Bhagwat Swaroop Sharma

From: Bhagwat Swaroop Sharma
Sent: Monday, May 30, 2022 10:54 AM
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 : Oct'21 to Mar'22)
Attachments: 1. EC Compliance Report_MPT 1995_Oct'21 to Mar'22.pdf

adani

Ports and Logistics

APSEZL/EnvCell/2022-23/017 **Date:** 27.05.2022

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: eccomplinace-guj@gov.in, iro.gandhingr-mefcc@gov.in

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

Ref : Environment and CRZ clearance granted to M/s Adani Ports & SEZ Limited vide letter dated 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 t copy of the compliance report for the Environmental and CRZ Clearance for the period of October-2021 March-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, Bagh Road, New Delhi-110003.
2) The Zonal Officer, Regional Office, CPCB – Western Region, Parivesh Bhawan, Opp. VMC Ward Office No. 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 – 3820
5) The Regional Officer, Regional Office GPCB (Kutch-East), Gandhidham – 370201.

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

O/C

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5) The Regional Officer, Regional Office GPCB (Kutch-East), Gandhidham – 370201.

01/06/22
Gujarat Pollution Control Board
Head Office
Sector No. 10-A,
Gandhinagar-382010

Adani Ports and Special Economic Zone Ltd
Adani House,
PO Box No. 1
Mundra, Kutch 370 421
Gujarat, India
CIN: L63090GJ1998PLC034182

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Fax +91 2838 25 51110
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Ports and Logistics

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Registered Office: Adani Corporate House, Shantigram, Nr. Vaishno Devi Circle, S.G. Highway, Khodiyar, Ahmedabad – 382421, Gujarat, India

adani
Ports and Logistics

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:

October-2021 to March-2022

Index

Environmental / 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 last half yearly EC Compliance report for the period Apr'21 to Sep'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 31-03-2022
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 31-03-2022</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 Oct'21 to Mar'22)</th><th>Type of ETP / STP</th></tr>
<tr><td>LT</td><td>265 KLD</td><td>78 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.

<table>
<tr><th>Parameter</th><th>Unit</th><th>Min</th><th>Max</th><th>Average</th><th>Perm. Limit[$]</th></tr>
<tr><td>pH</td><td>--</td><td>7.11</td><td>7.59</td><td>7.29</td><td>6.5 – 8.5</td></tr>
<tr><td>SS</td><td>mg/L</td><td>23</td><td>56</td><td>35</td><td>100</td></tr>
<tr><td>TDS</td><td>mg/L</td><td>1376</td><td>1678</td><td>1542</td><td>2100</td></tr>
<tr><td>COD</td><td>mg/L</td><td>71.10</td><td>78.00</td><td>74.38</td><td>100</td></tr>
<tr><td>BOD</td><td>mg/L</td><td>16</td><td>22</td><td>18</td><td>30</td></tr>
<tr><td>Ammonical Nitrogen as NH_3-N</td><td>mg/L</td><td>7.44</td><td>25.4</td><td>11.38</td><td>50</td></tr>
</table>
[$] 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 approved agency namely M/s. Pollucon Laboratories Pvt. Ltd. Surat and Unistar Environment and Research Labs Pvt. Ltd., Vapi. Please refer Annexure – 1 for detailed analysis reports for the period Oct'21 to Mar'22. Approx. INR 14.31 Lakh is spent for all environmental monitoring activities during the FY 2021-22 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 31-03-2022
		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). APSEZ, Mundra has also been certified as Single Use Plastic (SUP) Free Port by Confederation of Indian Industry (CII) (valid up to 25.05.2022). 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 through common facility i.e. M/s. Saurashtra Enviro Projects Pvt. Ltd., Bhachau and/or cement industries of Ambuja Cement Ltd., Kodinar. Used/Waste Oil is being sold to GPCB authorized recyclers / re-processors namely M/s.

Sr. No.	Conditions	Compliance Status as on 31-03-2022
		Western India Petro Chem Ind - Bhavnagar, Aviation Corporation - Kutch & Aroma Petrochem - Bhavnagar. It is also being 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. Oct'21 to Mar'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.

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 31-03-2022</th></tr>
<tr><td></td><td></td><td>
The following table summarizes the waste management practice (from Oct'21 to Mar'22) for different types of wastes at APSEZ:
<table>
<tr><th>Type of Waste</th><th>Quantity in MT</th><th>Disposal method</th></tr>
<tr><td colspan="3">Hazardous Waste</td></tr>
<tr><td>Pig Waste</td><td>6.71</td><td rowspan="3">Co-processing at cement industries</td></tr>
<tr><td>ETP / CETP Sludge</td><td>4.84</td></tr>
<tr><td>Oily Cotton waste</td><td>64.89</td></tr>
<tr><td>Used / Spent Oil</td><td>146.98</td><td>Sell to registered recycler</td></tr>
<tr><td>Discarded Containers / Barrels</td><td>2.89</td><td>Sell to registered recycler</td></tr>
<tr><td colspan="3">Other Waste</td></tr>
<tr><td>Bio Medical Waste</td><td>3.62</td><td>To approved CBWTF Site</td></tr>
<tr><td>E-Waste</td><td>2.91</td><td>Sell to register recycler</td></tr>
<tr><td colspan="3">Non-Hazardous Waste</td></tr>
<tr><td>Recyclables Dry Waste / Scrap</td><td>1906.771</td><td>After recovery sent for recycling / Reuse within premises</td></tr>
<tr><td>Non-Recyclable Dry Waste (RDF)</td><td>158.15</td><td>Co-processing at Cement Industries</td></tr>
<tr><td>Wet Waste (Food waste + Organic waste)</td><td>412.96</td><td>Converted to Manure for Horticulture use / Biogas for cooking purpose</td></tr>
<tr><td>Horticulture Waste</td><td>404.00</td><td>Used for making of manure and utilize for horticulture purpose</td></tr>
</table>

<u>Ambient Air Quality</u> (twice in a week) and <u>Noise</u> (once in a month) monitoring are being carried out by NABL accredited and MoEF&CC approved agency namely M/s. Pollucon Laboratories Pvt. Ltd. Surat and 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 Oct'21 to Mar'22 is mentioned below.

Total Ambient Air & Noise Sampling Locations: 4 Nos.
<table>
<tr><th>Parameter</th><th>Unit</th><th>Max</th><th>Min</th><th>Average</th><th>Perm. Limit$</th></tr>
<tr><td colspan="6">AAQM</td></tr>
<tr><td>PM_{10}</td><td>$\mu g/m^3$</td><td>91.55</td><td>41.55</td><td>76.44</td><td>100</td></tr>
<tr><td>$PM_{2.5}$</td><td>$\mu g/m^3$</td><td>55.39</td><td>18.65</td><td>36.33</td><td>60</td></tr>
<tr><td>SO_2</td><td>$\mu g/m^3$</td><td>40.18</td><td>6.53</td><td>19.23</td><td>80</td></tr>
<tr><td>NO_2</td><td>$\mu g/m^3$</td><td>44.38</td><td>14.35</td><td>29.20</td><td>80</td></tr>
<tr><th>Noise</th><th>Unit</th><th>Leq Max</th><th>Leq Min</th><th>Leq Ave.</th><th>Leq Perm. Limit*</th></tr>
<tr><td>Day Time</td><td>dB(A)</td><td>69.90</td><td>55.40</td><td>64.82</td><td>75</td></tr>
<tr><td>Night Time</td><td>dB(A)</td><td>64.90</td><td>52.34</td><td>60.20</td><td>70</td></tr>
</table>
</td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 31-03-2022
		$ 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 Oct'21 to Mar'22. Approx. INR 14.31 Lakh is spent for all environmental monitoring activities during the FY 2021-22 for overall APSEZ.
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	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.

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 31-03-2022</th></tr>
<tr><td></td><td>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.</td><td>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. Pollucon Laboratories Pvt. Ltd. Surat and Unistar Environment and Research Labs Pvt. Ltd., Vapi. Summary of the same for duration of Oct'21 to Mar'22 is mentioned in compliance condition no. 2(iii) above.

<u>Marine Monitoring:</u>
Marine monitoring is being carried out once in a month by NABL accredited and MoEF&CC approved agency namely M/s. Pollucon Laboratories Pvt. Ltd. Surat and Unistar Environment and Research Labs Pvt. Ltd., Vapi. Summary of the same for duration from Oct'21 to Mar'22 is mentioned below. Monitoring Reports are attached as Annexure – 1 for the same.

Total Sampling Locations: 09 Nos.
<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Unit</th><th colspan="3">Surface</th><th colspan="3">Bottom</th></tr>
<tr><th>Max</th><th>Min</th><th>Average</th><th>Max</th><th>Min</th><th>Average</th></tr>
<tr><td>pH</td><td>--</td><td>8.26</td><td>7.78</td><td>8.01</td><td>8.21</td><td>7.5</td><td>7.97</td></tr>
<tr><td>TSS</td><td>mg/L</td><td>144</td><td>92</td><td>116.76</td><td>118</td><td>76</td><td>97.50</td></tr>
<tr><td>BOD (3 Days @ 27 °C)</td><td>mg/L</td><td>3.3</td><td>2.1</td><td>2.77</td><td>ND*</td><td>ND*</td><td>ND*</td></tr>
<tr><td>DO</td><td>mg/L</td><td>6.7</td><td>5.8</td><td>6.11</td><td>6.5</td><td>5.7</td><td>5.98</td></tr>
<tr><td>Salinity</td><td>ppt</td><td>36.7</td><td>34.1</td><td>35.51</td><td>36.46</td><td>33.4</td><td>35.77</td></tr>
<tr><td>TDS</td><td>mg/L</td><td>37604</td><td>29104</td><td>35921</td><td>37992</td><td>31828</td><td>36488</td></tr>
</table>
*ND = Not Detectable

<u>Ground Water Monitoring:</u>
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 Oct'21 to Mar'22 is mentioned below.</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 31-03-2022</th></tr>
<tr><td></td><td></td><td>Sampling Locations: 5 Nos.
<table>
<tr><th>Parameters</th><th>Unit</th><th>MIN</th><th>MAX</th><th>AVERAGE</th></tr>
<tr><td>pH @ 25 ° C</td><td>--</td><td>7.60</td><td>8.06</td><td>7.87</td></tr>
<tr><td>Salinity</td><td>ppt</td><td>0.95</td><td>11.85</td><td>4.66</td></tr>
<tr><td>Oil & Grease</td><td>mg/L</td><td>ND*</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Hydrocarbon</td><td>mg/L</td><td>ND*</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Lead as Pb</td><td>mg/L</td><td>0.04</td><td>0.06</td><td>0.04</td></tr>
<tr><td>Arsenic as As</td><td>mg/L</td><td>ND*</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Nickel as Ni</td><td>mg/L</td><td>ND*</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Total Chromium as Cr</td><td>mg/L</td><td>0.08</td><td>0.09</td><td>0.09</td></tr>
<tr><td>Cadmium as Cd</td><td>mg/L</td><td>ND*</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Mercury as Hg</td><td>mg/L</td><td>ND*</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Zinc as Zn</td><td>mg/L</td><td>0.15</td><td>0.28</td><td>0.21</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>0.38</td><td>1.12</td><td>0.96</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>2.07</td></tr>
</table>
*ND = Not Detectable

Please refer Annexure – 1 for detailed analysis reports. Approx. INR 14.31 Lakh is spent for all environmental monitoring activities during the compliance period i.e. Oct'21 to Mar'22 for overall APSEZ, Mundra.</td></tr>
<tr><td>2(vii)</td><td>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.</td><td>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.</td></tr>
<tr><td>2(viii)</td><td>A hundred meter wide mangrove belt should be created all along the west of Navinal Creek till its junction</td><td>Complied.

24 hectare of Mangrove afforestation was carried out with a cost of INR 25.0 Lac at west of Navinal creek. All</td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 31-03-2022
	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 with the State Forest Department, and details sent to the Ministry.	Mangrove plantations were done in consultation with Dr. Maity, Mangrove consultant of India. Green belt was developed 72.81 ha. Total 1,33,462 trees were planted with the density of 1835 trees per hectare within the port area. So, far APSEZ has developed 486.19 ha. area as greenbelt with plantation of more than 9.4 Lacs saplings within the APSEZ area. 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. 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. Average water consumption for entire APSEZ area is 3.45 MLD during compliance period i.e. Oct'21 to Mar'22.

Sr. No.	Conditions	Compliance Status as on 31-03-2022
		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 previous monsoon Approx. 2.06 ML of rain water 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.** • A large number of water harvesting structure (Total 21 Nos. of check dams and Augmentation of 2 check dams (1 Check dam current year). • Ground recharge activities (pond deepening work for more than 56 ponds) individually and 26 ponds under Sujlam

Sr. No.	Conditions	Compliance Status as on 31-03-2022
		Suflam Jal Abhiyan were built leading to a significant increase in water table and higher returns to the farmers. • Pond deepening and bund strengthen of Rampar village pond increase water storage capacity. • Roof Top Rain Water Harvesting 115 Nos. (50 Nos current FY 2021-22) which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family. • Recharge Borewell 189 Nos (83 Nos current FY 2021-22) which is best ever option to. • Drip Irrigation 1158 Farmers (180 formers are supported with 15% of amount of total cost for maximum 4.0 lac. in current FY 2021-22). • 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. • 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 2021-22 is to the tune of INR 1628.45 lakh. Out of which, Approx. INR 1492.6 lakh are spent during current FY 2021-22.
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	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

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 31-03-2022</th></tr>
<tr><td></td><td>in view the safety aspects, Horton spheres of 1250 MT capacity each should be preferred.</td><td>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 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. Please refer attached Annexure-4.

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 (Sr. No. 1) is attached as Annexure – 4.</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</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>
</table>

Sr. No.	Conditions	Compliance Status as on 31-03-2022
	October, 1995.	
2(xiii)	A permanent staff structure should be created with latest R&D facilities and suitable equipments for environmental and forestry activities through creation of Environmental cell. Adequate funds should be earmarked for this cell.	Complied. APSEZ has a well-structured Environment Management Cell, staffed with qualified manpower for 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 2021-22 is to the tune of INR 1521.59 lakh. Out of which, Approx. INR 1371.79 lakh are spent during the year 2021-22. Detailed breakup of the expenditures for the past 3 years is attached as **Annexure – 5**.
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.

Sr. No.	Conditions	Compliance Status as on 31-03-2022
		• 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. • ASDC imparted various soft skilled and technical training to make Atma Nirbhar India. • During this year till Mar'22, Total 499 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. Oct'21 to Mar'22 by Adani Foundation are 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

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 31-03-2022</th></tr>
<tr><td></td><td></td><td>submitted along with previous half yearly EC compliance report for the period of Oct'20 to Mar'21.</td></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 Apr'21 to Sep'21 was submitted to Regional Office of MoEF&CC @ Bhopal, Zonal Office of CPCB @ Baroda, GPCB @ Gandhinagar & Gandhidham and Dept. of Forests & Env., Gandhinagar vide our letter dated 27.11.2021. 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 30.11.2021 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>Oct'18 to Mar'19</td><td>31.05.2019</td></tr>
<tr><td>2</td><td>Apr'19 to Sep'19</td><td>28.11.2019</td></tr>
<tr><td>3</td><td>Oct'19 to Mar'20</td><td>20.05.2020</td></tr>
<tr><td>4</td><td>Apr'20 to Sep'20</td><td>26.11.2020</td></tr>
<tr><td>5</td><td>Oct'20 to Mar'21</td><td>25.05.2021</td></tr>
<tr><td>6</td><td>Apr'21 to Sep'21</td><td>30.11.2021</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

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

Customer's Name and Address :

M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD.
PLOT NO. 169/P, AT – NAVINAL ISLAND,
TAL. –MUNDRA, DIST. - KUTCH – 370421.

Test Report No. : **PL/AM 0976**
Issue Date : **16/11/2021**
Customer's Ref. : **As Per W.O.**

Location of Sampling : **ADANI PORT – CT-3 RMU-2**
GPS Location : **N 22° 44.20.57' E 069°42.0.59'**

Date of Sampling : **As per table**
Protocol (purpose) : **Ambient Air Quality Monitoring**
Sampling By : **Pollucon Laboratories Pvt. Ltd.**
Lab Id : **As per table**
Instrument Used : **RDS: EnvirotechM.No.-APM 460 BRUSHLESS S.R.-2758 DTH-2014**
FDS: POLLTECH PEM-ADS-2.5/10 , I.NO.20714
Gas Asse. Model No.TECI B1,Sr.No.4613 RotameterSr No.PT/28/13

RESULT TABLE

SR. NO	TEST PARAMETER	UNIT	RESULT								LIMIT#	METHOD OF MEASUREMENT
Date of Sampling			04/10/2021	07/10/2021	11/10/2021	14/10/2021	18/10/2021	21/10/2021	25/10/2021	29/10/2021		
Lab ID			AMA/2110 [A - G]									
			05	18	31	44	57	70	83	96		
1	Particulate Matter (PM_{10})	$\mu g/m^3$	77.57	85.38	90.44	81.31	72.47	82.45	91.55	76.43	100	IS 5182 (Part-23) 2017
2	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	43.54	40.38	55.39	45.37	41.50	47.33	51.32	42.67	60	CPCB guidelines for AAQM (Vol. I, NAAQMS/36/2012-13)
3	Sulphur Dioxide (SO_2)	$\mu g/m^3$	13.55	24.34	19.55	8.64	21.55	16.49	22.68	17.51	80	IS 5182 (Part-2) 2017
4	Oxide of Nitrogen (NOx)	$\mu g/m^3$	16.59	33.41	26.50	17.59	34.53	27.60	36.43	22.49	80	IS 5182 (Part-6) 2014
5	Carbon Monoxide as (CO)	mg/m^3	0.53	0.42	0.70	0.22	0.73	0.61	0.50	0.39	4.0	IS 5182 (Part-10)
6	Hydrocarbon as CH_4	mg/m^3	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	Not Specified	SOP: HC: GC/Gas analyzer
7	Benzene (C_6H_6)	$\mu g/m^3$	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	5.0	IS 5182 (Part-11) 2017

LIMIT#: Industrial, Residential, Rural and other Area Notification Dated 18th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.
ND*:NotDetected,Detection Limit,: Hydrocarbon in $\mu g/m^3$:50, Benzene as C_6H_6($\mu g/m^3$): 2.0

Ravi Jariwala
Sr. Environmental Scientist

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

Customer's Name and Address :

M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD.
PLOT NO. 169/P, AT – NAVINAL ISLAND,
TAL. –MUNDRA, DIST. - KUTCH – 370421.

Test Report No. : **PL/AM 0977**
Issue Date : **16/11/2021**
Customer's Ref. : **As Per W.O.**

Location of Sampling : **ADANI PORT – TUG Berth 600 Kl Pump House**
GPS Location : **N 22° 44.19.97' E 069° 42.37.06'**

Date of Sampling : **As per table**
Protocol (purpose) : **Ambient Air Quality Monitoring**
Sampling By : **Pollucon Laboratories Pvt. Ltd.**
Lab Id : **As per table**
Instrument Used : **RDS: EnvirotechM.No.-APM 460 BRUSHLESS S.R.-2772 DTH-2014**
FDS: POLLTECH PEM-ADS-2.5/10 , I.NO.20614
Gas Asse. Model No.TECI B1,Sr.No.5214 RotameterSr No.PT/34/14

RESULT TABLE

SR. NO	TEST PARAMETER	UNIT	RESULT								LIMIT#	METHOD OF MEASUREMENT
Date of Sampling			04/10/2021	07/10/2021	11/10/2021	14/10/2021	18/10/2021	21/10/2021	25/10/2021	29/10/2021		
Lab IDAMA/2110 [A - G]			06	19	32	45	58	71	84	97		
1	Particulate Matter (PM_{10})	$\mu g/m^3$	68.36	59.31	52.42	73.54	58.26	63.63	76.55	69.35	100	IS 5182 (Part-23) 2017
2	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	26.46	33.53	30.37	39.44	25.38	28.37	40.23	34.70	60	CPCB guidelines for AAQM (Vol. I, NAAQMS/36/2012 -13)
3	Sulphur Dioxide (SO_2)	$\mu g/m^3$	20.63	17.56	22.46	15.28	19.28	24.64	10.50	21.48	80	IS 5182 (Part-2) 2017
4	Oxide of Nitrogen (NOx)	$\mu g/m^3$	32.47	25.13	29.54	33.64	30.49	35.67	20.83	26.48	80	IS 5182 (Part-6) 2014
5	Carbon Monoxide as (CO)	mg/m^3	0.62	0.76	0.41	0.48	0.74	0.52	0.40	0.72	4.0	IS 5182 (Part-10)
6	Hydrocarbon as CH_4	mg/m^3	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	Not Specified	SOP: HC: GC/Gas analyzer
7	Benzene (C_6H_6)	$\mu g/m^3$	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	5.0	IS 5182 (Part-11) 2017

LIMIT#: Industrial, Residential, Rural and other Area Notification Dated 18th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.
ND*:NotDetected, Detection Limit,: Hydrocarbon ($\mu g/m^3$):50, Benzene as C_6H_6($\mu g/m^3$): 2.0.

Ravi Jariwala
Sr. Environmental Scientist

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

Customer's Name and Address :

M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD.
PLOT NO. 169/P, AT – NAVINAL ISLAND,
TAL. –MUNDRA, DIST. - KUTCH – 370421.

Test Report No. : **PL/AM 0978**
Issue Date : **16/11/2021**
Customer's Ref. : **As Per W.O.**

Location of Sampling : **ADANI PORT – NEAR FIRE STATION**
GPS Location : **N 22° 44.991' E 069° 42.232'**

Date of Sampling : **As per table**
Protocol (purpose) : **Ambient Air Quality Monitoring**
Sampling By : **Pollucon Laboratories Pvt. Ltd.**
Lab Id : **As per table**
Instrument Used : **RDS: POLLTECH RDS-8 NL /1913**
FDS: POLLTECH PEM-ADS-2.5/10 , I.NO.19313
Gas Asse. Model No.TECI B1,Sr.No.5013 RotameterSr No.PT/39/13

RESULT TABLE

SR. NO	TEST PARAMETER	UNIT	RESULT								LIMIT#	METHOD OF MEASUREMENT
Date of Sampling			04/10/2021	07/10/2021	11/10/2021	14/10/2021	18/10/2021	21/10/2021	25/10/2021	29/10/2021		
Lab IDAMA/2110 [A - G]			07	20	33	46	59	72	85	98		
1	Particulate Matter (PM_{10})	µg/m^3	41.55	68.34	62.63	56.36	66.58	50.35	70.32	61.57	100	IS 5182 (Part-23) 2017
2	Particulate Matter ($PM_{2.5}$)	µg/m^3	18.65	28.61	24.34	21.58	34.25	25.64	31.66	38.60	60	CPCB guidelines for AAQM (Vol. I, NAAQMS/36/2012 -13)
3	Sulphur Dioxide (SO_2)	µg/m^3	8.64	12.63	14.40	6.53	11.62	13.58	15.85	9.57	80	IS 5182 (Part-2) 2017
4	Oxide of Nitrogen (NOx)	µg/m^3	14.35	19.33	24.30	15.66	18.69	25.76	28.38	16.35	80	IS 5182 (Part-6) 2014
5	Carbon Monoxide as (CO)	mg/m^3	0.50	0.64	0.18	0.58	0.47	0.56	0.29	0.19	4.0	IS 5182 (Part-10)
6	Hydrocarbon as CH_4	mg/m^3	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	Not Specified	SOP: HC: GC/Gas analyzer
7	Benzene (C_6H_6)	µg/m^3	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	5.0	IS 5182 (Part-11) 2017

LIMIT#: Industrial, Residential, Rural and other Area Notification Dated 18th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.
ND*:NotDetected,Detection Limit,: Hydrocarbon in (µg/m^3):50, Benzene as C_6H_6(µg/m^3): 2.0.

Ravi Jariwala
Sr. Environmental Scientist

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

Customer's Name and Address :

M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD.
PLOT NO. 169/P, AT – NAVINAL ISLAND,
TAL. –MUNDRA, DIST. - KUTCH – 370421.

Test Report No. : **PL/AM 0979**
Issue Date : **16/11/2021**
Customer's Ref. : **As Per W.O.**

Location of Sampling : **ADANI PORT – PUB/ADANI HOUSE**
GPS Location : **N 22° 46.537' E 069° 41.030'**

Date of Sampling : **As per table**
Protocol (purpose) : **Ambient Air Quality Monitoring**
Sampling By : **Pollucon Laboratories Pvt. Ltd.**
Lab Id : **As per table**
Instrument Used : **RDS: POLLTECH RDS-8 NL /2013**
FDS: POLLTECH PEM -ADS-2.5/10 ,I.No.15613
Gas Asse. Model No.TECI B1,Sr.No.5414 RotameterSr No.PT/30/14

RESULT TABLE

SR. NO	TEST PARAMETER	UNIT	RESULT								LIMIT#	METHOD OF MEASUREMENT
Date of Sampling			04/10/2021	07/10/2021	11/10/2021	14/10/2021	18/10/2021	21/10/2021	25/10/2021	29/10/2021		
Lab ID AMA/2110[A - G]			08	21	34	47	60	73	86	99		
1	Particulate Matter (PM_{10})	$\mu g/m^3$	52.61	63.42	70.42	51.34	62.52	58.31	64.51	50.36	100	IS 5182 (Part-23) 2017
2	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	30.48	24.50	34.53	26.55	31.27	23.45	28.47	21.20	60	CPCB guidelines for AAQM (Vol. I, NAAQMS/36/2012 -13)
3	Sulphur Dioxide (SO_2)	$\mu g/m^3$	17.61	21.63	12.30	10.52	16.33	11.56	13.63	15.69	80	IS 5182 (Part-2) 2017
4	Oxide of Nitrogen (NOx)	$\mu g/m^3$	26.58	29.50	20.38	23.48	27.58	18.57	25.47	19.39	80	IS 5182 (Part-6) 2014
5	Carbon Monoxide as (CO)	mg/m^3	0.31	0.26	0.32	0.38	0.36	0.23	0.44	0.54	4.0	IS 5182 (Part-10)
6	Hydrocarbon as CH_4	mg/m^3	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	Not Specified	SOP: HC: GC/Gas analyzer
7	Benzene (C_6H_6)	$\mu g/m^3$	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	5.0	IS 5182 (Part-11) 2017

LIMIT#: Industrial, Residential, Rural and other Area Notification Dated 18th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.
ND*:NotDetected, Detection Limit,: Hydrocarbon ($\mu g/m^3$):50, Benzene as C_6H_6($\mu g/m^3$): 2.0.

Ravi Jariwala
Sr. Environmental Scientist

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT

QF/7.8/19-WT

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1000** Issue Date : **16/11/2021** Customer's Ref. : **As Per W.O**

Description of Sample	: **ETP Inlet (Liquid Terminal)**				
Sampling Date	: **06/10/2021**	Quantity/No. of Samples	:	**02 Lit/One**	
Sampling By	: **Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**	
Sample Receipt Date	: **07/10/2021**	Lab ID	:	**AM/2110/17**	
Packing/ Seal	: **Sealed**	Test Parameters	:	**As per table**	
Date of Starting of Test	: **07/10/2021**	Date of Completion	:	**13/10/2021**	

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	RESULTS	TEST METHOD
			Liquid Terminal	
1	Colour	Co-pt	40	IS 3025 (Part – 4) 2017
2	pH	--	7.32	IS 3025 (Part – 11) 2017
3	Temperature	^{o}C	30.0	IS 3025 (Part–9) 2017
4	Total Suspended Solids	mg/L	149	IS 3025 (Part – 17) 2017
5	Total Dissolved Solids	mg/L	1178	IS 3025 (Part-16) 2017
6	COD	mg/L	413	APHA (23rd Edition 2017) 5220
7	BOD (3 Days @ 27 ^{o}C)	mg/L	87	IS 3025 (Part–44) 2019
8	Chloride as Cl	mg/L	406	IS 3025 (Part – 32) 2019
9	Oil & Grease	mg/L	5.9	APHA (23rd Edition 2017) 5520
10	Ammonical Nitrogen as NH_3	mg/L	21.76	IS 3025 (Part-34) 2019

#As per GPCB Consent Order No. AWH- 79311Issue Date: 02/06/2016 Upto 07/04/2021.

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT

QF/7.8/19-WT

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1001**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**As Per W.O.**

Description of Sample	:	**ETP Water Sample**			
Sampling Date	:	**06/10/2021**	Quantity/No. of Samples	:	**02 Lit/One**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**07/10/2021**	Lab ID	:	**AM/2110/18**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**07/10/2021**	Date of Completion	:	**13/10/2021**

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	GPCB Limit#	RESULTS	TEST METHOD
				Liquid Terminal ETP Outlet	
1	Colour	Co-pt	100	20	IS 3025 (Part – 4) 2017
2	pH	--	6.5 to 8.5	7.59	IS 3025 (Part–11) 2017 Electrometric Method
3	Temperature	°C	40	30.2	IS 3025 (Part–9) 2017
4	Total Suspended Solids	mg/L	100	23	IS 3025 (Part – 17) 2017
5	Total Dissolved Solids	mg/L	2100	1376	IS 3025 (Part-16) 2017
6	COD	mg/L	100	82	APHA (23rd Edition 2017) 5220 B Open Reflux Method
7	BOD (3 Days @ 27 °C)	mg/L	30	16	IS 3025 (Part–44) 2019
8	Chloride as Cl	mg/L	600	372	IS 3025 (Part–32) 2019 Argentometric Method
9	Oil & Grease	mg/L	10	3.6	APHA (23rd Edition 2017) 5520 B
10	Sulphate as SO_4	mg/L	1000	294	IS 3025 (Part-24) 2019 Turbidimetric method
11	Ammonical Nitrogen as NH_3	mg/L	50	10.4	IS 3025 (Part-34) 2019 Nesslerization Method
12	Phenolic Compound	mg/L	1.0	Not Detected	IS 3025 (Part–43) 2019 Aminoantipyrine Method
13	Copper as Cu	mg/L	3.0	Not Detected	APHA (23rd Edition 2017) 3111 B
14	Lead as Pb	mg/L	0.1	Not Detected	APHA (23rd Edition 2017) 3111 B
15	Sulphide as S	mg/L	2.0	0.094	APHA (23rd Edition 2017) 4500 S2 F Iodometric method
16	Cadmium as Cd	mg/L	2.0	Not Detected	APHA (23rd Edition 2017) 3111 B
17	Fluoride as F	mg/L	2.0	0.23	APHA (23rd Edition 2017) 4500 F D SPANDS Method
18	Residual Chlorine	mg/L	0.5 min	0.8	APHA (23rd Edition 2017) 4500 Cl G DPD Colorimetric method

#As per GPCB Consent Order No. AWH- 79311Issue Date: 02/06/2016 Upto 07/04/2021.
Detection Limit, Phenolic compounds as C_6H_5OH: 0.01 mg/L, Copper: 0.02 mg/L, Lead : 0.02 mg/L, Cadmium as Cd: 0.004 mg/L.

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1008** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

Description of Sample	:	**Marine Water (M2 Mouth of Bocha&Navinal Creak)**			
Sampling Date	:	**21/10/2021**	Quantity/No. of Samples	:	**10 Lit/Two**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**22/10/2021**	Lab ID	:	**AM/2110/53 & 54**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**22/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M2 Mouth of Bocha & Navinal Creak N 22°44'239" E 079°43'757"		TEST METHOD
			Surface	Bottom	
1	pH	--	8.21	8.15	IS 3025 (Part – 11) 2019
2	Temperature	°C	29.9	29.7	IS 3025 (Part – 9) 2019
3	Total Suspended Solids	mg/L	113	95.0	IS 3025 (Part – 17) 2019
4	BOD (3 Days @ 27 °C)	mg/L	2.4	Not Detected	IS 3025 (Part – 44) 2019
5	Dissolved Oxygen	mg/L	6.0	5.90	IS 3025 (Part – 38) 2019
6	Salinity	ppt	35.14	35.96	ICMAM GOVT OF INDIA 2012
7	Oil & Grease	mg/L	Not Detected	Not Detected	APHA (23rd Edition2017) 5520 B
8	Nitrate as NO_3	µmol/L	2.73	2.60	IS 3025 (Part 34) 2019
9	Nitrite as NO_2	µmol/L	0.98	0.85	ICMAM GOVT OF INDIA 2012
10	Ammonical Nitrogen as NH_3	µmol/L	2.51	2.37	ICMAM GOVT OF INDIA 2012
11	Phosphates as PO_4	µmol/L	2.24	2.18	APHA (23rd Edition) 4500 P C
12	Total Nitrogen	µmol/L	6.22	5.82	--
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	APHA (23rd Edition 2017)5520 F
14	Total Dissolved Solids	mg/L	36740	36982	IS 3025 (Part-16) 2019
15	COD	mg/L	11.76	8.20	USEPA 410.3 1978

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED **C/O. ENVIRONMENT CELL, 3rd FLOOR,** **ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,** **TALUKA-MUNDRA, DIST-KUTCH-370421**	Test Report No. : **PL/AM 1008** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M2 Mouth of Bocha&Navinal Creak N 22°44'239" E 079°43'757"		TEST/SAMPLING METHOD
			SURFACE	BOTTOM	
B	**Phytoplankton**				
16.1	Chlorophyll a	mg/m^3	2.32	2.25	APHA (23rd Edition 2017) 10200 H
16.2	Phaeophytin	mg/m^3	0.59	1.44	APHA (23rd Edition 2017) 10200 H
16.3	Cell Count	$No.x10^3/L$	152	123	APHA (23rd Edition 2017) 10200 F
16.4	Name of Group Number and name of group species of each group	--	*Coscinodiscus sp.*	*Navicula sp.*	APHA (23rd Edition 2017) 10200 F
			Biddulphia sp.	*Nitzschia sp.*	
			Thalassiothrix sp.	*Melosira sp.*	
			Skeletonema sp.	*Pinnularia sp.*	
			Rhizosolenia sp.	*Fragillaria sp.*	

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1008** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M2 Mouth of Bocha&Navinal Creak N 22°44'239" E 079°43'757"	TEST/SAMPLING METHOD
C	**Zooplanktons**			
17.1	Abudance(Population)	noX10^3/ 100 m^3	22	APHA (23rd Edition 2017)10200 G
17.2	Name of Group Number and name of group species of each group	--	Chaetognaths Gastropods Mysids Polychaetes	APHA (23rd Edition 2017)10200 G
17.3	Total Biomass	ml/100 m^3	2.05	APHA (23rd Edition 2017) 10200 G-I
D	**Microbiological Parameters**			
18.1	Total Bacterial Count	cfu/ml	2520	IS 5402:2018
18.2	Total Coliform	/ml	Present	IS 5401 (Part 2):2018
18.3	Escherichia coli	/ml	Absent	IS 5887 (Part 1):2018
18.4	Enterococcus species	/ml	Present	IS:15186:2005
18.5	Salmonella species	/ml	Absent	IS 5887 (Part 3):2018
18.6	Shigella species	/ml	Absent	IS 5887 (Part 7):2018
18.7	Vibrio species	/ml	Absent	IS 5887 (Part 5):2018

Note: Detection Limit, BOD: 1.0 mg/L, Oil & Grease: 2.0 mg/L. Petroleum Hydrocarbon:1.0 µg/L

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

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TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1009**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**AS Per W.O.**

Description of Sample	:	**Marine Water (M2 Mouth of Bocha&Navinal Creak)**			
Sampling Date	:	**21/10/2021**	Quantity/No. of Samples	:	**05 Kg/One**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**22/10/2021**	Lab ID	:	**AM/2110/55**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**22/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M2 Mouth of Bocha & Navinal Creak N 22°44'239" E 079°43'757" Sediment	TEST METHOD
1	Organic Matter	%	0.45	IS 2720 (Part -22) 2015
2	Phosphorus as P	µg/g	613	IS 5305 2020
3	Texture	--	Sandy	Soil manual of india Department of Agriculture &Coperation ministry of Agriculture Government of India
4	Petroleum Hydrocarbon	µg/g	Not Detected	SOP/INS/HW/07
5	**Heavy Metals**			
5.1	Aluminum as Al	%	4.96	USEPA 3050 B 1996
5.2	Total Chromium as Cr^{+3}	µg/g	132	USEPA 3050 B 1996
5.3	Manganese as Mn	µg/g	659	USEPA 3050 B 1996
5.4	Iron as Fe	%	4.87	USEPA 3050 B 1996
5.5	Nickel as Ni	µg/g	51.24	USEPA 3050 B 1996
5.6	Copper as Cu	µg/g	39.86	USEPA 3050 B 1996
5.7	Zinc as Zn	µg/g	112	USEPA 3050 B 1996
5.8	Lead as Pb	µg/g	2.14	USEPA 3050 B 1996
5.9	Mercury as Hg	µg/g	Not Detected	USEPA 7471 B 2007
6	**Benthic Organisms**			
6.1	Macro benthos(No and name of groups present, No and name of species of each group present)	--	Gastropods Polychaetes Crustaceans Isopods	APHA (23rd Edition 2017) 10500 C
6.2	MeioBenthos(No and name of groups present, No and name of species of each group present)	--	Nematodes	APHA (23rd Edition 2017) 10500 C
6.3	Population	no/m^2	353	APHA (23rd Edition 2017) 10500 C

Note: Detection Limit, Petroleum Hydrocarbon: 1.0 µg/g, Mercury as Hg: 1.0 µg/g.

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1010**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**AS Per W.O.**

Description of Sample	:	**Marine Water (M4 JUNA BANDAR)**			
Sampling Date	:	**21/10/2021**	Quantity/No. of Samples	:	**10 Lit/Two**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**22/10/2021**	Lab ID	:	**AM/2110/56 & 57**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**22/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M4 JUNA BANDAR N 22°47'577" E 079°43'620"		TEST METHOD
			Surface	Bottom	
1	pH	--	8.19	8.13	IS 3025 (Part – 11) 2019
2	Temperature	°C	29.9	29.8	IS 3025 (Part – 9) 2019
3	Total Suspended Solids	mg/L	105	91.0	IS 3025 (Part – 17) 2019
4	BOD (3 Days @ 27 °C)	mg/L	2.50	Not Detected	IS 3025 (Part – 44) 2019
5	Dissolved Oxygen	mg/L	5.85	5.72	IS 3025 (Part – 38) 2019
6	Salinity	ppt	35.42	35.96	ICMAM GOVT OF INDIA 2012
7	Oil & Grease	mg/L	Not Detected	Not Detected	APHA (23rd Edition2017) 5520 B
8	Nitrate as NO_3	µmol/L	2.73	2.61	IS 3025 (Part 34) 2019
9	Nitrite as NO_2	µmol/L	0.84	0.75	ICMAM GOVT OF INDIA 2012
10	Ammonical Nitrogen as NH_3	µmol/L	2.46	2.33	ICMAM GOVT OF INDIA 2012
11	Phosphates as PO_4	µmol/L	2.31	2.27	APHA (23rd Edition) 4500 P C
12	Total Nitrogen	µmol/L	6.03	5.69	--
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	APHA (23rd Edition 2017)5520 F
14	Total Dissolved Solids	mg/L	36482	36984	IS 3025 (Part-16) 2019
15	COD	mg/L	12.14	9.2	USEPA 410.3 1978

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

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TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1010** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M4 JUNA BANDAR N 22°47'577" E 079°43'620"		TEST/SAMPLING METHOD
			SURFACE	BOTTOM	
B	**Phytoplankton**				
16.1	Chlorophyll a	mg/m^3	2.34	2.06	APHA (23rd Edition 2017) 10200 H
16.2	Phaeophytin	mg/m^3	0.74	0.41	APHA (23rd Edition 2017) 10200 H
16.3	Cell Count	$No.x10^3/L$	135	106	APHA (23rd Edition 2017) 10200 F
16.4	Name of Group Number and name of group species of each group	--	*Nitzschia sp.*	*Rhizosolenia sp.*	APHA (23rd Edition 2017) 10200 F
			Skeletonema sp.	*Surirella sp.*	
			Cyclotella sp.	*Amphiprora sp.*	
			Biddulphia sp.	*Fragillaria sp.*	
			Ceratium sp.		

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No. : **PL/AM 1010**
Issue Date : **16/11/2021**
Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M4 JUNA BANDAR N 22°47'577" E 079°43'620"	TEST/SAMPLING METHOD
C	**Zooplanktons**			
17.1	Abudance(Population)	no$X10^3$/ 100 m^3	25	APHA (23rd Edition 2017)10200 G
17.2	Name of Group Number and name of group species of each group	--	Polychaetes Gastropods Decapods Ostracods	APHA (23rd Edition 2017)10200 G
17.3	Total Biomass	ml/100 m^3	2.25	APHA (23rd Edition 2017)10200 G-I
D	**Microbiological Parameters**			
18.1	Total Bacterial Count	cfu/ml	2610	IS 5402:2018
18.2	Total Coliform	/ml	Present	IS 5401 (Part 2):2018
18.3	Escherichia coli	/ml	Absent	IS 5887 (Part 1):2018
18.4	Enterococcus species	/ml	Present	IS:15186:2005
18.5	Salmonella species	/ml	Absent	IS 5887 (Part 3):2018
18.6	Shigella species	/ml	Absent	IS 5887 (Part 7):2018
18.7	Vibrio species	/ml	Absent	IS 5887 (Part 5):2018

Note: Detection Limit, BOD: 1.0 mg/L, Oil & Grease: 2.0 mg/L. Petroleum Hydrocarbon:1.0 µg/L .

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

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TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1011**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**AS Per W.O.**

Description of Sample	:	**Marine Water (M4 JUNA BANDAR)**			
Sampling Date	:	**21/10/2021**	Quantity/No. of Samples	:	**05 Kg/One**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**22/10/2021**	Lab ID	:	**AM/2110/58**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**22/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M4 JUNA BANDAR N 22°47'577" E 079°43'620" Sediment	TEST METHOD
1	Organic Matter	%	0.43	IS 2720 (Part -22) 2015
2	Phosphorus as P	µg/g	624	IS 5305 2020
3	Texture	--	Sandy	Soil manual of india Department of Agriculture &Coperation ministry of Agriculture Government of India
4	Petroleum Hydrocarbon	µg/g	Not Detected	SOP/INS/HW/07
5	**Heavy Metals**			
5.1	Aluminum as Al	%	4.82	USEPA 3050 B 1996
5.2	Total Chromium as Cr^{+3}	µg/g	129	USEPA 3050 B 1996
5.3	Manganese as Mn	µg/g	608	USEPA 3050 B 1996
5.4	Iron as Fe	%	4.73	USEPA 3050 B 1996
5.5	Nickel as Ni	µg/g	56.42	USEPA 3050 B 1996
5.6	Copper as Cu	µg/g	39.8	USEPA 3050 B 1996
5.7	Zinc as Zn	µg/g	107	USEPA 3050 B 1996
5.8	Lead as Pb	µg/g	2.58	USEPA 3050 B 1996
5.9	Mercury as Hg	µg/g	Not Detected	USEPA 7471 B 2007
6	**Benthic Organisms**			
6.1	Macro benthos(No and name of groups present, No and name of species of each group present)	--	Gastropods Crustaceans Amphipods Bivalves	APHA (23rd Edition 2017) 10500 C
6.2	MeioBenthos(No and name of groups present, No and name of species of each group present)	--	--	APHA (23rd Edition 2017) 10500 C
6.3	Population	no/m^2	440	APHA (23rd Edition 2017) 10500 C

Note: Detection Limit, Petroleum Hydrocarbon: 1.0 µg/g, Mercury as Hg: 1.0 µg/g.

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1012**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**AS Per W.O.**

Description of Sample	:	**Marine Water (M11 MPT T1 Jetty)**			
Sampling Date	:	**21/10/2021**	Quantity/No. of Samples	:	**10 Lit/Two**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**22/10/2021**	Lab ID	:	**AM/2110/59 & 60**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**22/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M11 MPT T1 Jetty N 22°42'278" E 079°43'450"		TEST METHOD
			Surface	Bottom	
1	pH	--	8.26	8.21	IS 3025 (Part – 11) 2019
2	Temperature	°C	29.9	29.8	IS 3025 (Part – 9) 2019
3	Total Suspended Solids	mg/L	113	89.0	IS 3025 (Part – 17) 2019
4	BOD (3 Days @ 27 °C)	mg/L	2.48	Not Detected	IS 3025 (Part – 44) 2019
5	Dissolved Oxygen	mg/L	5.95	5.83	IS 3025 (Part – 38) 2019
6	Salinity	ppt	35.36	35.92	ICMAM GOVT OF INDIA 2012
7	Oil & Grease	mg/L	Not Detected	Not Detected	APHA (23rd Edition2017) 5520 B
8	Nitrate as NO_3	µmol/L	2.62	2.54	IS 3025 (Part 34) 2019
9	Nitrite as NO_2	µmol/L	0.78	0.65	ICMAM GOVT OF INDIA 2012
10	Ammonical Nitrogen as NH_3	µmol/L	2.46	2.38	ICMAM GOVT OF INDIA 2012
11	Phosphates as PO_4	µmol/L	2.37	2.29	APHA (23rd Edition) 4500 P C
12	Total Nitrogen	µmol/L	5.86	5.57	--
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	APHA (23rd Edition 2017)5520 F
14	Total Dissolved Solids	mg/L	36427	36942	IS 3025 (Part-16) 2019
15	COD	mg/L	10.42	7.56	USEPA 410.3 1978

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No. : **PL/AM 1012**
Issue Date : **16/11/2021**
Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M11 MPT T1 Jetty N 22°42'278" E 079°43'450"		TEST/SAMPLING METHOD
			SURFACE	BOTTOM	
B	**Phytoplankton**				
16.1	Chlorophyll a	mg/m^3	2.50	2.16	APHA(23rd Edition 2017)10200 H
16.2	Phaeophytin	mg/m^3	1.15	0.33	APHA(23rd Edition 2017)10200 H
16.3	Cell Count	$No.x10^3/L$	128	110	APHA (23rd Edition 2017)10200 F
16.4	Name of Group Number and name of group species of each group	--	*Coscinodiscus sp.*	*Navicula sp.*	APHA (23rd Edition 2017)10200 F
			Skeletonema sp.	*Nitzschia sp.*	
			Cyclotella sp.	*Rhizosolenia sp.*	
			Ceratium sp.	*Chaetoceros sp.*	
			Pinnularia sp.		

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1012** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M11 MPT T1 Jetty N 22°42'278" E 079°43'450"	TEST/SAMPLING METHOD
C	**Zooplanktons**			
17.1	Abudance(Population)	noX10^3/ 100 m^3	29	APHA (23rd Edition 2017)10200 G
17.2	Name of Group Number and name of group species of each group	--	Gastropods Polychaetes Decapods Mysids	APHA (23rd Edition 2017)10200 G
17.3	Total Biomass	ml/100 m^3	2.64	APHA (23rd Edition 2017)10200 G-I
D	**Microbiological Parameters**			
18.1	Total Bacterial Count	cfu/ml	2680	IS 5402:2018
18.2	Total Coliform	/ml	Present	IS 5401 (Part 2):2018
18.3	Escherichia coli	/ml	Absent	IS 5887 (Part 1):2018
18.4	Enterococcus species	/ml	Present	IS:15186:2005
18.5	Salmonella species	/ml	Absent	IS 5887 (Part 3):2018
18.6	Shigella species	/ml	Absent	IS 5887 (Part 7):2018
18.7	Vibrio species	/ml	Absent	IS 5887 (Part 5):2018

Note: Detection Limit, BOD: 1.0 mg/L, Oil & Grease: 2.0 mg/L. Petroleum Hydrocarbon:1.0 µg/L .

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1013**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**AS Per W.O.**

Description of Sample	:	**Marine Water (M12 SPM)**			
Sampling Date	:	**21/10/2021**	Quantity/No. of Samples	:	**10 Lit/Two**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**22/10/2021**	Lab ID	:	**AM/2110/61 & 62**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**22/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M12 SPM N 22°40'938" E 069°39'191"		TEST METHOD
			Surface	Bottom	
1	pH	--	8.23	8.17	IS 3025 (Part – 11) 2019
2	Temperature	°C	29.9	29.8	IS 3025 (Part – 9) 2019
3	Total Suspended Solids	mg/L	103	91.0	IS 3025 (Part – 17) 2019
4	BOD (3 Days @ 27 °C)	mg/L	2.54	Not Detected	IS 3025 (Part – 44) 2019
5	Dissolved Oxygen	mg/L	5.95	5.80	IS 3025 (Part – 38) 2019
6	Salinity	ppt	35.43	35.90	ICMAM GOVT OF INDIA 2012
7	Oil & Grease	mg/L	Not Detected	Not Detected	APHA (23rd Edition2017) 5520 B
8	Nitrate as NO_3	µmol/L	2.68	2.51	IS 3025 (Part 34) 2019
9	Nitrite as NO_2	µmol/L	0.93	0.87	ICMAM GOVT OF INDIA 2012
10	Ammonical Nitrogen as NH_3	µmol/L	2.49	2.35	ICMAM GOVT OF INDIA 2012
11	Phosphates as PO_4	µmol/L	2.27	2.19	APHA (23rd Edition) 4500 P C
12	Total Nitrogen	µmol/L	6.10	5.73	--
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	APHA (23rd Edition 2017)5520 F
14	Total Dissolved Solids	mg/L	36482	36914	IS 3025 (Part-16) 2019
15	COD	mg/L	12.34	8.9	USEPA 410.3 1978

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No. : **PL/AM 1013**
Issue Date : **16/11/2021**
Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M12 SPM N 22°40'938" E 069°39'191"		TEST/SAMPLING METHOD
			SURFACE	BOTTOM	
B	**Phytoplankton**				
16.1	Chlorophyll a	mg/m^3	2.44	2.26	APHA(23rd Edition 2017)10200 H
16.2	Phaeophytin	mg/m^3	0.62	0.24	APHA (23rd Edition2017)10200 H
16.3	Cell Count	$No.x10^3/L$	138	110	APHA (23rd Edition 2017)10200 F
16.4	Name of Group Number and name of group species of each group	--	*Synedra sp.*	*Nitzschia sp.*	APHA (23rd Edition 2017)10200 F
			Ceratium sp.	*Chaetoceros sp.*	
			Melosira sp.	*Thallasionema sp.*	
			Rhizosolenia sp.	*Navicula sp.*	
			Cyclotella sp.	--	

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED **C/O. ENVIRONMENT CELL, 3rd FLOOR,** **ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,** **TALUKA-MUNDRA, DIST-KUTCH-370421**	Test Report No. : **PL/AM 1013** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M12 SPM N 22°40'938" E 069°39'191"	TEST/SAMPLING METHOD
C	**Zooplanktons**			
17.1	Abudance(Population)	noX10^3/ 100 m^3	28	APHA (23rd Edition 2017)10200 G
17.2	Name of Group Number and name of group species of each group	--	Polychaetes Gastropods Decapods Copepods	APHA (23rd Edition 2017)10200 G
17.3	Total Biomass	ml/100 m^3	2.76	APHA (23rd Edition 2017)10200 G-I
D	**Microbiological Parameters**			
18.1	Total Bacterial Count	cfu/ml	2540	IS 5405:2018
18.2	Total Coliform	/ml	Present	IS 5401 (Part 2):2018
18.3	Escherichia coli	/ml	Absent	IS 5887 (Part 1):2018
18.4	Enterococcus species	/ml	Present	IS:15186:2005
18.5	Salmonella species	/ml	Absent	IS 5887 (Part 3):2018
18.6	Shigella species	/ml	Absent	IS 5887 (Part 7):2018
18.7	Vibrio species	/ml	Absent	IS 5887 (Part 5):2018

Note: Detection Limit, BOD: 1.0 mg/L, Oil & Grease: 2.0 mg/L,Petroleum Hydrocarbon:1.0 µg/L .

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
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TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1014**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**AS Per W.O.**

Description of Sample	:	**Marine Water (M1 Left Side of Bocha Creak)**			
Sampling Date	:	**20/10/2021**	Quantity/No. of Samples	:	**10 Lit/Two**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**21/10/2021**	Lab ID	:	**AM/2110/39 & 40**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**21/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M1 Left Side of Bocha Creak N 22°45'183" E 079°43'241"		TEST METHOD
			Surface	Bottom	
1	pH	--	8.21	8.17	IS 3025 (Part – 11) 2019
2	Temperature	°C	29.8	29.6	IS 3025 (Part – 9) 2019
3	Total Suspended Solids	mg/L	97.0	89.0	IS 3025 (Part – 17) 2019
4	BOD (3 Days @ 27 °C)	mg/L	2.5	Not Detected	IS 3025 (Part – 44) 2019
5	Dissolved Oxygen	mg/L	5.95	5.80	IS 3025 (Part – 38) 2019
6	Salinity	ppt	35.26	35.52	ICMAM GOVT OF INDIA 2012
7	Oil & Grease	mg/L	Not Detected	Not Detected	APHA (23rd Edition2017) 5520 B
8	Nitrate as NO_3	µmol/L	3.06	2.80	IS 3025 (Part 34) 2019
9	Nitrite as NO_2	µmol/L	0.98	0.79	ICMAM GOVT OF INDIA 2012
10	Ammonical Nitrogen as NH_3	µmol/L	2.56	2.41	ICMAM GOVT OF INDIA 2012
11	Phosphates as PO_4	µmol/L	2.37	2.25	APHA (23rd Edition) 4500 P C
12	Total Nitrogen	µmol/L	6.60	6.0	--
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	APHA (23rd Edition 2017)5520 F
14	Total Dissolved Solids	mg/L	36328	36592	IS 3025 (Part-16) 2019
15	COD	mg/L	12.30	7.64	USEPA 410.3 1978

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1014** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M1 Left Side of Bocha Creak N 22°45'183" E 079°43'241"		TEST/SAMPLING METHOD
			SURFACE	BOTTOM	
B	**Phytoplankton**				
16.1	Chlorophyll a	mg/m^3	2.43	2.21	APHA (23rd Edition2017)10200 H
16.2	Phaeophytin	mg/m^3	0.34	0.36	APHA(23rd Edition 2017)10200 H
16.3	Cell Count	$No.x10^3/L$	156	102	APHA (23rd Edition 2017)10200 F
16.4	Name of Group Number and name of group species of each group	--	*Rhizosolenia sp.*	*Synedra sp.*	APHA (23rd Edition 2017)10200 F
			Biddulphia sp.	*Navicula sp.*	
			Coscinodiscus sp.	*Nitzschia sp.*	
			Pleurosigma sp.	*Melosira sp.*	
			Stauroneis sp.		

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No. : **PL/AM 1014**
Issue Date : **16/11/2021**
Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M1 Left Side of Bocha Creak N 22°45'183" E 079°43'241"	TEST/SAMPLING METHOD
C	**Zooplanktons**			
17.1	Abudance(Population)	no$X10^3$/ 100 m^3	22	APHA (23rd Edition 2017)10200 G
17.2	Name of Group Number and name of group species of each group	--	Foraminiferans Polychaetes Gastropods Isopods	APHA (23rd Edition 2017)10200 G
17.3	Total Biomass	ml/100 m^3	1.90	APHA (23rd Edition 2017) 10200 G-I
D	**Microbiological Parameters**			
18.1	Total Bacterial Count	cfu/ml	2680	IS 5402:2018
18.2	Total Coliform	/ml	Present	IS 5401 (Part 2):2018
18.3	Escherichia coli	/ml	Absent	IS 5887 (Part 1):2018
18.4	Enterococcus species	/ml	Present	IS:15186:2005
18.5	Salmonella species	/ml	Absent	IS 5887 (Part 3):2018
18.6	Shigella species	/ml	Absent	IS 5887 (Part 7):2018
18.7	Vibrio species	/ml	Absent	IS 5887 (Part 5):2018

Note: Detection Limit, BOD: 1.0 mg/L, Oil & Grease: 2.0 mg/L. Petroleum Hydrocarbon:1.0 µg/L

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1015**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**AS Per W.O.**

Description of Sample	:	**Marine Water Sample(M1 Left Side of Bocha Creak)**			
Sampling Date	:	**20/10/2021**	Quantity/No. of Samples	:	**05 Kg/One**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**21/10/2021**	Lab ID	:	**AM/2110/41**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**21/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M1 Left Side of Bocha Creak N 22°45'183" E 079°43'241" Sediment	TEST METHOD
1	Organic Matter	%	0.49	IS 2720 (Part -22) 2015
2	Phosphorus as P	µg/g	628	IS 5305 2020
3	Texture	--	Sandy	Soil manual of india Department of Agriculture &Coperation ministry of Agriculture Government of India
4	Petroleum Hydrocarbon	µg/g	Not Detected	SOP/INS/HW/07
5	**Heavy Metals**			
5.1	Aluminum as Al	%	4.82	USEPA 3050 B 1996
5.2	Total Chromium as Cr^{+3}	µg/g	139	USEPA 3050 B 1996
5.3	Manganese as Mn	µg/g	658	USEPA 3050 B 1996
5.4	Iron as Fe	%	4.92	USEPA 3050 B 1996
5.5	Nickel as Ni	µg/g	50.8	USEPA 3050 B 1996
5.6	Copper as Cu	µg/g	37.42	USEPA 3050 B 1996
5.7	Zinc as Zn	µg/g	129	USEPA 3050 B 1996
5.8	Lead as Pb	µg/g	2.56	USEPA 3050 B 1996
5.9	Mercury as Hg	µg/g	Not Detected	USEPA 7471 B 2007
6	**Benthic Organisms**			
6.1	Macro benthos(No and name of groups present, No and name of species of each group present)	--	Crustaceans Polychaetes Branchyurans	APHA (23rd Edition 2017) 10500 C
6.2	MeioBenthos(No and name of groups present, No and name of species of each group present)	--	Foraminiferams Nematodes	APHA (23rd Edition 2017) 10500 C
6.3	Population	no/m^2	351	APHA (23rd Edition 2017) 10500 C

Note: Detection Limit, Petroleum Hydrocarbon: 1.0 µg/g, Mercury as Hg: 1.0 µg/g.

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1016**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**AS Per W.O.**

Description of Sample	:	**Marine Water (M3 EAST OF BOCHA ISLAND)**			
Sampling Date	:	**20/10/2021**	Quantity/No. of Samples	:	**05 Kg/One**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**21/10/2021**	Lab ID	:	**AM/2110/42 & 43**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**21/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M3 EAST OF BOCHA ISLAND N 22°46'530" E 079°41'690"		TEST METHOD
			Surface	Bottom	
1	pH	--	8.24	8.15	IS 3025 (Part – 11) 2019
2	Temperature	°C	29.9	29.8	IS 3025 (Part – 9) 2019
3	Total Suspended Solids	mg/L	115	93.0	IS 3025 (Part – 17) 2019
4	BOD (3 Days @ 27 °C)	mg/L	2.56	Not Detected	IS 3025 (Part – 44) 2019
5	Dissolved Oxygen	mg/L	5.95	5.80	IS 3025 (Part – 38) 2019
6	Salinity	ppt	35.36	35.94	ICMAM GOVT OF INDIA 2012
7	Oil & Grease	mg/L	Not Detected	Not Detected	APHA (23rd Edition2017) 5520 B
8	Nitrate as NO_3	µmol/L	2.97	2.75	IS 3025 (Part 34) 2019
9	Nitrite as NO_2	µmol/L	0.82	0.63	ICMAM GOVT OF INDIA 2012
10	Ammonical Nitrogen as NH_3	µmol/L	2.31	2.20	ICMAM GOVT OF INDIA 2012
11	Phosphates as PO_4	µmol/L	2.43	2.35	APHA (23rd Edition) 4500 P C
12	Total Nitrogen	µmol/L	6.10	5.58	--
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	APHA (23rd Edition 2017)5520 F
14	Total Dissolved Solids	mg/L	36428	36962	IS 3025 (Part-16) 2019
15	COD	mg/L	12.6	8.50	USEPA 410.3 1978

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1016** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M3 EAST OF BOCHA ISLAND N 22°46'530" E 079°41'690"		TEST/SAMPLING METHOD
			SURFACE	BOTTOM	
B	**Phytoplankton**				
16.1	Chlorophyll a	mg/m^3	2.12	2.02	APHA (23rd Edition 2017) 10200 H
16.2	Phaeophytin	mg/m^3	0.14	0.33	APHA (23rd Edition 2017) 10200 H
16.3	Cell Count	$No.x10^3/L$	113	89	APHA (23rd Edition 2017) 10200 F
16.4	Name of Group Number and name of group species of each group	--	*Thallassiosira sp.*	*Nitzschia sp.*	APHA (23rd Edition 2017) 10200 F
			Melosira sp.	*Fragillaria sp.*	
			Rhizosolenia sp.	*Closterium sp.*	
			Amphiprora sp.	*Navicula sp.*	
			Biddulphia sp.	*Cyclotella sp.*	

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED **C/O. ENVIRONMENT CELL, 3rd FLOOR,** **ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,** **TALUKA-MUNDRA, DIST-KUTCH-370421**	Test Report No. : **PL/AM 1016** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M3 EAST OF BOCHA ISLAND N 22°46'530" E 079°41'690"	TEST/SAMPLING METHOD
C	**Zooplanktons**			
17.1	Abudance(Population)	noX10^3/ 100 m^3	23	APHA (23rd Edition 2017)10200 G
17.2	Name of Group Number and name of group species of each group	--	Polychaetes Ostracods Amphipods Mysids	APHA (23rd Edition 2017)10200 G
17.3	Total Biomass	ml/100 m^3	2.2	APHA (23rd Edition 2017)10200 G-I
D	**Microbiological Parameters**			
18.1	Total Bacterial Count	cfu/ml	2550	IS 5402:2018
18.2	Total Coliform	/ml	Present	IS 5401 (Part 2):2018
18.3	Escherichia coli	/ml	Present	IS 5887 (Part 1):2018
18.4	Enterococcus species	/ml	Present	IS:15186:2005
18.5	Salmonella species	/ml	Absent	IS 5887 (Part 3):2018
18.6	Shigella species	/ml	Absent	IS 5887 (Part 7):2018
18.7	Vibrio species	/ml	Absent	IS 5887 (Part 5):2018
Note: Detection Limit, BOD: 1.0 mg/L, Oil & Grease: 2.0 mg/L. Petroleum Hydrocarbon:1.0 µg/L .				

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1017**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**AS Per W.O.**

Description of Sample	:	**Marine Water(M3 EAST OF BOCHA ISLAND)**			
Sampling Date	:	**20/10/2021**	Quantity/No. of Samples	:	**05 Kg/One**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**21/10/2021**	Lab ID	:	**AM/2110/44**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**21/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M3 EAST OF BOCHA ISLAND N 22°46'530" E 079°41'690" Sediment	TEST METHOD
1	Organic Matter	%	0.45	IS 2720 (Part -22) 2015
2	Phosphorus as P	µg/g	619	IS 5305 2020
3	Texture	--	Sandy	Soil manual of india Department of Agriculture &Coperation ministry of Agriculture Government of India
4	Petroleum Hydrocarbon	µg/g	Not Detected	SOP/INS/HW/07
5	**Heavy Metals**			
5.1	Aluminum as Al	%	4.73	USEPA 3050 B 1996
5.2	Total Chromium as Cr^{+3}	µg/g	128	USEPA 3050 B 1996
5.3	Manganese as Mn	µg/g	634	USEPA 3050 B 1996
5.4	Iron as Fe	%	4.86	USEPA 3050 B 1996
5.5	Nickel as Ni	µg/g	53.20	USEPA 3050 B 1996
5.6	Copper as Cu	µg/g	32.94	USEPA 3050 B 1996
5.7	Zinc as Zn	µg/g	118	USEPA 3050 B 1996
5.8	Lead as Pb	µg/g	2.59	USEPA 3050 B 1996
5.9	Mercury as Hg	µg/g	Not Detected	USEPA 7471 B 2007
6	**Benthic Organisms**			
6.1	Macro benthos(No and name of groups present, No and name of species of each group present)	--	Gastropods Crustaceans Bivalves	APHA (23rd Edition 2017) 10500 C
6.2	MeioBenthos(No and name of groups present, No and name of species of each group present)	--	Nematodes	APHA (23rd Edition 2017) 10500 C
6.3	Population	no/m^2	350	APHA (23rd Edition 2017) 10500 C

Note: Detection Limit, Petroleum Hydrocarbon: 1.0 µg/g, Mercury as Hg: 1.0 µg/g.

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No.	:	**PL/AM 1018**
Issue Date	:	**16/11/2021**
Customer's Ref.	:	**AS Per W.O.**

Description of Sample	:	**Marine Water Sample(M5 Towards Western Side of East Port)**			
Sampling Date	:	**20/10/2021**	Quantity/No. of Samples	:	**10 Lit/Two**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**21/10/2021**	Lab ID	:	**AM/2110/45 & 46**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**21/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M5 Towards Western Side of East Port N 22°46'041" E 079°47'296"		TEST METHOD
			Surface	Bottom	
1	pH	--	8.17	8.09	IS 3025 (Part – 11) 2019
2	Temperature	°C	29.8	29.7	IS 3025 (Part – 9) 2019
3	Total Suspended Solids	mg/L	112	95.0	IS 3025 (Part – 17) 2019
4	BOD (3 Days @ 27 °C)	mg/L	2.43	Not Detected	IS 3025 (Part – 44) 2019
5	Dissolved Oxygen	mg/L	5.95	5.80	IS 3025 (Part – 38) 2019
6	Salinity	ppt	35.32	35.86	ICMAM GOVT OF INDIA 2012
7	Oil & Grease	mg/L	Not Detected	Not Detected	APHA (23rd Edition2017) 5520 B
8	Nitrate as NO_3	µmol/L	2.53	2.39	IS 3025 (Part 34) 2019
9	Nitrite as NO_2	µmol/L	0.87	0.78	ICMAM GOVT OF INDIA 2012
10	Ammonical Nitrogen as NH_3	µmol/L	2.45	2.32	ICMAM GOVT OF INDIA 2012
11	Phosphates as PO_4	µmol/L	2.36	2.27	APHA (23rd Edition) 4500 P C
12	Total Nitrogen	µmol/L	5.85	5.49	--
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	APHA (23rd Edition 2017)5520 F
14	Total Dissolved Solids	mg/L	36408	36892	IS 3025 (Part-16) 2019
15	COD	mg/L	11.84	9.32	USEPA 410.3 1978

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No. : **PL/AM 1018**
Issue Date : **16/11/2021**
Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M5 Towards Western Side of East Port N 22°46'041" E 079°47'296"		TEST/SAMPLING METHOD
			SURFACE	BOTTOM	
B	**Phytoplankton**				
16.1	Chlorophyll a	mg/m^3	2.40	2.28	APHA (23rd Edition 2017) 10200 H
16.2	Phaeophytin	mg/m^3	0.60	0.21	APHA (23rd Edition 2017) 10200 H
16.3	Cell Count	$No.x10^3/L$	172	102	APHA (23rd Edition 2017) 10200 F
16.4	Name of Group Number and name of group species of each group	--	Skeletonema sp.	Cyclotella sp.	APHA (23rd Edition 2017) 10200 F
			Pinnularia sp.	Amphiprora sp.	
			Coscinodiscus sp.	Nitzschia sp.	
			Thallassiosira sp.	Synedra sp.	
			Navicula sp.		

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR MARINE WATER SAMPLE

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No. : **PL/AM 1018**
Issue Date : **16/11/2021**
Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M5 Towards Western Side of East Port N 22°46'041" E 079°47'296"	TEST/SAMPLING METHOD
C	**Zooplanktons**			
17.1	Abudance(Population)	noX10^3/ 100 m^3	23	APHA (23rd Edition 2017)10200 G
17.2	Name of Group Number and name of group species of each group	--	Foraminiferans Amphipods Polychaetes Decapods	APHA (23rd Edition 2017)10200 G
17.3	Total Biomass	ml/100 m^3	2.15	APHA (23rd Edition 2017)10200 G-I
D	**Microbiological Parameters**			
18.1	Total Bacterial Count	cfu/ml	2640	IS 5402:2018
18.2	Total Coliform	/ml	Present	IS 5401 (Part 2):2018
18.3	Escherichia coli	/ml	Absent	IS 5887 (Part 1):2018
18.4	Enterococcus species	/ml	Present	IS:15186:2005
18.5	Salmonella species	/ml	Absent	IS 5887 (Part 3):2018
18.6	Shigella species	/ml	Absent	IS 5887 (Part 7):2018
18.7	Vibrio species	/ml	Absent	IS 5887 (Part 5):2018

Note: Detection Limit, BOD: 1.0 mg/L, Oil & Grease: 2.0 mg/L. Petroleum Hydrocarbon:1.0 µg/L .

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT

QF/7.8/19-WT

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED **C/O. ENVIRONMENT CELL, 3rd FLOOR,** **ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,** **TALUKA-MUNDRA, DIST-KUTCH-370421**	Test Report No. : **PL/AM 1019** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

Description of Sample	:	**Marine Water (M5 Towards Western Side of East Port)**			
Sampling Date	:	**20/10/2021**	Quantity/No. of Samples	:	**05 Kg/One**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**21/10/2021**	Lab ID	:	**AM/2110/45 & 46**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**21/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M5 Towards Western Side of East Port N 22°46'041" E 079°47'296" Sediment	TEST METHOD
1	Organic Matter	%	0.46	IS 2720 (Part -22) 2015
2	Phosphorus as P	µg/g	613	IS 5305 2020
3	Texture	--	Sandy	Soil manual of india Department of Agriculture &Coperation ministry of Agriculture Government of India
4	Petroleum Hydrocarbon	µg/g	Not Detected	SOP/INS/HW/07
5	**Heavy Metals**			
5.1	Aluminum as Al	%	4.73	USEPA 3050 B 1996
5.2	Total Chromium as Cr^{+3}	µg/g	135	USEPA 3050 B 1996
5.3	Manganese as Mn	µg/g	612	USEPA 3050 B 1996
5.4	Iron as Fe	%	4.96	USEPA 3050 B 1996
5.5	Nickel as Ni	µg/g	31.70	USEPA 3050 B 1996
5.6	Copper as Cu	µg/g	46.38	USEPA 3050 B 1996
5.7	Zinc as Zn	µg/g	152	USEPA 3050 B 1996
5.8	Lead as Pb	µg/g	2.76	USEPA 3050 B 1996
5.9	Mercury as Hg	µg/g	Not Detected	USEPA 7471 B 2007
6	**Benthic Organisms**			
6.1	Macro benthos(No and name of groups present, No and name of species of each group present)	--	Amphipods Polychaetes Crustaceans	APHA (23rd Edition 2017) 10500 C
6.2	Meio Benthos (No and name of groups present, No and name of species of each group present)	--	--	APHA (23rd Edition 2017) 10500 C
6.3	Population	no/m^2	469	APHA (23rd Edition 2017) 10500 C

Note: Detection Limit, Petroleum Hydrocarbon: 1.0 µg/g, Mercury as Hg: 1.0 µg/g.

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT

QF/7.8/19-WT

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1020** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

Description of Sample	:	**Marine Water Sample (M7 East Port)**			
Sampling Date	:	**20/10/2021**	Quantity/No. of Samples	:	**10 Lit/Two**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**21/10/2021**	Lab ID	:	**AM/2110/48 & 49**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**21/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M7 East Port N 22°47'120" E 079°47'110"		TEST METHOD
			Surface	Bottom	
1	pH	--	8.23	8.07	IS 3025 (Part – 11) 2019
2	Temperature	°C	29.9	29.8	IS 3025 (Part – 9) 2019
3	Total Suspended Solids	mg/L	107	85.0	IS 3025 (Part – 17) 2019
4	BOD (3 Days @ 27 °C)	mg/L	2.45	Not Detected	IS 3025 (Part – 44) 2019
5	Dissolved Oxygen	mg/L	5.95	5.80	IS 3025 (Part – 38) 2019
6	Salinity	ppt	35.36	35.82	ICMAM GOVT OF INDIA 2012
7	Oil & Grease	mg/L	Not Detected	Not Detected	APHA (23rd Edition2017) 5520 B
8	Nitrate as NO_3	µmol/L	2.63	2.57	IS 3025 (Part 34) 2019
9	Nitrite as NO_2	µmol/L	0.81	0.76	ICMAM GOVT OF INDIA 2012
10	Ammonical Nitrogen as NH_3	µmol/L	2.47	2.38	ICMAM GOVT OF INDIA 2012
11	Phosphates as PO_4	µmol/L	2.49	2.25	APHA (23rd Edition) 4500 P C
12	Total Nitrogen	µmol/L	5.91	5.71	--
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	APHA (23rd Edition 2017)5520 F
14	Total Dissolved Solids	mg/L	36426	36832	IS 3025 (Part-16) 2019
15	COD	mg/L	11.8	9.2	USEPA 410.3 1978

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605172, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT

QF/7.8/19-WT

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1020** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M7 East Port N 22°47'120" E 079°47'110"		TEST/SAMPLING METHOD
			SURFACE	BOTTOM	
B	**Phytoplankton**				
16.1	Chlorophyll a	mg/m^3	2.30	2.13	APHA (23rd Edition 2017) 10200 H
16.2	Phaeophytin	mg/m^3	0.75	0.38	APHA (23rd Edition 2017) 10200 H
16.3	Cell Count	$No.x10^3/L$	152	106	APHA (23rd Edition 2017) 10200 F
16.4	Name of Group Number and name of group species of each group	--	*Cyclotella sp.*	*Biddulphia sp.*	APHA (23rd Edition 2017) 10200 F
			Rhizosolenia sp.	*Navicula sp.*	
			Nitzschia sp.	*Pinnularia sp.*	
			Ceratium sp.	*Thalassiothrix sp.*	
			Gyrosigma sp.	*Synedra sp.*	

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT

QF/7.8/19-WT

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1020** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M7 East Port N 22°47'120" E 079°47'110"	TEST/SAMPLING METHOD
C	**Zooplanktons**			
17.1	Abudance(Population)	noX10^3/ 100 m^3	26	APHA (23rd Edition 2017)10200 G
17.2	Name of Group Number and name of group species of each group	--	Ostracods Polychaetes Gastropods Mysids	APHA (23rd Edition 2017)10200 G
17.3	Total Biomass	ml/100 m^3	2.4	APHA (23rd Edition 2017) 10200 G-I
D	**Microbiological Parameters**			
18.1	Total Bacterial Count	cfu/ml	2740	IS 5402:2018
18.2	Total Coliform	/ml	Present	IS 5401 (Part 2):2018
18.3	Escherichia coli	/ml	Absent	IS 5887 (Part 1):2018
18.4	Enterococcus species	/ml	Present	IS:15186:2005
18.5	Salmonella species	/ml	Absent	IS 5887 (Part 3):2018
18.6	Shigella species	/ml	Absent	IS 5887 (Part 7):2018
18.7	Vibrio species	/ml	Absent	IS 5887 (Part 5):2018

Note: Detection Limit,BOD: 1.0 mg/L, Oil & Grease: 2.0 mg/L. Petroleum Hydrocarbon:1.0 µg/L .

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, Web: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com

TEST REPORT

QF/7.8/19-WT

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1021** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

Description of Sample	:	**Marine Water (M8 Right side of Bocha Creak)**			
Sampling Date	:	**20/10/2021**	Quantity/No. of Samples	:	**10 Lit/Two**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**21/10/2021**	Lab ID	:	**AM/2110/50 & 51**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**21/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M8 Right side of Bocha Creak N 22°45'987" E 079°43'119"		TEST METHOD
			Surface	Bottom	
1	pH	--	8.25	8.17	IS 3025 (Part – 11) 2019
2	Temperature	°C	29.9	29.8	IS 3025 (Part – 9) 2019
3	Total Suspended Solids	mg/L	113	95.0	IS 3025 (Part – 17) 2019
4	BOD (3 Days @ 27 °C)	mg/L	2.58	Not Detected	IS 3025 (Part – 44) 2019
5	Dissolved Oxygen	mg/L	5.97	5.83	IS 3025 (Part – 38) 2019
6	Salinity	ppt	35.56	35.98	ICMAM GOVT OF INDIA 2012
7	Oil & Grease	mg/L	Not Detected	Not Detected	APHA (23rd Edition2017) 5520 B
8	Nitrate as NO_3	µmol/L	2.67	2.51	IS 3025 (Part 34) 2019
9	Nitrite as NO_2	µmol/L	0.82	0.73	ICMAM GOVT OF INDIA 2012
10	Ammonical Nitrogen as NH_3	µmol/L	2.39	2.25	ICMAM GOVT OF INDIA 2012
11	Phosphates as PO_4	µmol/L	2.41	2.30	APHA (23rd Edition) 4500 P C
12	Total Nitrogen	µmol/L	5.88	5.49	--
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	APHA (23rd Edition 2017)5520 F
14	Total Dissolved Solids	mg/L	36624	36982	IS 3025 (Part-16) 2019
15	COD	mg/L	12.80	9.14	USEPA 410.3 1978

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

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"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
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TEST REPORT

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED
C/O. ENVIRONMENT CELL, 3rd FLOOR,
ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,
TALUKA-MUNDRA, DIST-KUTCH-370421

Test Report No. : **PL/AM 1021**
Issue Date : **16/11/2021**
Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M8 Right side of Bocha Creak N 22°45'987" E 079°43'119"		TEST/SAMPLING METHOD
			SURFACE	BOTTOM	
B	**Phytoplankton**				
16.1	Chlorophyll a	mg/m^3	2.42	2.32	APHA (23rd Edition 2017) 10200 H
16.2	Phaeophytin	mg/m^3	0.58	0.17	APHA (23rd Edition 2017) 10200 H
16.3	Cell Count	$No.x10^3/L$	164	108	APHA (23rd Edition 2017) 10200 F
16.4	Name of Group Number and name of group species of each group	--	*Guinardia sp.*	*Rhizosolenia sp.*	APHA (23rd Edition 2017) 10200 F
			Cyclotella sp.	*Synedra sp.*	
			Biddulphia sp.	*Skeletonema sp.*	
				Pinnularia sp.	
			Melosira sp.	*Ceratium sp.*	
			Nitzschia sp.		
			Navicula sp.		

Continue...

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT

QF/7.8/19-WT

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED **C/O. ENVIRONMENT CELL, 3rd FLOOR,** **ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA,** **TALUKA-MUNDRA, DIST-KUTCH-370421**	Test Report No. : **PL/AM 1021** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M8 Right side of Bocha Creak N 22°45'987" E 079°43'119"	TEST/SAMPLING METHOD
C	**Zooplanktons**			
17.1	Abudance(Population)	no$X10^3$/ 100 m^3	21	APHA (23rd Edition 2017)10200 G
17.2	Name of Group Number and name of group species of each group	--	Amphipods Gastropods Polychaetes Decapods	APHA (23rd Edition 2017)10200 G
17.3	Total Biomass	ml/100 m^3	2.0	APHA (23rd Edition 2017) 10200 G-I
D	**Microbiological Parameters**			
18.1	Total Bacterial Count	cfu/ml	2560	IS 5402:2018
18.2	Total Coliform	/ml	Present	IS 5401 (Part 2):2018
18.3	Escherichia coli	/ml	Absent	IS 5887 (Part 1):2018
18.4	Enterococcus species	/ml	Present	IS:15186:2005
18.5	Salmonella species	/ml	Absent	IS 5887 (Part 3):2018
18.6	Shigella species	/ml	Absent	IS 5887 (Part 7):2018
18.7	Vibrio species	/ml	Absent	IS 5887 (Part 5):2018

Note: Detection Limit,BOD: 1.0 mg/L, Oil & Grease: 2.0 mg/L. Petroleum Hydrocarbon:1.0 µg/L .

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
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TEST REPORT

QF/7.8/19-WT

Customer's Name and Address :

M/s. ADANI PORT AND SPECIAL ECONOMIC ZONE LIMITED C/O. ENVIRONMENT CELL, 3rd FLOOR, ADANI HOUSE NAVINAL ISLAND, VILLAGE-MUNDRA, TALUKA-MUNDRA, DIST-KUTCH-370421	Test Report No. : **PL/AM 1021** Issue Date : **16/11/2021** Customer's Ref. : **AS Per W.O.**

Description of Sample	:	**Marine Water (M8 Right side of Bocha Creak)**			
Sampling Date	:	**20/10/2021**	Quantity/No. of Samples	:	**05 Kg/One**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Sampling Procedure	:	**Grab**
Sample Receipt Date	:	**21/10/2021**	Lab ID	:	**AM/2110/52**
Packing/ Seal	:	**Sealed**	Test Parameters	:	**As per table**
Date of Starting of Test	:	**21/10/2021**	Date of Completion	:	**01/11/2021**

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	M8 Right side of Bocha Creak N 22°45'987" E 079°43'119" Sediment	TEST METHOD
1	Organic Matter	%	0.42	IS 2720 (Part -22) 2015
2	Phosphorus as P	µg/g	603	IS 5305 2020
3	Texture	--	Sandy	Soil manual of india Department of Agriculture &Coperation ministry of Agriculture Government of India
4	Petroleum Hydrocarbon	µg/g	Not Detected	SOP/INS/HW/07
5	**Heavy Metals**			
5.1	Aluminum as Al	%	4.76	USEPA 3050 B 1996
5.2	Total Chromium as Cr^{+3}	µg/g	120	USEPA 3050 B 1996
5.3	Manganese as Mn	µg/g	614	USEPA 3050 B 1996
5.4	Iron as Fe	%	4.89	USEPA 3050 B 1996
5.5	Nickel as Ni	µg/g	53.20	USEPA 3050 B 1996
5.6	Copper as Cu	µg/g	41.49	USEPA 3050 B 1996
5.7	Zinc as Zn	µg/g	94.2	USEPA 3050 B 1996
5.8	Lead as Pb	µg/g	2.13	USEPA 3050 B 1996
5.9	Mercury as Hg	µg/g	Not Detected	USEPA 7471 B 2007
6	**Benthic Organisms**			
6.1	Macro benthos(No and name of groups present, No and name of species of each group present)	--	Amphipods Crustaceans Bivalves	APHA (23rd Edition 2017) 10500 C
6.2	Meio Benthos (No and name of groups present, No and name of species of each group present)	--	Foraminiferams Turbellarians	APHA (23rd Edition 2017) 10500 C
6.3	Population	no/m^2	499	APHA (23rd Edition 2017) 10500 C

Note: Detection Limit, Petroleum Hydrocarbon: 1.0 µg/g, Mercury as Hg: 1.0 µg/g.

H. T. Shah
Lab. Manager

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR NOISE LEVEL MONITORING

Customer's Name and Address :

M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD.
PLOT NO. 169/P, AT – NAVINAL ISLAND,
TAL. –MUNDRA, DIST. - KUTCH – 370421.

Test Report No. : **PL/AM 0980**
Issue Date : **16/11/2021**
Customer's Ref. : **As Per W.O**

NOISE LEVEL MONITORING REPORT

Sampling Date	: **As per table**	Sampling By	: **Pollucon Laboratories Pvt. Ltd.**
Test Method	: **IS 9876 : 2013 / IS 9989 : 2014**	Protocol (purpose)	: **Noise Level Monitoring**
Instrument Used	: **SLM-100 , 268 DTF 2014**		

RESULT TABLE

SR NO	SAMPLING LOCATION & GPS LOCATION			DATE OF SAMPLING	DAY TIME RESULTS IN Leq dB(A)							
ADANI PORTS & SOUTH BASIN					06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00
1	PUB/Adani House	N 22°46.537'	E 69°41.030'	05/10/2021	65.6	61.6	69.7	63.5	65.4	60.8	62.9	64.3
2	Nr. Fire Station	N 22°44.991'	E 69°42.232'	25/10/2021	63.6	60.1	63.3	67.0	67.7	70.2	69.5	70.4
3	T1 Terminal Nr.Marine Building	N 22°43.969'	E 69°42.347'	04/10/2021	62.6	68.3	64.2	69.8	62.2	68.8	67.2	62.5
4	CT-3 DG House	N 22°47.259'	E 69°33.898'	11/10/2021	60.9	66.5	68.4	61.8	67.4	61.1	63.9	69.9

SR NO	SAMPLING LOCATION & GPS LOCATION			DATE OF SAMPLING	DAY TIME RESULTS IN Leq dB(A)							
ADANI PORTS & SOUTH BASIN					14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	19:00 - 20:00	20:00 - 21:00	21:00 - 22:00
1	PUB/Adani House	N 22°46.537'	E 69°41.030'	05/10/2021	64.4	71.9	66.4	68.2	63.1	65.7	61.4	66.9
2	Nr. Fire Station	N 22°44.991'	E 69°42.232'	25/10/2021	68.6	67.3	62.8	68.7	63.8	65.1	62.3	65.0
3	T1 Terminal Nr.Marine Building	N 22°43.969'	E 69°42.347'	04/10/2021	67.1	61.5	66.8	70.1	68.1	65.2	64.1	61.2
4	CT-3 DG House	N 22°47.259'	E 69°33.898'	11/10/2021	72.1	70.5	69.4	66.1	62.4	65.5	62.1	64.8

SR NO	SAMPLING LOCATION & GPS LOCATION			DATE OF SAMPLING	DAY TIME RESULTS IN Leq dB(A)		
ADANI PORTS & SOUTH BASIN					AVERAGE	MAX	MIN
1	PUB/Adani House	N 22°46.537'	E 69°41.030'	05/10/2021	65.1	71.9	60.8
2	Nr. Fire Station	N 22°44.991'	E 69°42.232'	25/10/2021	66.0	70.4	60.1
3	T1 Terminal Nr.Marine Building	N 22°43.969'	E 69°42.347'	04/10/2021	65.6	70.1	61.2
4	CT-3 DG House	N 22°47.259'	E 69°33.898'	11/10/2021	65.8	72.1	60.9

Ravi Jariwala
Sr. Environmental Scientist

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR NOISE LEVEL MONITORING

Customer's Name and Address :

M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD. PLOT NO. 169/P, AT – NAVINAL ISLAND, TAL. –MUNDRA, DIST. - KUTCH – 370421.	Test Report No. : **PL/AM 0981** Issue Date : **16/11/2021** Customer's Ref. : **As Per W.O**

NOISE LEVEL MONITORING REPORT

Sampling Date	: **As per table**	Sampling By	: **Pollucon Laboratories Pvt. Ltd.**
Test Method	: **IS 9876 : 2013 / IS 9989 : 2014**	Protocol (purpose)	: **Noise Level Monitoring**
Instrument Used	: **SLM-100 , 268 DTF 2014**		

RESULT TABLE

SR NO	SAMPLING LOCATION & GPS LOCATION			DATE OF SAMPLING	NIGHT TIME RESULTS IN Leq dB(A)							
ADANI PORTS & SOUTH BASIN					22.00 - 23.00	23.00 - 24.00	24.00 - 1.00	01.00 - 02.00	02.00 - 03.00	03.00 - 04.00	04.00 - 05.00	05.00 - 06.00
1	PUB/Adani House	N 22°46.537'	12/02/2021	05 & 06/10/2021	60.9	68.5	66.5	60.8	61.8	61.2	65.6	67.4
2	Nr. Fire Station	N 22°44.991'	E 69°42.232'	25 & 26/10/2021	57.6	61.3	60.1	59.7	60.5	54.2	64.5	62.3
3	T1 Terminal Nr.Marine Building	N 22°43.969'	E 69°42.347'	04 & 05/10/2021	63.2	67.5	65.2	62.1	66.8	59.4	60.2	64.2
4	CT-3 DG House	N 22°47.259'	E 69°33.898'	11 & 12/10/2021	62.1	64.2	65.2	67.2	55.4	59.3	64.2	63.2

SR NO	SAMPLING LOCATION & GPS LOCATION			DATE OF SAMPLING	NIGHT TIME RESULTS IN Leq dB(A)		
ADANI PORTS & SOUTH BASIN					AVERAGE	MAX	MIN
1	PUB/Adani House	N 22°46.537'	E 69°41.030'	05 & 06/10/2021	64.1	68.5	60.8
2	Nr. Fire Station	N 22°44.991'	E 69°42.232'	25 & 26/10/2021	60.0	64.5	54.2
3	T1 Terminal Nr.Marine Building	N 22°43.969'	E 69°42.347'	04 & 05/10/2021	63.6	67.5	59.4
4	CT-3 DG House	N 22°47.259'	E 69°33.8'	11 & 12/10/2021	62.6	67.2	55.4

Ravi Jariwala
Sr. Environmental Scientist

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

TEST REPORT FOR STACK GAS MONITORING

Customer's Name and Address :

M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD. PLOT NO. 169/P, AT – NAVINAL ISLAND, TAL. – MUNDRA, DIST. - KUTCH – 370421.	Test Report No. : **PL/AM 0982** Issue Date : **16/11/2021** Customer's Ref. : **As Per W.O**

STACK DETAILS

Location of Sampling	:	**Hot Water System-1 (Liquid Terminal)**			
Date of Sampling	:	**16/10/2021**	Sampling Procedure	:	**As per table**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Protocol (purpose)	:	**Stack Gas Monitoring**
Sample Receipt Date	:	**18/10/2021**	Lab ID	:	**AMS/2110/01 [A-C]**
Date of Starting of Test	:	**18/10/2021**	Date of Completion	:	**21/10/2021**
Stack Temperature	:	**122˚C**	Fuel Used*	:	**Furnace Oil**
Stack Height#	:	**30 meter**	Stack Velocity	:	**4.83 m/sec**
Instrument Used	:	**Vayubodhan Stack Monitoring Sampler VSS 1 Sr. No. 930 DTO 11**			

RESULT TABLE

SR. NO.	TEST PARAMETER	UNIT	RESULTS	GPCB LIMIT#	TEST/SAMPLING METHOD
1	Particulate Matter	mg/Nm^3	30.61	150	IS 11255 (Part-1): 2014
2	Sulphur Dioxide	ppm	5.55	100	IS 11255 (Part-2): 2017
3	Oxide of Nitrogen	ppm	34.62	50	IS 11255 (Part-7): 2014

**Details provided by customer, #As per CC &A No. AWH - 83561 Dated: 09/01/2017 Valid up to 20/11/2021.
Results on 11 % O_2 Correction when Oxygen is greater than 11 % and 12 % CO_2 Correction when CO_2 is less than 12 %

Ravi Jariwala
Sr. Environmental Scientist

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

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TEST REPORT FOR STACK GAS MONITORING

Customer's Name and Address :

M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD. PLOT NO. 169/P, AT – NAVINAL ISLAND, TAL. – MUNDRA, DIST. - KUTCH – 370421.	Test Report No. : **PL/AM 0983** Issue Date : **16/11/2021** Customer's Ref. : **As Per W.O**

STACK DETAILS

Location of Sampling	:	**Thermic Fluid Heater (Bitumin-1)**			
Date of Sampling	:	**16/10/2021**	Sampling Procedure	:	**As per table**
Sampling By	:	**Pollucon Laboratories Pvt. Ltd.**	Protocol (purpose)	:	**Stack Gas Monitoring**
Sample Receipt Date	:	**18/10/2021**	Lab ID	:	**AMS/2110/02 [A-C]**
Date of Starting of Test	:	**18/10/2021**	Date of Completion	:	**21/10/2021**
Stack Temperature	:	**106˚C**	Fuel Used*	:	**High Speed Diesel**
Stack Height#	:	**30 meter**	Stack Velocity	:	**5.80 m/sec**
Instrument Used	:	**Vayubodhan Stack Monitoring Sampler VSS 1 Sr. No. 930 DTO 11**			

RESULT TABLE

SR. NO.	TEST PARAMETER	UNIT	RESULTS	GPCB LIMIT#	TEST/SAMPLING METHOD
1	Particulate Matter	mg/Nm^3	26.74	150	IS 11255 (Part-1): 2014
2	Sulphur Dioxide	ppm	4.45	100	IS 11255 (Part-2): 2017
3	Oxide of Nitrogen	ppm	29.37	50	IS 11255 (Part-7): 2014

**Details provided by customer, #As per CC &A No. AWH - 83561 Dated: 09/01/2017 Valid up to 20/11/2021.
Results on 11 % O_2 Correction when Oxygen is greater than 11 % and 12 % CO_2 Correction when CO_2 is less than 12 %

Ravi Jariwala
Sr. Environmental Scientist

Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

"Pollucon House", Plot No.5/6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.
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M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD.

PLOT NO. 169/P, AT - NAVINAL ISLAND, TAL. - MUNDRA, DIST. - KUTCH - 370421.

Monitoring Period: November – 2021 to March - 2022

Submitted By

UniStar
Environment and Research Labs Pvt. Ltd.

UniStar Environment & Research Labs Pvt. Ltd.

White House, Near GIDC Office, Char Rasta, Vapi, Gujarat, India – 396195

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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.00	7.81	7.98	7.92	8.03	7.99	8.12	8.02	8.08	7.98	IS 3025 (Part11)1983
2.	Temperature	°C	30	30	29.8	29.7	29.9	29.7	30.1	30	30.2	30.1	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	120	84	116	102	108	98	112	106	118	111	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.7	BDL	2.6	BDL	3.1	BDL	2.8	BDL	2.1	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.7	6.5	6.1	5.9	6.2	6.1	6.1	6	6	5.9	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35	33.4	35.41	35.64	35.38	35.94	35.28	35.82	34.89	35.14	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.59	1.7	2.59	2.16	3.02	2.15	2.37	2.15	2.59	2.15	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	BDL	BDL	0.077	0.064	0.095	0.086	0.11	0.103	0.121	0.112	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	11.34	10.4	7.32	6.89	3.23	3.02	1.94	1.51	2.33	2.15	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	24.6	23.7	15.51	14.22	9.7	9.05	4.01	3.19	5.34	5.17	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.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36820	31828	37360	37412	36844	36902	36124	36684	35894	36544	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	12.3	8.2	20.1	16.1	24.4	20.4	12.05	8.03	8.11	N.D.	APHA 23rd Ed.,2017, 5220-B

Continue...

UniStar
Environment and Research Labs Pvt. Ltd.

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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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton										
1.	Chlorophyll	mg/m^3	2.87	2.45	2.44	2.63	2.58	2.47	2.38	2.89	2.2	2.36	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m^3	0.98	0.86	0.52	0.74	0.69	0.81	0.71	0.78	0.36	0.63	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10^3/L	153	76	109	69	110	71	154	90	148	100	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Pleurosigma*	*Biddulphia*	*Biddulphia*	*Cyclotella*	*Rhizosolenia*	*Coscinodiscus*	*Pleurosigma*	*Cyclotella*	*Rhizosolenia*	*Biddulphia*	APHA (23rd Ed. 2017)10200 F
			Cyclotella	*Diplotella*	*Fragillaria*	*Pinnularia*	*Fragillaria*	*Pinnularia*	*Cyclotella*	*Pinnularia*	*Fragillaria*	*Fragillaria*	
			Ceratium	*Odontella*	*Odentella*	*Skeletonema*	*Cyclotella*	*Thalassiothrix*	*Ceratium*	*Skeletonema*	*Thalassiothrix*	*Odentella*	
			Skeletonema	*Dinophysis*	*Grammatophora*	*Thallassiosira*	*Grammatophora*	*Ceratium*	*Skeletonema*	*Thallassiosira*	*Grammatophora*	*Grammatophora*	
			Thallassiosira	*Surirella*	*Melosira*	*Thalassionema*	*Melosira*	*Thalassionema*	*Thallassiosira*	*Thalassionema*	*Ceratium*	*Melosira*	
B			Zooplankton										
1	Abudance(Population)	noX103/100 m3	29		32		28		36		30		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Copepods*		*Copepods*		*Siphonephora*		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		
			Decapoda		*Decapoda*		*Decapoda*		*Oikoplura*		*Oikoplura*		
			Gastropos Larvae		*Crustacean*		*Crustacean*		*Crustacean Larvae*		*Crustacean Larvae*		
			Egg(Fish and Shrimps)		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		*Crustacean*		*Crustacean*		
			Bivalve Larvae		*Oikoplura*		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		
3	Total Biomass	ml/100 m^3	15.47		14.63		15.32		14.23		15.63		

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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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological												
1	Total Bacterial Count	CFU/ml	220		230		212		202		198		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	32		68		40		54		42		APHA 23rd Ed.2017,9222-B
3	Ecoli	/100ml	25		35		28		12		18		IS :15185:2016
4	Enterococcus	/100ml	10		21		19		11		12		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	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	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	2.15	1.54	1.12	0.94	0.81	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	544.3	560.7	544.2	496.4	542.2	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	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.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals							
5.1	Aluminum as Al	%	1.62	1.86	2.12	2.36	2.68	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	19	31	33.4	55.4	64.4	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	360.13	412.6	428.8	488.6	512.4	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	1.52	1.85	2.24	2.64	2.89	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	21.14	22.25	26.31	28.62	30.12	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	16.61	16.52	15.84	20.25	25.41	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	31.7	40.2	44.4	60.2	66.85	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	5.88	5.46	6.12	5.16	4.86	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	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	NOVEMBER 2021 SEDIMENT	DECEMBER 2021 SEDIMENT	JANUARY 2022 SEDIMENT	FEBRUARY 2022 SEDIMENT	MARCH 2022 SEDIMENT	TEST METHOD
D	Benthic Organisms							
1	Macrobenthos	--	*Bivalves*	*Decapod Larvae*	*Decapod Larvae*	*Isopods*	*Bivalves*	APHA (23rd Ed. 2017)10500 C
			Gastropods	*Gastropods*	*Sipunculids*	*Sipunculids*	*Nemertine*	
			Polychates	*Isopods*	*Isopods*	*Isopods*	*Isopods*	
			Decapod Larvae	*Amphipods*	*Amphipods*	*Gastropods*	*Gastropods*	
2	MeioBenthos	--	*Turbellarians*	*Herpectacoids*	*Herpectacoids*	*Turbellarians*	*Foraminiferan*	
			Nematods	*Polychates*	*Foraminiferan*	*Polychates*	*Herpectacoids*	
3	Population	no/m^2	281	279	305	299	*342*	

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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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	7.97	7.93	7.96	7.86	8.11	8.07	8.06	7.98	8.11	8.02	IS 3025 (Part11)1983
2.	Temperature	°C	30	30	30	29.8	29.8	29.7	29.9	29.7	30.1	30	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	112	76	118	94	112	102	118	106	116	109	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.2	BDL	2.8	BDL	2.6	BDL	2.9	BDL	3.1	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.7	6.4	5.9	5.7	6	5.9	5.9	5.8	5.8	5.7	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	34.1	33.6	35.11	35.36	35.88	36.12	35.64	36.16	35.43	35.98	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.2	2.6	2.59	2.59	2.15	1.72	2.84	2.37	3.02	2.59	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	BDL	BDL	0.073	0.068	0.108	0.103	0.129	0.121	0.112	0.108	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	10.3	9.5	6.89	5.17	3.66	3.45	2.15	1.94	3.02	2.59	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	25.3	23.6	14.22	10.77	10.99	10.34	4.44	4.01	6.94	5.95	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.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	31716	37340	37128	37392	37406	37742	36822	37128	36524	37192	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	10.3	6.3	16.1	12.1	16.3	12.2	16.06	12.05	16.22	12.17	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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton												
1.	Chlorophyll	mg/m^3	2.67	2.32	2.88	2.39	2.74	2.98	2.68	2.56	3.21	2.87	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m^3	0.87	0.94	0.78	0.69	0.85	0.84	0.59	0.7	0.84	0.69	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10^3/L	137	76	132	84	125	90	106	102	120	130	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Cyclotella*	*Ceratium*	*Odontella*	*Diplonеis*	*Odontella*	*Odontella*	*Cyclotella*	*Melosira*	*Pinnularia*	*Melosira*	APHA (23rd Ed. 2017)10200 F
			Fragillaria	*Melosira*	*Cyclotella*	*Rhizosolenia*	*Cyclotella*	*Grammatophora*	*Fragillaria*	*Pinnularia*	*Biddulphia*	*Pinnularia*	
			Diniphysis	*Nitzschia*	*Pinnularia*	*Nitzschia*	*Pinnularia*	*Biddulphia*	*Diniphysis*	*Skeletonema*	*Navicula*	*Skeletonema*	
			Thallassiosira	*Dinophysis*	*Biddulphia*	*Cyclotella*	*Biddulphia*	*Cyclotella*	*Thallassiosira*	*Thallassiosira*	*Thallassiosira*	*Thallassiosira*	
			Skeletonema	*Pleurosigma*	*Thallassiosira*	*Pleurosigma*	*Thallassiosira*	*Thallassiosira*	*Skeletonema*	*Thalassionema*	*Skeletonema*	*Thalassionema*	
B	Zooplankton												
1	Abudance(Population)	noX10 3/ 100 m3	39		25		31		41		38		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Copepods nauplii*		*Oikoplura*		*Oikoplura*		*Crustacean*		*Egg(Fish and Shrimps)*		
			Decapoda		*Copepods*		*Copepods*		*Siphonephora*		*Oikoplura*		
			Copepods		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean*		*Crustacean Larvae*		
			Crustacean		*Crustacean*		*Crustacean*		*Oikoplura*		*Crustacean*		
			Bivalve Larvae		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		
3	Total Biomass	ml/100 m^3	17.50		15.26		16.21		17.52		16.45		

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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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological												
1	Total Bacterial Count	CFU/ml	110		254		190		176		126		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	50		50		42		33		42		APHA 23rd Ed.2017,9222-B
3	Ecoli	/100ml	32		19		32		24		21		IS :15185:2016
4	Enterococcus	/100ml	12		9		12		8		15		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	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	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.9	0.94	0.82	0.72	0.59	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	606.5	610.21	586.4	602.1	584.3	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	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.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals							
5.1	Aluminum as Al	%	1.22	1.66	1.84	2.12	2.38	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	16.07	15.86	17.85	48.6	55.6	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	361.51	355.2	384.4	444.2	462.4	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	1.18	1.78	2.04	2.22	2.41	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	19.41	18.15	19.14	26.21	31.22	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	11.14	12.1	14.21	22.31	28.33	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	34.44	31.7	29.82	36.84	40.24	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	3.51	3.14	3.56	3.42	3.12	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	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	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms							
1	Macrobenthos	--	*Decapod Larvae*	--	*Gastropods*	*Sipunculids*	*Gastropods*	APHA (23rd Ed. 2017)10500 C
			Gastropods	--	Decapods Larvae	Decapods Larvae	Decapods Larvae	
			Isopods	--	*Amphipods*	*Amphipods*	*Amphipods*	
			Amphipods	--	*Isopods*	*Isopods*	*Sipunculids*	
2	MeioBenthos	--	*Herpectacoids*	--	*Polychates*	*Foraminiferan*	*Polychates*	
			Polychates	--	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	
3	Population	no/m²	325	--	296	303	269	

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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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	7.83	7.92	7.94	7.9	7.98	7.94	8.14	8.04	8.09	7.94	IS 3025 (Part11)1983
2.	Temperature	°C	30	30	29.9	29.8	29.9	29.8	30	29.9	30.1	30	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	116	88	104	78	92	82	114	96	122	108	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.8	BDL	2.7	BDL	3	BDL	2.9	BDL	3	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.6	6.4	5.9	5.8	6	5.9	6.1	6	6	5.9	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.2	35.4	35.97	36.24	36.04	36.32	35.88	36.12	36.18	36.29	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.2	2.2	2.16	2.16	2.59	2.15	2.59	2.37	3.45	3.02	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	BDL	BDL	0.081	0.068	0.142	0.129	0.151	0.138	0.138	0.129	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	12.6	11.8	6.89	4.74	4.09	3.88	3.36	2.54	2.8	2.33	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	26.1	24.9	14.65	11.21	12.28	11.64	6.94	5.26	6.94	5.34	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.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36064	32952	35412	36164	36202	36844	35944	36438	36124	36748	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	12.3	8.2	8	4	8.2	4.1	20.08	16.06	16.22	8.11	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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton												
1.	Chlorophyll	mg/m^3	2.34	2.21	2.89	2.45	2.71	2.65	2.44	2.35	2.54	2.45	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m^3	0.87	0.82	0.96	0.65	0.82	0.75	0.69	0.56	0.86	0.78	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10^3/L	125	70	102	71	121	68	115	74	106	98	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Navicula*	*Surirella*	*Pinnularia*	*Coscinodiscus*	*Pinnularia*	*Coscinodiscus*	*Coscinodiscus*	*Surirella*	*Cyclotella*	*Surirella*	APHA (23rd Ed. 2017)10200 F
			Cyclotella	*Rhizosolenia*	*Biddulphia*	*Diploneis*	*Biddulphia*	*Pinnularia*	*Diploneis*	*Rhizosolenia*	*Pinnularia*	*Rhizosolenia*	
			Pinnularia	*Nitzschia*	*Navicula*	*Rhizosolenia*	*Navicula*	*Rhizosolenia*	*Rhizosolenia*	*Nitzschia*	*Skeletonema*	*Nitzschia*	
			Skeletonema	*Thalassionema*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	*Dinophysis*	*Dinophysis*	*Thalassionema*	*Thallassiosira*	*Thalassionema*	
			Thallassiosira	*Pleurosigma*	*Skeletonema*	*Thalassionema*	*Skeletonema*	*Thalassionema*	*Thalassionema*	*Pleurosigma*	*Thalassionema*	*Pleurosigma*	
B	Zooplankton												
1	Abudance(Population)	noX103/ 100 m3	21		22		32		29		30		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Copepods nauplii*		*Copepods*		*Copepods*		*Copepods nauplii*		*Oikoplura*		
			Oikoplura		*Bivalve Larvae*		*Crustacean*		*Decapoda*		*Copepods*		
			Crustacean Larvae		*Crustacean*		*Siphonephora*		*Copepods*		*Crustacean Larvae*		
			Crustacean		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		*Crustacean*		*Crustacean*		
			Egg(Fish aNot Detected Shrimps)		*Siphonephora*		*Oikoplura*		*Bivalve Larvae*		*Bivalve Larvae*		
3	Total Biomass	ml/100 m^3	18.0		12.48		13.62		14		13.95		

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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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological												
1	Total Bacterial Count	CFU/ml	290		190		152		160		210		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	68		42		51		49		36		APHA 23rd Ed.2017,9222-B
3	Ecoli	/100ml	46		26		23		31		26		IS :15185:2016
4	Enterococcus	/100ml	20		16		20		26		19		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	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	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	2.34	1.52	1.16	0.96	0.72	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	496.7	545.6	564.2	544.3	591.2	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	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.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals							
5.1	Aluminum as Al	%	1.48	1.69	1.94	2.44	2.56	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	17.74	32	31.8	62.1	74.23	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	222.95	260.4	255.2	312.2	344.4	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	1.42	1.72	2.21	2.36	2.48	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	19.4	20.84	24.85	30.24	34.51	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	15.66	15.92	18.96	26.1	30.22	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	36.09	42.2	44.78	52.66	56.85	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	5.43	5.12	6.14	5.56	4.98	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	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	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms							
1	Macrobenthos	--	*Sipunculids*	*Bivalves*	*Amphipods*	*Nemertine*	*Amphipods*	APHA (23rd Ed. 2017)10500 C
			Nemertine	*Nemertine*	*Decapod Larvae*	*Decapod Larvae*	*Decapod Larvae*	
			Isopods	*Isopods*	*Isopods*	*Isopods*	*Isopods*	
			Amphipods	*Gastropods*	*Gastropods*	*Gastropods*	*Gastropods*	
2	MeioBenthos	--	*Foraminiferan*	*Foraminiferan*	*Foraminiferan*	*Foraminiferan*	*Foraminiferan*	
			Nematods	*Herpectacoids*	*Herpectacoids*	*Polychates*	*Herpectacoids*	
3	Population	no/m^2	313	290	330	263	*256*	

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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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	7.97	7.5	7.82	7.78	7.99	7.93	8.06	8.01	8.14	8.06	IS 3025 (Part11)1983
2.	Temperature	°C	30	30	29.9	29.8	30	29.9	30.1	30	30.2	30.1	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	122	96	134	106	118	104	102	84	114	98	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.1	BDL	2.7	BDL	3.1	BDL	2.8	BDL	3.2	BDL	IS 3025(Part 4)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.5	6.3	6	5.8	6.1	6	6.1	6	6.2	6.1	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	36.1	36.3	35.85	36.06	35.94	36.12	36.14	36.46	35.86	36.21	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991,Amd.2
8.	Nitrate as NO_3	µmol/L	2.2	1.3	2.59	2.16	3.02	2.59	3.23	2.8	3.02	2.59	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	BDL	BDL	0.06	BDL	0.129	0.121	0.099	0.095	0.121	0.112	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	10.6	10.2	6.89	5.6	3.66	3.23	3.62	3.36	3.23	3.02	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	1.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	24.3	23.3	14.22	12.07	10.99	9.7	7.41	6.94	7.46	6.94	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.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	32184	36108	34636	35440	35222	35984	35864	36534	35712	36310	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	14.3	8.2	12.1	8	28.5	24.4	20.08	16.06	24.34	20.28	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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton												
1.	Chlorophyll	mg/m^3	2.74	2.53	2.84	2.42	2.41	2.36	2.74	2.59	2.54	2.75	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m^3	0.89	0.92	0.93	0.73	0.53	0.74	0.63	0.66	0.86	0.65	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10^3/L	120	71	121	63	132	71	142	87	132	98	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Cyclotella*	*Coscinodiscus*	*Rhizosolenia*	*Melosira*	*Rhizosolenia*	*Dinophysis*	*Cyclotella*	*Ceratium*	*Diploneis*	*Ceratium*	APHA (23rd Ed. 2017)10200 F
			Fragillaria	*Diploneis*	*Fragillaria*	*Pinnularia*	*Fragillaria*	*Coscinodiscus*	*Fragillaria*	*Melosira*	*Rhizosolenia*	*Melosira*	
			Navicula	*Nitzschia*	*Thalassiothrix*	*Skeletonema*	*Thalassiothrix*	*Cyclotella*	*Navicula*	*Nitzschia*	*Nitzschia*	*Nitzschia*	
			Thallassiosira	*Dinophysis*	*Gramma tophora*	*Thallassiosira*	*Gramma tophora*	*Thallassiosira*	*Thallassiosira*	*Dinophysis*	*Cyclotella*	*Dinophysis*	
			Skeletonema	*Thalassionema*	*Ceratium*	*Thalassionema*	*Ceratium*	*Thalassionema*	*Skeletonema*	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	
B	Zooplankton												
1	Abudance(Population)	noX10 3/ 100 m3	36		27		22		30		36		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Crustacean*		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		*Crustacean*		
			Oikoplura		*Oikoplura*		*Oikoplura*		*Oikoplura*		*Oikoplura*		
			Crustacean Larvae		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		
			Oikoplura		*Crustacean*		*Crustacean*		*Crustacean*		*Oikoplura*		
			Bivalve Larvae		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		
3	Total Biomass	ml/100 m^3	14.08		14.12		15.36		15.32		14.35		

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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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological												
1	Total Bacterial Count	CFU/ml	228		248		220		198		186		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	69		46		35		32		40		APHA 23rd Ed.2017,9222-B
3	Ecoli	/100ml	23		30		29		21		19		IS :15185:2016
4	Enterococcus	/100ml	31		22		15		14		9		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	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	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.6	0.55	0.62	0.44	0.48	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	584.1	602.4	620.4	634.1	602.2	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	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.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals							
5.1	Aluminum as Al	%	1.49	2.03	2.28	2.54	2.86	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	11.86	18.4	22.8	36.2	42.92	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	234.64	270.3	310.4	334.2	351.4	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	1.43	1.98	2.35	2.42	2.68	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	15.14	18.69	22.46	33.24	38.22	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	9.02	11.28	14.74	19.28	23.45	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	19.57	24.1	25.5	32.14	38.94	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	5.33	4.89	5.14	4.86	4.65	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	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	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms							
1	Macrobenthos	--	*Bivalves*	*Gastropods*	*Gastropods*	*Gastropods*	*Gastropods*	APHA (23rd Ed. 2017)10500 C
			Gastropods	Decapods Larvae	Decapods Larvae	Decapods Larvae	Decapods Larvae	
			Amphipods	*Amphipods*	*Amphipods*	*Amphipods*	*Amphipods*	
			Sipunculids	*Sipunculids*	*Sipunculids*	*Sipunculids*	*Sipunculids*	
2	MeioBenthos	--	*Nematods*	*Polychates*	*Turbellarians*	*Turbellarians*	*Turbellarians*	
			Herpectacoids	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	
3	Population	no/m²	363	374	298	270	321	

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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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	7.78	8.08	7.9	7.86	7.86	7.81	7.92	7.84	7.99	7.89	IS 3025 (Part11)1983
2.	Temperature	°C	30	30	29.8	29.7	29.9	29.8	29.9	29.8	30	29.9	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	114	82	122	104	138	116	126	114	104	92	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.0	BDL	2.6	BDL	2.9	BDL	2.6	BDL	2.4	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.6	6.5	6	5.9	6.2	6.1	6.1	6	6	5.9	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.5	35	35.67	35.88	35.55	35.72	35.62	35.89	35.55	35.92	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39)1991, Amd.2
8.	Nitrate as NO_3	µmol/L	2.2	1.3	2.59	2.16	2.59	2.15	3.02	2.84	2.59	2.15	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	BDL	BDL	0.064	0.056	0.151	0.142	0.134	0.121	0.147	0.138	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	11.2	10.2	6.46	6.03	4.09	3.97	1.72	1.51	3.45	3.22	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	25.1	24.4	13.36	12.49	12.28	11.9	3.53	3.19	7.93	7.46	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.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	34940	36916	35736	35812	35248	35946	35566	36242	35248	35890	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	14.3	8.2	8	4	20.4	16.3	16.06	12.05	12.17	8.11	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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton												
1.	Chlorophyll	mg/m^3	2.79	2.58	2.74	2.22	2.65	2.32	2.7	2.41	2.7	2.39	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m^3	0.70	0.83	0.69	0.88	0.59	0.72	0.5	0.56	0.68	0.58	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10^3/L	118	74	102	66	112	72	100	63	68	74	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Biddulphia*	*Cyclotella*	*Gramma tophora*	*Coscinodiscus*	*Gramma tophora*	*Coscinodiscus*	*Biddulphia*	*Skeletonema*	*Biddulphia*	*Skeletonema*	APHA (23rd Ed. 2017)10200 F
			Fragillaria	*Pinnularia*	*Dinophysis*	*Thalassionema*	*Dinophysis*	*Thalassionema*	*Fragillaria*	*Diplotella*	*Fragillaria*	*Diplotella*	
			Odentella	*Skeletonema*	*Navicula*	*Rhizosolenia*	*Navicula*	*Rhizosolenia*	*Odentella*	*Odontella*	*Odentella*	*Odontella*	
			Gramma tophora	*Thallassiosira*	*Fragillaria*	*Dinophysis*	*Skeletonema*	*Fragillaria*	*Gramma tophora*	*Dinophysis*	*Gramma tophora*	*Dinophysis*	
			Melosira	*Thalassionema*	*Biddulphia*	*Skeletonema*	*Biddulphia*	*Skeletonema*	*Melosira*	*Surirella*	*Melosira*	*Surirella*	
B	Zooplankton												
1	Abudance(Population)	noX103/ 100 m3	24		35		41		52		29		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Copepods*		*Crustacean*		*Crustacean*		*Oikoplura*		*Copepods nauplii*		
			Decapoda		*Siphonephora*		*Siphonephora*		*Crustacean*		*Decapoda*		
			Crustacean		*Crustacean*		*Crustacean*		*Crustacean Larvae*		*Copepods*		
			Egg(Fish and Shrimps)		*Oikoplura*		*Oikoplura*		*Crustacean*		*Crustacean*		
			Oikoplura		*Bivalve Larvae*		*Egg(Fish and Shrimps)*		*Bivalve Larvae*		*Bivalve Larvae*		
3	Total Biomass	ml/100 m^3	15.21		15.62		16.24		18.23		16.75		

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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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological												
1	Total Bacterial Count	CFU/ml	280		274		250		236		186		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	74		50		36		28		30		APHA 23rd Ed.2017,9222-B
3	Ecoli	/100ml	26		36		29		18		22		IS :15185:2016
4	Enterococcus	/100ml	30		26		24		11		10		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	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	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.46	0.48	0.44	0.53	0.46	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	625.8	602.2	623.1	588.2	542.4	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	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.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals							
5.1	Aluminum as Al	%	0.89	1.26	1.64	1.98	2.29	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	5.02	12.2	16.8	24.1	30.44	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	209.11	240.2	256.4	288.2	342.1	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	0.67	1.22	1.84	2.03	2.34	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	9.44	11.25	12.11	22.42	31.11	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	3.81	4.05	4.24	9.24	12.24	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	8.03	10.2	12.4	16.94	22.68	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	4.13	4.06	4.63	4.44	3.94	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	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	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms							
1	Macrobenthos	--	*Decapod Larvae*	*Decapod Larvae*	*Decapod Larvae*	*Gastropods*	Decapods Larvae	APHA (23rd Ed. 2017)10500 C
			Gastropods	*Nemertine*	*Nemertine*	*Polychates*	*Polychates*	
			Bivalves	*Bivalves*	*Isopods*	*Isopods*	*Isopods*	
			Amphipods	*Amphipods*	*Amphipods*	*Amphipods*	*Amphipods*	
2	MeioBenthos	--	*Herpectacoids*	*Nematods*	*Herpectacoids*	*Turbellarians*	*Turbellarians*	
			Polychates	*Polychates*	*Foraminiferan*	*Foraminiferan*	*Foraminiferan*	
3	Population	no/m^2	383	358	324	356	220	

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

SR. NO.	TEST PARAMETERS	UNIT	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	7.3	7.97	7.99	7.93	8.14	8.09	8.09	8.02	8.16	8.04	IS 3025 (Part11)1983
2.	Temperature	°C	30	29	30	29.8	29.9	29.8	30	29.9	30.1	30	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	112	92	118	94	128	112	136	118	128	112	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.2	BDL	2.7	BDL	2.9	BDL	3.1	BDL	2.1	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.4	6.3	5.9	5.7	6.2	6.1	6.1	6	6	5.9	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	34.5	35.8	35.93	36.28	35.44	35.74	35.21	35.53	35.34	35.88	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39)1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	1.7	1.3	2.59	2.16	3.02	2.59	2.59	2.37	3.88	3.45	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	BDL	BDL	0.064	0.056	0.121	0.112	0.129	0.108	0.155	0.147	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	10.3	9.5	4.74	4.31	3.97	3.53	2.54	2.15	4.31	3.66	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	23.3	22.5	9.91	9.05	11.9	10.6	5.26	4.44	9.91	8.45	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.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	33908	33416	36528	36996	36508	37022	35428	36334	35625	36107	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	10.5	6.3	16.1	12.1	12.2	8.2	8.03	4.02	8.11	4.06	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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton												
1.	Chlorophyll	mg/m³	2.9	2.45	2.69	2.12	2.69	2.42	2.71	2.56	2.87	2.44	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m³	0.75	0.86	0.78	0.92	0.61	0.89	0.75	0.64	0.9	0.75	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10³/L	115	73	146	84	136	78	123	85	132	70	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Odentella*	*Diploneis*	*Pleurosigma*	*Skeletonema*	*Surirella*	*Skeletonema*	*Odentella*	*Diploneis*	*Odentella*	*Diploneis*	APHA (23rd Ed. 2017)10200 F
			Cyclotella	*Rhizosolenia*	*Cyclotella*	*Diplotella*	*Cyclotella*	*Biddulphia*	*Cyclotella*	*Rhizosolenia*	*Cyclotella*	*Rhizosolenia*	
			Pinnularia	*Nitzschia*	*Biddulphia*	*Odontella*	*Biddulphia*	*Odontella*	*Pinnularia*	*Nitzschia*	*Pinnularia*	*Nitzschia*	
			Biddulphia	*Cyclotella*	*Skeletonema*	*Dinophysis*	*Skeletonema*	*Pleurosigma*	*Biddulphia*	*Cyclotella*	*Biddulphia*	*Cyclotella*	
			Thallassiosira	*Pleurosigma*	*Thallassiosira*	*Surirella*	*Thallassiosira*	*Surirella*	*Thallassiosira*	*Pleurosigma*	*Thallassiosira*	*Pleurosigma*	
B	Zooplankton												
1	Abudance(Population)	noX10 3/ 100 m3	31		26		30		32		41		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Oikoplura*		*Copepods*		*Crustacean Larvae*		*Egg(Fish and Shrimps)*		*Copepods*		
			Crustacean		*Decapoda*		*Crustacean*		*Oikoplura*		*Decapoda*		
			Crustacean Larvae		*Gastropos Larvae*		*Gastropos Larvae*		*Crustacean Larvae*		*Crustacean*		
			Crustacean		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		*Crustacean*		*Egg(Fish and Shrimps)*		
			Bivalve Larvae		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		*Oikoplura*		
3	Total Biomass	ml/100 m³	14.9		14.32		14.52		15.63		17.25		

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

SR. NO.	TEST PARAMETERS	UNIT	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological												
1	Total Bacterial Count	CFU/ml	298		150		186		148		158		APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	60		23		35		40		33		APHA 23rd Ed.2017,9222-B
3	Ecoli	/100ml	49		13		25		26		21		IS :15185:2016
4	Enterococcus	/100ml	24		7		10		12		18		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	7.95	7.9	7.8	7.77	7.98	7.92	7.99	7.91	8.12	8.02	IS 3025 (Part11)1983
2.	Temperature	°C	29	30	29.9	29.8	30	29.9	30.1	30	30.2	30.1	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	108	80	112	104	108	92	122	98	104	88	APHA 23rd Ed.,2017,2540-D
4.	BOD (3 Days @ 27°C)	mg/L	2.8	BDL	2.9	BDL	3.2	BDL	3.1	BDL	2.4	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.5	6.3	5.8	5.7	5.9	5.8	6.1	6	6.2	6.3	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	36.7	35.4	35.11	35.63	35.26	35.56	35.18	35.62	35.14	35.58	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	2.2	1.7	2.59	2.59	2.59	2.15	2.37	2.15	2.59	2.15	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	BDL	BDL	0.064	0.047	0.108	0.103	0.099	0.095	0.121	0.112	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	12.3	11.2	4.74	4.31	5.17	4.74	3.62	3.63	4.09	3.66	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	25.5	24.6	9.91	9.48	12.93	11.85	7.41	6.94	9.44	8.45	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.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	37168	32908	37604	37724	37124	37644	36594	37164	36424	37128	APHA 23rd Ed.,2017, 2540-C
15.	COD	mg/L	12.3	8.2	12.1	8	8.2	4.1	12.05	8.03	20.28	12.17	APHA 23rd Ed.,2017, 5220-B

Continue...

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

SR. NO.	TEST PARAMETERS	UNIT	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton												
1.	Chlorophyll	mg/m^3	2.92	2.38	2.54	2.42	2.36	2.39	2.89	2.45	3.02	2.69	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m^3	0.87	0.74	0.79	0.8	0.58	0.81	0.77	0.9	1.1	0.86	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10^3/L	108	68	129	85	106	70	96	88	142	110	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Pinnularia*	*Coscinodiscus*	*Cyclotella*	*Ceratium*	*Cyclotella*	*Ceratium*	*Pinnularia*	*Coscinodiscus*	*Pinnularia*	*Coscinodiscus*	APHA (23rd Ed. 2017)10200 F
			Biddulphia	*Diploneis*	*Fragillaria*	*Melosira*	*Fragillaria*	*Skeletonema*	*Biddulphia*	*Diploneis*	*Biddulphia*	*Diploneis*	
			Navicula	*Rhizosolenia*	*Diniphysis*	*Nitzschia*	*Melosira*	*Coscinodiscus*	*Navicula*	*Rhizosolenia*	*Navicula*	*Rhizosolenia*	
			Thallassiosira	*Dinophysis*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	*Dinophysis*	
			Skeletonema	*Thalassionema*	*Skeletonema*	*Pleurosigma*	*Skeletonema*	*Pleurosigma*	*Skeletonema*	*Thalassionema*	*Skeletonema*	*Thalassionema*	
B	Zooplankton												
1	Abudance(Population)	noX10 3/ 100 m3	18		34		25		36		42		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Copepods*		*Copepods nauplii*		*Copepods nauplii*		*Copepods nauplii*		*Copepods nauplii*		
			Bivalve Larvae		*Decapoda*		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		
			Crustacean		*Copepods*		*Copepods*		*Copepods*		*Copepods*		
			Egg(Fish and Shrimps)		*Crustacean*		*Crustacean*		*Crustacean*		*Crustacean*		
			Siphonephora		*Bivalve Larvae*		*Oikoplura*		*Oikoplura*		*Oikoplura*		
3	Total Biomass	ml/100 m^3	10.6		16.23		15.85		13.25		15.55		

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CIN:U73100GJ2007PTC051463

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

C			Microbiological					
1	Total Bacterial Count	CFU/ml	250	142	174	200	244	APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	38	45	40	29	36	APHA 23rd Ed.2017,9222-B
3	Ecoli	/100ml	21	21	31	22	29	IS :15185:2016
4	Enterococcus	/100ml	29	6	9	10	18	IS:15186:2002
5	Salmonella	/100ml	Absent	Absent	Absent	Absent	Absent	IS:15187:2016
6	Shigella	/100ml	Absent	Absent	Absent	Absent	Absent	APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent	Absent	Absent	Absent	Absent	IS: 5887 (Part V):1976

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Technical Manager

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

SR. NO.	TEST PARAMETERS	UNIT	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.67	0.52	0.54	0.56	0.49	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	563.7	588.2	602.4	542.2	562.2	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	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.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals							
5.1	Aluminum as Al	%	1.12	1.38	1.69	1.88	2.29	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	9.49	15.4	18.8	26.1	33.94	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	294.27	318.4	312.4	341.1	402.1	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	1	1.42	1.98	2.14	2.36	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	12.99	12.01	12.84	18.36	22.68	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	7.85	8.01	8.44	12.28	16.88	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	17.74	18.9	19.4	28.97	36.84	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	6.36	5.85	6.14	5.68	5.14	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	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	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms							
1	Macrobenthos	--	*Sipunculids*	*Bivalves*	*Isopods*	*Isopods*	*Decapod Larvae*	APHA (23rd Ed. 2017)10500 C
			Decapod Larvae	*Gastropods*	*Gastropods*	*Gastropods*	*Gastropods*	
			Gastropods	*Polychates*	*Polychates*	*Polychates*	*Isopods*	
			Amphipods	*Decapod Larvae*	*Decapod Larvae*	*Decapod Larvae*	*Amphipods*	
2	MeioBenthos	--	*Foraminiferan*	*Turbellarians*	*Turbellarians*	*Turbellarians*	*Herpectacoids*	
			Nematods	*Nematods*	*Foraminiferan*	*Foraminiferan*	*Polychates*	
3	Population	no/m²	462	268	274	274	396	

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CIN:U73100GJ2007PTC051463

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

SR. NO.	TEST PARAMETERS	UNIT	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	7.78	8.03	7.99	7.93	7.86	7.78	7.92	7.87	8.11	8.04	IS 3025 (Part11)1983
2.	Temperature	°C	29	29	29.8	29.7	30	29.9	30	29.9	30.1	30	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	116	94	134	106	124	102	144	118	136	114	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.8	BDL	2.7	BDL	3.1	BDL	3	BDL	3.3	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.4	6.2	5.8	5.7	6.1	6	6.2	6.1	6.1	6	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.8	35.8	35.41	35.63	35.58	36.04	35.66	35.94	35.28	35.77	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	1.7	1.3	2.59	2.16	2.15	1.72	3.45	3.23	3.02	2.59	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	BDL	BDL	0.081	0.068	0.121	0.108	0.138	0.129	0.112	0.108	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	10.6	9.7	5.17	4.74	3.36	3.19	4.05	3.62	4.31	4.09	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	24.1	22.9	12.07	9.91	8.4	7.97	8.36	7.41	9.91	9.44	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.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36964	37992	35444	35740	36122	36566	36844	37386	37246	37990	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	12.3	6.2	12.1	8	16.3	12.2	8.03	4.02	28.39	16.22	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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton												
1.	Chlorophyll	mg/m^3	2.76	2.31	2.25	2.36	2.63	2.52	2.76	2.4	2.97	2.76	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m^3	0.85	0.80	0.69	0.91	0.56	0.86	0.66	0.71	0.98	0.36	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10^3/L	115	70	135	68	124	72	130	56	125	86	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Rhizosolenia*	*Melosira*	*Navicula*	*Surirella*	*Navicula*	*Surirella*	*Rhizosolenia*	*Navicula*	*Rhizosolenia*	*Navicula*	APHA (23rd Ed. 2017)10200 F
			Fragillaria	*Pinnularia*	*Cyclotella*	*Rhizosolenia*	*Cyclotella*	*Grammatophora*	*Fragillaria*	*Cyclotella*	*Fragillaria*	*Cyclotella*	
			Thalassiothrix	*Skeletonema*	*Pinnularia*	*Nitzschia*	*Pinnularia*	*Nitzschia*	*Thalassiothrix*	*Pinnularia*	*Thalassiothrix*	*Pinnularia*	
			Grammatophora	*Thallassiosira*	*Skeletonema*	*Thalassionema*	*Skeletonema*	*Thalassionema*	*Grammatophora*	*Skeletonema*	*Grammatophora*	*Skeletonema*	
			Ceratium	*Thalassionema*	*Thallassiosira*	*Pleurosigma*	*Thallassiosira*	*Dinophysis*	*Ceratium*	*Thallassiosira*	*Ceratium*	*Thallassiosira*	
B	Zooplankton												
1	Abudance(Population)	noX103/ 100 m3	38		28		21		28		29		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Egg(Fish aNot Detected Shrimps)*		*Copepods nauplii*		*Copepods nauplii*		*Copepods nauplii*		*Copepods nauplii*		
			Oikoplura		*Oikoplura*		*Oikoplura*		*Oikoplura*		*Oikoplura*		
			Crustacean Larvae		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		
			Crustacean		*Crustacean*		*Crustacean*		*Crustacean*		*Crustacean*		
			Bivalve Larvae		*Egg(Fish and Shrimps)*		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		
3	Total Biomass	ml/100 m^3	13.62		16.56		13.24		14.36		13.56		

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

C			Microbiological					
1	Total Bacterial Count	CFU/ml	210	252	290	222	290	APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	62	54	62	50	48	APHA 23rd Ed.2017,9222-B
3	Ecoli	/100ml	27	36	38	26	33	IS :15185:2016
4	Enterococcus	/100ml	19	12	22	20	24	IS:15186:2002
5	Salmonella	/100ml	Absent	Absent	Absent	Absent	Absent	IS:15187:2016
6	Shigella	/100ml	Absent	Absent	Absent	Absent	Absent	APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	7.93	8.01	7.97	7.92	7.94	7.88	7.98	7.89	7.96	7.91	IS 3025 (Part11)1983
2.	Temperature	°C	29	29	30	29.9	30	29.9	30.1	30	30.2	30.1	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	120	92	136	84	111	102	128	106	110	98	APHA 23rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.2	BDL	2.8	BDL	3.2	BDL	2.9	BDL	3	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.6	6.5	5.9	5.7	6.1	6	6.2	6.1	5.9	5.9	APHA 23rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.7	35.4	35.89	35.93	35.74	36.11	35.54	35.82	35.62	36.04	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO_3	µmol/L	1.7	1.3	2.59	2.16	3.02	2.59	3.23	3.02	2.59	2.15	APHA 23rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	BDL	BDL	0.073	0.056	0.112	0.103	0.125	0.121	0.112	0.108	APHA 23rd Ed.,2017,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	11.0	10.3	4.7	4.31	3.97	3.53	3.36	2.54	3.45	3.23	APHA 23rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	24.6	24.0	10.34	9.91	9.91	8.84	6.94	5.26	7.93	7.46	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.	APHA 23rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	29104	37556	35932	36108	36216	36884	35648	36188	36244	36932	APHA 23rd Ed.,2017, 2540- C
15.	COD	mg/L	14.4	8.2	12.1	8	20.4	16.3	12.05	8.03	16.22	8.11	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	NOVEMBER 2021		DECEMBER 2021		JANUARY 2022		FEBRUARY 2022		MARCH 2022		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton												
1.	Chlorophyll	mg/m^3	2.89	2.34	2.6	2.44	2.45	2.87	2.62	2.9	2.74	2.82	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m^3	0.91	0.95	0.79	0.87	0.81	0.69	0.73	0.84	0.93	0.65	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x $10^3/L$	110	63	118	78	120	92	111	89	106	96	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	*Grammatophora*	*Coscinodiscus*	*Cyclotella*	*Coscinodiscus*	*Cyclotella*	*Coscinodiscus*	*Grammatophora*	*Coscinodiscus*	*Grammatophora*	*Coscinodiscus*	APHA (23rd Ed. 2017)10200 F
			Dinophysis	*Thalassionema*	*Fragillaria*	*Diploneis*	*Fragillaria*	*Melosira*	*Dinophysis*	*Thalassionema*	*Dinophysis*	*Thalassionema*	
			Navicula	*Rhizosolenia*	*Navicula*	*Nitzschia*	*Navicula*	*Surirella*	*Navicula*	*Rhizosolenia*	*Navicula*	*Rhizosolenia*	
			Fragillaria	*Dinophysis*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	*Dinophysis*	*Fragillaria*	*Dinophysis*	*Fragillaria*	*Dinophysis*	
			Biddulphia	*Skeletonema*	*Skeletonema*	*Thalassionema*	*Skeletonema*	*Thalassionema*	*Biddulphia*	*Skeletonema*	*Biddulphia*	*Skeletonema*	
B	Zooplankton												
1	Abudance(Population)	noX10 3/ 100 m3	29		31		45		33		28		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		*Crustacean*		*Crustacean*		*Copepods*		*Copepods*		*Egg(Fish and Shrimps)*		
			Siphonephora		*Oikoplura*		*Oikoplura*		*Bivalve Larvae*		*Oikoplura*		
			Crustacean		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean*		*Crustacean Larvae*		
			Oikoplura		*Oikoplura*		*Oikoplura*		*Egg(Fish and Shrimps)*		*Crustacean*		
			Bivalve Larvae		*Bivalve Larvae*		*Bivalve Larvae*		*Siphonephora*		*Bivalve Larvae*		
3	Total Biomass	ml/10 0m^3	13.96		15.62		17.23		16.98		14.86		

Continue...

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

C					Microbiological			
1	Total Bacterial Count	CFU/ml	290	200	232	214	200	APHA 23rd Ed.2017,9215-C
2	Total Coliform	/100ml	74	26	30	12	29	APHA 23rd Ed.2017,9222-B
3	Ecoli	/100ml	55	19	21	6	10	IS :15185:2016
4	Enterococcus	/100ml	34	6	11	4	9	IS:15186:2002
5	Salmonella	/100ml	Absent	Absent	Absent	Absent	Absent	IS:15187:2016
6	Shigella	/100ml	Absent	Absent	Absent	Absent	Absent	APHA 23rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent	Absent	Absent	Absent	Absent	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
			NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022		
			22/11/2021	20/12/2021	20/01/2022	28/02/2022	23/03/2022		
1.	Colour	Pt. Co. Scale	20	30	25	20	25	100	IS 3025(Part 4)
2.	pH @ 27 ° C	--	7.12	7.16	7.28	7.47	7.11	6.5 to 8.5	APHA 23rd Ed.,2017,4500-H+B
3.	Temperature	^{0}C	29	30	29.9	29.9	30.1	40	IS 3025(Part 9)1984
4.	Total Suspended Solid	mg/L	40	34	32	24	56	100	APHA 23rd Ed.,2017,2540 –D
5.	Total Dissolved Solids	mg/L	1444	1678	1656	1612	1488	2100	APHA 23rd Ed.,2017,2540- C
6.	COD	mg/L	72.2	76.2	72.4	76.4	71.1	100	IS 3025(Part 58)2006
7.	BOD (3 days at 27 ^{0}C)	mg/L	18	19	18	17	22	30	IS 3025(Part 44)1993Amd.01
8.	Chloride (as Cl)	mg/L	450.1	422.4	464.2	478.2	478.6	600	IS 3025(PART 32) 1988
9.	Oil & Grease	mg/L	BDL()	BDL()	BDL()	BDL()	BDL()	10	IS 3025(Part39)1991, Amd. 2
10.	Sulphate (as SO_4)	mg/L	229.3	214.4	228.6	232.4	129.4	1000	IS 3025(Part 24)1986
11.	Ammonical Nitrogen	mg/L	8.88	7.44	8.12	7.84	25.4	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)	1	IS 3025(Part 43)1992, Amd.2
13.	Copper as Cu	mg/L	BDL	BDL	BDL	BDL	BDL	**3**	IS 3025(Part 42)1992amd.01,
14.	Lead as Pb	mg/L	BDL	BDL	BDL	BDL	BDL	0.1	APHA 23rd Ed.,2017,3111-B

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SR.NO.	TEST PARAMETERS	UNIT	LIQUID TERMINAL					GPCB Limit	TEST METHOD
			NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022		
			22/11/2021	20/12/2021	20/01/2022	28/02/2022	23/03/2022		
15.	Sulphide as S	mg/L	0.14	0.16	0.28	0.34	0.28	2	APHA 23rd Ed.,2017,4500 S^{-2} F
16.	Cadmium as Cd	mg/L	BDL	BDL	BDL	BDL	BDL	2	APHA 23rd Ed.,2017,3111-B
17.	Fluoride as F	mg/L	0.34	0.41	0.46	0.46	0.98	2	APHA 23rd Ed.,2017,4500 F, D
18.	Residual Chlorine	mg/L	--	0.6	0.72	0.68	0.62	0.5 Min.	APHA 23rd Ed.,2017,4500-Cl-B
19.	Percent Sodium	%	--	--	--	--	44.18	60	By Calculation
20.	Sodium Absorption ratio	--	--	--	--	--	5.1	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.	01-11-2021	88.45	46.25	21.87	33.45	0.32	NOT DETECTED	NOT DETECTED
2.	02-11-2021	83.45	45.23	20.14	31.27	0.45	NOT DETECTED	NOT DETECTED
3.	08-11-2021	89.12	47.24	22.54	32.45	0.23	NOT DETECTED	NOT DETECTED
4.	09-11-2021	78.54	39.32	18.65	30.21	0.36	NOT DETECTED	NOT DETECTED
5.	15-11-2021	87.21	44.16	23.45	28.27	0.17	NOT DETECTED	NOT DETECTED
6.	16-11-2021	83.40	47.85	22.15	29.45	0.25	NOT DETECTED	NOT DETECTED
7.	22-11-2021	85.62	36.73	17.90	26.72	0.17	NOT DETECTED	NOT DETECTED
8.	23-11-2021	71.80	32.45	23.34	28.54	0.09	NOT DETECTED	NOT DETECTED
9.	29-11-2021	88.34	36.53	21.87	27.19	0.17	NOT DETECTED	NOT DETECTED
10.	30-11-2021	85.21	33.45	18.24	25.21	0.24	NOT DETECTED	NOT DETECTED
11.	05-12-2021	75.21	40.25	18.76	30.25	0.25	NOT DETECTED	NOT DETECTED
12.	06-12-2021	80.25	42.19	23.67	34.22	0.62	NOT DETECTED	NOT DETECTED
13.	13-12-2021	89.45	45.32	25.44	36.17	0.40	NOT DETECTED	NOT DETECTED
14.	14-12-2021	86.25	45.32	25.44	36.17	0.40	NOT DETECTED	NOT DETECTED
15.	20-12-2021	90.00	41.39	25.14	34.21	0.25	NOT DETECTED	NOT DETECTED
16.	21-12-2021	83.44	44.52	28.14	35.72	0.45	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
17.	27-12-2021	78.21	40.25	23.45	32.10	0.23	NOT DETECTED	NOT DETECTED
18.	28-12-2021	70.43	37.81	25.12	30.33	0.10	NOT DETECTED	NOT DETECTED
19.	03-01-2022	88.25	37.21	17.85	27.84	0.80	NOT DETECTED	NOT DETECTED
20.	04-01-2022	76.54	32.21	15.23	23.49	1.14	NOT DETECTED	NOT DETECTED
21.	10-01-2022	83.45	40.15	21.20	29.25	1.20	NOT DETECTED	NOT DETECTED
22.	11-01-2022	87.20	47.23	28.35	34.52	0.85	NOT DETECTED	NOT DETECTED
23.	17-01-2022	85.23	45.12	25.44	31.29	1.00	NOT DETECTED	NOT DETECTED
24.	18-01-2022	88.25	47.21	21.29	35.42	1.15	NOT DETECTED	NOT DETECTED
25.	24-01-2022	87.65	46.23	32.45	39.18	0.95	NOT DETECTED	NOT DETECTED
26.	25-01-2022	85.52	47.85	28.96	34.55	0.75	NOT DETECTED	NOT DETECTED
27.	31-01-2022	80.78	48.75	33.23	38.78	1.25	NOT DETECTED	NOT DETECTED
28.	03-02-2022	89.23	44.12	36.23	41.19	0.45	2.17	NOT DETECTED
29.	07-02-2022	85.34	39.28	30.15	38.25	1.19	4.12	NOT DETECTED
30.	10-02-2022	76.33	43.29	28.17	37.25	1.35	3.14	NOT DETECTED
31.	14-02-2022	82.55	45.67	36.29	42.18	1.12	NOT DETECTED	NOT DETECTED
32.	16-02-2022	88.25	47.38	34.25	39.23	1.00	1.29	NOT DETECTED
33.	21-02-2022	85.23	45.68	37.22	42.18	1.23	3.14	NOT DETECTED

Continue...

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
34.	23-02-2022	88.76	46.21	33.15	40.15	1.00	1.45	NOT DETECTED
35.	28-02-2022	79.45	40.15	38.15	42.16	1.18	2.25	NOT DETECTED
36.	03-03-2022	83.46	37.89	34.56	42.20	1.25	4.15	NOT DETECTED
37.	07-03-2022	80.45	41.45	27.15	37.89	1.00	3.17	NOT DETECTED
38.	10-03-2022	84.56	40.18	25.19	35.18	1.00	5.12	NOT DETECTED
39.	14-03-2022	87.15	40.23	32.45	40.25	1.34	2.35	NOT DETECTED
40.	17-03-2022	85.12	48.15	40.18	42.36	1.00	2.00	NOT DETECTED
41.	21-03-2022	87.13	39.15	35.17	40.19	1.18	2.87	NOT DETECTED
42.	24-03-2022	88.21	46.78	30.18	42.35	1.20	3.42	NOT DETECTED
43.	28-03-2022	84.52	43.45	35.22	40.17	1.15	3.00	NOT DETECTED
44.	30-03-2022	85.64	46.75	39.45	44.38	1.00	2.18	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

GUJARAT VAPI.

Nikunj D. Patel
(Chemist)

Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Location Name		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.	01-11-2021	68.76	28.75	12.34	25.67	0.16	NOT DETECTED	NOT DETECTED
2.	02-11-2021	73.45	22.45	17.34	23.45	0.20	NOT DETECTED	NOT DETECTED
3.	08-11-2021	58.93	20.18	15.21	21.25	0.15	NOT DETECTED	NOT DETECTED
4.	09-11-2021	66.45	25.23	13.70	20.34	0.11	NOT DETECTED	NOT DETECTED
5.	15-11-2021	60.23	23.48	15.44	23.45	0.18	NOT DETECTED	NOT DETECTED
6.	16-11-2021	72.35	27.89	17.25	27.67	0.07	NOT DETECTED	NOT DETECTED
7.	22-11-2021	65.81	25.45	15.98	24.36	0.09	NOT DETECTED	NOT DETECTED
8.	23-11-2021	69.23	27.21	12.34	20.25	0.14	NOT DETECTED	NOT DETECTED
9.	29-11-2021	58.74	22.35	14.56	21.34	0.19	NOT DETECTED	NOT DETECTED
10.	30-11-2021	67.25	26.78	15.35	24.23	0.16	NOT DETECTED	NOT DETECTED
11.	05-12-2021	74.53	37.85	19.86	31.28	0.25	NOT DETECTED	NOT DETECTED
12.	06-12-2021	86.12	40.15	21.45	34.15	0.20	NOT DETECTED	NOT DETECTED
13.	13-12-2021	80.55	36.78	19.55	31.27	0.23	NOT DETECTED	NOT DETECTED
14.	14-12-2021	78.23	35.56	21.26	34.23	0.25	NOT DETECTED	NOT DETECTED
15.	20-12-2021	87.45	41.35	23.67	37.13	0.25	NOT DETECTED	NOT DETECTED
16.	21-12-2021	82.15	39.21	22.53	34.80	0.14	NOT DETECTED	NOT DETECTED

Continue...

Location Name		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
17.	27-12-2021	71.23	35.42	14.89	32.67	0.10	NOT DETECTED	NOT DETECTED
18.	28-12-2021	65.23	30.21	11.45	28.34	0.05	NOT DETECTED	NOT DETECTED
19.	03-01-2022	88.23	35.23	12.34	25.34	0.85	NOT DETECTED	NOT DETECTED
20.	04-01-2022	71.23	31.20	16.73	31.26	0.45	NOT DETECTED	NOT DETECTED
21.	10-01-2022	75.24	36.55	14.65	28.47	0.75	NOT DETECTED	NOT DETECTED
22.	11-01-2022	84.56	45.67	12.34	35.32	1.00	NOT DETECTED	NOT DETECTED
23.	17-01-2022	83.40	40.23	17.23	34.31	0.95	NOT DETECTED	NOT DETECTED
24.	18-01-2022	85.54	45.21	15.26	35.33	0.82	NOT DETECTED	NOT DETECTED
25.	24-01-2022	88.24	39.22	18.24	29.45	1.04	NOT DETECTED	NOT DETECTED
26.	25-01-2022	75.25	44.53	15.35	31.25	1.12	NOT DETECTED	NOT DETECTED
27.	31-01-2022	86.12	47.25	17.36	33.25	0.96	NOT DETECTED	NOT DETECTED
28.	03-02-2022	83.20	35.67	23.18	31.45	1.24	1.76	NOT DETECTED
29.	07-02-2022	89.23	39.23	21.18	36.23	0.76	2.15	NOT DETECTED
30.	10-02-2022	86.34	42.45	24.15	37.25	0.34	NOT DETECTED	NOT DETECTED
31.	14-02-2022	84.15	47.34	21.29	38.19	1.00	3.15	NOT DETECTED
32.	16-02-2022	87.34	40.15	23.19	39.17	0.55	1.27	NOT DETECTED
33.	21-02-2022	83.45	43.67	20.16	35.23	1.05	2.15	NOT DETECTED

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Location Name		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
34.	23-02-2022	81.89	45.20	24.19	36.27	1.00	NOT DETECTED	NOT DETECTED
35.	28-02-2022	87.45	48.35	26.17	34.12	1.25	2.18	NOT DETECTED
36.	03-03-2022	85.63	30.27	28.95	37.25	1.34	2.34	NOT DETECTED
37.	07-03-2022	85.20	42.35	25.12	34.90	1.20	5.12	NOT DETECTED
38.	10-03-2022	82.14	45.67	32.18	40.23	1.15	2.10	NOT DETECTED
39.	14-03-2022	87.15	48.45	30.17	37.52	1.20	1.78	NOT DETECTED
40.	17-03-2022	85.12	39.56	28.44	39.16	1.30	2.45	NOT DETECTED
41.	21-03-2022	80.47	43.44	25.62	35.61	1.25	3.10	NOT DETECTED
42.	24-03-2022	86.35	40.17	30.16	37.83	1.20	2.87	NOT DETECTED
43.	28-03-2022	81.93	39.35	25.21	35.19	1.15	2.00	NOT DETECTED
44.	30-03-2022	88.45	42.34	30.27	41.25	1.26	3.15	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)

Jaivik S. Tandel
(Manager - Operations)

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

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Results of Ambient Air Quality Monitoring

Location Name		ADANI PORT – TUG Berth 600 KL Pump 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.	01-11-2021	71.55	37.51	8.76	17.23	0.25	NOT DETECTED	NOT DETECTED
2.	02-11-2021	78.43	32.44	9.15	15.32	0.17	NOT DETECTED	NOT DETECTED
3.	08-11-2021	60.35	26.75	8.15	18.43	0.29	NOT DETECTED	NOT DETECTED
4.	09-11-2021	68.23	30.15	12.34	19.21	0.12	NOT DETECTED	NOT DETECTED
5.	15-11-2021	65.21	28.23	10.25	17.54	0.09	NOT DETECTED	NOT DETECTED
6.	16-11-2021	76.75	31.24	9.18	15.28	0.23	NOT DETECTED	NOT DETECTED
7.	22-11-2021	65.44	26.75	8.12	16.23	0.15	NOT DETECTED	NOT DETECTED
8.	23-11-2021	56.84	21.85	10.21	18.25	0.18	NOT DETECTED	NOT DETECTED
9.	29-11-2021	62.17	24.64	13.44	21.26	0.05	NOT DETECTED	NOT DETECTED
10.	30-11-2021	68.14	27.85	10.45	17.26	0.08	NOT DETECTED	NOT DETECTED
11.	05-12-2021	54.35	42.36	12.34	24.56	0.14	NOT DETECTED	NOT DETECTED
12.	06-12-2021	69.21	40.56	10.15	22.18	0.25	NOT DETECTED	NOT DETECTED
13.	13-12-2021	62.56	37.65	12.42	26.30	0.15	NOT DETECTED	NOT DETECTED
14.	14-12-2021	76.15	42.85	14.56	27.16	0.20	NOT DETECTED	NOT DETECTED
15.	20-12-2021	81.25	45.18	12.65	25.11	0.15	NOT DETECTED	NOT DETECTED
16.	21-12-2021	71.54	40.17	8.15	23.12	0.15	NOT DETECTED	NOT DETECTED

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Location Name		ADANI PORT – TUG Berth 600 KL Pump 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
17.	27-12-2021	64.32	34.51	10.25	25.22	0.18	NOT DETECTED	NOT DETECTED
18.	28-12-2021	60.34	28.76	8.15	20.15	0.15	NOT DETECTED	NOT DETECTED
19.	03-01-2022	87.21	45.62	13.45	21.35	0.56	NOT DETECTED	NOT DETECTED
20.	04-01-2022	78.23	41.23	11.50	25.67	0.10	NOT DETECTED	NOT DETECTED
21.	10-01-2022	58.92	38.90	16.78	22.35	1.05	NOT DETECTED	NOT DETECTED
22.	11-01-2022	84.53	46.75	12.25	30.21	0.80	NOT DETECTED	NOT DETECTED
23.	17-01-2022	81.80	44.67	10.35	36.44	0.54	NOT DETECTED	NOT DETECTED
24.	18-01-2022	85.64	48.25	17.23	30.17	0.23	NOT DETECTED	NOT DETECTED
25.	24-01-2022	89.45	49.12	15.24	28.56	1.07	NOT DETECTED	NOT DETECTED
26.	25-01-2022	85.21	43.20	13.25	21.44	0.84	NOT DETECTED	NOT DETECTED
27.	31-01-2022	77.23	49.21	10.25	32.45	0.96	NOT DETECTED	NOT DETECTED
28.	03-02-2022	86.23	45.23	27.15	34.13	0.87	2.15	NOT DETECTED
29.	07-02-2022	76.45	40.25	21.28	29.26	0.35	NOT DETECTED	NOT DETECTED
30.	10-02-2022	89.21	46.10	24.39	30.15	1.14	3.45	NOT DETECTED
31.	14-02-2022	85.23	45.12	20.18	28.77	1.15	1.76	NOT DETECTED
32.	16-02-2022	87.45	47.18	23.10	35.14	0.95	NOT DETECTED	NOT DETECTED
33.	21-02-2022	84.14	42.95	25.19	32.19	1.52	NOT DETECTED	NOT DETECTED

Continue…

Location Name		ADANI PORT – TUG Berth 600 KL Pump 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
34.	23-02-2022	88.24	44.12	19.44	32.16	1.00	2.34	NOT DETECTED
35.	28-02-2022	85.45	42.82	26.15	35.18	1.14	4.12	NOT DETECTED
36.	03-03-2022	89.65	45.78	31.16	39.18	1.23	4.25	NOT DETECTED
37.	07-03-2022	84.32	42.62	26.23	35.12	1.00	1.87	NOT DETECTED
38.	10-03-2022	82.34	40.95	29.15	39.17	1.44	2.10	NOT DETECTED
39.	14-03-2022	88.14	45.67	32.17	41.23	1.20	3.45	NOT DETECTED
40.	17-03-2022	84.56	43.78	27.34	38.66	1.00	2.65	NOT DETECTED
41.	21-03-2022	81.90	45.78	25.17	35.90	1.80	5.12	NOT DETECTED
42.	24-03-2022	88.35	47.91	32.15	40.83	1.25	4.74	NOT DETECTED
43.	28-03-2022	85.43	44.78	30.62	37.90	1.30	3.23	NOT DETECTED
44.	30-03-2022	88.23	43.26	28.15	39.22	1.00	6.15	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

GUJARAT VAPI.

Nikunj D. Patel
(Chemist)

Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Location Name		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.	01-11-2021	57.23	23.45	11.23	20.15	0.15	NOT DETECTED	NOT DETECTED
2.	02-11-2021	62.34	25.67	15.23	21.34	0.18	NOT DETECTED	NOT DETECTED
3.	08-11-2021	54.50	22.34	12.17	18.76	0.11	NOT DETECTED	NOT DETECTED
4.	09-11-2021	52.34	20.17	11.21	19.35	0.18	NOT DETECTED	NOT DETECTED
5.	15-11-2021	61.78	24.54	12.35	17.65	0.07	NOT DETECTED	NOT DETECTED
6.	16-11-2021	70.23	27.85	14.18	22.35	0.15	NOT DETECTED	NOT DETECTED
7.	22-11-2021	56.72	21.36	15.23	23.15	0.20	NOT DETECTED	NOT DETECTED
8.	23-11-2021	64.23	24.78	11.72	18.23	0.13	NOT DETECTED	NOT DETECTED
9.	29-11-2021	60.23	21.54	13.25	19.45	0.11	NOT DETECTED	NOT DETECTED
10.	30-11-2021	53.57	18.94	12.43	17.32	0.08	NOT DETECTED	NOT DETECTED
11.	05-12-2021	60.23	28.83	7.84	25.67	0.05	NOT DETECTED	NOT DETECTED
12.	06-12-2021	73.45	32.45	8.15	28.11	0.23	NOT DETECTED	NOT DETECTED
13.	13-12-2021	65.24	30.18	15.24	26.15	0.15	NOT DETECTED	NOT DETECTED
14.	14-12-2021	86.15	33.45	13.17	28.15	0.20	NOT DETECTED	NOT DETECTED
15.	20-12-2021	76.23	30.15	15.14	25.89	0.05	NOT DETECTED	NOT DETECTED
16.	21-12-2021	68.23	25.43	12.38	27.15	0.12	NOT DETECTED	NOT DETECTED

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Location Name		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
17.	27-12-2021	60.21	23.48	14.17	25.13	0.10	NOT DETECTED	NOT DETECTED
18.	28-12-2021	56.32	20.25	10.50	20.15	0.10	NOT DETECTED	NOT DETECTED
19.	03-01-2022	83.23	29.67	9.12	21.23	0.75	NOT DETECTED	NOT DETECTED
20.	04-01-2022	56.70	25.43	13.21	20.15	0.55	NOT DETECTED	NOT DETECTED
21.	10-01-2022	75.24	28.21	11.23	25.23	1.03	NOT DETECTED	NOT DETECTED
22.	11-01-2022	80.23	23.45	10.25	24.25	0.34	NOT DETECTED	NOT DETECTED
23.	17-01-2022	81.56	27.12	14.56	27.21	0.15	NOT DETECTED	NOT DETECTED
24.	18-01-2022	86.24	28.94	16.24	31.45	0.84	NOT DETECTED	NOT DETECTED
25.	24-01-2022	75.24	21.35	12.68	33.20	0.52	NOT DETECTED	NOT DETECTED
26.	25-01-2022	83.45	26.75	17.23	27.34	0.34	NOT DETECTED	NOT DETECTED
27.	31-01-2022	85.56	32.45	15.44	25.67	0.75	NOT DETECTED	NOT DETECTED
28.	03-02-2022	85.77	34.56	15.78	25.18	0.87	NOT DETECTED	NOT DETECTED
29.	07-02-2022	89.21	30.18	19.21	32.95	1.05	2.45	NOT DETECTED
30.	10-02-2022	88.45	35.81	16.25	29.17	0.65	NOT DETECTED	NOT DETECTED
31.	14-02-2022	85.76	37.25	16.36	28.35	0.89	NOT DETECTED	NOT DETECTED
32.	16-02-2022	88.34	34.23	19.25	28.79	0.23	3.12	NOT DETECTED
33.	21-02-2022	83.45	36.12	21.18	29.34	1.00	1.97	NOT DETECTED

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Location Name		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
34.	23-02-2022	84.64	39.12	17.25	31.29	0.85	NOT DETECTED	NOT DETECTED
35.	28-02-2022	86.77	32.00	23.19	34.95	0.68	2.15	NOT DETECTED
36.	03-03-2022	82.15	27.00	12.45	20.45	0.05	1.15	NOT DETECTED
37.	07-03-2022	75.62	29.14	17.21	27.18	1.00	2.10	NOT DETECTED
38.	10-03-2022	85.67	31.18	20.14	30.18	1.13	1.76	NOT DETECTED
39.	14-03-2022	84.54	29.12	18.77	27.15	0.75	1.23	NOT DETECTED
40.	17-03-2022	78.32	35.84	21.34	28.91	0.90	2.10	NOT DETECTED
41.	21-03-2022	77.35	30.48	16.93	25.62	1.14	1.52	NOT DETECTED
42.	24-03-2022	85.34	36.75	20.16	27.85	0.75	1.00	NOT DETECTED
43.	28-03-2022	88.23	34.52	21.15	28.92	0.90	1.43	NOT DETECTED
44.	30-03-2022	85.34	30.92	24.56	30.25	0.75	1.95	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				
		15-11-2021	14-12-2021	06-01-2022	01-02-2022	18-03-2022
1	06:00 to 07:00	55.4	65.5	62.34	64.34	63.17
2	07:00 to 08:00	61.6	63.5	65.78	66.12	65.18
3	08:00 to 09:00	62.5	66.9	68.14	69.84	66.2
4	09:00 to 10:00	65.4	67.5	68.35	68.75	63.5
5	10:00 to 11:00	61.9	68.6	67.51	69.23	67.5
6	11:00 to 12:00	63.4	61.5	65.23	68.21	69.71
7	12:00 to 13:00	67.8	66.4	67.12	69.65	68.2
8	13:00 to 14:00	68.3	68.9	65.15	68.73	67.21
9	14:00 to 15:00	68.1	66.7	62.18	66.19	65.48
10	15:00 to 16:00	69.4	67.5	67.12	68.45	67.42
11	16:00 to 17:00	69.5	68.1	65.4	67.7	68.5
12	17:00 to 18:00	66.2	68.5	64.5	66.2	69.74
13	18:00 to 19:00	61.8	66.9	62.19	65.69	64.26
14	19:00 to 20:00	60.7	62.5	60.15	67.34	66.83
15	20:00 to 21:00	66.5	63.3	65.1	65.3	64.33
16	21:00 to 22:00	63.5	58.9	61.15	63.45	62.14
Day Time		<75 dB (A)				

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Location Name		CT3 RMU-2				
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time				
		15-11-2021	14-12-2021	06-01-2022	01-02-2022	18-03-2022
1	22:00 to 23:00	60.5	61.3	60.28	62.67	63.54
2	23:00 to 24:00	63.4	59.7	61.25	63.28	64.52
3	24:00 to 01:00	62.8	60.6	58.25	61.64	62.68
4	01:00 to 02:00	62.5	60.5	55.15	60.75	61.28
5	02:00 to 03:00	60.5	56.7	59.25	61.55	60.98
6	03:00 to 04:00	61.3	63.5	60.15	62.78	61.27
7	04:00 to 05:00	60.6	62.8	57.15	63.45	64.82
8	05:00 to 06:00	62.4	64.5	58.5	62.19	63.12
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				
		16-11-2021	07-12-2021	07-01-2022	08-02-2022	02-03-2022
1	06:00 to 07:00	63.1	61.8	60.1	61.23	62.85
2	07:00 to 08:00	66.7	63.8	61.25	63.45	64.51
3	08:00 to 09:00	68.2	66.7	62.45	64.56	65.78
4	09:00 to 10:00	64.9	65.3	66.75	68.92	69.81
5	10:00 to 11:00	69.1	66.7	63.23	67.4	66.21
6	11:00 to 12:00	66.8	62.9	61.25	66.23	67.35
7	12:00 to 13:00	65.2	64.2	62.15	65.29	66.74
8	13:00 to 14:00	64.4	62.5	63.15	67.24	68.31
9	14:00 to 15:00	60.5	63.6	60.28	66.18	65.1
10	15:00 to 16:00	62.3	60.6	61.15	62.45	64.22
11	16:00 to 17:00	61.5	63.5	63.45	65.14	64.27
12	17:00 to 18:00	58.5	60.5	66.34	67.29	66.87
13	18:00 to 19:00	59.2	58.5	61.25	64.25	65.46
14	19:00 to 20:00	58.5	58.3	60.25	63.45	62.87
15	20:00 to 21:00	60.3	59.5	57.84	60.23	61.32
16	21:00 to 22:00	58.9	58.5	56.52	58.45	59.76
Day Time		<75 dB (A)				

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Location Name		Near Fire Station				
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time				
		16-11-2021	07-12-2021	07-01-2022	08-02-2022	02-03-2022
1	22:00 to 23:00	57.9	58.2	60.24	57.15	56.27
2	23:00 to 24:00	61.6	57.5	63.18	58.15	57.32
3	24:00 to 01:00	60.3	57.5	61.15	58.44	59.51
4	01:00 to 02:00	61.9	56.8	60.15	56.45	55.23
5	02:00 to 03:00	60.6	56.9	60.2	52.34	53.21
6	03:00 to 04:00	56.8	55.4	58.45	55.67	56.75
7	04:00 to 05:00	60.9	57.8	61.25	56.89	55.21
8	05:00 to 06:00	59.4	60.2	60.2	58.23	57.34
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				
		15-11-2021	13-12-2021	05-01-2022	07-02-2022	03-03-2022
1	06:00 to 07:00	61.6	63.4	61.18	63.78	64.23
2	07:00 to 08:00	65.2	66.9	63.23	66.21	67.28
3	08:00 to 09:00	63.9	65.5	61.15	64.92	65.31
4	09:00 to 10:00	65.5	69.6	67.84	66.25	67.33
5	10:00 to 11:00	63.5	65.2	64.69	65.23	64.21
6	11:00 to 12:00	67.6	66.5	65.66	68.14	69.74
7	12:00 to 13:00	68.6	69.5	68.14	69.15	68.31
8	13:00 to 14:00	65.5	69.2	67.15	66.25	65.93
9	14:00 to 15:00	69.4	69.4	69.15	65.23	64.12
10	15:00 to 16:00	69.2	69.5	66.25	67.39	68.46
11	16:00 to 17:00	68.7	69.5	68.14	69.45	67.5
12	17:00 to 18:00	68.3	68.2	62.44	65.18	66.32
13	18:00 to 19:00	65.1	69.5	67.12	68.35	67.31
14	19:00 to 20:00	62.4	65.5	69.15	66.54	65.43
15	20:00 to 21:00	60.7	61.5	67.23	63.45	62.14
16	21:00 to 22:00	62.4	64.5	61.25	62.93	63.14
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				
		15-11-2021	13-12-2021	05-01-2022	07-02-2022	03-03-2022
1	22:00 to 23:00	62.6	61.5	60.24	61.76	60.78
2	23:00 to 24:00	63.7	62.5	63.18	62.3	63.42
3	24:00 to 01:00	60.5	62.3	61.15	60.45	59.44
4	01:00 to 02:00	62.4	62.5	60.15	58.96	57.32
5	02:00 to 03:00	61.5	61.6	60.2	55.37	54.28
6	03:00 to 04:00	61.5	60.3	58.45	57.24	56.39
7	04:00 to 05:00	62.9	64.4	61.25	60.35	61.28
8	05:00 to 06:00	60.5	61.8	60.2	61.86	62.53
Day Time		<70 dB (A)				

Test Method	IS: 9989 : 1981

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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				
		16-11-2021	06-12-2021	18-01-2022	15-02-2022	09-03-2022
1	06:00 to 07:00	62.5	62.8	61.23	59.45	60.1
2	07:00 to 08:00	63.5	63.5	62.54	60.14	61.86
3	08:00 to 09:00	64.9	64.5	63.4	66.83	65.91
4	09:00 to 10:00	65.8	66.9	65.23	64.2	63.28
5	10:00 to 11:00	67.8	66.5	63.21	67.16	68.72
6	11:00 to 12:00	69.6	66.7	64.35	65.34	66.32
7	12:00 to 13:00	68.2	68.5	67.34	64.56	65.97
8	13:00 to 14:00	67.8	65.5	66.23	62.75	63.12
9	14:00 to 15:00	66.8	62.6	61.23	60.45	59.54
10	15:00 to 16:00	65.4	63.5	65.23	63.46	62.38
11	16:00 to 17:00	65.1	66.7	67.2	65.29	66.39
12	17:00 to 18:00	60.5	62.4	63.22	66.21	67.31
13	18:00 to 19:00	60.8	61.5	62.45	65.21	66.79
14	19:00 to 20:00	67.3	60.5	61.23	62.3	63.21
15	20:00 to 21:00	61.9	60.3	59.87	58.45	59.54
16	21:00 to 22:00	62.5	60.1	58.75	57.19	58.42
Day Time		<75 dB (A)				

Continue...

Location Name		PUB/Adani House				
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time				
		16-11-2021	06-12-2021	18-01-2022	15-02-2022	09-03-2022
1	22:00 to 23:00	62.8	60.3	57.34	56.24	57.17
2	23:00 to 24:00	63.1	60.2	60.23	58.25	59.64
3	24:00 to 01:00	62.5	62.5	59.25	57.25	58.43
4	01:00 to 02:00	61.5	60.4	58.34	55.21	56.34
5	02:00 to 03:00	60.6	60.4	57.64	54.59	53.76
6	03:00 to 04:00	60.6	60.2	57.45	58.69	59.73
7	04:00 to 05:00	64.3	62.3	58.23	59.23	58.21
8	05:00 to 06:00	63.6	62.3	59.25	57.38	56.24
Day Time		<70 dB (A)				

Test Method	IS: 9989 : 1981

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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
Oct-21								
1	Particulate Matter	mg/Nm^3	30.61		26.74		**150**	**IS 11255 (Part - 1)**
2	Sulfur Dioxide as SO_2	ppm	5.55		4.45		**100**	**IS 11255 (Part - 2)**
3	Oxides of Nitrogen as NO_X	ppm	34.62		29.37		**50**	**IS 11255 (Part - 7)**
Nov-21								
1	Particulate Matter	mg/Nm^3	32.45	31.45	21.34	18.10	**150**	**IS 11255 (Part - 1)**
2	Sulfur Dioxide as SO2	ppm	5.76	6.15	4.56	4.25	**100**	**IS 11255 (Part - 2)**
3	Oxides of Nitrogen as NOX	ppm	29.54	27.10	25.12	21.45	**50**	**IS 11255 (Part - 7)**
Dec-21								
1	Particulate Matter	mg/Nm^3	30.12	28.76	24.56	20.23	**150**	**IS 11255 (Part - 1)**
2	Sulfur Dioxide as SO_2	ppm	6.12	5.50	5.12	5.11	**100**	**IS 11255 (Part - 2)**
3	Oxides of Nitrogen as NO_X	ppm	27.15	28.15	26.18	18.76	**50**	**IS 11255 (Part - 7)**
Jan-22								
1	Particulate Matter	mg/Nm^3		25.10	21.23		**150**	**IS 11255 (Part - 1)**
2	Sulfur Dioxide as SO_2	ppm		9.26	5.45		**100**	**IS 11255 (Part - 2)**
3	Oxides of Nitrogen as NO_X	ppm		25.60	23.25		**50**	**IS 11255 (Part - 7)**

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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
Feb-22								
1	Particulate Matter	mg/Nm^3	21.44		18.36		**150**	**IS 11255 (Part - 1)**
2	Sulfur Dioxide as SO_2	ppm	7.23		6.19		**100**	**IS 11255 (Part - 2)**
3	Oxides of Nitrogen as NO_X	ppm	20.18		22.52		**50**	**IS 11255 (Part - 7)**
Mar-22								
1	Particulate Matter	mg/Nm^3	19.45	21.3	16.53		**150**	**IS 11255 (Part - 1)**
2	Sulfur Dioxide as SO_2	ppm	6.48	7.5	5.85		**100**	**IS 11255 (Part - 2)**
3	Oxides of Nitrogen as NO_X	ppm	21.35	22.1	20.90		**50**	**IS 11255 (Part - 7)**

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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
			Feb-22					
			26-02-2022	26-02-2022	26-02-2022	26-02-2022		
1	Particulate Matter	mg/Nm^3	24.8	18.64	18.35	20.4	150	IS 11255 (Part - 1)
2	Sulfur 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)
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
			Mar-22					
			05-03-2022	05-03-2022	05-03-2022	09-03-2022		
1	Particulate Matter	mg/Nm^3	21.38	24.1	19.26	16.75	150	IS 11255 (Part - 1)
2	Sulfur Dioxide as SO_2	ppm	6.1	7.13	6.74	5.13	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	31.23	33.48	30.13	26.75	50	IS 11255 (Part - 7)

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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
			Mar-22					
			09-03-2022	09-03-2022	09-03-2022	09-03-2022		
1	Particulate Matter	mg/Nm^3	20.49	16.78	20.35	21.34	**150**	**IS 11255 (Part - 1)**
2	Sulfur Dioxide as SO_2	ppm	6.34	5.1	6.15	6.8	**100**	**IS 11255 (Part - 2)**
3	Oxides of Nitrogen as NO_X	ppm	33.25	26.43	30.37	30.15	**50**	**IS 11255 (Part - 7)**

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RESULTS OF BORE HOLE WATER

SR.NO.	TEST PARAMETERS	UNIT	Pump House-1	Pump House-2	Pump House-3	Near Control room	Near ETP	TEST METHOD
			26/03/2022	26/03/2022	26/03/2022	26/03/2022	26/03/2022	
1.	pH @ 25 ° C	--	8.17	7.85	8.06	7.96	7.60	IS 3025(Part 11)1983
2.	Salinity	ppt	3.83	0.95	1.18	0.97	11.85	APHA 23rd Ed.,2017,2520 B
3.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39)1991, Amd. 2
4.	Hydrocarbon	mg/L	N.D.	N.D.	N.D.	N.D.	N.D.	GC/GCMS
5.	Lead as Pb	mg/L	0.056	0.064	0.036	0.048	0.038	IS 3025 (PART 47) 1994
6.	Arsenic as As	mg/L	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017,3114-C
7.	Nickel as Ni	mg/L	BDL	BDL	BDL	BDL	BDL	IS 3025 (PART 54) 2003
8.	Total Chromium as Cr	mg/L	BDL	0.084	BDL	BDL	0.092	IS 3025 (PART 52) 2003
9.	Cadmium as Cd	mg/L	BDL	BDL	BDL	BDL	BDL	IS 3025(PART 41) 1992
10.	Mercury as Hg	mg/L	BDL	BDL	BDL	BDL	BDL	APHA 23rd Ed.,2017, 3112-B
11.	Zinc as Zn	mg/L	0.154	0.282	0.194	0.236	0.211	IS 3025(PART 49) 1994
12.	Copper as Cu	mg/L	BDL	BDL	BDL	BDL	BDL	IS 3025 (PART 42) 1992
13.	Iron as Fe	mg/L	0.38	0.94	0.86	0.91	1.12	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	1.90	2.10	1.95	2.10	2.15	--

GUJARAT VAPI.

Mr. Nilesh Patel
Sr. Chemist

Mr. Nitin Tandel
Technical Manager

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

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 (PM10)	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

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Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

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	--	--

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CIN:U73100GJ2007PTC051463

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

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CIN:U73100GJ2007PTC051463

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 March – 2022					
LOCATION	**Area (In Ha.)**	**Trees (Nos.)**	**Palm (Nos.)**	**Shrubs (SQM)**	**Lawn (SQM)**
SV COLONY	71.66	34920	7962	69696.00	100646.00
PORT & NON SEZ	81.61	149359	19220	75061.78	62966.38
SEZ	116.60	227120	20489	220583.60	28162.03
MITAP	2.52	8168	33	3340.00	4036.00
WEST PORT	109.37	256552	70831	24612.00	22854.15
AGRI PARK	8.94	17244	1332	5400.00	2121.44
SOUTH PORT	14.45	27530	3470	3882.00	3327.26
Samudra Township	57.27	63722	11834	23908.89	47520.07
Productive Farming (Vadala Farm)	23.79	27976	--	--	--
TOTAL (APSEZL)	**486.19**	**8,12,591**	**1,35,171**	**426484.27**	**271633.33**
		Total Saplings: 9,47,762 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

2021-22

Annual Report

CSR Kutch

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

adani Foundation

Our journey

Corporate Social Responsibility in India is going through an accelerating phase where the need for community centered impact is increasingly becoming more crucial than ever before. It is not just about the compliance with the laws and regulations but also about transitioning beyond the mandated CSR, Stakeholder engagement is a critical tool to ensure a comprehensive approach in carrying out responsible business and within that community ownership holds an important place.

Mundra is now Industrial and employment hub. Tremendous development is expected in upcoming years. In Year 2021-22, **Uthhan Project expanded its wings from 17 Primary schools to 35 Primary schools** with **MOU with Education Department**. Sustainable Agriculture Initiatives i.e. Natural Farming, Home biogas, Drip Irrigation, Vermi compost, Tissue Culture and Various type of fodder growing are started as a mission with Capacity Building with **5500+ Farmers and 3500+ cattle owners**. Mangroves costal biodiversity, water harvesting structures and Home Biogas promotion is ongoing sustainable project with proper documentation and demarcation. Adani Vidya Mandir has proven best in education by reaching to its apex level of Quality Education through digital technology. It is nurturing fisher folk community students by enabling them access to Tablets to prepare them techno-savy.

Under the guidance of leadership team, Community Resource Centre is developed as a systematic model for empowering rural community with an aim to bridge the gap between underprivileged community who need support and government schemes. Adani Foundation firmly believes to carry all its project by involving community in its operations. The involvement of Fisherman community and women provides real-time feedback and leads to successful projects.

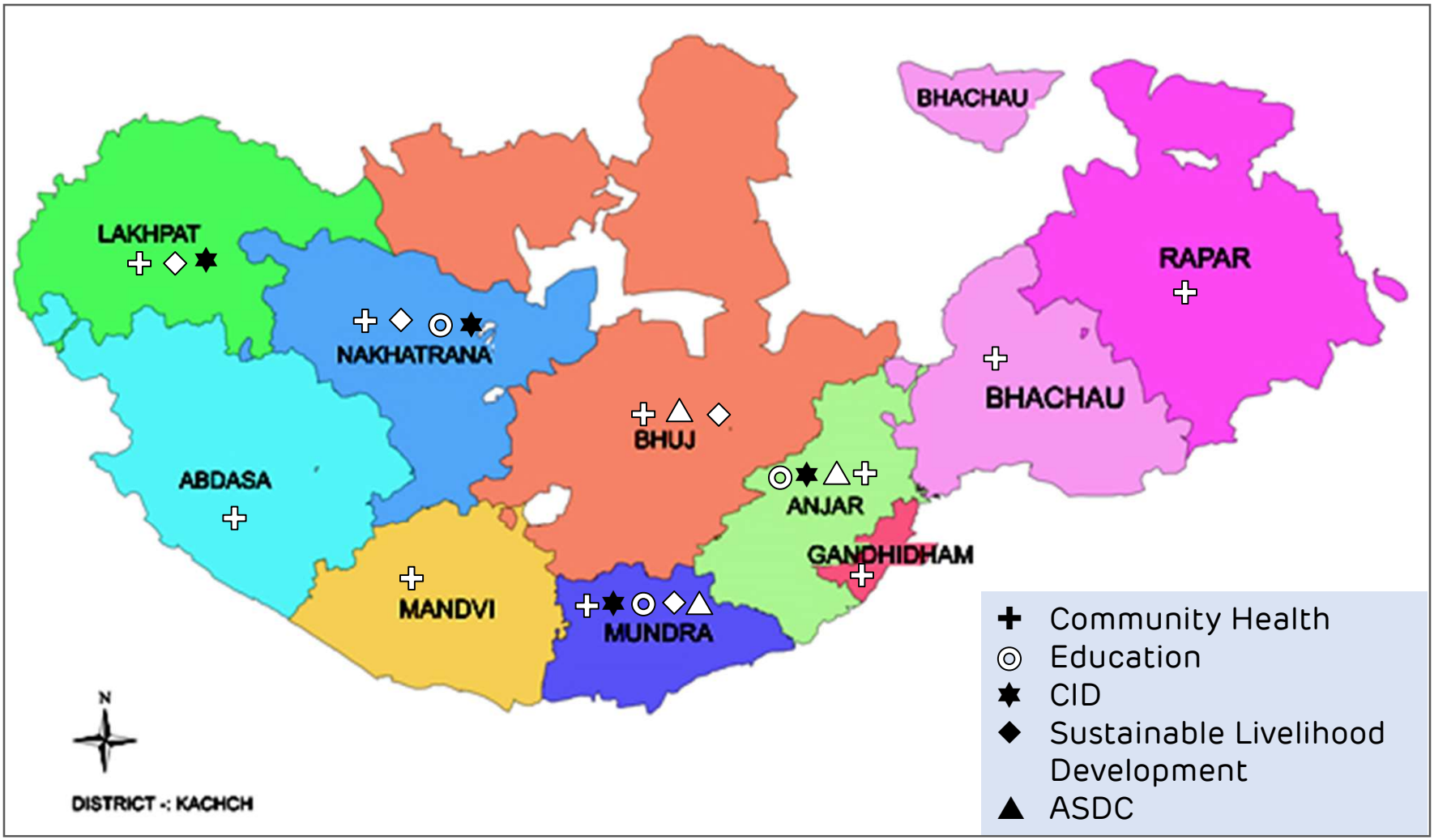
'Technical Training Program' by Adani Skill Development Centre for Fisher Folk community youth is a flagship program to provide them with a platform to get skilled and carve their future into new career options. The ASDC is committed to the cause of the deprived and underprivileged to generate employment through enhancing skills. It has been working relentlessly which resulted in rapport building with District Administration Kutch also.

Respected Shri Dr. Priti G. Adani, Chair Person, Adani Foundation with her charismatic leadership has transformed millions of lives through sustainable development initiatives. Along with her, Rakshit Shah, Executive Director, APSEZ has been a great mentor and involves himself thoroughly in all development initiatives. Mundra team would also like to acknowledge Shri Vasant Gadhvi, Executive Director, Adani Foundation for cultivating great ideas and guidance to the team. We are also grateful to Respected Gowda Sir (COO, AF) for being a source of motivation.

AF Mundra team acknowledges CEO - APSEZ, Human Resource Department- APSEZ, Finance Department-APSE for continuous support and facilitation.

Towards Growth with Goodness, Adani Foundation presents highlights of FY 2021 in this Annual Report!

Our Presence in Kutch



INDEX

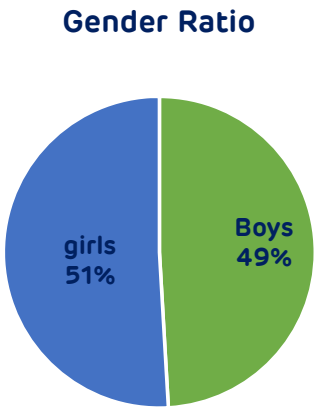
Education (SDG - 4/4.a)

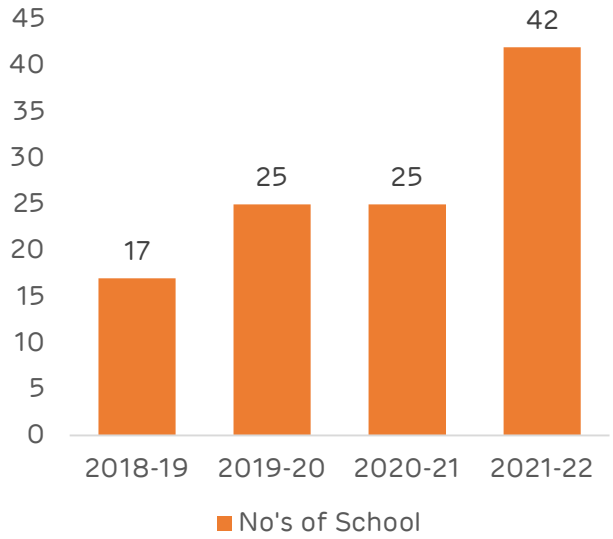
Education Projects

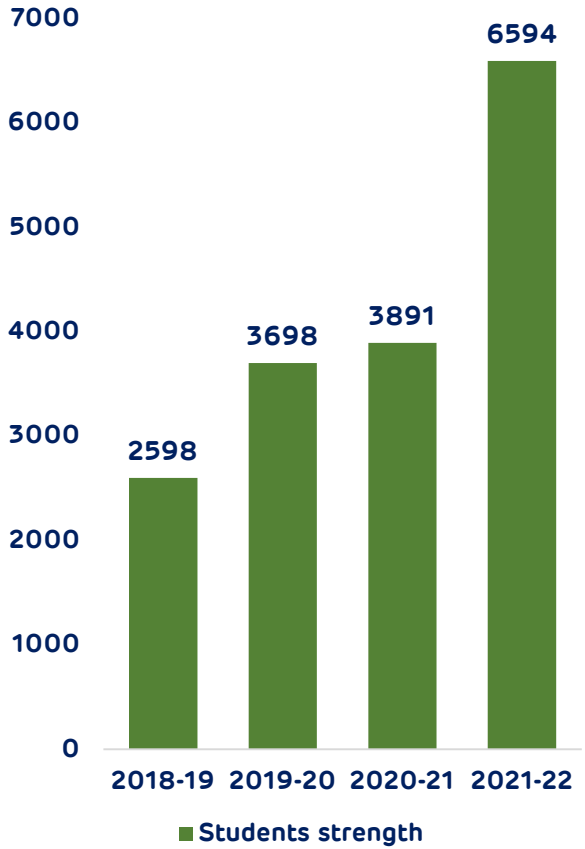
To foster students' learning abilities and achieve better learning outcomes at the grassroots, Adani Foundation charted an innovative intervention in Year 2018-19 through Project Utthan.

This comprehensive intervention entails:

- ✔ Adopting government primary schools
- ✔ Tutoring Priya Vidyarthi's (progressive learners)
- ✔ Arresting dropout rates
- ✔ Collaborating for teachers' capacity building
- ✔ Creating joyful learning spaces







Annual Achievement

- Introducing English as a third language.

Though talent has no barriers to success yet often rural community children and youth are devoid of higher education and better job opportunities only because of lack of command over English language. However, getting equipped with International language expands horizon of a student by opening wide communication mediums for them to learn and grow.

In Gujarat, The language gets introduced from Class4 whereas under the Project Utthan, Adani Foundation initiated to provide basics of English from class 1 with a structured syllabus. Utthan assisted 3,246 students to learn English from Class 1.

Table shows the result of Gunotsav of year 2021-22 for 18 Schools (24 Schools Results are awaited)

Gunotsav Result					
Academic year	Numbers of school in grade				
	A+	A	B	C	D
2020-21	1	0	30	11	0
2021-22	2	8	7	1	0

Utthan assisted

3246

students to learn English from Class 1

Class		Students are able for....
I	62 %	✔ Standing line, sleeping line, Left Slanting line, Right Slanting line, Left Curve, Right Curve, Up Curve, Down Curve ✔ Writing capital letter of A to Z, Identification of alphabet, Match alphabet with object
II	64 %	✔ Writing capital and small letters ✔ Vowel and consonant ✔ Week, month, and numbers up to 30
III	73 %	✔ Differentiate between capital and small letters ✔ Recite rhymes ✔ Numbers 1-50, English name of shapes, fruit, vegetable, and stationary items ✔ Action words: Sit down, stand up, Run, Walk, Jump
IV	76 %	✔ Capital and small letters ✔ Body parts, Golden words ✔ Self-introduction in 5-7 sentences

IT ON WHEELS
Benefited 3418 students

Digital literacy in early schooling is the first step to addressing access disparities in this evolving digital environment which is not feasible for rural students. This impede their development.

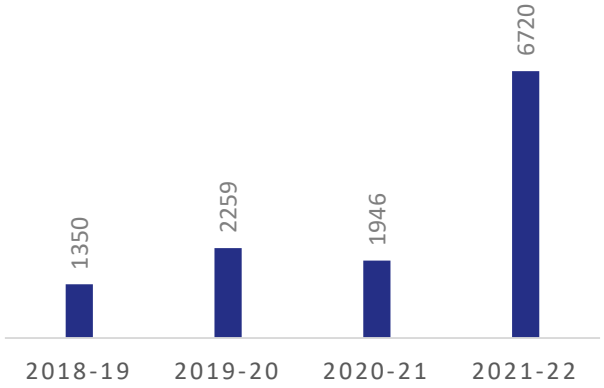
IT on wheel program is run to teach them Basic emphasizes elementary school digital literacy.

Highlights

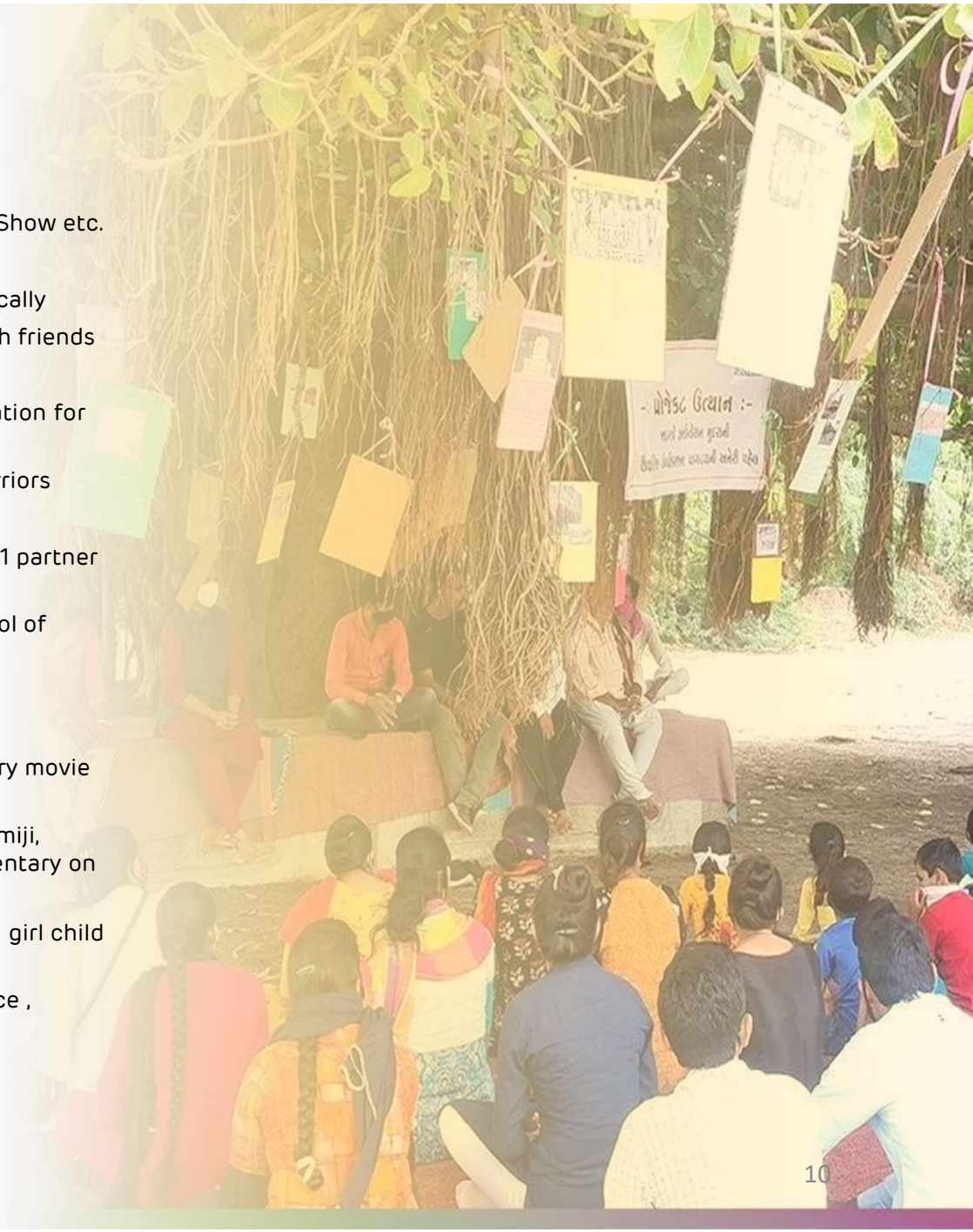
- ✔ 40 laptops + 2 IT instructor + 01 Van with customize basic syllabus
- ✔ Catering students from classes: 4-8
- ✔ IT on Wheel visits fortnightly to each school under project Utthan.

Annual Mother's meet

A child's maximum growth occurs in initial years of education where involvement of teacher as well as mother plays a key role in nurturing their character and personality. Many of the students are first generation learners with uneducated parents, in such case, Mother's meet helps mother and teacher are both in sync towards child's education. Moreover, mothers feel empowered and valued and gets insight of the school activities regularly.



Celebration/competition	Activities performed
World Book Day	▪ Virtual Group Reading, Puppetry Show etc.
Mother's Day	▪ Letter to supermom
International Yoga Day	▪ Performing Yoga Virtually + Physically
World emoji day	▪ Preparing emoji + exchanging with friends
Azadi ka Amrut Mahotsav	▪ Poster making competition
Rashtra Gaan	▪ Certificate from Ministry of Education for 'Recitation of Rashtragaan'.
Raksha Bandhan	▪ Eco Friendly Rakhi for Corona warriors
Teachers' day	▪ Gratitude wall for teachers
ISLM Participation	▪ Digital bookmark exchange with 11 partner schools from 5 countries
Virtual connection around the World	▪ Live connected with partner school of Croatia
Children's Day	▪ Paint party
World computer literacy day	▪ Restart of 'IT on Wheel'
National Maths Day	▪ Match Competition & Documentary movie on Shri Ramanujan.
National Youth Day	▪ Character sketch, Speech on Swamiji, Quote Competition ,Short documentary on Swamiji.
National Girl Child Day	▪ Contribution of Savitribai Phule in girl child education
National Science Day	▪ Girl/Women noble laurels in science , Model making ▪ Documentary on Raman effect
International Women's Day	▪ Women's Day with 1000 Mothers



Healthy competition inspires kids to exhibit their maximum potential. When students compete, they will become more inquisitive, research independently and learn to work with others. They will strive to do more than is required. These abilities prepare children for future situations of all kinds. Due to pandemic students were away from multiple competitions and celebrations were planned in school. Which helps them for-

- Improving teamwork and collaboration
- Enhancing social and emotional learning
- Increasing intrinsic motivation
- Facilitating growth mind-set
- Building mental toughness
- Virtual celebrations and competitions to engage students during lockdown period.

Capacity Building Program

To make the project sustainable, Utthan closely **works with block resource coordinators to organize monthly training sessions for Government teachers + Utthan sahayaks on various subjects.** Entire academic year teachers training is focused on National Education Policy 2020.

Utthan's outreach strategies to support children's learning

- 100 hours capacity building programs for Utthan sahayaks and school Teachers
- 90% students were involved in various activities under Aazadi ka Amrit Mahotsav
- 6600 hours were given in 'SAMAYDAAN'
- 100 % participation in 100 days reading campaign
- Project is in alignment with NIPUN Bharat: FLN
- Dedicatedly 80 hours provided for preparing JNV and NMMS examination. 19 number of students qualified for JNV and NMMS.

100% Utthan Schools are equipped with:

- ✓ Smart classrooms
- ✓ LED TV
- ✓ Library cupboard with 350 books
- ✓ Annual subscription of 07 magazines
- ✓ Sports materials
- ✓ Music instruments
- ✓ BALA Painting
- ✓ TLMs focusing language and numeracy
- ✓ Kitchen garden – 4200 plants planted

Reaching out to students with no smartphones at home

24,748 Voice messages sent to create awareness regarding Precautions during Covid19

All students taught during sheri shikshan by Utthan sahayaks

74% progressive learners virtually connected on various platform

12

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

EDUCATION: FREE AND COMPULSORY – WHAT A WAY TO LEARN LOGIC!" The quote mentioned unfolds the distinguished 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. Due to Covid Pandemic this year Class 1st Admission was done.

AVMB –Adani Vidhya Mandir, Bhadreswar is accredited By NABET under 'Quality Council of India'

SDG

- ✓ ***Quality education - 4***
- ✓ ***GenderEquality - 5***
- ✓ ***Reduced Inequality - 10***

National Accreditation Board for Education and Training is a constituent Board of Quality Council of India.

NABET is offering accreditation program for Quality School Governance in the Country, with a view to provide framework for the effective management and delivery of the holistic education program aimed at overall development of students.

State level First Gujarati Medium school accredited by NABET

Adani Vidya Mandir Bhadreshwar Gujarat Board Standard 10th Examination Result is 100% (27 students have passed the examination out of 27). Adani Foundation took complete responsibility of further study of students with respect to their interest.

The global upsurge of the Covid-19 pandemic and the resultant lockdown has brought all of us to face such unprecedented times and situations. The challenge was rural locality, network unavailability, lack of health awareness, apprehensions for technology and gadgets and financial crunch to spend on mobile / Internet.

But We did not Give-up and reached out to our students to pursuit educational through virtual platform by various initiative.

Objective

- Provide free and Quality Education to economically and socially under-privileged students
- Support to students for academics and co-curricular activities and overall well-being

Project Activity

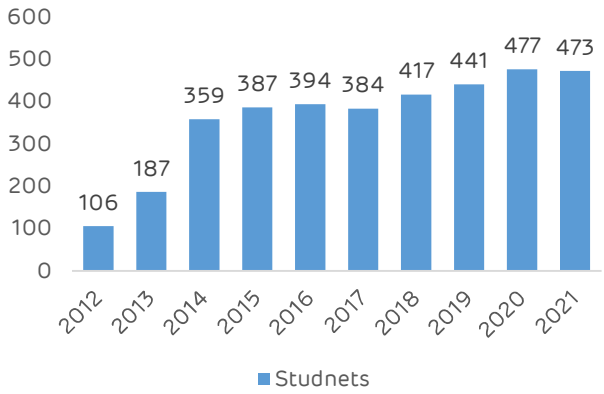
- Balwadis started in 2010, for students in age group of 2-5 yrs. In 2013, this school was built on a donated land
- Cost Free food, education, uniforms, online tablets
- Classes from Gr-I to Gr-X with 22 qualified teachers and 8 helping staffs
- Monthly stay of Gr-X students at school before exam, along with teachers

Outcome

- **473 underprivileged students** of Fisherman & Maldhari communities from **8 villages** taking education at the school
- Educated children have better opportunities of income beyond fishing
- Quality of life and change of mindset of students & families
- With education, many addictions reduced

AVMB STD - 10 SE BATCH RESULT
Year 2021-2022

SR NO	GRADE	STUDENTS
1	Above 80 %	01
2	Above 70 %	00
3	Above 60 %	07
4	Above 50 %	07
5	Above 35 %	12
	TOTAL	27



- Street Education popularly known as 'Sheri Shikshan' was initiated for the students who could not attend sessions online.
- Offline education was started for Class 10 students under the Covid19 Guidelines.
- 'Fit India week' celebrated by arranging various sports events, Elocution, Written and Drawing competition for class 9 and 10 students.
- Covid Vaccination drive for Class 10 students in coordination with GKGH, Bhuj Hospital.
- Various National and International day celebrations at School level with learn and fun activities as well as conducted Motivation Sessions.
- Motivating Girl Child from fisherfolk families for Education after 10th Standard.

Community Health Projects

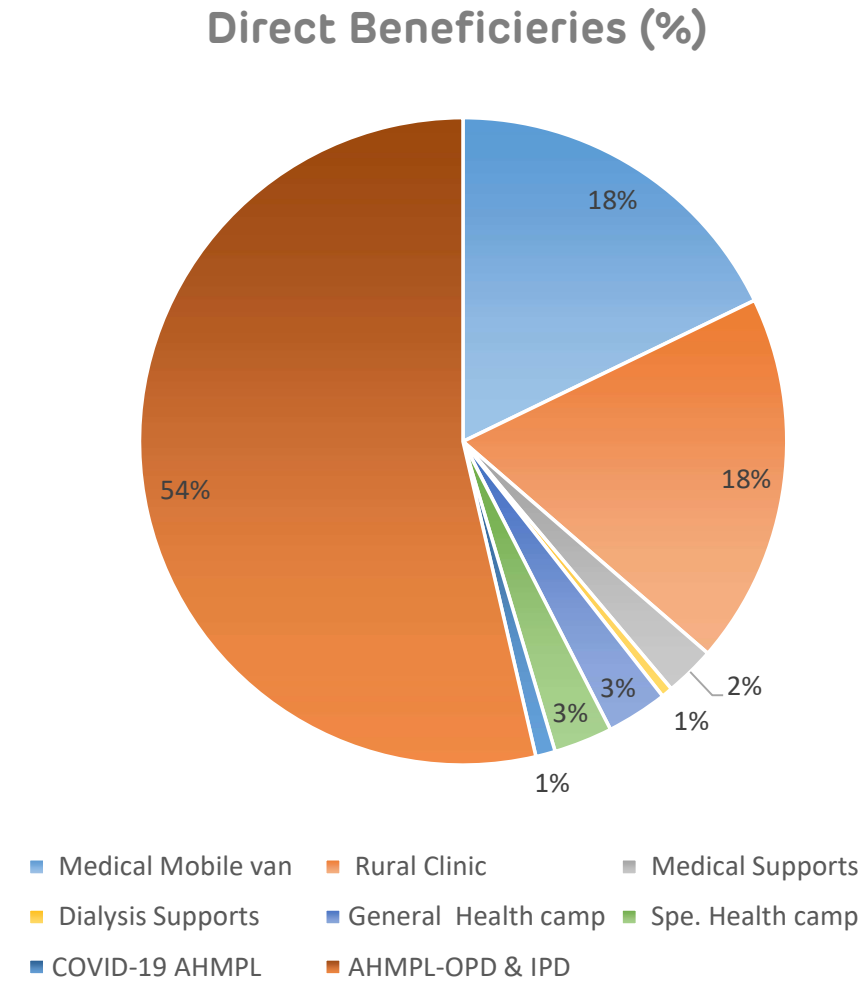
Good Health is extremely important, invaluable and indispensable. A Healthy body paves the way for a healthy mind. Adani Foundation team at Kutch works towards better health of community and access to easy consultation with expert doctors in collaboration with G.K General Hospital, Bhuj and Adani Hospital, Mundra. For more than a decade, Community care is provided through Mobile Health Care Units, Rural Clinics and Health Cards for senior citizens.

In span of 6 years, there are number of cases reported for Kidney related diseases. Under those circumstances, periodic and special health camps are scheduled to address this issue, provide them necessary treatment support. We also conduct awareness camps for preventive measures against kidney problems.

It is health that is real Wealth , not a piece of Gold and silver.

Preventive and curative healthcare are critical to sustaining community health and promoting economic prosperity. The objective is to find the proper balance that will lead to a long, healthy, and fulfilling life journey for that AF

Project	Direct Beneficiary	In-Direct Beneficiary
Medical Mobile van	10043	39844
Rural Clinic	10439	41436
Medical Supports	1409	5532
Dialysis Supports	314	30
General Health camp	1715	6852
Spe. Health camp	1655	6624
COVID-19 AHMPL	554	2770
AHMPL-OPD & IPD	31291	90573
Total	57420	193661



Rural Clinic & Mobile Health Care unit

Health is the most basic prerequisite for community development and in order to transform rural healthcare landscape Adani Foundation has initiated **'Mobile Health Care'** and **'Rural Clinic Service'** to providing primary, preventative and curative healthcare services accessible in inaccessible areas which is being executed since a decade. Adani Foundation has acted as catalyst to reduce health disparity and hardship of medical expenses among community.

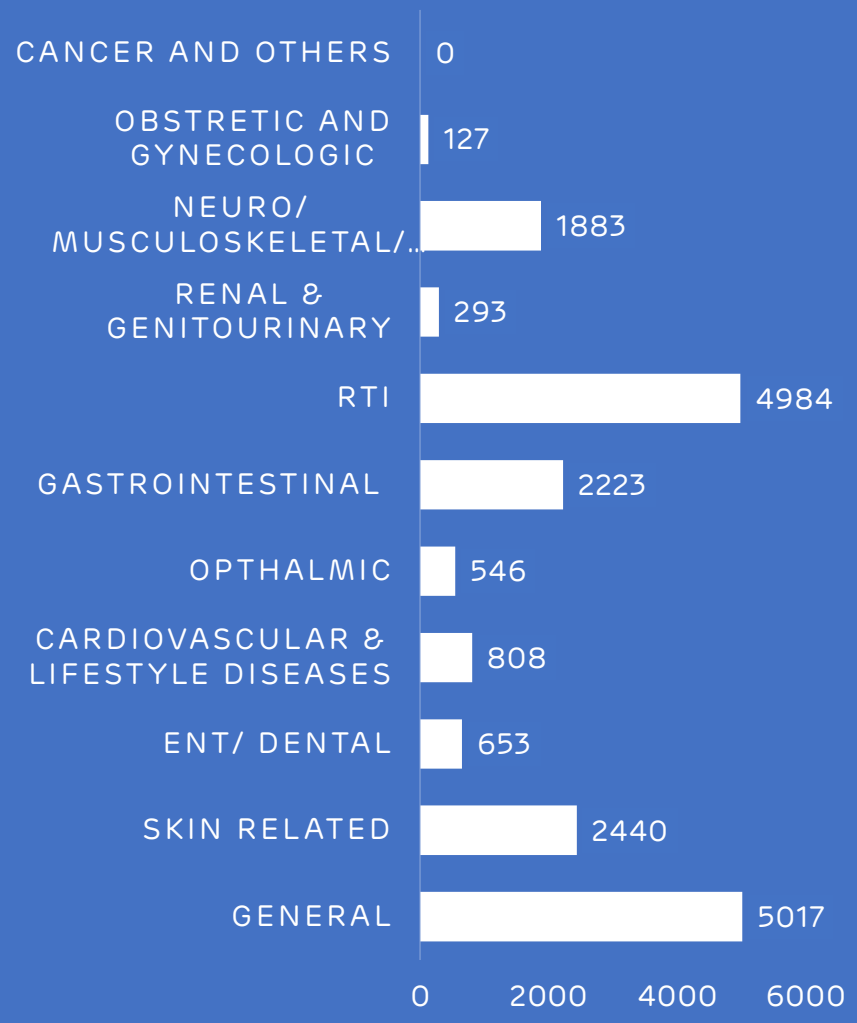
- ✓ Time saving
- ✓ Reduce Medical expenses
- ✓ diagnosis and treatment
- ✓ Preventive health screenings
- ✓ Early disease diagnosis
- ✓ Chronic disease management
- ✓ Health education & Counseling

The mobile health care unit is operated by Medical officer and health care assistant and equipped with various integrated medical devices that allows Medical staff to conduct preliminary check up. more than 90 types of general life saving medicines are available in MHCU and covered 29 villages and 07 fishermen settlements population. MHCU and Rural Clinics are providing services of Bloood pressure checking, Sugar testing and ECG as well,

Similarly rural clinics are serving at **9 Villages of Mundra 3 Villages of Anjar Block and Mandavi Block.**

The MHCU and Rural Clinics services are available with Token Charges Rs. 20 per patient.

DISEASE WISE DATA OF MHCU & RURAL CLINIC



Under the '**Preventive Health Care**' programme, specific screening and questionnaire are developed for Non communicable disease(NCD) like ***Blood pressure, Sugar, Thyroid*** and suspected patients are referred for secondary examination at Adani Hospital, Mundra.

More than **110 Patients are diagnosed with NCD and are cured before patient reaches to severity stage**.

Support to Vulnerable Patients

Adani foundation provide financial assistance to the most economically challenged patients who are suffering from life threatening diseases related to heart, liver, kidney and cancer cases with Minimum Participation.

In the current year total **1409 patients from Mundra, Mandavi and Anjar Block were supported in Adani Hospital Mundra.**

Dialysis Support

Patients with kidney disorders must undergo periodic dialysis, which is expensive and lends financial burden to family.

Adani Foundation has initiated a dialysis program to support foremost needy patients .

Till date 5 patients with critical and severe condition has been supported for dialysis with token charge of Rs. 150 per session. Regular dialysis has improved patients condition prolonging their life.

Senior Citizen Project

Adani Foundation has launched Senior citizen project with the aim to provide access for Promotive, Preventive and Curative health service to more than **8500+** elderly people of Mundra since 2011 to 2020 – A Decade.

After 2021 to make the project sustainable, Linkages with Government Schemes and senior citizens are initiated. Total **61 Senior citizens has been Facilitated with Senior Citizen and Widow Pension Scheme Rs. 1250/Month in 2021**. Till more than **750+ Senior citizens ARE Linked with Gov.schmes..**

Health camps

Getting the right health screenings and treatments is the key to living longer and better.

Major Activities

- Under Dignity of workforce program, weekly medical camps organized at labour colonies.
- General health check up of work force plus deaddiction counselling done by Medical Officers.
- Motivational sessions by "**Prajapita Brahmakumaris**" are also organized to make them strong against addiction.
- General Health camps, Specialty camps, Pediatric camp especially for Malnourished children are organized frequently to provide health care treatment to the community.

In this year **total 5200+ People are diagnosed and treated accordingly**.

Corona Related Work at GKGH and AHMPL

- Started Covid care centre service at **Samudra town ship** to Provide medical services at 24 x7 hrs. Home Visit for examining patients with severe conditions and providing them immediate relief.
- AHMPL, Mundra was converted into Covid Hospital with 100 bed Facilities with oxygen to extend treatment to Covid patients. All related coordination done by our team for more than **350+ OPDs and IPDs**.
- Provided Oxygen Concentrators to home isolated patients to safeguard their lives during pandemic.
- Provide hearses to shift Covid deceased patients to Crematorium with all dignity.
- Precautionary voice message dissemination through '*Awaj de*' voice message service **Over 11000+** Community.
- Sanitized villages, Distribution of Vitamin C tablet to **2300+people**
- Adani Foundation employees volunteered for providing service in G K General Hospital, Bhuj during pandemic.

Machhimar Ajivika Uparjan Yojana

The availability of water for personal and domestic hygiene has been found to be an important factor in decreasing the rates of water-related diseases such as ascariasis, diarrhea, schistosomiasis, and trachoma. **2091 female beneficiaries** at nine fisherfolk vasahats.

- To Reduce women drudgery to get water at fisherfolk settlement
- To Reduce Water borne disease

Sr. No	Vashat	Family	Requirement	Remarks
1	Luni	116	15000	9 Months
2	BavdiBandar	107	17500	9 Months
3	RandhBandar	245	25000	9 Month
4	KutdiBandar	118	-	Linkages with MSPVL
5	ZarapraVasahat	90	-	Linkages with Port
6	Virabandar	80	-	Linkage with GWIL
7	Junabandar	160	-	Linkage with Mundra GP
8	GhavarvaroBanada	60	-	Linkage with GWIL
9	Zaraprachacha	55	-	Linkages with Port GWIL
Total		**1031**		

Gujarat Adani Institute of Medical Science (GAIMS) - Bhuj

Adani Foundation Team has initiated coordination with GKGH hospital since 2015 and established a reception area for the smooth patient coordination.

•GKGH Hospital is Covid Care Hospital since 22nd March 2020. in the second wave of Covid Adani Foundation staff members supported in patient counselling, coordinating and supporting for dead body Covid care van.

•Total **7826** Covid patients got treatment from overall Kutch with satisfaction.

•Dead body medical van –Dignity to death is one of the noble initiatives taken up by the Adani Foundation. If any death occurs in GKGH, dead bodies are shifted to the native village of the concerned in the Kutch District free of cost. Total 1163 dead bodies privileged till now to different locations in Kutch including Covid Patients.

•Mahiti Setu, A Platform at GKGH to Guide and Assist to get Government health scheme benefit. Through Mahiti Setu 6923 beneficiaries are sourced and more than 947 beneficiaries are linked with Ayushman Yojna and MAA Yojna.

Facilitation of Government Bal sahay Yojna- Rs.50000 Financial support to **527 family** who had lost their members due to covid-19.

Patient Care and Coordination at GKGH Bhuj to avail proper treatment and Guide for 100% satisfaction.

Environment Sustainability

Environmental sustainability involves making decisions and taking actions that are in the interests of protecting the natural world, with particular emphasis on preserving the capability of the environment to support human life. It is an important topic at the present time, as people are realizing the full impact that businesses and individuals can have on the environment.

Sustainable development has many important facets/components like social, economic, environmental, etc. these components are closely interrelated and mutually re-enforcing. Under Corporate Environmental responsibility 10 km radius villages from SEZ Boundaries.

To make connections between human actions and the level of biological diversity found within a habitat and/or ecosystem, In year 2017-18 project "Sanrakshan" was launched in coordination with GUIDE. MOU has been signed with Dr. Vijay Kumar – GUIDE for conservation of five spices of mangroves.

Miyawaki–Nana Kapaya

Miyawaki is a technique pioneered by Japanese botanist Akira Miyawaki, that helps build dense, native forests. The Miyawaki method of reconstitution of "indigenous forests by indigenous trees" produces a rich, dense and efficient protective pioneer forest in 20 to 30 years. The approach is supposed to ensure that plant growth is 10times faster and the resulting plantation is 30 times denser than usual. It involves planting dozens of native species in the same area, and becomes maintenance-free after the first three years.

Nana Kapaya village and proposed site for Miyawaki-Dense Plantation is very close to many industries in and around the Mundra landscape. This area is also very close to main roads and coastal creeks. Mainly dense to sparse Prosopis Juliflora- (Ganda Bavar cover) is recorded surrounding to project site with very few scattered native trees like-Limda, Deshi Bavaretc. Shrubs species like-Akadoand Aavarare also predominant close to site; while, grasses like
Chhabarand Dhrabare recorded in proposed plot area.

As shared and discussed by villagers, this proposed plot is also very close to sewage water tank and nallahs; and proposing for watering to our proposed plantation.
As discussed with villagers and Adani Foundation, we proposed the close or dense plantation at site-called 1Miyawaki 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 4965 saplings of different 42 spices is completed which will result in dense forest within 2 years.

Smriti van

Smriti van 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.
As a part of this Smritivan Memorial Park, it will have a museum, convention Centre, sunset point and Ecological park with around varied species of trees to attract different biodiversity.
For the ecological park, approx. 24 acres of land has been demarcated, wherein it is proposed to plant ~3 lakh local species trees.

Under Phase –1 project, Govt of Gujarat through GSDMA will be planting across 1 lakh trees, across 8 acres through "Miyawaki" methodology(Japanese technology of tree plantation). They have already enrolled the services of M/s Forest Creator, a Mumbai, based agency expertise in carrying out afforestation project, through Miyawaki technology.

Forest Creators have already been involved and completed 58such kind of project of Terrestrial afforestation, across India and this will be their 59thproject. (Details of project carried out Forest Creator attached)
Under this project, 60+ local species of trees will be planted and further the entire scope of development of Nursery, Soil enrichment, Plantation of saplings, mulching, biomass application, water supply & maintenance for 3 years are considered .
All Corporate of Kutch has supported fund for the same. APSEZ has done monitory support under CSR and Adani Foundation is coordinating for monitoring.

Coastal Bio diversity

Mangrove is a tropical tree or shrub that grows in swampy areas and has tangled roots located above ground. Mangroves, seagrass beds, and coral reefs work as a single system that keeps coastal zones healthy and provide essential habitat for thousands of Flora and Fauna.

Mangrove cover in India is 4992 km2 which is around 3% of global distribution and 0.15% of the country's total geographical area. With the second-largest mangrove cover in India, mangroves cover in Kutch increased from 794.77 km2 to 798.44 km2 *With dominant species of Avicennia marina, Rhizophora, Ceriops, Aegiceros* For the past two decades and APSEZ, Mundra is actively involved in mangrove conservation and management activities.

Adani Foundation contemplated to establishment of multi-species Mangrove Biodiversity Park to help disseminate knowledge on the mangrove ecosystem and simultaneously conserve the species with collaboration of Gujarat Institute of Desert Ecology (GUIDE), Bhuj, Kachchh.

Total 12 hector area have been developed with multi-species Mangrove plantation of ***Avicenna Marina ,Rhizophora Mucronata ,Ceriops Tagal ,Ceropos decandra at Luni Coast as phase wise in*** the year 2018-2019 (Phase-I). & Phase-II (2019-2020) with good survival rate.

So, to develop that as Bio- diversity park ,another 03 ha area coastal stretches have been planted with selected true mangrove species.

Fisheries Diversity

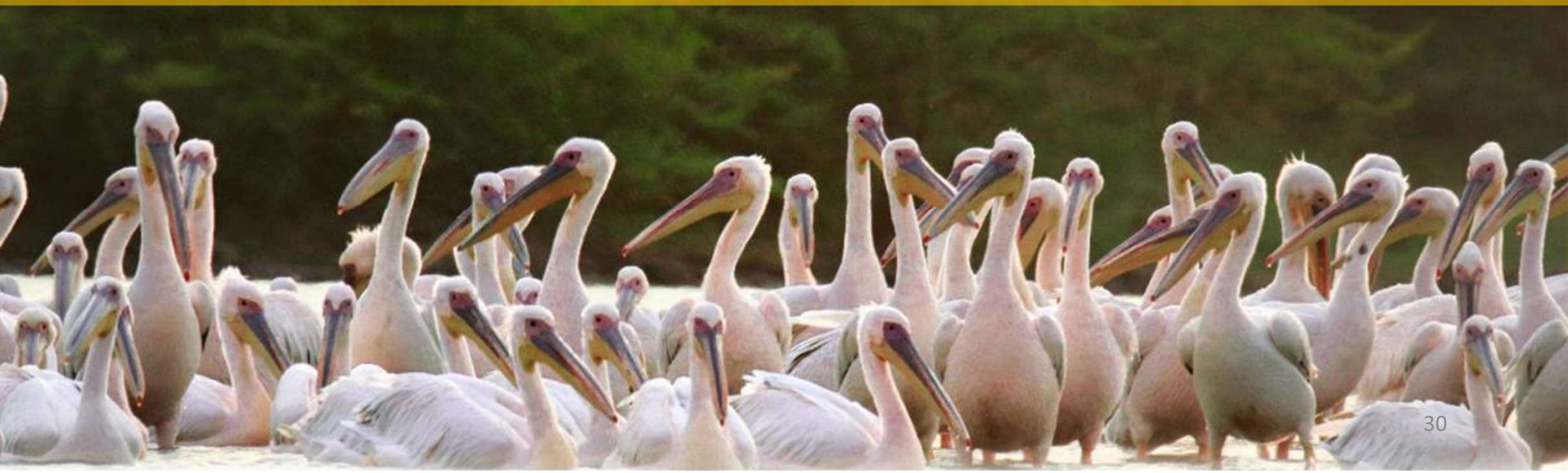
Mudskippers and bivalves were found near the waterfront. The gastropod, *Pirenella cingulata* few crabs ,Dead razor clams were also found inside the plantation site, A few crablets of *Scylla serrata* species and mud-skippers (*Periophthalmus waltoni*) were found in the cultivation site. In addition, catfish and mullets also occurred at the intertidal zone that the fisherman collected.



Macro Fauna

- *Gelasimus tetragonon*
- *Austruca variegata*
- *Periophthalmus waltoni*
- *Tubuca dussumieri*
- *Calidris pugnax Ardea cinerea*
- *Recurvirostra avosetta*
- *Larus fuscus*
- *Pirenella cingulata*
- *Solen sp.*
- *Painted strock*

- ✓ reduce carbon sequestration by 3 T per hector annually in early five years - after it reduces up to 20-25 T per hector
- ✓ provide alternate livelihood to fisherman by providing 3500 person days employment annually .
- ✓ Provide natural Habitat for Flora and Fauna.



Water Conservation (SDG 6/6.6)

At the turn of millennium, the state watched with growing alarm the steady depletion of its ground water and launched massive drive to achieve water security in Mundra region.

As a part of pre monsoon activities due to negligible rainfall we are getting less outcome of this intervention.

The Foundation's Water Conservation program, Swajal, is aimed at addressing the alarming depletion of groundwater levels and reduction in water sources in various parts of the country. Devising eco-friendly and cost-efficient methods of water body rejuvenation, the project works to revive existing water resources, plan sustainable infrastructure for protection of natural water bodies and improve ecological conditions around the area. Interventions are focused on groundwater recharge, sustainable agriculture and boosting livelihoods post stream rejuvenation.

Total 110 Roof Top Rain Water Harvesting, 190 Recharge Borewell and 56 Pond Deepening carried out in up to year.

Impact

- ✓ 218500 men, women, children and elderly impacted by this initiative.
- ✓ Total Dissolved Solids (TDS) in the ground water down by 16.7%.
- ✓ Ground water table up by 4.2 ft. over the last 5 years.
- ✓ In four villages water levels have increased by 15-20 ft. through bore-well recharging facility
- ✓ Storage capacities of check dams and ponds increased by 106.44 MCFT. Total area benefited 2857 hectors.
- ✓ Annually 10000 Liters of water saved and up to INR 10000 saved per family.
- ✓ 80% reduction in money spent on labour.
- ✓ Up to 20% less money spent on electricity bills.
- ✓ 50% less water used as compared to conventional methods.
- ✓ Potable water available at doorstep. Earlier on an average women used to walk 1.3 kms to fetch water.
- ✓ On an average there has been up to 25% decrease in expenses on healthcare.
- ✓ Water availability has also ensured safety, security and overall well-being of women and children in the area.
- ✓ Initiatives and efforts made under water projects by Adani Foundation continues to provides sustainable solutions for community for their improved farming and ease of living.

Initiative	FY 2021	Total
Roof Top Rain Water Harvesting	50	115
Bore & well recharge	83	189
Pond Deepening	-	56
Check dams	-	21
Drip Irrigation	180	1158

Drip Irrigation Project (SDG 2/2.4)

The fragile economy of Kutch is hampered by the salinity ingress and higher saline ground water which consequently impact on cultivation area and farmers yields as well.

Hence, To Conserve the Water. It is necessary to bring the land under **'Micro Irrigation System'** by allowing water to drip slowly to the roots of the plants, either from above the soil surface or buried below the surface we have started project Drip irrigation to Provide Financial support to adopt & Install Drip irrigation system.

This year **More than 180** farmers are supported with 15% Amount of Total Cost for maximum Rs.0.40lac.

Till the date Total **2229 acre of land are covered under Drip system by 1158 farmers** impacted to save their Money ,time and water and electricity as well.

The process to availing Benefits

- Farmers have to apply in the prescribed form of Adani foundation with photographs _
- Inspection and verification will be by AF representative.
- Ration card, work order of GGRC, 7/12 certificate, and all bills must be attached.
- Solutions to Queries .
- Primary information about farmer land will be recorded.
- Farm visit within 10 days of receipt of application and verified installation of the system as per map and material.
- Feedback from farmers.

Farmers selection Criteria

- Farmer should belong to the intervention villages of AF (Adhar Card) within Mundra block
- Small/marginal farmer – having maximum 3 hectors total family land were considered.
- Submit copy of application and copy of approval certificate from GGRC for drip irrigation .
- Consent to contribute and participate as per the provision of the AF scheme.
- Spot check/ field visit at the farmer's farmland by AF team before and after setting up the drip irrigation system and regular monitoring visit.
- Opening a bank account (the financial assistance was provided only through cheque).

Grassland Ecosystem Restoration project - Guneri

Lakhpat taluka is bestowed with rich mineral resources, lignite being the most important. Additionally, the area is also known for presence of tropical thorn forest. The region exhibits a great correlation between floral and faunal species and many rare and threatened species including Helichrysum cutchicum (endemic species), Cistanche tubulosa, Campylanthus ramoissimus, and Sida tiagii hence area is a proposed Biodiversity Heritage Site. However, the stress on this biological pool is constant, which arises primarily due to dynamic environmental conditions culminating in frequent droughts.

- With this background, and as a part of Biodiversity initiatives, to conceptualizing the landscape ecology and social-ecological systems together, by taking grassland restoration as its epicenter, APSEZ has proposed to take the pioneering steps towards building sustainable growth in the Lakhpat region, Kutch by taking **the initiation of restoring the natural grassland habitats (Ecological Restoration) along the Guneri village, i.e. ~40 Ha grassland ecosystem in gauchar land**, by collaboration with Gujarat Ecology Society (GES) – A Nonprofit Organization, based in Vadodara, Gujarat.

Grassland Ecosystem Restoration project - Guneri

Guneri village is situated north of Lakhpat fort with a population of 967 as per the 2011census. A Biodiversity Management Committee (BMC)already exists there and hence it becomes easy to undertake grassland restoration with the help of committee members. The gauchar land available for restoration is around 100 Ha and about 40 Ha of the area can be considered for restoration. The restoration process will be spread over a time period of three years, starting initially with 10 Ha and slowly moving up to 40 Ha by the third year.

The faunal survey was initiated in the month of December and continued till February 2022. This time is suitable to record the migratory birds. The survey highlights the presence of 9 threatened species based on IUCN (2021) viz., Monitor Lizard Black tailed Godwit, Black-headed Ibis, Common Pochard, Tawny Eagle, Steppe Eagle and White-backed Vulture were sighted in the area.

MILESTONES ACHIEVED

- Restoring the grasslands in the Gauchar lands.
- Preparatory phase for plantation activity.
- Capacity building of the locals in the ecological monitoring process and process of documentation and observation of changes.
- faunal Survey Mambles-07 species ,Reptiles-04 Species Birds-59 Species ,Threatened species-09 Species were Found.
- On Soil day celebration, An expert session was presented by Dr. Jayendra Lakhmapurkar for the APSEZ staff, students and farmers.
- International Wetland day was celebrated on 2nd February jointly by Adani port and logistics and GES with the theme "**Action on wetlands for people and nature'** . Key note speaker Dr. Deepa Gavali took insightful session to create awareness.

Sustainable Livelihood Projects

Empowering lives and broadening their scope for economic opportunities, Adani Foundation's initiatives introduced under 'Sustainable Livelihood Development Program', is formed to empower and uplift community towards better living and better livelihood.

At Mundra Taluka, several communities are economically side-lined and depend on a sole income source or are unemployed.

Sustainable livelihood projects have been launched to cater financial independence through building local partnerships, providing diverse livelihood avenues, inculcate the attitude to establish savings, equipping to earn and updating local skills by making use of existing resources to encourage self-reliant lifestyles. Participation is encouraged by launching specific projects for fishermen communities, farmers and cattle owners, youth and women.

A comprehensive program for Fishermen community is developed with holistic approach to improve their Education, health, economic status, Employment opportunities, Infrastructure and social awareness.

With support of Adani Foundation, Education Scenario is changing in fisher folk community which wasn't a cake walk but with the hard work and commitment Adani Foundation has created miracles to motivate this vulnerable students to pursue Education for their bright future .

To inculcate Education in first generation learners – **SMART Balwadis are set up with an aim to provide quality education,** scholarship support to girl child along with transportation facility.

SMART Balwadi

A child's early years experience provide strong base for their lifelong learning. A Balvadi center for their holistic development was set up at Four fishermen vasahat where trained Balvadi teachers looks after Children's Physical, cognitive, Emotional and Social development.

Initiatives taken to provide Study Material and Cycle are the distributed to keep fisher folk children motivated to continue their study as well as reduce financial burden of their parents.

68 fisher folk children studying in 9th to 12th standard were provided with educational material and stationary material and Cycle support to Juna bandar secondary school going students.

Economic Empowerment is necessary for "ATMA NIRBHAR BHARAT" and Skill Development is the base of comprehensive growth. To Develop various technical and Non-Technical Skills in youth - training was conducted for Fisher Youth and Women.

Digital literacy and spoken English class:- Basic computer and spoken English training for 152 Fisherfolk students of Zarpara and Luni Vasahat which will help them to grow with confidence.

sewing training given to 26 fisher women of Juna bandar to make them Self-reliance. Planning industry tie-ups to provide them with livelihood opportunities.

Awareness programs For fisherwomen :

Fisherfolk women are still living in 19th Century, due to lack of education they are having issues of addiction, hygiene and independence.

More then **1250+ women** participated in various sessions awareness workshop at Fisherfolk settlements periodically.

Process for livelihood support to Fisher folk
39 Fisher Youth were interviewed in various industries among that 12 are selected.

Mangroves Nursery Development

Optional livelihood provision during Two-month Fishing Offseason is taken care by Mangrove Planation and maintaining at Luni Hamiramora site.

Till the date 162 hector area have been planted with Avacinia marina mangrove species which provided **46247 person days** and create environment Sustainability as well.

Years	Mandays
2012-13	6943
2013-14	1480
2014-15	3240
2015-16	3533
2016-17	3125
2017-18	3666
2018-19	7539
2019-20	6261
2020-21	5020
2021-22	5440
Total	46247

Project Fish

Skill Enhancement of Fisher folk Youth

Objectives

- To Promote long-term socio-ecological effectiveness through focused interventions like employment through Skill enhancement.
- Engage more than 500 fisher folk youth in Skill Development Training to provide consistent scope of income
- Alternative incomes mean fishers are less pressured to go out to fish especially when the weather is bad
- Skill Enhancement in technical sector will motivate them for Education provision in future generations
- Livelihood interventions to improve fisheries dependent households and also reduce risk during open sea fishing

Project Goal

To develop new livelihoods opportunities for more than 500 fishing families and therefore to helping with family finances this leads to an increased sense of empowerment and confidence.

Pre-launch Activities

Brewing Big

Fish project ideation bring into existence after researching and analyzing the existing situation of Fisher folk youth and challenges they face due to which the future of the community was at stake.

The future of any community depends upon its youth. Considering this phenomenon, Adani Foundation targets fishermen youth at remotest location of Kutch district covering villages like Zarpara, Navinal, Mundra, Shekhadiya and others.

The key activities conducted before the launch were:

Mobilization - Team reaches out to villages to created awareness regarding the purpose of project and providing detailed information about training and the employment opportunities provided to them.

Counselling - A regular Interaction with every potential beneficiary to understand their educational background and interest areas along with mental and emotional capabilities. On the basis of individual's educational background and capabilities, counsellor suggests best fit course to the beneficiaries.

1 Jan' 2022

11 Jan' 2022

10 April 2022

Project Launch

Getting started

Project 'FISH' was inaugurated with an aim to enable fishermen community youth in 3 trades
Assistant Electrician, Mason and Digital Literacy.

52 aspirants from community were given an opportunity to get holistic skilled development environment by Adani Foundation under Adani Skill Development Centre. The certified training program of ___months. The expert trainers of ASDC acts as a catalyst to develop not just technical skills but to provide trainees a holistic learning platform to develop their personality and to make them industry ready.

Job Roles

- ❑ Mason General
- ❑ Bar Bender & Steel Mixer
- ❑ Assistant Electrician

Training & Beyond

Skill journey of Beneficiaries

Life at Skill Centre

Once beneficiary enrolls in a skill training program, he undergoes various modes and methods of training to develop his overall personality during his technical skill journey.

The training cycle started with theory sessions and practical sessions in respective job roles. Post that, Soft skills sessions and activity based learning sessions were conducted to boost their confidence. Though, beneficiaries start career at entry level, to grow themselves further ASDC prepares them with well with sessions like communication skills and Digital literacy.

I am happy that I am getting chance to get skilled and choose to make a living doing other occupation and no more dependent on just fishing. When my trainer appreciated my drawing skills for project and grasping power,
I got determined to study dedicatedly to score maximum in my assessment.

- Rahim Bhatti

In 3 months of training, I feel immense confidence in myself. My changed personality is even witnessed by my family and friends.
Post training session, I even do home study and discuss queries with trainers regularly to get myself prepare for my first job.

- Ayub Vagher

Initially I was hesitant to speak in class and also struggled in theory sessions. But our trainer is so supportive and helped me to understand better through practical.
I am looking forward to start my career post skill training and all set to enter into an occupation to make my parents and fishermen community proud.

- Abdullah Vagher

Transforming Lives

Home like meal service by SHG members

One of the interesting initiative of project the 'Fish' is the involvement of SHG group women named 'Saheli Gruh Udhyog' in the successful training of fishermen youth in the form of providing freshly cooked meal for the beneficiaries and arranging their lunch at training centre.

Adani Skill Development centre has given a meal service contract to SHG member and bears complete cost of beneficiaries meal and supporting SHG members in expanding their services.

About 'Saheli Gruh Udhyog'

It's a group of 10 members among whom, some are widows. They are making active efforts to run their SHG group by providing meal services for their sustenance.

Getting a chance to serve 52 young men for 3 months proved as a big achievement for their SHG group. *Moreover, food quality is appreciated by trainees and they express their gratitude by saying 'the food reminds them of home as it tastes like home'.*

Sustainable Livestock Management

The inadequate rainfall and high saline ground water acts as a threat for agriculture practices. Also, cattle sustenance is the main cause of concern due to dry arid region in lean months. Adani Foundation contributed its exceptional efforts in Mundra block for consistent betterment in livelihood sector.

The organization has carried out remarkable activities in the agricultural and animal husbandry sectors i.e. Cattle Health care, Natural Farming, Soil health enhancement, Fodder sustainability etc.

Pashudhan :

Fodder Support Programme, Individual Fodder Cultivation

- Adani Foundation provides good Quality dry and green fodder to 24 Villages. Project is covering total 14116 Cattle's / 3008 farmers and hence enhancing cattle productivity. Fodder support is of prime importance for sustaining the cattle in dry months.
- Fodder Cultivation- To made fodder sustain villages - 25 Acre Gaucher land of Siracha village is being cultivated for the same.
- Fodder support MOU- with Gram panchayat at Zarpara, Nana Kapaya, Borana, Mangara, Sadau, Shekhdiya , tuna , Rampar, Dharab, Navinal, Luni, Gundala, hamiaramora , Raga.
- Individual Farmer fodder cultivation supported for Maize seed and NB21 to more than 200 farmers which has created revenue of Rs. 27 Lacs.

Preventive Health Care

- Adani foundation and Government Animal hospital jointly organizing Cattle awareness camps total 22 villages .
- Vaccination of susceptible animals against foot-and-mouth disease (FMD) is a well established strategy for helping to combat the disease. Traditionally, FMD vaccine has been used **to control a disease incursion in countries where the disease has been endemic rather than in countries considered free of the disease**.
- Foot-and-mouth disease (FMD) and Deworming done with 1883 cattle owner benefitted to 15700 cattle.
- Sheep and goats have weakened immune systems when they are sick with other diseases, are quite young or old, and during highly stressful events such as lambing. Deworming strategies should seek to protect these higher at-risk groups, controlling parasite levels in all animals to prevent visible effects of parasitism.
- Special Camps organized at Kira Dungar Nakhatrana for camel which benefitted 525 camels.




To protect Cattles against **Bovine Brucellosis** zoonotic disease, Awareness and vaccination program is ongoing with Kutch fodder fruit & Forest development trust (KFFT) in our 13 Villages , Last year 287 families 2132 Animals benefited. In 2021, **In Total 666 families 5083 animal benefited.**

Bovine brucellosis is a chronic infectious disease of cattle that causes abortion, the birth of weak or dead calves, infertility and, as a consequence, reduced milk production. Cattle and buffaloes of all ages are susceptible, and infection can persist for many years. In females, abortion is the major clinical sign, typically occurring between five and seven months of gestation. Most infections result from ingestion of bacteria either from diseased animals or contaminated feed. Infection may also be acquired by respiratory exposure and by contamination of abraded skin and mucosal surfaces. Infected bulls can spread the disease through semen. This disease is also zoonotic (a disease that can be transmitted from animals to people or, more specifically, a disease that normally exists in animals but that can infect humans). Under this project following activities were carried out so far,

- Meeting with Gram Panchayat, Farmers and Livestock Owners.
- Development and Distribution of the Awareness Materials among the stakeholders.
- Mass Level awareness by pasting the poster and meetings with Village Leaders and Gram Panchayats.
- Primary Survey and Sample Collections i.e. Milk Ring Test, Blood Collection and testing.
- Brucella Vaccination and Ear Tagging etc.

Sustainable Agriculture

Sustainable agriculture is to protect the environment, public health, communities, and the welfare of animals. Sustainable agriculture also promotes economic stability for farms and helps farmers to better their quality of life.

Soil Enrichment, Crop Pattern, Agro Cover, Natural Farming, Orchard Development, Tissue Culture, Water Harvesting Practices, Replacement of chemical fertilizers and pesticides, Bio intensive Integrated Pest Management are the main parameters of Sustainable Agriculture Practices.

Sustainable Agriculture benefits are:

1. Contributes to Environmental Conservation
2. Saves Energy for Future
3. Prevents Soil Erosion
4. Enriches Soil quality
5. Biodiversity
6. Sustainable Livestock management
7. Economically Beneficial For Farmer
8. Quality Food to consumers

Home biogas

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.

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

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 cigarettes.

As a Main Process, Bacteria break down organic waste in a naturally occurring process, and Home Biogas stores and harnesses the energy created so that it can be used for gas.

Sustainable agriculture Project is revolving around Home biogas which is not just utilized for cooking gas but its by product is bio slurry which is replacement of chemical fertilizers and promotes soil enrichment.

Adani Foundation has supported for **223 Home biogas system** till date with 20% participation by the community.

As per SORI use of biogas each farmer can save Rs.23399/-year. Total 223 farmers can save Rs.5217977/- in a year.

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. Pre testing and post testing is carried out for designing carbon content management of soil.

Implementation

- Survey and identification of farmers to adopt Natural farming –**Total 150 Farmers were selected as criteria in first phase of the Project.**
- Arranged Workshop & Hands on training for them which was conducted by Agri expert ,KVK and Progressive farmers with 700+ farmers.
- **23 vermi compost unit have been set-up** to give guidance n training to other farmers. This units are provided Which is facilitated through Government with farmer Contribution.
- **150 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 in which more than 700 farmers participated.
- Four Farmers Groups is registered with **ATMA –Agricultural technology management Agency – it will leverage Government schemes.**

Promotion of Horticulture : Kutch Kalptaru FPO

Kutch Kalpaturu Producer Company (KKPC) is established to address the challenges faced by the farmers, particularly to enhanced access for inputs, technology up gradation in Agri practices, output, Sorting, Grading, Value addition & marketing. by the farmers of Mundra Block in the year of 2020. The company is started with 350 shares of 280 holders, Right now it is on path of expansion up to 5000 Farmers.

Current year for the dates Packaging and Marketing, KKPC Started to sell **10 Kg capacity packaging Box** at Minimum Profit Margin At **Rs.29/Boxes** which resulted in turn over of Rs. **24 Lacs with Profit of 1 Lac.** This initiative has supported more than 1800 farmers indirectly.

Regular Director Board Meeting as well as capacity building Training were arranged.

In Coordination with KKPC, Adani Foundation has supported for Dates Offshoot plants to 100 farmers. It will start fruiting from 4th year and matured from 7th year. 4th year

expected yield is 50 Kg. and Minimum fetch rate is 50 per Kg so each farmer will produce 1000 Kg high quality dates and Rs.50000/- income from it and all 100 farmers will produce 100000 Kg dates and income will be generate Rs.50 Lacs in first fruiting year.

It will increasing year by year till 7th year, when dates plants matured and after that 2000 plants produced 300000 Kg expected high quality dates and expected income will 1.5 Cr. Approx.

Five farmers are cultivating Dragon Fruits in 2 acre each – Total 11000 plants.

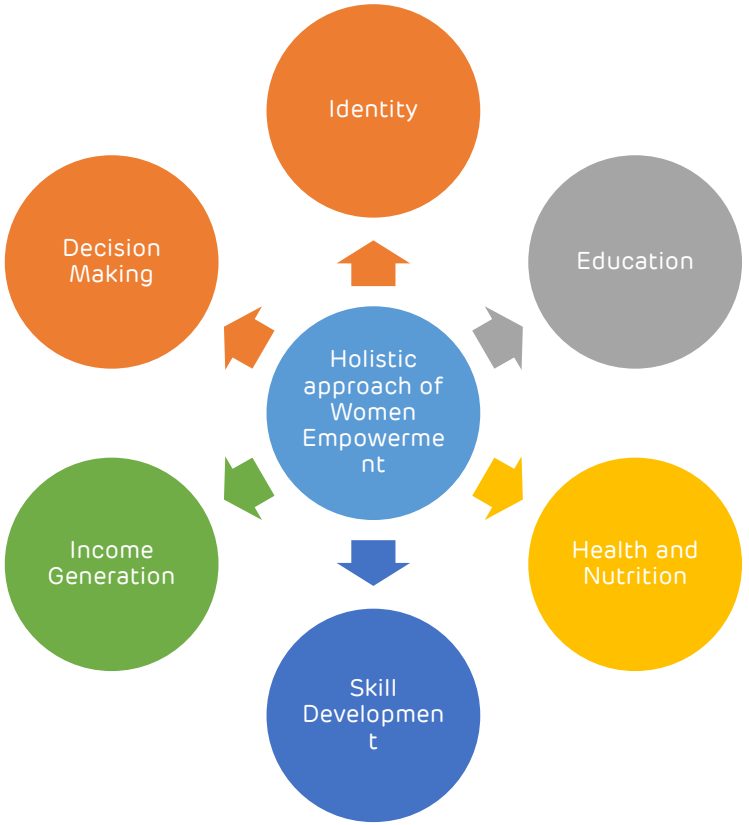
Women Empowerment Projects

Women are central to the entire development process, be it in an individual family, village, state or to a nation. Adani Foundation provides platform to community women to break the ceiling and move out as a change makers in their communities and among societies keeping their traditions intact. A considerable change has been witnessed in Mundra in terms of development of women beneficiaries in various fields of occupation like farming, self entrepreneurship, agriculture, etc. Adani Foundation has a special focus on empowering rural women and uplift by providing sustainable livelihood support resulting socio-economic shits in rural population.

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 focuses on is all parameters as a part of holistic approach towards empowering Women.

- Education – **More than 1200** girls are impacted under project Utthan. Project promotes girl child education, Creating awareness through various Govt schemes like Vahali Dikri Yojana, Sukanya Samriddhi Yojana and others.
- Health and Nutrition – Suposhan Project focus on adolescent and Reproductive age women nutrition part. Till date covered more than **12500 women** and **8700 adolescent** under this Project and brought them to considerable status.
- Skill Development and Income Generation – Adani Foundation is working with **15 Self help groups** and supporting to develop entrepreneur skills to become self reliant, sourcing more than 350 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 **115** Roof Top Rain Water Harvesting is supported for hassle free household chores. **1057** families are supported for Potable water at Fisherfolk settlement to reduce drudgery of women.



Total 15 Active SHG Groups are engaged as mentioned in table Income generation activity. We facilitate them capacity building training for quality ,Marketing Finance and team work to made them self sustain.

Major Achievements:

- Saheli Swa Sahay Juth have **completed order of 15000 Sanitary pad** from District Health Department.
- "**Shradhha Saheli Sva sahay Juth**" has won tender to provide Catering service in Block level Government.
- **Tejasvini SHG has received order** of three layer mask preparation worth Rupees Nine Lacks
- **Sonal Saheli** Women SHG had **supplied 500 KG washing powder** to Adani port & Will mar.
- Shradha Saheli & Jay Adhar Saheli have been registered in FSSAI (Food safety and standards Authority of India.
- Turn over of Tejaswi Saheli, Shraddha Saheli and Meghdhanush Saheli is **@ 40 Lacs till date**.

Sr. No	Name of IG activity	Activity	Nos
1	Sonal Saheli Swa Sahay Juth	Phynale & Washing Powder	11
2	Jay Adhar Saheli Swa Sahay Juth	Dry Nasta	12
3	Tejasvi Saheli Swa Sahay Juth	Stiching,Uniform,Bag	12
4	Umang Saheli Swa Sahay Juth	Soft toys, Jula,	13
5	Vishvas Saheli Swa Sahay Juth	Tie & Die, Stitching	13
6	Jay Momay Saheli Swa Sahay Juth	Tie & Die, Stitching	12
7	Meghadhanush Saheli Swa Sahay Juth	Mud Works,	10
8	Saheli Swa Sahay Juth	Sanitary Pad	10
9	Radhe Saheli Swa Sahay Juth	Dhadaki, Small Godadi	14
10	Shraddha Saheli Swa Sahay Juth	Fresh Food	10
11	Chamunda Saheli Swa Sahay Juth	Tie & Die	10
12	Jay shakti Saheli Swa Sahay Juth	Stitching	10
13	Navdurga Saheli Swa Sahay Juth	Sanitary Pad Sale	10
14	Sakhi Saheli Swa Sahay Juth	Sanitary Pad Sale	10
15	Sonal Krupa Saheli Swa Sahay Juth	Stitching	10
		168 Members in Group	

Economic Empowerment of women means “Enhancing the role of women as drivers of poverty reduction, promoting female investors and entrepreneurs as per SDG 5” in this half year all 15 women groups did turn over of Rs. 11.5 Lacs. 43 women got job in various SEZ industries by AF intervention and 11 women got absorbed as Gram Rakshak Dal, Bank Sakhi and Bima Sakhi.

Registration Certificate
Government of Gujarat
Food And Drugs Control Administration
Food Safety and Standards Authority of India
Registration Certificate under FSS Act, 2006

/ Registration Number: **20721013000245**

1.	Name and permanent address of Food Business Operator (FBO)	JAY AADHAR SAHELI SVA SAHAY JUTH BAROI , Baroi , Mundra, BHUJ(KUTCHH), Gujarat-370421
2.	Address of location where food business is to be conducted / premises	BAROI, Baroi , Mundra, BHUJ(KUTCHH), Gujarat - 370421
3.	Kind of Business	General Manufacturing
4.	Photo Identity Card	N/A

This Registration certificate is issued under and is subject to the provisions of FSS Act, 2006 all of which must be complied with by the petty food business.

Place / BHUJ(KUTCHH)
Issued On / 12-03-2021 (New Registration)
Valid Upto: 11-03-2022 (For details, refer Annexure)

Registering Authority

Annexures:
1. Product Annexure
2. Validity Annexure
3. Registration Id Card

Note:
1. **Application for renewal of Registration Certificate can be filed as early as 180 days prior to expiry date of Registration Certificate. You can file application for renewal or modification of Registration Certificate by login into FSSAI's Food Safety Compliance System(https://foscos.fssai.gov.in) with your user id and password or call us at 1800112100 for any clarification.**
2. **This Registration Certificate is only to commence or carry on food businesses and not for any other purpose.**
3. **This is computer generated Registration Certificate and doesn't require any signature or stamp by authority.**
4. **This Registration Certificate is allowed to conduct food businesses activities having annual turnover upto Rs. 12 Lacs only.**

Community Resource Center

Adani foundation acting as bridge between Government and needy beneficiaries to facilitated government scheme leverages since 2015. and after our efforts and observation, we decided to established Community resource center, where people can have easy access for Guidance and complete all necessaries document for Government Scheme.

CRC is Located just near to Mundra Bus stand and known to all People.

In the year of 2021-22 Total 667 people have benefitted through CRC center.

Total 2243 beneficiaries have been benefited and get support through Government and Adani Foundation. Among them more than 712 people have been getting financial support as Monthly base that is. Rs16.Lacs.

Scheme Detail	Beneficiaries 2021-22	Remarks	Total Beneficiaries	Revenue Convergence (Rs)
Senior Citizen	10	Rs.750/ Month	104	78000
Online Application	13		13	
Widow Pension	289	Rs.1250/ Month	526	657500
Medical Certificate	59		59	
AF Support	32		32	
Divyang pension	2	Rs.1000/ Month	7	7000
E-Shram CARD	8		8	
Divyang Job	14		14	
Sukanya	123		123	
Vahali Dikri	23		23	
Bal Yog Yojna	51	Rs.2000/ Month	51	102000
Covid -Support	13	Rs.50000/ one time	13	650000
Aditya birla Scholarship	30		30	
palak mata pita		Rs.3000/ Month	9	27000
sanakat Mochan		Rs.40000- One Time	2	80000
Tool and Kits Support by through Government			1057	
Support By AF (Widow and Divyag)			159	
Ration support To Widow and Niradhar			13	
Total	667	0	2243	1601500

Project Swavlamban

Project Swavlamban Launched with an aim to make **differently abled people of MUNDRA TALUKA self sustainable.**

Our objectives:

- To increase awareness about Government schemes for Divyang people, widows and senior citizens and coordinate them with Social Welfare Department, Government of Gujarat.
- After getting income generation equipment support - Proper training provision to make them self-reliant in true sense!!
- Adani Foundation is playing key role as facilitator in case of tie up with Government Scheme for Widows, Senior Citizens and Handicapped people. The identity cards are issued for the handicapped in coordination with Bhuj Samaj Suraksha Khata which is beneficial for them to get specific kit for their disability type. This year **154 beneficiaries** linked up with pension scheme.
- The financial benefit of the senior citizen Yojana is Rs. 500 per month and the widow scheme is of Rs. 1250 per month. Jilla Samaj Suraksha Officer and team remain present every time.

Community Infrastructure Development

Building a strong community relationship is the key to progress of Adani Foundation. The programs such as Education, Health and Sustainable livelihood development play a very important role in building this strong relationship with the community. These three programs are incomplete without the inclusion of the Rural Infrastructure Development program.
This year on path of sustainability, we have taken some steps as follows...

Under Fisherfolk Development Project, Adani Foundation has constructed 46 shelters at Randh Bandar with pre cast structure. Fisherfolk Community cum Training center is the biggest project of current year and will also create impact as a boon for fisherfolk youth for various trainings.

Balwadi development work at Bandar and Shed for Adani Skill Development Center for technical trainings will also improve quality of many lives in true sense.

- 23 Fishermen of Randar bandar are benefitted to Pakka House constructed under AF Fishermen Avasa yojna
- Renovation and Up-gradation of Check Dam & River Rejuvenate work at siracha and Bhupur villages.
- RRWHS & Bore well recharge Construction at Various Villages.
- Basic amenities and maintenance and reparing work at all Fishermen vasahat.
- Community gathering and training Center construction at Different villages
- LED Street Light and Sky Lifter Structure at Municipality Mundra Baroi.
- Supply & Fixing of Hi Mask Tower at Gundala village work.

Adani Skill Development Centre

A section 8, not-for-profit company, registered on May 16, 2016, 'Adani Skill Development Centre' is an initiative of Adani Foundation. ASDC focuses on skill development activities to contribute towards nation building by bridging the skill gap demand & supply, in line with Government of India's Skill India Mission.

"SAKSHAM" is an ideology of the Adani Skill Development Centre to make youth of India 'SAKSHAM' (capable) of achieving their goals in life by becoming skilled professionals.

Mobilization and Counselling

Theory and Placement support

Practical training for all job roles

On the Job training

Post training placement support

A strategic model of skill training is implement by ASDC in which Mobilisers visit remotest locations to encourage youth and women to get skilled, Counsellors provide in-depth information and assist in suggesting need based course, Certified trainers with expertise provides theory and practical training. Trainees are provided with soft skills sessions and interview preparation sessions to make them employable and industry ready. For each batch, ASDC team will arrange Panel Interviews and Campus Interviews for trainees to get directly selected as soon as they complete training.

Practical Training : As a training part we are conducting other activities. We have conducted Learn with Fun activities, Parents Meeting, Certificate distribution program, Preparation for Interview etc.

Women's Day Celebration : Conducted 7 days seminar to empower female candidates in line with International Women's Day theme. More than 60 women participated.

Educational Exposure Visit of GDA candidates (DDU-GKY) at K. D. Hospital Ahmedabad. 21 candidates visited.

Guest session organised for trainees to provide them soft skills training and make them industry ready with a doze of motivation.

Certificate distribution to GDA batch Students

Course wise Admission Bhuj

Name of Trade	Total
General Duty Assistant	90
Digital Literacy	42
Financial Literacy	45
GST with Tally	169
Frontline Health Worker	11
Welding Technician	1
Basic Functional English	5
Beauty Therapist	5
Logistics & Supply Chain Management	1
Junior Crane Operator	3
Occupational Safety and Health Administration	1
Pedicurist and Manicurist	2
Domestic Data Entry Operator	2
Diet & Nutrition	41
First Aid	81
Total Admission	**499**

Name of Trade	Bhuj	Kutch University	Chanakya College	DDU-GKY	Total
Total Admission	97	179	191	32	**499**

Name of Trade	Total Trained	Placement	Self-Employed	Upskilled
General Duty Assistant	32	10	0	22
Digital Literacy	38	0	0	38
Financial Literacy	20	0	0	20
GST with Tally	92	0	0	92
Beauty Therapist	3	0	3	0
Junior Crane Operator	3	1	0	2
Pedicurist and Manicurist	1	0	1	0
Domestic Data Entry Operator	1	0	0	1
Diet & Nutrition	41	0	0	41
First Aid	41	0	0	41
Total	272	11	4	257

Name of Trade	Mundra
Basic Functional English	170
Digital Literacy	152
Self Employed Tailor	120
Pedicurist and Manicurist	107
Junior Crane Operator	54
Mason General	42
Bar Bender and Steel Fixer	42
Dori Work	22
Mud Work	18
Assistant Electrician	10
General Duty Assistant	6
GST with TALLY	5
Beauty Therapist	2
Data Entry Operator	3
Checker	1
5S	1
Total Admission	**755**

Placement Details for the F.Y. of 2021-22 (Mundra)

Name of Trade	Total Trained	Placement	Self-Employed	Upskilled
General Duty Assistant	6	0	0	6
Digital Literacy	99	0	0	99
GST with TALLY	5	0	0	5
Mud Work	18	0	18	0
Basic Functional English	105	0	0	105
Dori Work	22	0	22	0
Junior Crane Operator	46	25	1	20
Data Entry Operator	3	0	0	3
Pedicurist and Manicurist	27	0	27	0
Self Employed Tailor	29	0	29	0
Total Admission	**360**	**25**	**97**	**230**

CSR Nakhtrana

Adani Green Energy(MP) Limited (AGEMPL) proposes to setup an integrated wind energy project as Green Energy Works which includes Limestone 750 Mw, Through approx. **1250 windmill** at Dayapar to Nakhtrana in District Kutch (Gujarat).

- Socio economic survey of Widow women and than linked with Government Widow pension scheme Rs.1250 /Month. Total **246 widow women have been facilitated with Widow pension scheme** with convergence of Rs.307500 /Month on Regular basis.
- **Till the date 22 Bore well** were recharged at Ugedi and Deshalpar Villages. Two pond deepening work and **4 Old check dams** were repaired. Tree Plantation at Jinjay & Ugedi Villages Primary schools.
- **Government Scheme Awareness Session** was held at Deshalpar village on the silver Jubille of Foundation day .
- **Distribution of 1000+ Mangoes Sapling** to farmers of Ugedi and Deshalpar Villages for promotion of Horticulture farming.

CSR Lakhpat

Adani Cementation Limited (ACL) proposes to setup an integrated cement project as Lakhpat Cement Works which includes Limestone Mine in 251.9 ha area.

Main focus of Adani Foundation is to prevent community from life threatening diseases and provide basic healthcare services.

Activities:

- Barred land of the Kapurashi crematorium afforestation with **2222 different type of trees in collaboration of forest department and Bhagvati Gramaya Vikas trust**. Arranging **water pipelines to facilitate regular watering** of plants to ensure nurturing. Impact: Attracts peacocks and other birds at crematorium site.
- General health camp and speciality health camp was arranged frequently at villages. More than **425 Patients were diagnosed and refer to GK General Hospital** for further treatment and operation if needed.
- Sewing machine training was conducted Kapurashi women. Main objective of the training was to empower women to boost their self confidence and thus financial independency,

CSR Tuna Port (AKBPTL)

Adani Kandla Bulk Terminal Pvt. Ltd. is joint venture of Adani Ports and SEZ Limited and handles all types of dry bulk cargo including coal, fertilizers, minerals, industrial salt and agriculture products.

Various activities were carried out for the community development under core areas of Education ,Health ,SLD & community Infrastructure of Tuna ,Ramapar Vandi villages and Fishermen vasahat

Rural clinic and MHCU

Basic health facilities is being facilitated through Rural clinic Rampar, vandi and MHCU to vira bandar.

Specialist health camp was arranged at Tuna Villages. More than **184 patients was diagnosed and treated** as well as suggest to GKGH for Further test and treatment.

Drinking Water

Potable water supply to Dhavlavaro and Vira bandar vandi villages impact on fishermen health to reduce water born disease.

Covid Vaccination camp

covid vaccination camp was held at AKBTPL for labors and security Staff through government health department.

Fodder support

Fodder scarcity is always remained prime need of farmers which is being resolve through Fodder supply intervention to Rampar and Tuna village from April to July -2021 which improved cattle health and milk quality.

26680Kg Dry fodder support

721855Kg green fodder support

Pond deepening and bund strengthen of Rampar village pond increase water storage capacity.

Construction of Community gathering center at vandi village provide access for community function and training as well.

Water pipeline installation near to Rampar village pond to Watering tree planation which was developed by villagers and maintain regularly.

CSR Bitta

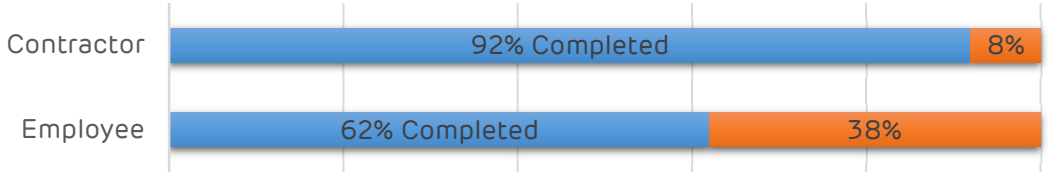
One of the Largest single location solar power project was commissioned by the Adani Group at Bitta, in Gujarat in year 2011. It spans a vast area of 450 acres. The massive plant comprises 2 lakh solar modules, 73782 foundations, 4500 tons of structure, 2800 km of cables, 56 inverters and 33 transformers. And now fully operational mode as well as connected with the 66 kV GETCO substation of GETCO TO powering 16,326 homes in a suitable manner and for the Sustainable rural development various Activities was carried by AF as mentioned.

- Avail Dinking Water and drainage line facilities by availing pipeline connection to Dhufi village which reduce drudgery and lead toward 'Swachh village'.
- Repairing and maintenance Bavnipar village cricket ground to offer hassle free playing ground as well; crated strong repo with Youth.
- Cleanliness of village Pond inlet in the Bita Village which lead more storage capacity and Village. Pond bunding construction in Dhufi village.
- Support Bita Primary school with Four Solar Light which reduce Electricity consumption and nurture renewable energy concept.
- Pota container and LED light support at Mathla check post for security and safety purpose.
- Cleanliness awareness session was conducted with Cleanliness program with youth involvement to create my Village clean village concept.
- Panchayat Building construction was carried out by Adani Foundation's support and technical guidance.

Dignity of Work Force Programe - EVP

India's 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, five years ahead of the UN Sustainable Development Goals (SDG) of 2030. In response to this call, the Government of India and USAID jointly launched the Corporate TB pledge (CTP), in April 2019 to galvanized corporate support to end TB.

To continue the momentum and efforts, the USAID-supported iDEFEAT TB project, which is working towards institutional strengthening to accelerate actions for Tuberculosis (TB) and drug resistant TB (DR-TB) in India; was launched as USAID/India's flagship TB project. The project works in collaboration with the Central TB Division (CTD), Ministry of Health and Family Welfare (Mo HFW) of the Government of India across a network of diagnostic, treatment, and program management institutions.



No of sessions
155

No of Trainers:
89

No of days
44/50

Total no covered:
3433/3906

The CTP secretariat, hosted at The Union under the iDEFEAT TB project, provides technical assistance to government and corporates to adapt, implement TB interventions, and guide corporate resources for TB and DR-TB care.

Early diagnostics and treatment initiation are key to saving lives and minimizing disease transmission. In 2019, India reached a milestone of 24 lakh notified cases in India, an increase of 12% compared with 2018. Even then, an estimated 5.4 lakh were 'missing' across India, a serious drawback to our TB elimination efforts as what is not measured is unlikely to be improved. Diagnostic delays are also prevalent in India, with studies indicating that these can be attributed to patients as well as health systems.

Adani foundation with APSEZ, APML, AWL and MSPVL HR department in coordination of FOKIA has launched cluster based screening program to eliminate TB in labors under Dignity of workforce program. Adani Ports and SEZ Limited has initiated screening with 2300 work force in first phase with target of screening more than 10,000 workforce of all group businesses and SEZ Industries.

USAID/India team including Director – Health Office has planned to visit Adani Foundation CSR Activities related to community health. He visited Adani Hospital, GKGH Hospital and related activities.

"जन जन को जगाना है, टीबी को भगाना है"

Dignity of Work Force Programe - EVP

"Joy of giving week" celebrated by employees of APSEZ and AWL by distributing clothes and stationary items to labour workforce of APSEZ.

More than 7500 Clothes distributed to 650 workers of Labor Colony.

Support to children Vallabh Vidyalaya

In year 2018-19 year Adani group employees has adopted **704 students** and in year 2019-20 adopted **800 students** who are from families of migrant labourers working in various industries in and around Mundra.

And in 2021, **997 students were registered and** to make employees connected with children Vallabh Vidyalaya regularly send progress report twice in a year. Current year Women group of Samundra Ladies has donated Rs. 55,000 for support activities of School and motivation to teaching staff in street education.

De-addiction Awareness Campaign is going on with "Prajapati Brahmakumaris" at Labour Vasahat Areas. This campaign has changed life of many labours. Cleanliness Drive is organized in May and August with Adani Willmar Limited at vasahat areas. In this series of event 225+ labours remained present and 9 labours took pledge to leave liquor and Tabaco.

Events

Community Resource Inauguration

Inauguration of **'Community Resource Centre'** to support and facilitate community regarding various government schemes.

District Magistrate of Kutch Ms.Pravina D,K , IAS, District Development Officer was guest of Honour. Other dignitaries present was Mr Bhavya Verma – IAS ,Director, DRDA Mr Joshi , Director- Social welfare office Mr Arvind Rohadiya, Mr Chaudhary Sub Divisional Magistrate , Sarpach and volunteers from villages were remain present.

'**Schematic Guideline book super -51**' book launch on 3rd April . Book consists in-depth scheme information on , Health, Education, Fisher folk based schemes and Social welfare schemes.

All dignitaries along with National Rural Livelihood Mission (NRLM) **visited to Sanitary pad making unit**, ensuing support to create sustainable Group.

International Day of Persons with Disabilities

International Day of Persons with Disabilities is an international observance promoted by the United Nations since 1992. Since 2011 – **Adani Foundation Mundra is celebrating the day with enthusiasm and Zeal in coordination with District Social Welfare office** by planning various support to divyang people.

Adani Foundation has supported **more than 35 Divyang** to initiate their livelihood i.e. Stitching, Flour mill, Ration shop, E-Rickshaw, Gift Shop and Agarbatti making machine. In connection with this, current year Adani Foundation has organized **'Divyang Employment Fair'** in coordination with more than 14 Industries of Mundra on 1st December 2021. Same platform was utilized for distributing "**E-Shram Card**' with Labor Commissioner of GOG which will give benefit of Rs. 2 Lacs accidental Insurance and unique pension scheme (3000 INR per month for any Divyang after age of 60 years) for all Disable people of Mundra.

Total 28 Divyang had applied for interview and out of them 11 received confirmation for job. Apart from this 92 E-shram cards were developed.

World Wetlands Day programme

Adani Foundation, Mundra and Gujarat Institute of Desert Ecology (GUIDE), Bhuj-Kachchh has jointly organized the **World Wetlands Day programme on 2nd February 2022**

Shri. V. S. Gadhavi, IAS (Retd.) was the chief guest proceeded by Smt. Pankti Shah and officials from Adani Groups and Adani Foundation along with Dr. V. Vijay Kumar, Director, GUIDE and scientists from GUIDE were participated in the programme.

Eminent personalities; Prof. K. Padmakumar, Former PVC Kerala University of Fisheries and Ocean Studies, also Director, Centre for Marine Biodiversity, Department of Aquatic Biology and Fisheries, University of Kerala delivered an enlightening talk on "Mangroves Ecosystem – Global and Indian Perspectives".

Prof. I. R Gadhvi, Head, Dept of Marine Sciences, Maharaja Krishnakumarsinhji Bhavnagar University delivered a talk on "Mangrove Scenario of Kachchh" and in his talk highlighted the increase of mangrove cover especially in Kachchh district.

Dr. Sheetal Pachpande, Mangrove Foundation, Mumbai delivered a talk on "Mangrove Interpretation Center" that highlighted replication of such centers in Mundra, Kachchh for enhancing the knowledge among students, naturalists and local inhabitants in mangroves and marine sciences.

Students from the HSC Science school of Mundra .Block are Partcipated in Drawing competition and Students from Maharaja Krishnakumarsinhji Bhavnagar University, Bhavnagar; Atmiya University, Rajkot Did paper presentation. Among them decalared 1st winner for Paper presentation and 1st to 5th winner for Drawining competition as well Provide Precipitation certificate to all.

Apart Them Site Head and Adani foundation and All site head were remain present Virtually Program is conveyed by Mrs Panktiben Shah –UCH and concluded by Shri. V. S Gadhavi, in which he has pointed out the conservation and management of coastal and mangrove ecosystem and the need for the preparation of long-term action plan for the effective conservation of the same.

International Women's Day

Activities:

Bhuj
- Session on Gender Equality and Women Empowerment at G.K General Hospital, Bhuj. The guest of honour was Mr Nimaben Acharya, Speaker, Gujarat Vidhan Sabha.
- Felicitating **Disha Gada**, a woman pilot who rescued 275 students from Ukraine.

Mundra
- Session on Importance of Health and Hygiene for women organized in association with Rotary Club at Mundra.
- Honored 230 women of best two blocks of Anganwadi with certificate and memento for their successful contribution at work.

Nakhtrana
- General Health camp was organized at Nakhtrana Gram panchayat specially for women in collaboration with GKGH.

- Utthan
- Recreational activities for woman sahayaks, Educationalist, Principals, Sarpanch of 42 Utthan schools.

2059 Women participated in celebration of Women's Day week.

Fishermen Youth Employment Training

Inauguration of Technical Skill Development Training Program for the Fisher folk youth by Adani Foundation

Adani Foundation and Adani Skill Development Center had jointly inaugurated of the **"Technical Skill Development Training Program for Fisher folk youth on 10th January.** To Promote long-term socio-ecological effectiveness through focused interventions like employment through Skill enhancement and "To improve fisheries dependent households

In Phase I, 51 fish folk community youth will be skilled and certified in job roles like Assistant Electrician, Mason and Bar bender under 90 days training program supported by placements.

World Environment day Celebration

- Adani Foundation celebrated World Environment day on 5th June with Inauguration of Maiyawanki forest development.

Activities done on World Environment Day:

- **MOU with KSKV Kutch University** and Adani Foundation to provide technical guidance on **'Cow based'** natural farming.
- Conducted **training on 'Jivamrut' and 'Vermi compost preparation'** to farmers promote cow-based natural Farming with Home Bio-gas distribution.
- **Inauguration of Miyawaki forest developed at Nana Kapaya village** in 2.5-acre land with collaboration of Forest and Manrega Department and Gram Panchayat participation.
- **2000 trees have been planted with spreading awareness among people at various places of Mundra, Nakatrana and Tuna location.**

Adani Foundation Day

Silver Jubilee of Adani Foundation was celebrated on 11th August at Adani House Mundra. **11 women** were felicitated who have done Remarkable work in the their filed of Agriculture , Education , Entrepreneur, Government and having special recongnization among society and Communities for their work by Shree Rakshit Shah, Executive Managing Director- APSEZ and HR Head- APSEZ.

Also felicitated first fisherman youth- Shakil Manjaiya with Offer letter to work with APSEZ after completing Mechanical Diploma.

World water day celebration

World water day was celebrated on the Theme of "Groundwater, making the invisible visible" at Adani House auditorium **felicitating all progressive farmers with a memento** who have done remarkable work for water harvesting and management as an individual and at village level.

The event was graced by chief guest, Mr. Dipeshbhai Shroff, President of Kutch Nav Nirman, Mr. Rakshit Shah- EDM ,APSEZ , Mr. Yogesh bhai Jadeja Director of Arid Community and Technology, Mr. Niraj Kumar, Deputy director of NABARD ,Kutch.

Mr. Rakshit Shah, Executive Director, APSEZ expressed compliments to all **14** progressive farmers for their exceptional work for water conservation and management.

International Coastal Cleanup Drive

Indian Coast Guard, Adani Foundation team, NGO team, Students of SV Arts and Commerce College unanimously dedicated a day to clean Mandvi Beach and to create awareness among local community towards save guarding coastal areas by becoming responsible citizen towards clean ocean.

Utthan Second Phase Inauguration

Inauguration of Phase II of Utthan was inaugurated on 28th September spreading its impact to more 14 schools. On this occasion District Primary Education Officer, Utthan schools Principal and teachers have graced the occasion.

"Like an Oasis in a desert"

Dema ben's family has returned home from a neighbour country in 1971 war. Today Demaben is happy to be in her own country but prior to that she and her family faced lot of stress and underwent a lot of trauma living in a conflicted place away from home.

She lives with her Husband and daughters. Her one daughter is suffering from mental illness and completely dependent for care. Her husband is doing labour work in farms. He is sole bread earner of this vulnerable family. Being single earning person of the family doing labour work and a responsible father of a dependent daughter, his income is never sufficing which creates constant distress in family. Her willpower is strong, but all these did a toll on his health, and she suffered constant headache, Fatigue, High Blood Pressure, Nausea, etc.

Demaben Umed
Village Pragpar-2, Kutch

Dr. Mukesh Parmar, Adani Foundation inspected her condition, her BP was 197 /97 mmhg. He immediately started symptomatic treatment and later second follow-up, Dr started anti-hypertensive treatment and provided required medicines and advised her some lifestyle changes and list of food items to add in her regular intake of meals. On regular follow-up checkups and treatment, Dema ben followed her road to recovery. Dr has witnessed steady progress in her health, and she finally got a relief from a disease.

She expresses gratitude in her vernacular language expresses Adani Foundation as 'વિરાન જંગલ મા મીઠા જલ ની વિરડી સમાન' meaning 'Sweet water well in barren Jungle'.

"Live many more years Chacha!"

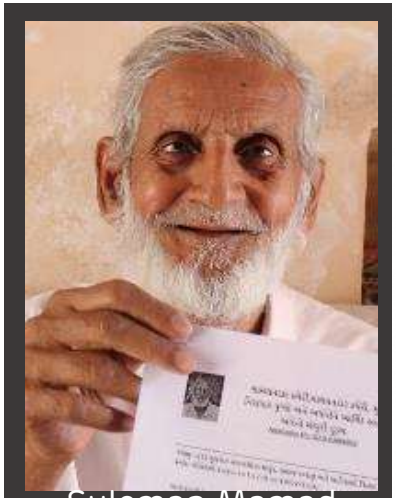
Ramzan Adam Chacha lives with his family at Juna Bandar. For the last 8 years he is the victim of Kidney Failure. He needs to go for dialysis regularly. However, the treatment facility was only available in Bhuj which compelled him to travel to Bhuj for 2 days in a week. He had to skip his work for the days, if there is any delay in his dialysis routine, which is very difficult situation for a fisherman whose income depends on daily catch, he need to skip his work to rest. Moreover, in his thin financial position, it was difficult for him to arrange money for the treatment and transportation too was a big issue. Learning about dialysis centre at Adani Hospital Mundra, he approached for aid from Adani Foundation.

Ramzan Adam Chacha
Village Shekhdiya, Kutch

In no time Adani Foundation team planned a routine dialysis for him against no cost. Earlier he used to visit thrice in a week and from the last two years, he is coming twice in a week. "Watching him every year is the biggest source of inspiration for not just me but our whole team. I wish Chaha to live many more years" says Manharbhai, Adani Foundation Employee.

"Mari toh umer vadhari didhi Adani Foundation e, treatment ma sahay kari," chuckles Ramzan Chacha in his local language. Meaning "Adani Foundation has prolonged my age by providing Dialysis support for the last 8 years".

: ‘Hands are softer than a stick’



Suleman Mamad Kevar
Village : Pragpar

A senior citizen named Suleman bhai hails from Pragpar village. Father of 6 girls out of which 5 got married. He lives with her wife and 1 daughter. Both Suleman bhai and his wife are senior citizens. Being a father of 6 girls, Suleman bhai was concerned about his financial situations, this did not stop him from giving best life to his daughters. 5 of them got married and youngest one is graduated. Suleman bhai and his wife along with daughters used to work as house helps and did labour work to earn living.

Due to their slim economic condition and constant labour work, Suleman Bhai's health started deteriorating. He started having blur vision, watery eyes and constant discomfort in his eyes. On consulting doctor, he got to know that he needs to undergo cataract surgery for both his eyes. It was heart wrenching to know for the family as the cost of surgery was too high. Someone recommended him to consultant Doctor from whom he got to know about ‘Adani Vadil Swasth Yojana’ under which Adani provides necessary health care support to senior citizens who are from underprivileged families. He inquired about the scheme and immediately completed all the necessary procedures to avail benefit of the scheme.

After completion of necessary formalities, He got his cataract surgery done for both the eyes on pro bono basis. He and his family were overjoyed that the surgery happened on time, saving his eyes from complete loss of vision. From here, Sulemanbhai stayed in constant touch with Adani Foundation team as a family.

He was also counselled about Vrudh Pension Yojana scheme of government by concerned Adani Foundation employee under which seniors above the age of 60 receives Rs. 750/- monthly in the form of pension. Adani Foundation has a dedicated group of employees working for rural senior citizens providing liasoning support to avail benefit of schemes to support the community. Under ‘Vrudh Pension Scheme’ both Sulemanbhai and his wife received Rs.1500/- every month. It might not be suffice but for them, it’s like a shade of tree from scorching heat.

On receiving amount for the first time, they contacted AF and expressed gratitude. He also encouraged his daughter Ruksana to spread awareness about these schemes to fellow villagers so that they can also get benefit from these schemes.

A naturalistic learner, shines bright in the class!

We have been fascinated to see how the holistic development took place in Seda Malshree Karaman, studying in class 5. An introverted student transforming into a dynamic learner is not only surprising to us but also to her family members. Mr. Mahendrasingh Solanki, School Principal of Zarpara Shala no. 3 says "I would like to congratulate Utthan team and Utthan Sahayk named Rajendra Chauhan for his commendable work in empowering progressive students and bringing them in line with average and above average performance level."

Malshree's story of transformation began during the pandemic period when schools were shut, and education was made available for the students at their doorstep under the title 'Sheri shikshan' provided by the Government of Gujarat. Seda Malshree Karaman was in class 4 in 2020. However, she is finding difficulties with the minimum level of learning.

During the home visit, Rajendra(Utthan Sahayak) met Seda Malshree. Initially, dealing with an introverted child was challenging. But slowly, within 10 days, he could boost her confidence.

On mentoring her regularly, Sahayak identified that she was a 'Naturalistic learner'. From the very next day, he started teaching Malshree with multiple natural resources which are easily available at her residence lived in 'Wadi'(backyard).

This was observed by her parents too. Slowly and steadily, Malshree took an interest in language and arithmetic. Gradually, Mr. Rajendra measured her learning outcomes by conducting a timely assessment. Her academic growth inspired other students too to give a lot of attention during classes. Today she is in class 5 where she can read, write, and do basic arithmetic calculations.

Name: Malshree Seda
School: Zarpara Shala No. 3

Hanif Mohammad
School: Deshalpar Group Shala

As Sunflower faces Sun, Progressive students always look forward to Sahayaks

Hanif, a small child was abandoned by his parents. Such young boy might even don't know what happened to him and why his parents left him. Hanif might not ask these questions today as he is too young to absorb all of it but it did affect him mentally and emotionally. It was obvious to feel isolated and different from other fellow student.

On one side, he is dealing with this somber transformation in life and adapting to living life with his uncle and aunt, and on other side, he has this immense interest and curiosity towards knowledge but lacked direction in life and also in academics. Under project Utthan, the purpose is to identify and uplift progressive students and bring them at par with fellow students. To do that, it's the duty of Sahayak to know a student inside out and that's what happened to Hanif.

On regular interaction, Uthhan sahayak motivated Hanif and taught him to start reading and practice writing skills. With consistent efforts Sahayak managed to make Hanif regular in school and made sure he does his homework daily. Not just that, Sahayak shared inspiring stories and motivated him to participate in 'Bal Mela Program' in which Hanif with the support of Sahayak prepared a Wind Mill from the waste. The project was successfully exhibited receiving appreciation from the visitors at Mela.

It is said that 'Distraction heals Pain' and in Hanif's case, he has completely changed his focus from pain towards his passion for learning. Hanif is rejuvenated to learn in this new academic year holding Utthan Sahayak's hand.

Anju Chauhan
Village : Zarpara

Uplifting progressive students

Little Anju studies in class 4th of Zarpara Primary School. She was in 2nd Class when the lockdown declared. Unlike urban schools, rural students do not get a chance to immediately start learning through online platforms. In such situation, Utthan Sahayak initiated online teaching and mentoring and tried to reach out to rural students who do not have access to mobile phones in their families.

Anju could not cope up with her education for 2 years and when she resumed school, she found out to be a progressive student due to her inability to read, write and count. School teachers noticed Anju's poor performance and handed over her case to Utthan Sahayak. It took few months, where one to one mentoring and teaching sessions were arranged for Anju and dedicated Utthan Sahayk made rigorous efforts to improve Anju's performance till examinations, preventing her from failing in class.

"Hard work and consistent efforts of Anju is appreciable. Yes, the start was tough but I was determined to bring Anju out of progressive students zone to average learner and we did it successfully." Says Bindya, Utthan Shayak

Adani Foundation as 'Moonbeem in Valima's lightless life.'

Valima is a senior citizen with disability (blind with both eyes) residing at Gurjarvas of Kutch District. Living in extremely poor condition. Her story is heart wrenching. She has proved to be an epitome of strength. She is a strong woman and even stronger as a mother who is taking care of her divyang and mentally challenged daughter who is 30 years old as of 2021.

One could get goose bumps to witness how this old blind mother takes care of her divyang daughter. Valima's two sons got married and started new life leaving mother and sister to suffer and survive on their own. With no vision but only pain in her eyes, Valima has fulfilled all responsibilities but now she is old. Adani Foundation's encounter with Valima was a beginning of the end of her problems. Earlier when her husband was alive, he used to make arrangements for family's survival. But now, Valima being blind and living in remote area is unaware of any of the schemes which can ease her living. Moreover, to get support from any of the rural development scheme, on needs identity proof and documents. Kanta, her daughter was not even having her identity proof, Valima was unaware of her widow pension rights and the support provided to divyang by government.

Here comes the role of Adani Foundation, to support the most needy and vulnerable who is completely devoid of information and their rights. Under project swavlamban, Adani Foundation provides end to end support to senior Citizens, Divyang and Widows. Adani Foundation team assisted valima to get necessary documents first. Starting from Ration card, Adhar Card, Voter Id, Disability card and Bank account was requested for her daughter and mother from respective departments . Post completion of all necessary compliances for documents, Valima started receiving 'Senior Citizen Pension', 'Widow Pension' and got free 'Bus Pass' for their ease of mobility.

Name: Valima L. Sibhi
Gurjarvas, Mundra

Narpant Singh Jadeja
Village Hatadi, Ta. Mundra

Overshadowing disability with his ability to make living.

Narpat singh resides in outskirts of Mundra. He lives a simple life. He, being Divyang, is unable to walk. Before few years, Adani Foundation provided him wheelchair for his ease of life. That's when he met Foundation team and stayed connected. His life was in routine before pandemic. He used to run flour mill and earn basic livelihood. At times, the mill does not work and creates problem. In those situations, Narpatbhai himself juggled with spare parts and repair it.

In 2021, His flour mill stopped working. He tried repeatedly but could not repair it by himself. Due to his less mobility, he was not able to move out and explore other options to repair it. With damaged machine, his income also stopped, and he got worried for his living. He contacted Adani Foundation again for the support. On inspecting his machine's condition, Adani Foundation decided that it does not require repairing, it requires total replacement.

Narpat Singh took a breath of relief as he was provided with new flour mill. 70% cost of flour mill was borne by Adani Foundation and 30% by Narpat Singh. Hearing about his new flour mill, villagers again started visiting Narpatsingh and his earning rose to 8000/- from 6000/- monthly.

Shakil Manjaliya
Village : Luni, Ta. Mundra

"From AVMA to APSEZ, Fishermen communities pride'

"From fishing to studying, from helping to hold a pencil to helping to have a social position, from my first book to my first offer letter, Adani has played a key role in my life." Proudly states Shakil

Shakil, A first generation learner of a fisherman community has studied in Adani Vidya Mandir School. It is an initiative of Adani Foundation to establish a school to provide free education to underprivileged and economically challenged community children providing best in class education for their bright future.

Hailing from fisherman community whose income mostly depends on daily wages, it was impossible for his parents to bare the cost of his education. Learning about Adani Vidya Mandir school, they applied for his admission. They fulfill the criteria of a deserving family and shakil's journey of change began by studying in school. He got 78percentage in 10^{th} standard, which motivated him to pursue engineering stream. He then, successfully completed Mechanical Engineering Diploma course and applied to APSEZ.

His intelligence and hard work surpassed his poor financial conditions. All the struggles he and family faced due to low income have come to an end. Shakil says "I used to dream in Adani Vidya Mandir that one day I will work and earn enough to change my family condition."

It's a fruit of his continuous sowing of hard work and dedication that he reaps employment in APSEZ. He got his first offer letter from Mr Rakshit Shah, EDM, APSEZ. Not just his family but even his teachers of Adani Vidya Mandir are proud of him today to see him grown so far and starting his career as first generation learner of his family who has managed to get livelihood in the form of job. Small steps taken for years will now lead to an socio-economic shift for all those fisher folk young boys and girls who have completed their education and will enter into a professional world with a dream to bring out community from a difficult living to an improved standard of living.

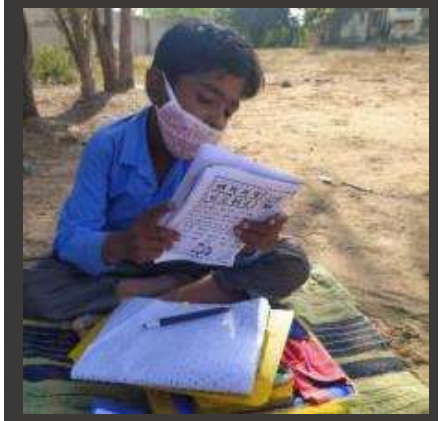
Ishaq
Village : , Ta. Mundra

"There is no greater disability in society, than the inability to see a person as more." – Robert M. hensel

Ishaq is a young 29-year-old responsible husband and a sole bread winner of a family. He was 14, when he got hit by Polio. He managed to complete his schooling and got H.S.C cleared successfully. He also achieved computer diploma degree to cope up with the present work scenario. Hailing from a Fisherman community, he is a first-generation individual who dreams to get employment. He always dreamt of working with Adani but never applied as he thought he is not ready yet. Therefore, He decided to get work experience for couple of years and apply confidently.

On one occasion where Adani Foundation organized 'Divyang Rojgar Mela' where Ishaq applied in an interview and showcased his knowledge, skills and dedication towards work. *Looking at his zeal and agility towards work and his preparedness, he was offered a job as a weight-bridge operator Job in APSEZ.*

Ishaq elated receiving an offer let his dream company and made his community extremely proud.
With open arms, Adani always welcomes Talent Divyang and Energetic Fisherman community to join hands for nation's growth with goodness.



Dipak Maheshwari
Village :

Getting back on track with Sheri Shikshan !

Dipak Maheshwari is a student of Muru Primary School. Losing his father at an early age has made him numb and inattentive in class. At first, he showed no interest in studies and slowly he started skipping lessons. His irregularity was concerning his school teachers where Utthan Sahayaks are contributing their mentorship and guidance to progressive student.

The root of his loss of interest in academics and difficulty to cope up with academics has started when his father was constantly keeping unwell and losing him has made Dipak vulnerable. He lost hope and was tired of making efforts to balance his emotions and studies. He chooses to remain at home.

On learning about Dipak's situation, Utthan Sahayak visited him to check on his mental and emotional condition. When Utthan Sahayak visited his place, Sahayak decided that it was not the right time to push Dipak to attend school, therefore he planned to teach Dipak under Sheri Shiksha teaching methodology (Study at home under the guidance of Sahayak).

Dipak found comfort and developed great understanding with Shayak and was able to grasp Foundation Learning Numeracy. Sometimes with written and other time by activities, Dipak used to study well. When he resumed his confidence and zeal back on track, Sahayak encouraged him to start his schooling again.

Utthan Sahayak keeps close contact with his family and still keeps a track on his academic performance.

Rasilaben Goyal

Right treatment at a right time !

Rasilaben is a 28year old woman from Fechariya village, Kutch. She has 6 sisters and 1 brother. Her father died due to cancer. Family's financial condition was stressful because they have incurred lot of expense for father's treatment but couldn't save him. Rasila, being the eldest among all sibling took all responsibilities on her shoulders. Loosing husband and a father of 7 children, Rasila's mother suffered a huge shock. She could not come out from the trauma and started keeping unwell. Unfortunately, her mother died in just few months after the father's demise. Situation could not get more worse than this for the family. Rasila had her uncle who used to run a small tea shop, he used to help family a bit as per his own capacity.

In 2013, Rasila started facing some health issues. She used to complaint of trouble in her stomach and also was facing gynecological problems. On her visit to hospital, she came to know that she has ulcers in her intestine. Her world had turned upside down, her siblings were not prepared to hear this devastating news. She started her treatment with a hope but continued to manage household chores and responsibilities of her siblings. But, the cost of treatment was 3,000 to 4,000 monthly, which is too much for a family to manage on their own. In such critical situation, they were in dilemma as to how to manage the cost of treatment when they don't have sufficient funds with them.

One her visit to G. K General Hospital, Rasila got satisfactory treatment but some of the medicines prescribed were supposed to be bought from pharmacy. She was not having enough money to purchase medicine regularly, therefore she approached Adani Foundation expecting some relief to support her in completing her treatment and medicines. Her issues were immediately taken into consideration, her medicines were arranged and provide to her for free.

For the past 2 years, Rasila's medicine expenditure is taken care by Adani Foundation observing fair improvement in her condition.

Ankita Bhatt
Beauty Therapist

'Smile on my client's face is my final touchup'

Ankita bhatt hails from Bhuj, kutch. She runs her own beauty parlor for the last 5 years now. Though her beauty treatment skills were good, she used to do selective basic treatment. Ankita believes, gone are the days, where we used to think this is a small service. Now, it's a booming industry where every year there is something new and advanced techniques comes up daily in beauty industry. Keeping up with industry is not an easy task.

Ankita's beauty skills were limited and stagnant and that's when she decided to take her profession seriously and master her beauty treatment skills and understanding through proper training. Also, the Covid years hit badly to small scale, self-entrepreneurs and service providers. She decided to utilize the no-rush time in developing new skills.

In Adani Skill Development Centre, online training program was a big hit in rural areas which enable women and girls to get trained just by sitting at home without Hustle. Post covid, all trainees were invited to complete their practical training at ASDC Bhuj Centre where Ankita cleared the program with flying colours and started earning better than before giving a new look to her parlour at home.

From Failures, one only gets better for the future!

Hetal Purabiya
General Duty
Assistant

"It was my mother's dream to see me working in Healthcare Industry. Even after ample efforts to get admission in GNM course to pursue dream, I didn't make it due to inadequate percentage. My confidence broke, thinking I will never get another chance to study further and will always remain a 12th pass.

I never knew any other way to fulfill my mother's dream until I learned about *GDA training course provided by Adani Skill Development Centre under DDUGKY scheme.* I decided to grab this moment to visit ASDC Centre. On my visit, I got amazed to see a hospital like setup which they call it as Practical Lab. I was well explained regarding the GDA training contents, systematic training methodology and as soon as I got to know that they are providing On the Job Training (OJT) with placement support, I got prompted to join immediately.

Unlike regular training centres, ASDC provides a lot more. *Regular guest sessions, activities and soft skills training helped us become industry ready.* Post completion of GDA course, it was the time to appear for interviews. I was confident not just because of the knowledge I gained but also because of my successful OJT period organized by ASDC. After undergoing GDA training, I became certified GDA , my lost confidence is back and I am determined to update and advance my health care skills to climb more ladders in future.

After 6 months of rigorous GDA training, OJT and placement support by ASDC, *my career kick started as Patient Care Assistant at Dr. Rashmi Shah Hospital, Kutch. I will never forget the moment when I hugged my mother and informed about my selection.*

ASDC has paved way for my successful career journey!" shares Hetal .

Hiral S. Darad
Beauty Therapist

From a next-door beautician to a professional one

"I am a 12th pass self-employed Beautician; I do beauty treatments at home. With no professional degree or certification, I never got a chance to take this work to the next level. Also, self-learning was not enough, I was looking for a training program, where I could get a mentor and practical training. In my locality, there was no option to learn beautician course and its difficult to learn from random videos. I am glad that I got recommendation from my friend about Adani Skill Development Centre, where Beauty Therapist training is provided in the form of certified course along with the planned theory and practical sessions. I got so happy thinking I will finally get to attend a professional training program which will add value to my basic skills and bring me close to my dream to become expert beautician.

It gave me lot of joy to see so many young girls and women coming to ASDC Centre while undergoing training at Centre, even housewives, working women joins courses as per their interest. In many of the cases, they have developed interest and became self-employed. One of the main reasons I love ASDC Centre is to see fellow friends/batch mates and develop a network of people with similar interests in our small town. Making friends and networking with trainees is very empowering. The reason is, we got to know stories of many women and how they are utilizing skills post completion of training course.

As I was also running beauty parlour before joining course, my aim was clear that I need to master beauty treatment skills and become professional. Not just me, but even my clients have witnessed a huge transformation in my beauty treatment methodologies post training. My training journey has been a most memorable one. Post completion of the course, my income increased significantly and the number of my clients rose to a level that most days I remain busy. "

Knowledge gives Degree, Skill gives employment.

Khushal Pargadu
General Duty Assistant

"I am a resident of Naliya village, Kutch district. I completed my Graduation and also did ITI. Coming from a village location, I couldn't find enough of job opportunities with me. Most youth of our locality, move out of hometown in search of job but this is not an option for many of us because of the responsibilities.

Khushal adds, "as much as I loved attending GDA sessions, I also thoroughly enjoyed my On-the-Job experience because we got to experience working directly under expert nurses and learnt that patient care which is the most critical and crucial element in any hospital. It was an overwhelming experience on initial days of OJT when we had to deal with lot of patients, managing time and serving patients with right kind of care in case-to-case basis. *No wonder why Health Care Providers are called as 'Warriors'. OJT was no less than a Healthcare training camp where me and my fellow batch mates were prepared to become Warriors to provide best of care to the patients."*

The major impact of GDA course run by ASDC Bhuj is that many young graduates who are from Bhuj and are looking for employment are preferring to come to the Centre because they don't have to move out of Bhuj to get skilled.

ASDC has provided a platform to get skilled under various courses and supports in placement which helps local residents to stay in their hometown and generate livelihood."

Awards

Adani Foundation received CII National Award for Excellent in Water Management 2021 for 'Water Conservation Project' on 7th January 2022 under National Competition for Water Management 2021. The Award ceremony was announced by Union Jal Shakti Minister in virtual presence of dignitaries from CII and nominees from other industries.

Adani Foundation awarded for CSR in water conservation at 3rd National Water Awards from the Ministry of Jal Shakti in the category of Best Industry for CSR activities, on 29 March 2022.

The award ceremony was conducted in the presence of President Shri Ramnath Kovind, Minister of State for Jal Shakti and Food Processing Industries, Shri Gajendra Singh Shekhawat, and Minister of State for Jal Shakti and Tribal Affairs, Shri Bishwesar Tudu.

Beneficiaries Data F.Y. 2021-2022

Sr.No	Program	Direct	Indirect	Remarks
1	Education	6585	26340	Utthan , Mundra & Nakhtrana
2	AVMB-Vidhyamandir	473	2365	AVMB Students
3	Community Health-Mundra	26129	193661	Rural clinic, MHCU,Health camp, AHMUPL
4	Community Health-Bhuj	16261	65044	Medical Support , Mahiti setu, Patients Care & Co-ordination
5	AHMUPL	31291		OPD and IPD Patients
6	SLD-Women	780	3900	SHG Group & Individual Incoem Generation
7	SLD-Agri & Animal Husbandry	7398	29731	Drip,Fooder,Home bio gas,Farmers training
8	SLD -Fisherfolk	6114	5490	Education, Mangrove, Water and Livelihood
9	CRC-Gov Schemes	667	3272	Government Schmes
10	CID	138174	189617	Fishermen Amenities & Shelter & Other Amenties
11	Nakhtrana	1428	5712	Utthan, Governemnt schems
12	Tuna	6601		Fodder,Health , Pond deepning
13	Bita	2150		CID & Pond deepning
14	Lakhpat	2455		women training and palnttaion
15	ASDC	1374	6870	soft skill and DL .GDA & Online Training
	Total	247880	657166	

Summary - Budget Utilization F.Y. 2021-2022

Rs. In lacs

Sr No	Particulars	Budget 2021-22	Utilization(LE) 2021-22	% of utilization
A.	General Management and Administration	76.12	79.27	104%
B.	Education	172.05	110.38	64%
B1	Utthan-Education -Mundra & Anjar	149.51	99.88	67%
B2	Utthan : Fisherfolk	22.54	10.50	47%
C.	Community Health	330.38	323.51	98%
D.	Sustainable Livelihood Development	426.28	453.84	106%
E.	Community Infrastructure Development	141.35	130.71	92%
F.	EDM Recommended Projects	100.00	82.01	82%
G.	COVID 19 Support	25.00	22.16	89%
	Total AF CSR Budget :	1,271.18	1,201.89	95%
[I]	Adani Vidya Mandir-Bhadreshwar	189.84	117.86	62%
[II]	Project Udaan-Mundra	167.42	66.85	40%
	TOTAL Budget with AVMB & UDAAN :	1,628.45	1386.60	85%
	Project "FISH"		106.00	
	GRAND TOTAL :	1,628.45	1,492.60	92%

Media coverage

અદાણી ફાઉન્ડેશન દ્વારા નાના કપાયા ખાતે ગાઢ જંગલ ઉભું કરાશે

અદાણી ફાઉન્ડેશન અને કચ્છ યુનિ. વચ્ચે સહયોગ થવા માટે એમઓયુ

કચ્છ પત્રિકા

અદાણી ફાઉન્ડેશન અને તાલુકા હેલ્થ ઓફીસના સંયુક્ત ઉપક્રમે "ટી.બી.હારેગા દેશ જીતેગા" અંતર્ગત કાર્યક્રમ યોજાયો

કોરોનાકાળમાં મહિલાઓએ મેળવી રોજગારી

અદાણી સ્કિલ ડેવલપમેન્ટ દ્વારા મુંદરા વિસ્તારમાં તક ઊભી કરાઇ

અદાણી ફાઉન્ડેશનના પ્રયાસો રંગ લાવ્યા...

માછીમારનો દીકરો મિકેનિકલ એન્જિનીયર બન્યો, મોટી કંપનીમાં નોકરી પણ મળી

adani Foundation

અદાણી ફાઉન્ડેશનનો મંત્ર : સેવાનું ઉત્તરદાયિત્વ

મુંદરા એસઇઝેડ ઔદ્યોગિક વિવિધતાની ઓળખ

કચ્છ પત્રિકા

"શાળા બંધ પણ શિક્ષણ નહિ"

અદાણી વિદ્યા મંદિર , ભદ્રેશ્વર દ્વારા અંતરિયાળ ગામોમાં શેરી શિક્ષણ શરૂ કરાયું

મુંદરામાં કોમ્યુનિટી રિસોર્સ સેન્ટરનો કરાયેલો પ્રારંભ

અદાણી ફાઉન્ડેશન દ્વારા બહેનો માટે કરવામાં આવતી કામગીરી

મુન્દ્રાની અદાણી હોસ્પિટલમાં કોરોના પોઝિટીવ દર્દીઓની કરાતી સેવા-ચાકરી

Media coverage

adani Foundation

અદાણી ફાઉન્ડેશનનો મંત્ર : સેવાનું ઉત્તરદાયિત્વ

મુંદરા એસઇઝેડ ઔદ્યોગિક વિવિધતાની ઓળખ

પ્રજાલક્ષી કાર્યોમાં અદાણી ફાઉન્ડેશન હંમેશાં અગ્રેસર

માનવ કલ્યાણ ટ્રસ્ટ સંચાલિત સાર્વજનિક સ્મશાનગૃહમાં પેવર બ્લોકના ડાઘનું ભૂમિપૂજન : માગમાં પેવર બ્લોક થશે

મુંદરા, તા. ૨૯ : અહીંના માનવ કલ્યાણ ટ્રસ્ટ સંચાલિત સાર્વજનિક સ્મશાનગૃહમાં અદાણી ફાઉન્ડેશન દ્વારા બનાવાયા પતરાંના શેડ અને માગમાં પેવર બ્લોકના ડાઘનું ભૂમિપૂજન કરાયું હતું. આ તકે કચ્છની પ્રજાલક્ષી કાર્યોમાં હંમેશાં સહયોગ આપતી એવી તેનું જણાવાયું હતું.

મુંદરાના માનવ કલ્યાણ ટ્રસ્ટ સંચાલિત સાર્વજનિક સ્મશાનગૃહ

કોરોના સામેના જંગમાં અદાણી ગ્રુપના પ્રયાસો

મુંદરામાં કોવિડ હોસ્પિટલ વિકસાવાઈ રહી છે, સીટી સ્કેન મશીન પણ સ્થપાશે : ઓક્સિજનની કટોકટી હળવી કરવા અનેક દેશોથી પુરવઠો મેળવવા ચક્રો ગતિમાન

વિશ્વ દિવ્યાંગ દિને અદાણી ફાઉન્ડેશન દ્વારા

મુન્દ્રામાં ૧૪ દિવ્યાંગને રોજગારી પૂરી પાડી દિવ્યાંગ દિવસની ઉજવણી કરાઈ

આત્મનિર્ભર બનાવવા ખુદની જરૂરિયાત થકી આજીવિકા પ્રાપ્ત કરી શકે તે દિશામાં સઘન પ્રયાસો હાથ ધર્યાં છે.

કચ્છ પત્રિકા

અદાણી ફાઉન્ડેશન અને તાલુકા હેલ્થ ઓફીસના સંયુક્ત ઉપક્મે "ટી.બી.હારેગા દેશ જીતેગા" અંતર્ગત કાર્યક્રમ યોજાયો

અદાણી ફાઉન્ડેશનના પશુ વિકાસ કાર્યક્રમ અંતર્ગત

પશુઓને રસીકરણ, કૃમિનાશક દવા તથા સારવાર

૧૨ ગામોના ૧૮૦૦૦ થી ૨૦૦૦૦ નાના અને મોટા પશુઓને આવરી લેવાના લક્ષ્યાંક સાથે શરૂઆત

'જોય ઓફ ગિવિંગ' અંતર્ગત ૭૫૦ જરૂરતમંદોને

અદાણી ગ્રૂપના કર્મચારીઓ દ્વારા કપડાં અને રમકડાંનું વિતરણ કરાયું

અદાણી ફાઉન્ડેશનને

CSR પ્રવૃત્તિ માટે એવોર્ડ

કેન્દ્રીય જળ શક્તિ મંત્રાલય દ્વારા જાહેર કરાયેલા વિવિધ એવોર્ડ પૈકી ગુજરાત અદાણી ફાઉન્ડેશનને બેસ્ટ ઈન્ડસ્ટ્રી ફોર સીએસઆર એક્ટિવિટી માટે પ્રથમ નંબરના એવોર્ડની જાહેરાત કરાઈ છે. જળશક્તિ મંત્રાલય દ્વારા 11 વિવિધ શ્રેણીઓમાં રાજ્યો, સંસ્થાઓ અને વ્યક્તિઓ વગેરેને પુરસ્કાર અપાય છે.

Thank You

Annexure – 4

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar**-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

By R.P.A.D

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

And whereas Board has received consolidated consent application **inward No. 202362** dated 19/09/2021 for the **Renewal of Consolidated Consent and Authorization (CC&A)** of this Board under the provisions / rules of the aforesaid Acts. Consents & Authorization are hereby granted as under:

CONSENTS AND AUTHORISATION:
(Under the provisions /rules of the aforesaid environmental acts)

To,
M/s. Adani Ports & Special Economic Zone,
Plot no. 169/P, At Navinal Island,
Tal: Mundra,
Dist: Kutch - 370 421

1. **Consent Order No. AWH-117045 Date of issue: 14/02/2022.**
2. The consents shall be **valid upto 20/11/2026** for the use of outlet for the discharge of trade effluent and emission due to operation of industrial plant for storage & handling of the following items/ products:

Sr. No	Product/Services	Capacity
1	General Cargo Handling	112.8 MMTPA
2.	Dry Cargo Handling	
3.	Liquid Cargo (Chemical/ POC Products)	5 MMTPA
4.	Import, Storage and Distribution of Edible Oil	2.20 MMTPA
5.	Storage and Distribution of Bitumen	0.30 MMTPA
6.	Container Terminal Handling Operation	5.7 Million TEUs/ Annum
7.	Waste Destruction system for decomposition/ destruction of municipal solid waste	3.5 Cubic Meter (MSW Destruction Capacity @ 500 kg/day)
8.	Oil water separate (Flame Proof) to remove oil portion from slope oil received from vessels/ ships	25 M^3/Hr

Subject to specific condition:

1. Industry shall comply with conditions of CRZ Clearance issued by MoEF vide order no. 10-47/200/-IA-III dated 12/01/2009 & its amendment.
2. Industry shall comply with conditions of Environment Clearance and CRZ Clearance issued by MoEF vide order no. F. no. 10-138/2008-IA-III dated 15/07/2014.

3. Industry shall comply with this office circular dated 27/08/2021 regarding retrofitting of emission control/ equipment in D.G. Set of capacity 125 KVA and above at the earliest and submit compliance.
4. Industry shall comply with Manufacture, Storage and Import of Hazardous Chemicals Rules-1989 (MSIHC) as amended time to time.
5. Industry shall ensure that all storage terminal located within DPT area shall strictly comply with MSIHC Rules including site notification & submit details periodically to board with relevant details.
6. Industry shall renew Public Liability Insurance time to time & submit a copy to this Board.
7. Industry shall notify site under MSIHC Rule-1989 from competent authority as mentioned in schedule-5 of MSIHC Notifications.
8. Industry shall not withdraw groundwater without prior NOC from CGWA as per Hon. National Green Tribunal order.
9. Industry shall manage Solid Wastes generated from industrial activities as per Solid Waste Management Rules-2016 (solid waste as defined in Rule-3(46)).
10. Industry shall comply with Plastic Waste Management Rules– 2016 and amendments made therein.
11. Industry shall strictly comply with coal handling guideline of this board.
12. Industry shall provide dedicated storage facility for dry cargos& ensure to take adequate measures to prevent dusting.
13. Industry shall ensure that there shall be no damage to the existing mangrove patches near site and also ensure the free flow of water to avoid damage to the mangroves.
14. Industry shall ensure as per EC condition that no creeks or rivers are blocked due to any activities at the site and free flow of water is maintained.
15. Industry shall provide proper system for collection, storage & treatment & disposal of waste water generated by vessel as per MARPOL& maintain records.
16. Industry shall install storm drainage catch basin to avoid directly discharge into surface water.
17. Waste effluent accumulated with port activities including storm water & sewage from port operation including sewage ballast water, bilge water &clean waste water from ships shall be as per MARPOL norms.
18. Industry shall make separate records regarding generation, collection, transportation& disposal of waste generation from ship & maintain its records.
19. Industry shall made necessary arrangement for the plastic Waste, Solid Waste or other waste generation due to port activities & for facilitation of reception facilities under MARPOL & Environment (Protection) Act-1986 rules etc.
20. Ports shall obtain approval of their oil spill contingency plan (OSCP) as required under national oil spill disaster contingency plan (NOS-DCP) of coast guard, ministry of defence, govt. of India.
21. Best environmental practices by ports maybe uploaded on "Indian ports Association" as well as the same maybe linked to websites of CPCB and respective SPCBs.

22. Manually handling of cargo should be converted into mechanized system, in time bound manner.

3. Conditions under the Water act-1974:

3.1 Source of Water: - Narmada Water from GWIL/ Sea water from APSEZ/ Desalination Plant.

3.2 The quantity of the fresh water consumption for industrial purpose shall not exceed 1304.1 KL/Day.

3.3 The quantity of the fresh water consumption for domestic purpose shall not exceed 370 KLD.

3.4 The quantity of the industrial effluent to be generated from the manufacturing process and other ancillary industrial operations shall not exceed 90.31 KL/Day.

3.5 The quantity of domestic waste water shall not exceed 248 KLD.

3.6 Domestic waste water shall be treated in ETP along with industrial effluent.

3.7 Industry shall operate Effluent Treatment Plant (ETP) adequately so that treated effluent shall comply with following norms:

PARAMETERS	PRESCRIBED LIMITS
pH	6.5 to 8.5
Temperature	40°C
Colour (Pt.Co. scale) in units	100 units
Total Suspended Solids	100 mg/L
Oil and Grease	10 mg/L
Ammonical Nitrogen	50 mg/L
BOD (3 days at 27o C)	30 mg/L
COD	100 mg/L
Chlorides	600 mg/L
Sulphates	1000 mg/L
Total dissolved solids	2100 mg/L
Percent Sodium	60 %
Sulphides	5.0 mg/L
Sodium Absorption Ratio	26

3.8 Treated effluent, confirming to above norms shall be discharged on land for gardening and plantation purpose within premises only having area 175 hectare. In no case effluent shall be discharged outside premises.

3.9 Industry shall provide fixed pipeline network with flow meter for even distribution of treated effluent and maintain its record.

3.10 Disposal system for storm water shall be provided separately. In no case storm water & sewage from port facility shall not be discharge into surface water.

4. Conditions under the Air Act-1981:

4.1. The following shall be used as a fuel in Hot Water Generator, Fuel Heater and D.G. Sets respectively:

Sr. No.	Utility	Fuel	Quantity
1	Hot Water Generator & Fuel Heater	LDO/ HSD	975 Lit/Hr
2	D.G. Sets	HSD	100 Ltr/Hr

4.2. The applicant shall install & operate air pollution control system efficiently in order to achieve prescribed norms.

4.3. The flue gas emission through stack attached to Hot Water Generator, Fuel Heater and D.G. Sets shall conform to the following standards

Sr. No.	Stack attached to	Stack height in Meter	APCM	Parameter	Permissible Limit
1	Hot Water Generator-1	35		PM SO_2 NO_X	150 mg/NM^3 100 ppm 50 ppm
2	Hot Water Generator-2	35			
3	Fuel Heater (Thermic) (2 nos.)	35		PM SO_2 NO_X	150 mg/NM^3 100 ppm 50 ppm
4	D.G. Set (9 nos.) (500 KVA) (Stand by)	9 meter each	Adequate Stack Height		
5	D.G. Set (3 nos.) (1250 KVA) (Stand by)	30 common stack	Adequate Stack Height		
6	D.G. Set (6 nos.) (1500 KVA) (Stand by)	30 meter each	Adequate Stack Height		

4.4. The Process gas emission through stack attached to Waste Destruction System with auxiliary heater shall conform to the following standards.

Sr. No.	Stack attached to	Stack height in Meter	APCM	Parameter	Permissible Limit
1	Waste Destruction System with auxiliary heater	10	Ventury Scrubber	SO_2 NO_X	40 mg/NM^3 25 mg/NM^3

4.5. The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder as per National Ambient Air Quality Standards issued by MoEF & CC dated 18th November-2009.In addition to following parameters Industry shall also carry out AAQ monitoring of all

other applicable parameter as per MoEF notification dated 18/11/2009 and submit the report to the Board.

Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient air in µg/M^3
1.	Sulphur Dioxide (SO_2)	Annual 24 Hours	50 80
2.	Nitrogen Dioxide (NO_2)	Annual 24 Hours	40 80
3.	Particulate Matter (Size less than 10 µm) or PM_{10}	Annual 24 Hours	60 100
4.	Particulate Matter (Size less than 2.5 µm) or $PM_{2.5}$	Annual 24 Hours	40 60

4.6. The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted/displayed to facilitate identification.

4.7. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75dB(A) during day time and70 dB (A) during night time. Daytime is reckoned in between 6a.m. and10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.

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

Form for grant of authorization for occupier or operator handling Hazardous waste

5.1 Authorization order no:-**AWH-117045** Date of issue: 14/02/2022.

5.2 **M/s. Adani Ports & Special Economic Zone** is hereby granted an authorization to operate facility for following hazardous wastes on the premises situated at Plot no. 169/P, At Navinal Island, Tal: Mundra, Dist : Kutch.

Sr. No.	Waste	Quantity/ Year	Schedule &Category	Facility
1	Used/ Spent Oil	300 MT	I- 5.1	Collection, storage, Transportation,, Disposal by selling out to registered recyclers/ reprocessor
2	ETP Sludge	109.5 MT	I-34.3	Collection, storage, Transportation & disposal at TSDF site of SEPPL.
3	Sludge & filters contaminated with oil	5 MT	I-3.3	Collection, storage, Transportation, Disposal by co-processing at cement industries and/or CHWIF site

4	Waste Residue containing Oil/ oily rags	150 MT	I-33.2	Collection, storage at designated place, Transportation, Disposal at TSDF Site.
5	Pig Waste	24 MT	I-3.1	Collection, storage, Transportation, Disposal by co-processing at cement industries and/or CHWIF site
6	Tank Bottom sludge	Whatever Quantity generated	I-3.2	Collection, storage, Transportation, Disposal by co-processing at cement industries and/or CHWIF site/ or recycling to registered recycler.
7	Discard containers/ barrels	16 MT	I-33.3	Collection, storage, Transportation, Disposal by reuse within premises and / or selling out to registered decontamination.
8	Asbestoses Waste	Whatever Quantity generated	I-15.1	Collection, storage, Transportation, Disposal at CHWIF site.
9	Glass Wood Waste	Whatever Quantity generated	II-9	Collection, storage, Transportation, Disposal by co-processing at cement industries and/or incineration at CHWIF site and / or recycling through registered recycler.
10	Downgrade Chemical	Whatever Quantity generated	I-20.2	Collection, storage, Transportation, Disposal by reuse within premises and / or selling out to authorized solvent recover.
11	Waste Oil	0.18 MT	I-5.2	Collection, storage, Transportation,, Disposal by selling out to registered recyclers
12	Expired Paint Material	10 MT	I-21.1	Collection, storage, Transportation, Disposal by co-processing at cement industries and/or CHWIF site

GPCB

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5.3 The authorization shall be valid up to **20/11/2026.**

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

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

5.6 **TERMS AND CONDITIONS OF AUTHORISATION**

1. The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
3. The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a beach of this authorization.
5. The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Wastes and Penalty"
7. It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
8. An application for the renewal of an authorization shall be made as laid down in rules 6(2) under Hazardous and Other Waste Rules, 2016.
9. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
10. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
11. The hazardous and other wastes which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
12. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. The waste generator shall be totally responsible for (i.e. collection, storage, transportation and ultimate disposal) the wastes generated.
15. Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form-4 by 30th day of June of every year for the preceding period April to March.

16. In case of any accident, details of the same shall be submitted on Form-11 to Gujarat Pollution Control Board.
17. As per "Public Liability Insurance Act-91" company shall get Insurance Policy, if applicable.
18. Empty drums and containers of toxic and hazard material shall be treated as per guideline published for "Management & Handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.
19. In case of transport of hazardous wastes to a facility for (i.e. treatment, storage and disposal) existing in a State other than the State where hazardous wastes are generated, the occupier shall obtain 'No Objection Certificate' from the State Pollution Control Board or Committee of the concerned State of Union Territory Administration where the facility exists.
20. Unit shall take all concrete measures to show tangible results in waste generation, reduction, avoidance, reuse and recycle. Actions taken in this regard shall be submitted within three months and also along with Form-4.
21. Industry shall have to display the relevant information with regards to hazardous waste as indicated in the Hon. Supreme Court's Order in W.P. No.657 of 1995 dated 14th October, 2003.
22. Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.

6. **SPECIFIC CONDITIONS:-**

6.1 The authorized actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook issued by the State Pollution Control Board along with the authorization.

6.2 Handling over of the hazardous and other wastes to the authorized actual user shall be only after making the entry in the passbook of the actual user.

6.3 In case of renewal of authorization, a self-certified compliance report in respect of effluent, emission standards and the conditions specified in the authorization for hazardous and other wastes shall be submitted to SPCB.

6.4 The occupier of the facility shall comply Standard operating procedure/guidelines published by MOEF&CC or CPCB or GPCB from time to time.

6.5 Unit shall comply provisions of E-Waste Management Rules-2016.

6.6 The disposal of Hazardous Waste shall be carried out as per the waste Management hierarchy.

6.7 The occupiers of facilities shall not store the hazardous and other wastes for a period not exceeding **ninety days**. Prior permission of the Board shall be obtained for extension of the storage period.

6.8 The occupier shall maintain the records of generation, sale, storage, transport, recycling, co processing and disposal of hazardous waste and make available during the inspection.

6.9 The transportation of the hazardous waste shall be carried out in GPS mounted dedicated vehicles.

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar**-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

7. GENERAL CONDITIONS: -

7.1 Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.

7.2 Applicant shall also comply with the general conditions given in annexure I.

7.3 Whenever due to accident or other unforeseen act or ever, such emissions occur or is apprehended to occur in excess of standards laid down such information shall be forthwith reported to Board, concerned Police Station Office of Directorate of Health Service, Department of Explosives, Inspectorate of Factories and local body.

7.4 In case of failure of pollution control equipments, the production process connected to it shall be stopped. Remedial actions/measures shall be implemented immediately to bring entire situation normal.

7.5 The Environmental Management Unit/Cell shall be setup to ensure implementation on and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Management Cell/Unit shall directly report to the Chief Executive of the organization and shall work as a focal point for internalizing environmental issues. These cells/units also coordinate the exercise of environmental audit and preparation of environmental statements.

7.6 The Environmental audit shall be carried out yearly and the environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30th September every year.

7.7 The Board reserves the right to review and/or revoke the consent and/or make variations in the conditions, which the Board deems, fit in accordance with Section 27 of the Act.

7.8 In case of change of ownership/management the name and address of the new owners/ partners/directors/proprietor should immediately be intimated to the Board.

7.9 Industry shall have to display the relevant information with regard to hazardous waste as indicated in the Hon. Supreme order in w.p. no. 657 of 1995 dated 14th October 2003.

For and on behalf of
GUJARAT POLLUTION CONTROL BOARD

(Smt. U.K. Upadhyay)
Senior Environment Engineer

NO: GPCB/CCA-Kutch-39(7)/ID-17739/ 625051 **Date:-** 9/3/2022

Issued to:
M/s. Adani Ports & Special Economic Zone,
Plot no. 169/P, At Navinal Island,
Tal: Mundra,
Dist: Kutch - 370 421

Annexure – 5

Cost of Environmental Protection Measures

Sr. No.	Activity	Cost incurred (INR in Lacs)			Budgeted Cost (INR in Lacs)
		2019 – 20	2020 – 21	2021 – 22	2021 – 22
1.	Environmental Study / Audit and Consultancy	0.33	6.2	6.82	7.0
2.	Legal & Statutory Expenses	0.84	10.58	10.52	12.0
3.	Environmental Monitoring Services	21.74	19.17	14.31	20.0
4.	Hazardous / Non-Hazardous Waste Management & Disposal	108.43	83.55	107.09	114.10
5.	Environment Days Celebration and Advertisement / Business development	1.5	5.3	4.04	7.0
6.	Treatment and Disposal of Bio-Medical Waste	1.62	2.09	2.14	2.04
7.	Mangrove Plantation, Monitoring & Conservation	Nil	32.59	53.6	53.6
8.	Other Horticulture Expenses	734.18	689	921	921
9.	O&M of Sewage Treatment Plant and Effluent Treatment Plant (including STP, ETP of Port & SEZ & Common Effluent Treatment Plant)	110.18	148.49	252.27	299.5
10.	Expenditure of Environment Dept. (Apart from above head)	105.13	89.11	149.8	85.35
	Total	**1083.95**	**1086.08**	**1371.79**	**1521.59**