ફાઉન્ડેશનના સંયુક્ત ઉપક્રમે અદાણી ફાઉન્ડેશનના ચેરમેન ડૉ. પ્રીતિબેન અદાણીના ૫૮મા જન્મદિવસ નિમિત્તે બોરાણા ગામે વિસ્તરી માતાજી મંદિરના પરિસરમાં વૃક્ષારોપણ કાર્યક્રમનું આયોજન કરવામાં આવ્યું હતું. જેમાં મુન્દ્રા સેવા કેન્દ્રના ૫૦ જેટલા ભાઈ-બહેનોએ પરમાત્માની મધુર સ્મૃતિમાં ૧૧૦૦ જેટલા અલગ અલગ પ્રકારના રોપાંઓનું વાવેતર કર્યું હતું.

બ્રહ્માકુમારીઝ વિશ્વ વિદ્યાલય દ્વારા કલ્પતરુ પ્રોજેક્ટ હેઠળ ઓછામાં ઓછા ૫૦ લાખ વૃક્ષો વાવવાનો લક્ષ્યાંક નક્કી

કરવામાં આવેલ છે ત્યારે મુન્દ્રા સેવા કેન્દ્રના મુખ્ય સંચાલિકા રાજયોગિની બ્રહ્માકુમારી સુશીલાબેને આ આનંદના પ્રસંગે જીવનમાં પર્યાવરણના મહત્ત્વ પર પ્રકાશ પાડ્યો હતો. પ્રોજેક્ટ ઓફિસર કરસન ગઢવીએ સહયોગ આપી કાર્યક્રમને સફળ બનાવ્યો હતો.

મુન્દ્રામાં સક્ષમ દ્વારા રોજગારીની તરકો વધારતા માછીમાર યુવાનો

પ્રગતિની બેચ-૧ પૂર્ણ અને બેચ-૨નો પ્રારંભ કરવામાં આવ્યો

ભુજ,તા.૩

કચ્છના મુન્દ્રામાં આધુનિક સ્કીલસેટ ધરાવતા યુવકોની સંખ્યા વધી રહી છે. અહીંના માછીમાર યુવકો અદાણી ફાઉન્ડેશન અંતર્ગત ચાલતા સ્કીલ ડેવલપમેન્ટ પ્રોજેક્ટ પાસ કરી રોજગારીની તકો વધારી ... હતી. ઉત્તીર્ણ થયેલા સક્ષમ માછીમાર યુવકો યોગ્ય રોજગારી મેળવતા તેમનું તથા સંલગ્ન સમાજના જીવનધોરણમાં સુધારો થશે.

વિદ્યાર્થીઓએ આ તક પૂરી પાડવા બદલ અદાણી ફાઉન્ડેશન પ્રત્યે હૃદયસ્પર્શી કૃતજ્ઞતા વ્યક્ત કરી હતી. ... ૧૯૯૬માં સ્થપાયેલા અદાણી ફાઉન્ડેશન આજે ૧૮ રાજ્યોમાં વ્યાપક કામગીરી ધરાવે છે, જેમાં દેશના ૨,૪૯૦ ગામડા અને શહેરોનો સમાવેશ થાય છે. સંસ્થામાં તજજ્ઞોની ટીમ નવીનતા, લોકભાગીદારી અને સહયોગને મૂર્ત ...

કચ્છની ૫૯ શાળાઓમાં 'ઇકો ફ્રેન્ડલી' રક્ષાબંધનની ઉજવણી

અદાણી ફાઉન્ડેશન પ્રકલ્પ ઉત્થાન પ્રોજેક્ટ અંતર્ગત વિવિધ દિવસોનો કરવામાં આવતી અનોખી રીતે ઉજવણી

। કચ્છ આજકાલ । ભુજ

ભારત તહેવારોનો દેશ છે. તેમાં અનેક તહેવારોની ઉજવણી થાય છે. આપણે ધાર્મિક, સામાજિક અને રાષ્ટ્રીય તહેવારો ઉજવીએ છીએ. તેમાં રક્ષાબંધન એ ભાઈ-બહેનનો ખુબ મહત્વનો તહેવાર માનવામાં આવે છે. અદાણી ફાઉન્ડેશન દ્વારા પ્રાથમિક શિક્ષણમાં ચાલતા ઉત્થાન પ્રોજેક્ટ અંતર્ગત પણ વિવિધ દિવસોનો અનોખી રીતે ઉજવણી કરવામાં આવે છે. આ વખતે ઉત્થાન શાળાઓમાં 'ઇકો ફ્રેન્ડલી' રક્ષાબંધનની ઉજવણી કરવાનું નક્કી કરવામાં આવ્યું હતું.

ઉત્થાનનાં વિદ્યાર્થીઓ રાખડીઓ તૈયાર કરીને એક છોડને બાંધીને તેનું આખા વર્ષ દરમિયાન તેની કાળજી લેશે તેવો સંકલ્પ લીધો હતો. જેમાં રક્ષાબંધન પ્રકૃતિની, પ્રકૃતિ દ્વારા અને પ્રકૃતિ માટે થીમ અંતર્ગત આયોજન કરવામાં આવ્યું હતું. મનુષ્ય જન્મે ત્યારથી તેને કોઈને કોઈ પ્રકારનો ભય તો રહેતો જ હોય છે, અને જ્યાં ભય હોય ત્યાં રક્ષા સ્વયંભૂ પ્રગટ થતી હોય છે. પ્રકૃતિ થકી આપણે છીએ અને તે હશે તો જ આપણે રહીશું તેથી તેની રક્ષા કરવી એ આપણી જવાબદારી છે. તે મુલ્ય બાળપણમાંથી જ વિકશે તે ખુબ જ અગત્યનું છે. શું રાખડી બાંધીને કોઈની રક્ષા ખરેખર થઈ શકે ખરી? એ પ્રશ્નનો જવાબ આ રીતે રક્ષાબંધન ઉજવાય તો આપો આપ જ મળી જાય તેમ છે. ઉત્થાન પ્રોજેક્ટ અંતર્ગત બાળકોને વિવિધ ઉજવણી દ્વારા તહેવારો વિશે જાણવામાં ઉત્સાહ જાગે, શાળામાં આવી ઉજવણી થાય તો શિક્ષણમાં રસ જાગે અને શાળાનું વાતાવરણ ધમધમતું અને બાળકને ગમતું બને તે હેતુથી ઉજવણી કરવામાં આવી હતી. ઉત્થાન સહાયકોના માર્ગદર્શનમાં બાળકોએ 'ઇકો ફ્રેન્ડલી' રાખડીઓ બનાવવામાં આવી હતી. બાળકો પોતે સંપૂર્ણ રીતે તેમાં જોડાય અને તે પોતે રાખડી બનાવે તો તેનું મહત્વ ખુબ જ વધી જાય છે. બાળકનાં આવી પ્રવૃત્તિઓમાં જોડાવાથી તેમની વિચારશીલતા, સર્જનાત્મકતા અને સંવેદનશીલતા જેવા જરૂરી ગુણો વિકસે છે.

કચ્છ ખબર

મુંદ્રામાં હોમ બાયોગેસ કીટનું વિતરણ કરી 'વર્લ્ડ અર્થ ડે' ઉજવાયો

'અર્થ ડે'ને સાર્થક કરતુ અદાણી ફાઉન્ડેશનનું સરાહનીય કદમ!

મુંદરા મધ્યે આયોજીત નેત્ર નિદાન કેમ્પમાં ૭૦ દર્દી

અલગ તારવેલા મોતીયા, વેલના ૨૨ દર્દીના ઓપરેશન નિઃશુલ્ક કરી...

અદાણી ફાઉન્ડેશન ચોમાસામાં ટપકતી છત નીચે રહેતી આદિવાસી કન્યાઓની વ્હારે આવ્યું

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अदाणी फाउंडेशन द्वारा नियोजित उड़ान परियोजना के तहत

अदाणी हजीरा पोर्ट के शैक्षिक दौरे पर सूरत के छात्र

लोकतेज, सूरत। अदाणी समूह की सामाजिक विकास गतिविधियों के लिए अदाणी फाउंडेशन ने उड़ान प्रोजेक्ट अंतर्गत गुजरात के स्कूल कॉलेजों के छात्रों को गुजरात में संचालित अदाणी समूह के औद्योगिक प्रतिष्ठानों में

उपलब्ध सुविधाओं के स्वयं गुणवत्ता अध्ययन के लिए गुजरात सरकार के साथ समझौता ज्ञापन किया हुआ। इस प्रेरित होकर उड़ान प्रोजेक्ट ने अदानी फाउंडेशन की शुरुआत की है।

उड़ान परियोजना मार्च 2020 से कोविड-19 के कारण स्थगित कर दी गई थी जो अब फिर से शुरू हो गई है। उड़ान प्रोजेक्ट के तहत राज्य की पहली महिला विश्वविद्यालय वनिता विश्राम की 50 बीबीए छात्राओं ने अदाणी हजीरा पोर्ट का दौरा किया और यहां किए जा रहे कार्यों से दौरा किया और खाद्य तेल बनाने की प्रक्रिया को देखा। एक दिवसीय यात्रा के दौरान, छात्र जहाज को बंदरगाह और उससे जुड़ी व्यावसायिक गतिविधियों के साथ-साथ अदानी-विल्मर संयंत्र में खाद्य तेल के उत्पादन और वितरण को देखकर प्रसन्न हुए और कहा कि यह उनका पहला अनुभव था। उड़ान के दूसरे दिन, सोनगढ़ तालुका के आदिवासी इलाके में उकाई के

અદાણી ફાઉન્ડેશન દ્વારા હજીરા વિસ્તારમાં ત્રણ મીઠા પાણીના તળાવો તૈયાર કરવામાં આવ્યાં

અકસ્માત નિવારણ માટે રેલીંગ, વૃક્ષારોપણ સહિત અનેક લોકોપયોગી કાર્યો થઈ રહ્યાં છે

અદાણી ફાઉન્ડેશને નેત્રંગ તાલુકાના અંતરિયાળ વિસ્તારમાં પુસ્તકાલયની સ્થાપના કરી

ખબરદાર પ્રતિનિધિ, વાગરા, તા. ૦૯

ગ્રામીણ વિસ્તારમાં સ્પર્ધાત્મક પરીક્ષાઓની તૈયારી કરતાં યુવાનોને ઘર આંગણે સુવિધા મળે એ આશયથી અદાણી ફાઉન્ડેશન, દહેજ દ્વારા ભરૂચના અંતરિયાળ થવા ગામમાં સંપૂર્ણ સુવિધાયુક્ત લાઈબ્રેરીની સ્થાપના કરી હતી. જેનું ઉદઘાટન હજીરા અને દહેજ અદાણી પોર્ટના સીઈઓ અનિલ કિશોર સિંહના હસ્તે સ્થાનિક આગેવાનોની હાજરીમાં કર્યું હતુ.નેત્રંગ તાલુકાના થવા અને આસપાસના ગામોના ૧૦૦થી વધુ વિદ્યાર્થીઓ સ્પર્ધાત્મક પરીક્ષામાં ભાગ લેતા હોય છે.પરંતુ આર્થિક સ્થિતિ અને વાંચન સામગ્રીની સુવિધાના અભાવે પરીક્ષાઓમાં ઉત્તમ પ્રદર્શન કરી શકતા ન હતા.જે બાબત ને ધ્યાને લઈ અદાણી ફાઉન્ડેશન દ્વારા સુવિધા સજ્જ લાયબ્રેરી

(તસવીર : ઝફર ગડીમલ)

બનાવવાનું નક્કી કરાયુ હતુ.ગામડાઓનું યુવાધન સ્પર્ધાત્મક પરીક્ષા ની તૈયારી સુપેરે કરી શકે એ માટે સંદર્ભ સાહિત્ય સાથે ની પુસ્તકાલયમાં ગુજરાતી,હિન્દી અને અંગ્રેજી ના પુસ્તકો ઉપલબ્ધ કરાવાયા છે.જેમાં અભ્યાસક્રમ ના પુસ્તકો ઉપરાંત જનરલ નોલેજ,મહાન વ્યક્તિઓના જીવનચરિત્ર, નવલકથાઓ અને અખબારો નો સમાવેશ કરાયો હતો.આજના લોકાર્પણ કાર્યક્રમ દરમિયાન અદાણી ફાઉન્ડેશન,દહેજ દ્વારા પુસ્તકાલયમાં વધુ પુસ્તકોની સાથે સમયાંતરે વિષય નિષ્ણાત વક્તા અને સલાહકારોની શિબિરનું પણ આયોજન કરવામાં આવશે ની જાહેરાત કરવામાં આવી હતી.અદાણી ફાઉન્ડેશનો ઉદ્દેશ્ય પરીક્ષાઓ પાસ કરનારા વિદ્યાર્થીઓને મદદરુપ થવાની સાથે સામાજિક સ્તર ઊંચું લાવવાનો છે.

Annexure – 4

Cost of Environmental Protection Measures

Sr. No.	Activity	Cost incurred (INR in Lacs)			Budgeted Cost (INR in Lacs)
		2020 – 21	2021 – 22	2022 – 23 (till Sep'22)	2022 – 23
1.	Environmental Study / Audit and Consultancy	6.2	6.82	7.32	11.05
2.	Legal & Statutory Expenses	10.58	10.52	9.70	12
3.	Environmental Monitoring Services	19.17	14.31	6.37	33
4.	Hazardous / Non-Hazardous Waste Management & Disposal	83.55	107.09	72.35	127.72
5.	Environment Days Celebration and Advertisement / Business development	5.3	4.04	2.05	8.00
6.	Treatment and Disposal of Bio-Medical Waste	2.09	2.14	0.68	2.04
7.	Mangrove Plantation, Monitoring & Conservation	32.59	53.6	24.0	35.0
8.	Other Horticulture Expenses	689	921	490	913
9.	O&M of Sewage Treatment Plant and Effluent Treatment Plant (including STP, ETP of Port & SEZ & Common Effluent Treatment Plant)	148.49	252.27	77.36	196.63
10.	Expenditure of Environment Dept. (Apart from above head)	89.11	149.8	68.02	75.79
	Total	**1086.08**	**1371.79**	**757.85**	**1414.23**