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Ports and Logistics

एकीकृत क्षेत्रीय कार्यालय, गाँधीनगर
Integrated Regional Office, Gandhinagar
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Ministry of Environment, Forest and Climate Change
भारत सरकार
कक्ष क्र. 409
Room No.409
गाँधीनगर (गुजरात)/Gandhinagar (Gujarat)
27/12/2021

APSEZL/EnvCell/2021-22/079

Date: 27.11.2021

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, rowz.bpl-mef@nic.in

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

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

Dear Sir,

Please refer to the above cited reference for the said subject matter. In connection to the same, it is to state that copy of the compliance report for the Environmental and CRZ Clearance for the period of April-2021 to September-2021 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**

Shalin Shah
Head – Environment & Sustainability

Encl: As above

Copy to:

1) The Additional Secretary, MoEF&CC, Regional Office (WZ), E-5, Kendriya, Paryavaran Bhawan, Arera Colony, Link Road No. – 3, Bhopal – 462016.
2) The Director (IA Division), Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003.
3) The Zonal Officer, Regional Office, CPCB – Western Region, Parivesh Bhawan, Opp. VMC Ward Office No. 10, Subhanpura, Vadodara – 390023.
4) The Member Secretary, GPCB – Head Office, Paryavaran Bhavan, Sector 10 A, Gandhi Nagar – 382010.
5) The Director, Forests & Environment Department, Block – 14, 8th floor, Sachivalaya, Gandhi Nagar – 382010.
6) The Regional Officer, Regional Office GPCB (Kutch-East), Gandhidham – 370201.

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

Tel +91 2838 25 5000
Fax +91 2838 25 51110
info@adani.com
www.adani.com

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

Chiragsing Rajput

From:	Chiragsing Rajput
Sent:	Tuesday, November 30, 2021 6:58 PM
To:	'eccompliance-guj@gov.in'; 'rowz.bpl-mef@nic.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 - APSEZ, Mundra - MPT 1995 (Apr'21 to Sep'21)
Attachments:	1. EC Compliance Report_MPT 1995_Apr'21 to Sep'21.pdf

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APSEZL/EnvCell/2021-22/079

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4) The Member Secretary, GPCB – Head Office, Paryavaran Bhavan, Sector 10 A, Gandhi N

Thanks & Regards,
Chiragsing Rajput
Environment Cell | Adani Ports & Special Economic Zone Ltd.
Mob +91 9687678443 | Ext. 59523 | chiragsing.rajput@adani.com | www.adani.com
Adani Corporate House, 8th Floor, East Wing, Shantigram, Ahmedabad - 382421, Gujarat, India.

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Ports and Logistics

APSEZL/EnvCell/2021-22/079 **Date:** 27.11.2021

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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:

April-2021 to September-2021

Index

EC & CRZ Clearance Compliance Report

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

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

Sr. No.	Conditions	Compliance Status as on 30-09-2021
2(i)	All construction designs / drawings relating to various project activities should have the approval of the concerned State Government departments / Agencies.	Complied All construction and operation activities are being carried out in line with the CRZ recommendation and permissions granted.
2(ii)	To prevent discharge of bilge wastes, sewage and other liquid wastes from the oil tankers / ships into marine environment, adequate system for collection, treatment and disposal of liquid wastes including shoreline installation and special hose connections for ships to allow for discharge of sewage must be provided.	Complied Ships berthing at Mundra Port comply with MARPOL regulations. No discharge such as bilge wastes, sewage or any other liquid wastewater is allowed into marine environment inside port limits. APSEZ has adequate Waste Reception facility as per MARPOL and DG Shipping regulations. The port has reception facility for all MARPOL waste streams (Annex-I, Annex-II, Annex-IV & Annex-V) except Annex-VI that is generated from vessels. APSEZL has not received any sewage/liquid waste from ships / vessels till date. As a general practice APSEZ provide facility for receiving slop / waste oil from vessels through hose connection with oil tankers. These tankers divert slop / waste oil to Oil water separator system where water and oil particles are separated. Separated oil is being sold to authorized recycler /re-processor. However, no slope / waste oil was received during the compliance period.
2(iii)	The quality of treated effluents, solid wastes, emissions and noise levels etc. must confirm to the standards laid down by the competent authorities	Complied. ETP is provided to treat the wastewater/wash water. Also the sewage generated from port is being treated in designated ETP. Treated water is used for horticultural purposes. Quality of treated water confirm to the

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30-09-2021</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 Wastewater Treated (Avg. from Apr'21 to Sep'21)</th><th>Type of ETP / STP</th></tr>
<tr><td>LT</td><td>265 KLD</td><td>84 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>Perm. Limit$</th></tr>
<tr><td>pH</td><td>--</td><td>6.58</td><td>7.99</td><td>6.5 – 8.5</td></tr>
<tr><td>SS</td><td>mg/L</td><td>24</td><td>52</td><td>100</td></tr>
<tr><td>TDS</td><td>mg/L</td><td>793</td><td>2069</td><td>2100</td></tr>
<tr><td>COD</td><td>mg/L</td><td>65</td><td>86</td><td>100</td></tr>
<tr><td>BOD</td><td>mg/L</td><td>12</td><td>19</td><td>30</td></tr>
<tr><td>Ammonical Nitrogen as NH_3-N</td><td>mg/L</td><td>1.76</td><td>8.56</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. Please refer Annexure – 1 for detailed analysis reports for the period Apr'21 to Sep'21. Approx. INR 9.56 Lakh is spent for all environmental monitoring activities during the FY 2021-22 (Till Sep'21) 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 is attached as Annexure – 2, which shows all the parameters are well within the permissible limit.

<u>Waste Management</u> – APSEZ has adopted 5R concept for environmentally sound management of different types of solid & liquid wastes. Please refer below details about management of each type of waste.</td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 30-09-2021
		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 / mechanical 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 are attached as **Annexure – 3**. **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. Aroma Petrochem, Bhavnagar & Aviation Corporation, Kutch. 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

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30-09-2021</th></tr>
<tr><td></td><td></td><td>
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. Aroma Petrochem, Bhavnagar & Aviation Corporation, Kutch and water is sent to ETP for further treatment. However, during the compliance period i.e. Apr'21 to Sep'21, there was no received or disposal of Slope Oil.

Details of permissions / agreements of hazardous waste authorized vendors were submitted along with pervious half yearly EC Compliance Reports. And there is no further change.

The following table summarizes the waste management practice (from Apr'21 to Sep'21) 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>9.01</td><td rowspan="2">Co-processing at cement industries</td></tr>
<tr><td>Oily Cotton waste</td><td>68.5</td></tr>
<tr><td>Used / Spent Oil</td><td>223.6</td><td>Sell to registered recycler</td></tr>
<tr><td rowspan="2">Discarded Containers / Barrels</td><td>29.56</td><td>Sell to registered recycler</td></tr>
<tr><td>1.49</td><td>Reuse within premises</td></tr>
<tr><td colspan="3">Other Waste</td></tr>
<tr><td>Battery Waste</td><td>30.0</td><td>Sell to registered recycler</td></tr>
<tr><td>E-Waste</td><td>35.79</td><td>Sell to registered recycler</td></tr>
<tr><td>Bio Medical Waste</td><td>3.0</td><td>To approved CBWTF Site</td></tr>
<tr><td colspan="3">Non-Hazardous Waste</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30-09-2021</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Recyclables Dry Waste / Scrap</td><td>755.97</td><td>After recovery sent for recycling / Reuse within premises</td></tr>
<tr><td>Non-Recyclable Dry Waste (RDF)</td><td>217.86</td><td>Co-processing at Cement Industries</td></tr>
<tr><td>Wet Waste (Food waste + Organic waste)</td><td>438.55</td><td>Converted to Manure for Horticulture use / Biogas for cooking purpose</td></tr>
<tr><td>STP Sludge</td><td>17</td><td>Used as a Manure 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. Quality of Ambient Air and Noise level confirm to the standard laid down by SPCB / CPCB. Summary of the same for duration from Apr'21 to Sep'21 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>Perm. Limit$</th></tr>
<tr><td colspan="5">AAQM</td></tr>
<tr><td>PM_{10}</td><td>µg/m³</td><td>95.52</td><td>43.61</td><td>100</td></tr>
<tr><td>$PM_{2.5}$</td><td>µg/m³</td><td>57.32</td><td>16.56</td><td>60</td></tr>
<tr><td>SO_2</td><td>µg/m³</td><td>23.45</td><td>6.22</td><td>80</td></tr>
<tr><td>NO_2</td><td>µg/m³</td><td>41.25</td><td>14.26</td><td>80</td></tr>
<tr><th>Noise</th><th>Unit</th><th>Leq Max</th><th>Leq Min</th><th>Leq Perm. Limit*</th></tr>
<tr><td>Day Time</td><td>dB(A)</td><td>73.1</td><td>48.7</td><td>75</td></tr>
<tr><td>Night Time</td><td>dB(A)</td><td>69.8</td><td>52.4</td><td>70</td></tr>
</table>
$ as per NAAQ standards, 2009
* as per CC&A granted by SPCB
Values recorded confirms to the stipulated standards.
Please refer Annexure – 1 for detailed analysis reports for the period Apr'21 to Sep'21. Approx. INR 9.56 Lakh is spent for all environmental monitoring activities during the FY 2021-22 (Till Sep'21) for overall APSEZ.
</td></tr>
<tr><td>2(iv)</td><td>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</td><td>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</td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 30-09-2021
	during the construction phase and will remain in existence thereafter as part of the infrastructure build up in the area for local developmental purposes.	compliance report submission for the period Oct'16 to Mar'17.
2(v)	Adequate noise control measures should be ensured in various project activities and due to increase in the traffic which is likely to take place during construction and operational phases.	Complied. Construction phase is completed. For operation phase, following noise control measures are taken: • All DG sets are installed with acoustic enclosure confirming EPA norms. • Proper maintenance of equipments / plant machineries is being done on regular basis. • Green Belt has been developed at road sides and operational areas. • Traffic control measures such as signage, speed regulation, traffic guides etc. are in place to reduce the unnecessary honking by cargo vehicles.
2(vi)	The water quality parameters such as dissolved oxygen, ammonical nitrogen and other nutrients etc. should be measured at regular intervals to ensure adherence to the prescribed standards of water qualities. Suitable ground water monitoring should also be undertaken around the sludge lagoons and regular reports to be submitted to the Ministry for evaluation.	Complied. ETP having 265 KLD capacity is provided for treatment of wastewater. Treated water is used for horticulture purpose within premises after confirming permissible limit. The watery sludge is transferred to sludge drying bed, where the excess wastewater is recirculated to ETP. Third party analysis of the treated water is being carried out twice in a month by NABL accredited and MoEF&CC approved agency namely M/s. Pollucon Laboratories Pvt. Ltd. Summary of the same for duration of Apr'21 to Sep'21 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 Laboratory Pvt. Ltd. Summary of the same for duration from Apr'21 to Sep'21 is mentioned below. Monitoring Reports are attached as **Annexure – 1** for the same.

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30-09-2021</th></tr>
<tr><td></td><td></td><td>
Total Sampling Locations: 09 Nos.
<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Unit</th><th colspan="2">Surface</th><th colspan="2">Bottom</th></tr>
<tr><th>Max</th><th>Min</th><th>Max</th><th>Min</th></tr>
<tr><td>pH</td><td>--</td><td>8.47</td><td>8.02</td><td>8.48</td><td>7.95</td></tr>
<tr><td>TSS</td><td>mg/L</td><td>135</td><td>88</td><td>133</td><td>80</td></tr>
<tr><td>BOD (3 Days @ 27 °C)</td><td>mg/L</td><td>5.0</td><td>2.26</td><td>ND*</td><td>ND*</td></tr>
<tr><td>DO</td><td>mg/L</td><td>6.4</td><td>5.8</td><td>6.0</td><td>5.7</td></tr>
<tr><td>Salinity</td><td>ppt</td><td>37.4</td><td>34.86</td><td>37.7</td><td>35.2</td></tr>
<tr><td>TDS</td><td>mg/L</td><td>38842</td><td>35964</td><td>39117</td><td>36276</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. Pollucon Laboratories Pvt. Ltd. Summary of the same for duration of Apr'21 to Sep'21 is mentioned below.

Sampling Locations: 5 Nos.
<table>
<tr><th>Parameter</th><th>Unit</th><th>Minimum</th><th>Maximum</th></tr>
<tr><td>pH</td><td>-</td><td>7.89</td><td>8.35</td></tr>
<tr><td>Salinity</td><td>ppt</td><td>0.91</td><td>7.44</td></tr>
<tr><td>Oil & Grease</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Hydrocarbon</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Lead as Pb</td><td>mg/L</td><td>0.02</td><td>0.22</td></tr>
<tr><td>Arsenic as As</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Nickel as Ni</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Total Chromium as Cr</td><td>mg/L</td><td>0.02</td><td>0.04</td></tr>
<tr><td>Cadmium as Cd</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Mercury as Hg</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Zinc as Zn</td><td>mg/L</td><td>0.14</td><td>0.64</td></tr>
<tr><td>Copper as Cu</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Iron as Fe</td><td>mg/L</td><td>0.28</td><td>3.86</td></tr>
<tr><td>Insecticides/Pesticides</td><td>--</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Depth of Water Level from GL</td><td>meter</td><td>1.90</td><td>2.15</td></tr>
</table>
*ND = Not Detectable

Please refer Annexure – 1 for detailed analysis reports. Approx. INR 9.56 Lakh is spent for all environmental monitoring activities during the compliance period i.e. Apr'21 to Sep'21 for overall APSEZ, Mundra.
</td></tr>
<tr><td>2(vii)</td><td>Adequate culverts should be</td><td>Complied.</td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 30-09-2021
	provided for smaller creeks so that breeding grounds for crabs, mud snappers and other marine organisms are not cut off by road construction activities.	Adequate culverts are provided on prominent creek system named as (1) Kotdi (2) Baradimata (3) Navinal (4) Bocha (5) Mundra (Oldest port (Juna Bandar) leading to Bhukhi river). All above creeks are in existence allowing free flow of water and there is no filling or reclamation of any creek area. APSEZL has so far constructed 19 culverts having total length of approx. 1100 m with total cost of INR 20 Crores. Apart from that three RCC Bridges have been constructed over Kotdi creek with total length of 230 m and cost of INR 10 Crores. Photographs of the same were submitted as part of compliance report submission for the duration of Apr'17 to Sep'17.
2(viii)	A hundred meter wide mangrove belt should be created all along the west of Navinal Creek till its junction up to new road. Green belt of 50 M width should also be provided all along the periphery of the plant site and along the roads, storage tanks etc. at 1500 trees per hectare. All details regarding the Mangrove belt and other afforestation work must be worked out in consultation with the State Forest Department, and details sent to the Ministry.	Complied. 24 hectare of Mangrove afforestation was carried out with a cost of INR 25.0 Lac at west of Navinal creek. All Mangrove plantations were done in consultation with Dr. Maity, Mangrove consultant of India. Green belt was developed 72.81 ha. Total 1,49,959 trees were planted with the density of 2060 trees per hectare within the port area. So, far APSEZ has developed 486.19 ha. area as greenbelt with plantation of more than 9.4 Lacs saplings within the APSEZ area. To enhance the marine biodiversity, till date APSEZ has carried out mangrove afforestation in 2890 ha. area across the coast of Gujarat. Total expenditure for the same till date is INR 832 lakh. Details on Mangroves afforestation & Green belt development carried out by APSEZ till date is annexed as **Annexure – 4**. 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. Current year 3 ha

Sr. No.	Conditions	Compliance Status as on 30-09-2021
		development is planned to extend multi-species mangrove plantation. Please refer attached **Annexure – 5** 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 water through Gujarat Water Infrastructure Limited. Average water consumption for entire APSEZ area is 3.93 MLD during compliance period i.e. Apr'21 to Sep'21. 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 last monsoon Approx. 530 KL 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.

Sr. No.	Conditions	Compliance Status as on 30-09-2021
		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 (18 Nos. of check dams in coordination with salinity department) and Augmentation of 2check dams (1 Check dam current year). • Ground recharge activities (pond deepening work for more than 52 ponds) individually and 26 ponds under Sujlam Suflam Jal Abhiyan were built leading to a significant increase in water table and higher returns to the farmers. • Roof Top Rain Water Harvesting 90 Nos. (35 Nos current year) which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family. • Recharge Borewell 125 Nos (50 Nos current year) which is best ever option to. • Drip Irrigation 980 Farmers (56 Application current year) benefitted in coordination with Gujrat Green Revolution Company. • 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 – 5** 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 423.18 lakh are spent during current compliance period i.e. Apr'21 to Sep'21.

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30-09-2021</th></tr>
<tr><td>2(x)</td><td>While filling the storage tanks, compatibility of the chemicals should be ensured for chemical safety. Since 5000 MT capacity is proposed to be created for cryogenic conditions, necessary HAZOP study should be initiated and submitted to the Ministry within three months. Calculations carried out on the basis of EFFECT MODEL for this storage should be rechecked for various accident scenarios. Keeping in view the safety aspects, Horton spheres of 1250 MT capacity each should be preferred.</td><td>Complied.

Risk assessment study was carried out by M/s. Comet Consultancy Services in January 1995 as a part of EIA for storage of various chemicals in tanks for chemical safety and the same was submitted to MoEF&CC while processing EC application.

Risk assessment study was carried out by iFluids Engineering for handling and storage of LPG in three parts as mentioned below.
1. QRA for LPG Jetty Area
2. QRA for LPG Pipeline
3. QRA for LPG Tank farm

A copy of the same was submitted as part of compliance report for the duration of Apr'17 to Sep'17.

Recommendations of the risk assessment have been implemented as part of the construction activity and 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-83561 valid till 20th November, 2021. The same was submitted along with compliance submission for the period of Oct'16 to Mar'17.

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-83561</td><td>20.11.2021</td></tr>
</table>
</td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 30-09-2021
		<table><tr><td>2</td><td>CtO - Amendment</td><td>Mundra Port Terminal</td><td>WH-88317</td><td>20.11.2021</td></tr><tr><td>3</td><td>CtO - Amendment</td><td>Mundra Port Terminal</td><td>GPCB/CCA-Kutch -39(5)/ ID-17739/473575</td><td>20.11.2021</td></tr><tr><td>4</td><td>CtO - Amendment</td><td>Mundra Port Terminal</td><td>H-98086</td><td>20.11.2021</td></tr><tr><td>5</td><td>CtO - Amendment</td><td>Mundra Port Terminal</td><td>H-105708</td><td>20.11.2021</td></tr><tr><td>6</td><td>CtE – Amendment</td><td>WFDP</td><td>17739 / 15618</td><td>18.05.2027</td></tr><tr><td>7</td><td>CtO - Correction</td><td>Mundra Port Terminal</td><td>PC/CCA-KUTCH-39(7)/GPCB ID 17739/592900</td><td>20.11.2021</td></tr></table> The permissions mentioned above (Sr. No. 1 to 6) were submitted along with earlier compliance report submission. The copy of CtO – Correction (Sr. No. 7) is attached as **Annexure – 6**. APSEZ has already applied for CC&A / CtO Renewal to the GPCB vide Inward No. 202362, dated 25.08.2021, which is under scrutiny. Details of the same are attached as **Annexure – 7**.
2(xii)	For ensuring the acceptance of the project by the local people, a Resolution of the Official Panchayat of the Region should be obtained offering their concurrence in writing by the project proponents and submitted to the Ministry by 31st October, 1995.	Complied. Resolution from the Panchayat has been obtained and submitted to the Ministry of Environment, Forest & Climate Change on 31st July, 2012.
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 is attached as **Annexure – 8**. Budget for environmental management measures

Sr. No.	Conditions	Compliance Status as on 30-09-2021
		(including horticulture) for the FY 2021-22 is to the tune of INR 1332 lakh. Out of which, Approx. INR 876 lakh are spent during the year 2021-22 (till Sep'21). Detailed breakup of the expenditures for the past 3 years is attached as **Annexure – 9**.
2(xiv)	Landsat imagery should be obtained on a continuous basis covering various seasons to study the change in the land use pattern due to the project and project related activities.	Complied. Project is in operation phase since many years and there is no change in the land use pattern.
2(xv)	With a view to providing adequate job opportunities to local people, facilities for technical training and development of skills should be made available in consultation with the state Harbour Department, and to this end it must be ensured that there is allocation of adequate funds. The local people should be involved in the afforestation program proposed for the scheme to ensure public participation and success of vegetation programmes.	Complied. Adani Foundation – CSR Arm of Adani Group is doing following activities as a part of Skill Development in surrounding communities in Kutch area. • Adani Skill Development Center (ASDC), Mundra & Bhuj is providing skill development training to the locals for Soft Skill, Technical Training and Carrier Guidance & knowledge-based training. • Adani Skill Development Centre (ASDC) is playing a pivotal role in implementing sustainable development in the state. ASDC is envisioned to be playing a major role in elevating the socio-economic status of the people belonging to the lowest strata of the society by empowering them with various skill development training for employability and livelihood. • Over the last few years, ASDC has assessed various aspects of the technical, leadership and soft skills gaps that organizations, in general, face and accordingly focuses on imparting required training in those areas in partnership with various colleges and institutes. • ASDC imparted various soft skilled and technical training to make Atma Nirbhar India. • During this year till Sep'21, Total 417 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.

Sr. No.	Conditions	Compliance Status as on 30-09-2021
		• 24 hectare of mangrove afforestation at Mundra was done through active participation of local fishermen at the cost of INR 25.0 Lac. • 5820+ Man-days Fisherman person days employed in Mangroves Plantation. The Foundation has also supported Pagadiya fishermen as painting laborers by providing them with employment and job in various field. Details on skill development training imparted during compliance period i.e. Apr'21 to Sep'21 by Adani Foundation are enclosed as **Annexure – 5**.
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 taken for import of hazardous chemicals as per License No. P/HQ/GJ/15/2050 (P12369) dated 18/07/2016 which is valid up to 31/12/2024 for Class A & Class C petroleum. A copy of the same was submitted along with the compliance report submission for the period of Oct'16 to Mar'17 and there is no further change. Please refer point no. 2 (xi) regarding GPCB permissions. License under Factories Act is taken dated 07.10.1998 and last renewed vide license no. 0102 on 20.04.2017 (Sr. No. 70707) is valid up to 31.12.2022. Details were submitted along with last half yearly EC compliance report for the period of Oct'20 to Mar'21.

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30-09-2021</th></tr>
<tr><td>2(xvii)</td><td>A detailed progress report should be submitted to the Ministry on each of the conditions stipulated above in respect of the follow-up action taken every six months. The first of these two reports should be sent in by 31.3.1996.</td><td>Complied.

Compliance report of EC conditions is uploaded regularly. Last compliance report including results of monitoring data for the period of Oct'20 to Mar'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 18.05.2021. 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 20.05.2021 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>Apr'18 to Sep'18</td><td>30.11.2018</td></tr>
<tr><td>2</td><td>Oct'18 to Mar'19</td><td>31.05.2019</td></tr>
<tr><td>3</td><td>Apr'19 to Sep'19</td><td>28.11.2019</td></tr>
<tr><td>4</td><td>Oct'19 to Mar'20</td><td>20.05.2020</td></tr>
<tr><td>5</td><td>Apr'20 to Sep'20</td><td>26.11.2020</td></tr>
<tr><td>6</td><td>Oct'20 to Mar'21</td><td>25.05.2021</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

"HALF YEARLYENVIRONMENTAL MONITORING REPORT"

FOR

adani™

ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED
TAL: MUNDRA, KUTCH, MUNDRA – 370 421

MONITORING PERIOD:
APRIL 2021 TO SEPTEMBER 2021

PREPARED BY:

Pollucon

POLLUCON LABORATORIES PVT.LTD.

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TC - 5945 **ISO 9001:2015** **ISO 14001:2015** **ISO45001:2018**

MARINE WATER MONITORING SUMMARY REPORT

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021		MAY 2021		JUNE 2021		JULY 2021		AUGUST 2021		SEPTEMBER 2021		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1	pH	--	8.41	8.35	8.32	8.25	8.27	8.21	8.24	8.31	8.17	8.12	8.13	8.09	IS3025(P11)83Re.02
2	Temperature	oC	30.7	30.5	30.5	30.1	30.2	30	29.5	29.3	29.9	29.8	29.9	29.7	IS3025(P9)84Re.02
3	Total Suspended Solids	mg/L	102	88	119	102	127	108	107	92	113	102	93	85	IS3025(P17)84Re.02
4	BOD (3 Days @ 27 °C)	mg/L	5.0	Not Detected	4.2	Not Detected	3.4	Not Detected	3.1	Not Detected	2.8	Not Detected	2.3	Not Detected	IS 3025 (P44)1993Re.03Edition2.1
5	Dissolved Oxygen	mg/L	6.0	5.8	5.9	5.8	6.0	5.8	5.9	5.7	6.0	5.8	6.0	5.95	IS3025(P38)89Re.99
6	Salinity	ppt	37.1	37.4	36.2	36.7	35.2	35.6	35.72	36.18	35.14	35.46	34.90	35.32	APHA (22nd Edi) 2550 B
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	APHA(22nd Edi)5520 D
8	Nitrate as NO_3	µmol/L	2.21	2.40	2.98	2.75	2.54	2.39	2.86	2.74	2.36	2.14	2.17	2.06	IS3025(P34)88
9	Nitrite as NO_2	µmol/L	0.75	0.81	0.83	0.79	0.35	0.46	0.92	0.81	0.75	0.63	0.63	0.54	IS3025(P34)88 NEDA
10	Ammonical Nitrogen as NH_3	µmol/L	2.90	2.72	2.76	2.51	2.13	1.97	2.35	2.16	2.59	2.48	2.38	2.13	IS3025(P34)88Cla.2.3
11	Phosphates as PO_4	µmol/L	2.58	2.04	1.93	1.72	2.64	2.48	1.97	1.83	2.28	2.19	2.46	2.35	APHA(22nd Edi) 4500 C
12	Total Nitrogen	µmol/L	5.86	5.93	6.57	6.05	5.02	4.82	6.13	5.71	5.70	5.25	5.18	4.73	IS3025(P34)88
13	Petroleum Hydrocarbon	µg/L	8.0	Not Detected	14.0	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
14	Total Dissolved Solids	mg/L	38712	38901	37804	38216	36809	37118	36802	37184	36758	37066	35994	36384	IS3025(P16)84Re.02
15	COD	mg/L	20	Not Detected	23.6	19.8	21.6	Not Detected	15.4	Not Detected	12.9	10.8	10.28	Not Detected	APHA(22nd Edi) 5520-D Open Reflux
A	**Phytoplankton**														
16.1	Chlorophyll	mg/m^3	2.62	2.25	2.59	2.20	2.67	2.25	2.21	2.16	2.18	2.13	2.23	2.12	APHA (22nd Edi) 10200-H

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

16.2	Phaeophytin	mg/m^3	0.15	0.32	0.18	0.38	0.1	0.3	0.36	0.60	0.59	0.44	0.54	0.46	APHA (22nd Edi) 10200-H
16.3	Cell Count	No. x 10^3/L	162	96	150	94	146	102	124	94	156	106	142	96	APHA (22nd Edi) 10200-H
16.4	Name of Group Number and name of group species of each group	--	*Biddulphia sp .Cheatoceros sp. Skeletonema sp. Rhizosolenia sp.*	*Nitzschia sp. Stauroneis sp. Navicula sp.*	*Rhizosolenia sp. Stauroneis sp. Pleurosigma sp. Coscinodiscus sp.*	*Navicula sp. Skeletonema sp. Nitzschia sp.*	*Thallasiosira sp. Cheatoceros sp. Skeletonema sp. Thallasionema sp.*	*Nitzschia sp. Navicula sp. Melosira sp. Synedra sp.*	*Ceratium sp. Pleurosigma sp. Rhizosolenia sp. Mastogloia sp. Thallasionema sp.*	*Synedra sp. Nitzschia sp. Cyclotella sp. Melosira sp.*	*Skeletonema sp. Rhizosolenia sp. Coscinodiscus sp. Thallasionema sp.*	*Navicula sp. Nitzschia sp. Cyclotella sp. Melosira sp.*	*Chaetoceros sp. Coscinodiscus sp. Biddulphia sp. Skeletonema sp.*	*Rhizosolenia sp. Pleurosigma sp. Navicula sp. Synedra sp.*	APHA (22nd Edi) 10200-H
B	**Zooplanktons**														
17.1	Abundance (Population)	noX10^3/ 100 m^3	24		22		32		27		33		25		APHA (22nd Edi) 10200-G
17.2	Name of Group Number and name of group species of each group	--	Chaetognathes Polychaetes Amphipods Decapods		Copepods Isopods Polychaetes Namatodes		Copepods Polychaetes Decapods Ostracods		Bivalves Gastropods Polychaetes		Decapods Gastropods Polychaetes		Polychaetes Lamellibranches Gastropods Ostracods		APHA (22nd Edi) 10200-G
17.3	Total Biomass	ml/100 m^3	2.1		1.9		2.25		2.4		3.1		2.45		APHA (22nd Edi) 10200-G
C	**Microbiological Parameters**														
18.1	Total Bacterial Count	CFU/ml	2410		2320		2540		2550		2610		2740		IS 5402:2002
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present		APHA(22nd Edi)9221-D
18.3	Ecoli	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:1622:1981Edi.2.4(2003-05)
18.4	Enterococcus	/ml	Present		Present		Present		Present		Present		Present		IS : 15186 :2002
18.5	Salmonella	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 5887 (P-3)
18.6	Shigella	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 1887 (P-7)
18.7	Vibrio	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 5887 (P-5)

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021	MAY 2021	JUNE 2021	JULY 2021	AUGUST 2021	SEPTEMBER 2021	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1	Organic Matter	%	0.63	0.52	0.48	0.43	0.39	0.42	FCO:2007
2	Phosphorus as P	µg/g	529	463	593	528	613	574	APHA(22nd Edi) 4500 C
3	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	--
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
5	**Heavy Metals**								
5.1	Aluminum as Al	%	5.59	4.26	4.87	4.37	4.56	4.98	AAS APHA 3111 B
5.2	Total Chromium as Cr^{+3}	µg/g	128	110	126	109	127	112	AAS 3111B
5.3	Manganese as Mn	µg/g	716	673	706	684	639	728	AAS APHA 3111 B
5.4	Iron as Fe	%	4.93	4.39	4.68	4.47	4.61	4.76	AAS APHA(22nd Edi)3111 B
5.5	Nickel as Ni	µg/g	57	31.72	39.5	29.84	33.58	28.64	AAS APHA(22nd Edi)3111 B
5.6	Copper as Cu	µg/g	48	28.6	42.6	32.6	49.8	46.70	AAS APHA(22nd Edi)3111 B
5.7	Zinc as Zn	µg/g	135	107	113	97.5	110	92.70	AAS APHA(22nd Edi)3111 B
5.8	Lead as Pb	µg/g	2.76	3.28	2.59	3.16	2.68	2.38	AAS APHA(22nd Edi)3111 B
5.9	Mercury as Hg	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	AAS APHA- 3112 B
6	**Benthic Organisms**								
6.1	Macrobenthos	--	Polychaetes Ostracods Gastropods	Polychaetes Amphipods Gastropods	Polychaetes Amphipods Branchyarans	Gastropods Crustaceans Decapods	Gastropods Crustaceans Bivalves	Gastropods Polychaetes Bivalves	APHA (22nd Edi) 10500-C
6.2	MeioBenthos	--	Foraminiferans Nematodes	Foraminiferams	Nematodes	Foraminiferams Nematodes	Foraminiferams	Nematodes	APHA (22nd Edi) 10500-C
6.3	Population	no/m2	379	262	350	440	352	499	APHA (22nd Edi) 10500-C

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021		MAY 2021		JUNE 2021		JULY 2021		AUGUST 2021		SEPTEMBER 2021		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1	pH	--	8.39	8.37	8.32	8.25	8.23	8.17	8.17	8.14	8.13	8.09	8.09	8.04	IS3025(P11)83Re.02
2	Temperature	oC	30.9	30.8	30.8	30.6	30.2	30.1	29.6	29.3	29.9	29.8	29.8	29.7	IS3025(P9)84 Re.02
3	Total Suspended Solids	mg/L	109	124	123	107	135	119	123	107	113	102	102	91	IS3025(P17)84Re.02
4	BOD (3 Days @ 27 °C)	mg/L	3.0	Not Detected	3.5	Not Detected	3.2	Not Detected	3.0	Not Detected	2.8	Not Detected	2.3	Not Detected	IS 3025 (P44)1993Re. 03Edition2.1
5	Dissolved Oxygen	mg/L	5.9	5.7	5.9	5.8	6.0	5.9	5.9	5.7	6.0	5.7	6.0	5.8	IS3025(P38)89Re.99
6	Salinity	ppt	37	37.3	37.2	37.5	35.3	35.5	35.46	35.92	35.26	35.74	34.86	35.2	APHA (22nd Edi) 2550 B
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	APHA(22nd Edi) 5520D
8	Nitrate as NO_3	µmol/L	2.56	2.74	2.96	2.63	2.61	2.42	2.37	2.19	2.47	2.39	2.53	2.41	IS3025(P34)88
9	Nitrite as NO_2	µmol/L	0.65	0.74	0.75	0.51	0.45	0.56	0.89	0.75	0.76	0.68	0.81	0.73	IS3025(P34)88 NEDA
10	Ammonical Nitrogen as NH_3	µmol/L	2.45	2.80	2.34	2.24	2.51	2.34	2.38	2.23	2.57	2.41	2.34	2.19	IS3025(P34)88Cla.2.3
11	Phosphates as PO_4	µmol/L	2.71	2.49	2.69	2.47	2.37	2.28	1.75	1.68	1.36	1.27	1.75	1.63	APHA(22nd Edi) 4500 C
12	Total Nitrogen	µmol/L	5.66	5.49	6.05	5.38	5.57	5.32	5.64	5.17	5.80	5.48	5.68	5.33	IS3025(P34)88
13	Petroleum Hydrocarbon	µg/L	6.0	Not Detected	10.5	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
14	Total Dissolved Solids	mg/L	38544	38675	38664	38926	36898	37104	37066	37504	36862	37314	35964	36276	IS3025(P16)84Re.02
15	COD	mg/L	14	8	21.7	19.3	19.4	Not Detected	16.2	Not Detected	13.4	12.8	10.48	Not Detected	APHA(22nd Edi) 5520-D Open Reflux
A	**Phytoplankton**														
16.1	Chlorophyll	mg/m^3	2.71	2.63	2.65	2.49	2.58	2.4	2.37	2.29	2.26	2.18	2.24	2.16	APHA (22nd Edi) 10200-H

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16.2	Phaeophytin	mg/m^3	0.99	0.19	1.04	0.33	0.2	1.3	0.45	1.40	0.65	1.51	0.67	1.54	APHA (22nd Edi) 10200-H
16.3	Cell Count	No. x 10^3/L	156	95	142	86	152	106	134	99	152	106	138	108	APHA (22nd Edi) 10200-H
16.4	Name of Group Number and name of group species of each group	--	Rhizosolenia sp. Biddulphia sp. Thallasiosira sp. Coscinodiscus sp.	Synedra sp. Nitzschia sp. Pleurosigma sp.	Thallasionema sp. Pleurosigma sp. Biddulphia sp.	Navicula sp. Synedra sp. Cheatoceros sp.	Thallasionema sp. Cheatoceros sp. Biddulphia sp. Coscinodiscus sp.	Synedra sp. Navicula sp. Nitzschia sp. Pleurosigma sp.	Biddulphia sp. Stauroneis sp. Coscinodiscus sp. Skeletonema sp.	Navicula sp. Nitzschia sp. Cyclotella sp. Thalassiothrix sp.	Rhizosolenia sp. Synedra sp. Thallasionema sp. Pleurosigma sp. Coscinodiscus sp.	Thallasionema sp. Navicula sp. Skeletonema sp. Biddulphia sp.	Coscinodiscus sp. Biddulphia sp. Thallasionema sp. Rhizosolenia sp.	Synedra sp. Nitzschia sp. Navicula sp. Stauroneis sp.	APHA (22nd Edi) 10200-H
B	**Zooplanktons**														
17.1	Abundance (Population)	noX10^3 / 100 m^3	27		25		31		23		29		24		APHA (22nd Edi) 10200-G
17.2	Name of Group Number and name of group species of each group	--	Ostracods Gastropods Chaetognathes Polychaetes		Namatodes Copepods Polychaetes Mysids		Decapods Polychaetes Gastropods		Polychaetes Bivalves Decapods Ostracods		Polychaetes Bivalves Decapods Chaetognaths		Lamellibranches Polychaetes Gastropods		APHA (22nd Edi) 10200-G
17.3	Total Biomass	ml/100 m^3	2.6		2.2		2.35		2.2		2.9		2.15		APHA (22nd Edi) 10200-G
C	**Microbiological Parameters**														
18.1	Total Bacterial Count	CFU/ml	2240		2380		2450		2600		2580		2710		IS 5402:2002
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present		APHA(22nd Edi) 9221-D
18.3	Ecoli	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:1622:1981 Edi.2.4(2003-05)
18.4	Enterococcus	/ml	Present		Present		Present		Present		Present		Present		IS : 15186 :2002
18.5	Salmonella	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 5887 (P-3)
18.6	Shigella	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 1887 (P-7)
18.7	Vibrio	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 5887 (P-5)

H. T. Shah

Lab Manager

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Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021	MAY 2021	JUNE 2021	JULY 2021	AUGUST 2021	SEPTEMBER 2021	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1	Organic Matter	%	--	--	--	--	0.47	0.37	FCO:2007
2	Phosphorus as P	µg/g	--	--	--	--	619	568	APHA(22nd Edi) 4500 C
3	Texture	--	--	--	--	--	Sandy	Sandy	--
4	Petroleum Hydrocarbon	µg/g	--	--	--	--	Not Detected	Not Detected	PLPL-TPH
5	**Heavy Metals**								
5.1	Aluminum as Al	%	--	--	--	--	4.78	4.88	AAS APHA 3111 B
5.2	Total Chromium as Cr+3	µg/g	--	--	--	--	169	152	AAS 3111B
5.3	Manganese as Mn	µg/g	--	--	--	--	852	783	AAS APHA 3111 B
5.4	Iron as Fe	%	--	--	--	--	4.8	4.72	AAS APHA(22nd Edi)3111 B
5.5	Nickel as Ni	µg/g	--	--	--	--	42.96	37.98	AAS APHA(22nd Edi)3111 B
5.6	Copper as Cu	µg/g	--	--	--	--	37.64	41.23	AAS APHA(22nd Edi)3111 B
5.7	Zinc as Zn	µg/g	--	--	--	--	152	139	AAS APHA(22nd Edi)3111 B
5.8	Lead as Pb	µg/g	--	--	--	--	2.75	1.86	AAS APHA(22nd Edi)3111 B
5.9	Mercury as Hg	µg/g	--	--	--	--	Not Detected	Not Detected	AAS APHA- 3112 B
6	**Benthic Organisms**								
6.1	Macrobenthos	--	--	--	--	--	Gastropods Polychaetes Crustaceans	Gastropods Polychaetes Crustaceans	APHA (22nd Edi) 10500-C
6.2	MeioBenthos	--	--	--	--	--	Nematodes	--	APHA (22nd Edi) 10500-C
6.3	Population	no/m^2	--	--	--	--	499	469	APHA (22nd Edi) 10500-C

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POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021		MAY 2021		JUNE 2021		JULY 2021		AUGUST 2021		SEPTEMBER 2021		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1	pH	--	8.43	8.47	8.31	8.27	8.24	8.20	8.19	8.13	8.12	8.09	8.09	7.98	IS3025(P11)83Re.02
2	Temperature	oC	30.8	30.9	30.7	30.5	30.1	29.8	29.6	29.5	29.9	29.8	29.8	29.7	IS3025(P9)84Re.02
3	Total Suspended Solids	mg/L	98	85	110	92	123	107	114	93	128	104	107	89	IS3025(P17)84Re.02
4	BOD (3 Days @ 27°C)	mg/L	4.0	Not Detected	3.6	Not Detected	3.4	Not Detected	3.2	Not Detected	2.8	Not Detected	2.3	Not Detected	IS 3025 (P44)1993Re.03Edition2.1
5	Dissolved Oxygen	mg/L	6.2	6	6.0	5.9	6.0	5.8	5.9	5.8	6.0	5.7	6.0	5.85	IS3025(P38)89Re.99
6	Salinity	ppt	36.9	37.3	37.1	37.4	35.3	35.6	35.74	36.18	35.14	35.89	35.24	35.76	APHA (22nd Edi) 2550 B
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	APHA(22nd Edi)5520D
8	Nitrate as NO_3	µmol/L	2.41	2.65	2.87	2.74	2.69	2.47	2.39	2.13	2.57	2.41	2.39	2.27	IS3025(P34)88
9	Nitrite as NO_2	µmol/L	0.55	0.60	0.93	0.81	0.75	0.68	0.68	0.52	0.73	0.68	0.64	0.58	IS3025(P34)88 NEDA
10	Ammonical Nitrogen as NH_3	µmol/L	2.75	2.84	2.68	2.58	2.53	2.45	2.28	2.17	2.39	2.17	2.47	2.30	IS3025(P34)88Cla.2.3
11	Phosphates as PO_4	µmol/L	2.66	2.14	2.57	2.41	2.39	2.31	1.99	1.75	2.15	2.10	2.25	2.17	APHA(22nd Edi) 4500 C
12	Total Nitrogen	µmol/L	5.71	5.14	6.48	6.13	5.97	5.60	5.35	4.82	5.69	5.26	5.50	5.15	IS3025(P34)88
13	Petroleum Hydrocarbon	µg/L	18.0	Not Detected	16.8	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
14	Total Dissolved Solids	mg/L	38241	38656	38558	38282	36894	37180	37312	37726	36748	37456	36318	36784	IS3025(P16)84Re.02
15	COD	mg/L	24	17	21.6	19.4	20.5	Not Detected	16.3	Not Detected	13.6	11.4	10.86	Not Detected	APHA(22nd Edi) 5520-D Open Reflux
A	**Phytoplankton**														
16.1	Chlorophyll	mg/m^3	2.87	2.34	2.71	2.29	2.61	2.34	2.33	2.25	2.26	2.10	2.34	2.27	APHA (22nd Edi) 10200-H
16.2	Phaeophytin	mg/m^3	0.12	0.16	0.39	0.22	0.5	0.2	0.77	0.26	0.83	0.40	0.14	0.80	APHA (22nd Edi) 10200-H
16.3	Cell Count	No. x $10^3/L$	137	103	117	89	131	104	117	84	131	97	123	91	APHA (22nd Edi) 10200-H

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

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Lab Manager (Q)

16.4	Name of Group Number and name of group species of each group	--	Nitzschia sp. Pleurosigma sp. Biddulphia sp. Coscinodiscus sp.	Navicula sp. Stauroneis sp. Cheatoceros sp. Synedra sp.	Pleurosigma sp. Thallasiosira sp. Biddulphia sp. Rhizosolenia sp.	Cyclotella sp. Navicula sp. Nitzschia sp.	Skeletonema sp. Biddulphia sp. Coscinodiscus sp. Rhizosolenia sp.	Navicula sp. Nitzschia sp. Pleurosigma sp. Melosira sp.	Skeletonema sp. Biddulphia sp. Thallasionema sp. Coscinodiscus sp.	Nitzschia sp. Rhizosolenia sp. Synedra sp. Pleurosigma sp.	Nitzschia sp. Biddulphia sp. Skeletonema sp. Rhizosolenia sp.	Navicula sp. Pleurosigma sp. Synedra sp. Cheatoceros sp.	Gyro sigma sp. Guinardia sp. Thallasionema sp. Coscinodiscus sp. Cyclotella sp.	Nitzschia sp. Amphiprora sp. Biddulphia sp. Melosira sp. Synedra sp.	APHA (22nd Edi) 10200-H
B	**Zooplanktons**													
17.1	Abundance (Population)	noX10^3/ 100 m^3	28		26		30		25		31		26	APHA (22nd Edi) 10200-G
17.2	Name of Group Number and name of group species of each group	--	DecapodsPolychaetesSiphonophores		ChaetognathesOstracods Gastropods		GastropodsPolychaetes DecapodsOstracods		PolychaetesDecapodsOstracodsAmphipods		Polychaetes Gastropods Decapods		Polychaetes GastropodsOstracods	APHA (22nd Edi) 10200-G
17.3	Total Biomass	ml/100 m^3	2.6		2.3		2.45		2.4		2.9		2.55	APHA (22nd Edi) 10200-G
C	**Microbiological Parameters**													
18.1	Total Bacterial Count	CFU/ml	2390		2450		2520		2320		2490		2640	IS 5402:2002
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present	APHA(22ndEdi)9221-D
18.3	Ecoli	/ml	Present		Absent		Absent		Absent		Absent		Absent	IS:1622:1981Edi.2.4(2003-05)
18.4	Enterococcus	/ml	Present		Present		Present		Present		Present		Present	IS : 15186 :2002
18.5	Salmonella	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS : 5887 (P-3)
18.6	Shigella	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS : 1887 (P-7)
18.7	Vibrio	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS : 5887 (P-5)

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

RESULTS OF SEDIMENT ANALYSIS [M3 RIGHT SIDE OF BOCHA CREEK - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021	MAY 2021	JUNE 2021	JULY 2021	AUGUST 2021	SEPTEMBER 2021	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1	Organic Matter	%	0.56	0.47	0.43	0.42	0.37	0.35	FCO:2007
2	Phosphorus as P	µg/g	539	603	576	537	569	542	APHA(22nd Edi) 4500 C
3	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	--
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
5	**Heavy Metals**								
5.1	Aluminum as Al	%	4.72	4.39	4.63	4.46	4.68	4.58	AAS APHA 3111 B
5.2	Total Chromium as Cr+3	µg/g	119	127	119	106	132	107	AAS 3111B
5.3	Manganese as Mn	µg/g	703	613	710	692	613	592	AAS APHA 3111 B
5.4	Iron as Fe	%	4.81	4.68	4.56	4.37	4.58	4.63	AAS APHA(22nd Edi)3111 B
5.5	Nickel as Ni	µg/g	63	35.7	39.28	35.6	31.24	41.28	AAS APHA(22nd Edi)3111 B
5.6	Copper as Cu	µg/g	40	32.6	42.5	37.48	41.98	36.7	AAS APHA(22nd Edi)3111 B
5.7	Zinc as Zn	µg/g	139	112	119	102	129	109	AAS APHA(22nd Edi)3111 B
5.8	Lead as Pb	µg/g	2.75	2.93	2.64	2.36	2.75	2.17	AAS APHA(22nd Edi)3111 B
5.9	Mercury as Hg	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	AAS APHA- 3112 B
6	**Benthic Organisms**								
6.1	Macrobenthos	--	Polychaetes Crustaceans Bivalves	Polychaetes Gastropods Crustaceans	Amphipods Polychaetes Crustaceans	Gastropods Polychaetes Bivalves	Crustaceans Polychaetes Bivalves	Gastropods Polychaetes Bivalves	APHA (22nd Edi) 10500-C
6.2	MeioBenthos	--	Nematodes Turbellaria	Namatodes	Namatodes	Foraminiferams	--	--	APHA (22nd Edi) 10500-C
6.3	Population	no/m^2	324	352	411	471	353	372	APHA (22nd Edi) 10500-C

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

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Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021		MAY 2021		JUNE 2021		JULY 2021		AUGUST 2021		SEPTEMBER 2021		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1	pH	--	8.38	8.35	8.29	8.17	8.24	8.20	8.19	8.15	8.15	8.12	8.07	8.01	IS3025(P11)83Re.02
2	Temperature	oC	30.8	30.5	30.6	30.4	30.3	30	29.7	29.5	29.9	29.8	29.8	29.6	IS3025(P9)84Re.02
3	Total Suspended Solids	mg/L	94	80	97	86	119	102	105	93	113	102	97	83	IS3025(P17)84Re.02
4	BOD (3 Days @ 27 °C)	mg/L	3.0	Not Detected	3.4	Not Detected	3.2	Not Detected	3.1	Not Detected	2.7	Not Detected	2.3	Not Detected	IS 3025 (P44)1993Re.03 Edition2.1
5	Dissolved Oxygen	mg/L	6.0	5.9	5.9	5.8	6.0	5.8	5.9	5.8	6.0	5.7	5.9	5.75	IS3025(P38)89Re.99
6	Salinity	ppt	36.8	37.2	37.3	37.6	35.4	35.7	35.68	35.92	35.29	35.68	35.16	35.42	APHA (22nd Edi) 2550 B
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	APHA(22nd Edi)5520D
8	Nitrate as NO_3	µmol/L	2.45	2.14	2.73	2.59	2.61	2.53	2.74	2.58	2.47	2.31	2.46	2.31	IS3025(P34)88
9	Nitrite as NO_2	µmol/L	0.59	0.45	0.65	0.53	0.75	0.65	0.69	0.61	0.73	0.64	0.57	0.49	IS3025(P34)88 NEDA
10	Ammonical Nitrogen as NH_3	µmol/L	2.58	2.50	2.38	2.29	2.51	2.38	2.37	2.29	2.16	1.97	2.28	2.17	IS3025(P34)88Cla.2.3
11	Phosphates as PO_4	µmol/L	2.64	2.44	2.84	2.76	2.69	2.58	1.99	1.87	2.39	2.31	2.53	2.46	APHA(22nd Edi) 4500 C
12	Total Nitrogen	µmol/L	5.02	5.09	5.74	5.41	5.87	5.56	5.8	5.48	5.36	4.92	5.31	4.97	IS3025(P34)88
13	Petroleum Hydrocarbon	µg/L	9.0	Not Detected	13.6	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
14	Total Dissolved Solids	mg/L	38415	37818	38742	39052	36992	37280	37256	37472	36874	37258	36472	36472	IS3025(P16)84Re.02
15	COD	mg/L	15	10	26.8	17.2	19.6	Not Detected	17.3	Not Detected	13.2	11.6	10.28	Not Detected	APHA(22nd Edi) 5520-D Open Reflux
A	**Phytoplankton**														
16.1	Chlorophyll	mg/m^3	2.61	2.32	2.52	2.28	2.56	2.37	2.48	2.25	2.21	2.13	2.04	1.95	APHA (22nd Edi) 10200-H
16.2	Phaeophytin	mg/m^3	0.77	0.65	0.86	0.69	0.8	0.6	0.90	0.72	1.17	0.84	0.93	0.30	APHA (22nd Edi) 10200-H
16.3	Cell Count	No. x 10^3/L	131	101	121	91	139	109	123	96	134	110	127	89	APHA (22nd Edi) 10200-H

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

16.4	Name of Group Number and name of group species of each group	--	Melosira sp. Closteriu m sp. Biddulphi a sp. Rhizosole nia sp.	Thallasios ira sp. Nitzschia sp. Navicula sp. Fragillaria sp.	Thallasios ira sp. Coscinodi scus sp. Rhizosole nia sp. Pleurosig ma sp.	Navicula sp. Nitzschia sp. Melosira sp.	Rhizosole nia sp. Nitzschia sp. Synedra sp. Pleurosig ma sp. Coscinodi scus sp.	Navicula sp. Cheatocer ous sp. Biddulphi a sp. Melosira sp.	Navicula sp. Pleurosig ma sp. Biddulphi a sp. Coscinodi scus sp.	Synedra sp. Chetocen s sp. Staurond s sp. Nitzschia sp.	Navicula sp. Pleurosig ma sp. Biddulphi a sp. Coscinodi scus sp.	Synedra sp. Chetocen s sp. Staurond s sp. Nitzschia sp.	Nitzschia sp. Melosira sp. Ceratium sp. Pleurosig ma sp. Coscinod iscus sp.	Cyclotella sp. Biddulphi a sp. Synedra sp. Nitzschia sp.--	APHA (22nd Edi) 10200-H
B	**Zooplanktons**													
17.1	Abundance (Population)	noX10^3/ 100 m^3	31		27		30		25		31		28	APHA (22nd Edi) 10200-G
17.2	Name of Group Number and name of group species of each group	--	Polychaetes Decapods Gastropods Medusae		Siphnophores Chaetognathes Polychaetes Isopods		Polychaetes Decapods Ostracods Copepods		Polychaetes Gastropods Bivalves Ostracods		Polychaetes Gastropods Decapods		Foraminiferans Gastropods Lamellibranches Amphipods	APHA (22nd Edi) 10200-G
17.3	Total Biomass	ml/100 m^3	2.9		2.5		2.65		2.5		3.0		2.75	APHA (22nd Edi) 10200-G
C	**Microbiological Parameters**													
18.1	Total Bacterial Count	CFU/ml	2450		2340		2540		2160		2180		2390	IS 5402:2002
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present	APHA(22nd Edi)9 221-D
18.3	Ecoli	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS:1622:1981Edi .2.4(2003-05)
18.4	Enterococcus	/ml	Present		Present		Present		Present		Present		Present	IS : 15186 :2002
18.5	Salmonella	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS : 5887 (P-3)
18.6	Shigella	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS : 1887 (P-7)
18.7	Vibrio	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS : 5887 (P-5)

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021	MAY 2021	JUNE 2021	JULY 2021	AUGUST 2021	SEPTEMBER 2021	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1	Organic Matter	%	0.54	0.48	0.46	0.4	0.42	0.39	FCO:2007
2	Phosphorus as P	µg/g	603	590	560	574	664	582	APHA(22nd Edi) 4500 C
3	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	--
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
5	**Heavy Metals**								
5.1	Aluminum as Al	%	4.86	4.72	4.82	4.62	4.83	4.64	AAS APHA 3111 B
5.2	Total Chromium as Cr^{+3}	µg/g	152	129	139	114	129	112	AAS 3111B
5.3	Manganese as Mn	µg/g	693	658	587	630	675	576	AAS APHA 3111 B
5.4	Iron as Fe	%	4.78	4.42	4.69	4.27	4.78	4.52	AAS APHA(22nd Edi)3111 B
5.5	Nickel as Ni	µg/g	59	38.6	43.2	35.6	41.92	51.6	AAS APHA(22nd Edi)3111 B
5.6	Copper as Cu	µg/g	47	52.9	39.5	27.4	38.4	32.94	AAS APHA(22nd Edi)3111 B
5.7	Zinc as Zn	µg/g	127	108	117	92.8	113	98.7	AAS APHA(22nd Edi)3111 B
5.8	Lead as Pb	µg/g	3.38	2.93	2.59	2.17	2.64	2.17	AAS APHA(22nd Edi)3111 B
5.9	Mercury as Hg	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	AAS APHA- 3112 B
6	**Benthic Organisms**								
6.1	Macrobenthos	--	Gastropods Amphipods Bivalves	Polychaetes Gastropods Crustaceans	Polychaetes Amphipods Branchyarans	Polychaetes Gastropods Bivalves	Gastropods Amphipods Decapods	Gastropods Polychaetes Amphipods	APHA (22nd Edi) 10500-C
6.2	MeioBenthos	--	Nematodes	Foraminiferams	Foraminiferams	Foraminiferams	Foraminiferams	Nematodes	APHA (22nd Edi) 10500-C
6.3	Population	no/m^2	351	292	322	499	322	352	APHA (22nd Edi) 10500-C

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021		MAY 2021		JUNE 2021		JULY 2021		AUGUST 2021		SEPTEMBER 2021		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1	pH	--	8.43	8.40	8.34	8.25	8.23	8.16	8.15	8.12	8.13	8.09	8.08	8.03	IS3025(P11)83Re.02
2	Temperature	oC	30.7	30.5	30.6	30.4	30.3	30.1	29.7	29.4	29.9	29.8	29.9	29.8	IS3025(P9)84Re.02
3	Total Suspended Solids	mg/L	88	80	95	87	104	116	102	89	113	91	105	89	IS3025(P17)84Re.02
4	BOD (3 Days @ 27 °C)	mg/L	4.0	Not Detected	3.5	Not Detected	3.2	Not Detected	3.1	Not Detected	2.7	Not Detected	2.4	Not Detected	IS 3025 (P44)1993Re.03Edition2.1
5	Dissolved Oxygen	mg/L	6.2	6	5.9	5.8	6.0	5.9	5.9	5.8	5.9	5.7	6.0	5.85	IS3025(P38)89Re.99
6	Salinity	ppt	37.2	37.5	37.1	37.4	35.3	35.7	35.86	36.12	35.36	35.69	35.14	35.388	APHA (22nd Edi) 2550 B
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	APHA(22nd Edi)5520D
8	Nitrate as NO_3	µmol/L	2.71	2.78	2.83	2.51	2.47	2.38	2.36	2.19	2.47	2.39	2.37	2.26	IS3025(P34)88
9	Nitrite as NO_2	µmol/L	0.59	0.66	0.75	0.60	0.59	0.51	0.64	0.53	0.68	0.57	0.74	0.53	IS3025(P34)88 NEDA
10	Ammonical Nitrogen as NH_3	µmol/L	1.95	2.10	2.31	2.24	2.28	2.17	2.17	2.10	2.31	2.24	2.59	2.47	IS3025(P34)88Cl a.2.3
11	Phosphates as PO_4	µmol/L	2.69	2.51	2.19	1.93	2.49	2.43	2.13	1.95	2.39	2.33	2.17	2.08	APHA(22nd Edi) 4500 C
12	Total Nitrogen	µmol/L	5.75	5.54	5.89	5.35	5.34	5.06	5.17	4.82	5.46	5.20	5.70	5.26	IS3025(P34)88
13	Petroleum Hydrocarbon	µg/L	7.0	Not Detected	15.4	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
14	Total Dissolved Solids	mg/L	38612	38796	38556	38842	36897	37286	37148	37684	36948	37264	36234	36462	IS3025(P16)84Re.02
15	COD	mg/L	20	17.2	25.2	18.4	21.4	Not Detected	17.2	Not Detected	12.76	Not Detected	10.76	Not Detected	APHA(22nd Edi) 5520-D Open Reflux
A	**Phytoplankton**														
16.1	Chlorophyll	mg/m^3	2.75	2.61	2.65	2.57	2.56	2.4	2.37	2.30	2.24	2.20	2.21	2.13	APHA (22nd Edi) 10200-H
16.2	Phaeophytin	mg/m^3	2.26	1.08	2.35	1.12	2.5	1.3	1.60	1.39	1.73	1.50	1.48	1.84	APHA (22nd Edi) 10200-H
16.3	Cell Count	No. x 10^3/L	162	116	152	102	190	118	164	98	168	108	156	98	APHA (22nd Edi) 10200-H

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

16.4	Name of Group Number and name of group species of each group	--	Skeletonema sp. Navicula sp. Biddulphia sp. Coscinodiscus sp.	Nitzschia sp. Fragillaria sp. Synedra sp. Melosira sp.	Amphipods sp. Biddulphia sp. Coscinodiscus sp. Rhizosolenia sp.	Navicula sp. Nitzschia sp. Synedra sp. Melosira sp.	Rhizosolenia sp. Cheatoceros sp. Pleurosigma sp. Skeletonema sp. Melosira sp.	Synedra sp. Coscinodiscus sp. Navicula sp. Nitzschia sp.	Coscinodiscus sp. Cheatoceros sp. Skeletonema sp. Thallasionema sp.	Nitzschia sp. Synedra sp. Cyclotella sp. Pleurosigma sp.	Coscinodiscus sp. Cheatoceros sp. Skeletonema sp. Rhizosolenia sp.	Nitzschia sp. Biddulphia sp. Pleurosigma sp. Navicula sp.	Gyinardia sp. Skeletonema sp. Cyclotella sp. Melosira sp. Nitzschia sp.	Thallasionema sp. Amphipora sp. Cymbella sp. Pleurosigma sp.--	APHA (22nd Edi) 10200-H
B	**Zooplanktons**													
17.1	Abundance (Population)	noX10^3/ 100 m^3	28		24		28	23		29		26		APHA (22nd Edi) 10200-G
17.2	Name of Group Number and name of group species of each group	--	Polychaetes Amphipods Decapods Medusae		Polychaetes Gastropods Decapods		Gastropods Decapods Mysids Chaetognathes	Polychaetes Bivalves Decapods Foraminiferans		PolychaetesChaetognaths Decapods		GastropodsOstracodsAmphipods Lamellibranches		APHA (22nd Edi) 10200-G
17.3	Total Biomass	ml/100 m^3	2.4		2.1		2.4	2.2		2.8		2.55		APHA (22nd Edi) 10200-G
C	**Microbiological Parameters**													
18.1	Total Bacterial Count	CFU/ml	2340		2310		2280	2530		2510		2780		IS 5402:2002
18.2	Total Coliform	/ml	Present		Present		Present	Present		Present		Present		APHA(22ndEdi)9221-D
18.3	Ecoli	/ml	Absent		Absent		Absent	Absent		Absent		Absent		IS:1622:1981Edi. 2.4(2003-05)
18.4	Enterococcus	/ml	Present		Present		Present	Present		Present		Present		IS : 15186 :2002
18.5	Salmonella	/ml	Absent		Absent		Absent	Absent		Absent		Absent		IS : 5887 (P-3)
18.6	Shigella	/ml	Absent		Absent		Absent	Absent		Absent		Absent		IS : 1887 (P-7)
18.7	Vibrio	/ml	Absent		Absent		Absent	Absent		Absent		Absent		IS : 5887 (P-5)

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021	MAY 2021	JUNE 2021	JULY 2021	AUGUST 2021	SEPTEMBER 2021	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1	Organic Matter	%	0.58	0.47	0.45	0.41	0.38	0.36	FCO:2007
2	Phosphorus as P	µg/g	593	618	574	517	629	528	APHA(22nd Edi) 4500 C
3	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	--
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
5	**Heavy Metals**								
5.1	Aluminum as Al	%	4.87	4.53	4.69	4.46	4.67	4.53	AAS APHA 3111 B
5.2	Total Chromium as Cr^{+3}	µg/g	143	117	127	107	119	129	AAS 3111B
5.3	Manganese as Mn	µg/g	724	692	568	612	635	558	AAS APHA 3111 B
5.4	Iron as Fe	%	4.76	4.52	4.72	4.58	4.73	4.80	AAS APHA(22nd Edi)3111 B
5.5	Nickel as Ni	µg/g	61	53.7	35.64	31.76	37.94	42.99	AAS APHA(22nd Edi)3111 B
5.6	Copper as Cu	µg/g	35	41.9	47.3	39.84	31.26	35.6	AAS APHA(22nd Edi)3111 B
5.7	Zinc as Zn	µg/g	123	109	128	112	135	128	AAS APHA(22nd Edi)3111 B
5.8	Lead as Pb	µg/g	3.17	2.67	2.59	2.19	2.28	2.16	AAS APHA(22nd Edi)3111 B
5.9	Mercury as Hg	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	AAS APHA- 3112 B
6	**Benthic Organisms**								
6.1	Macrobenthos	--	Polychaetes Crustaceans Bivalves	Polychaetes Gastropods Crustaceans	Polychaetes Bivalves Crustaceans	Polychaetes Gastropods Bivalves	Polychaetes Crustaceans Decapods	Gastropods Polychaetes Amphipods	APHA (22nd Edi) 10500-C
6.2	MeioBenthos	--	--	Namatodes	Namatodes	Foraminiferams	Foraminiferams	Nematodes	APHA (22nd Edi) 10500-C
6.3	Population	no/m 2	409	322	353	439	350	322	APHA (22nd Edi) 10500-C

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021		MAY 2021		JUNE 2021		JULY 2021		AUGUST 2021		SEPTEMBER 2021		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1	pH	--	8.46	8.40	8.34	8.29	8.27	8.22	8.17	8.14	8.11	8.07	8.02	7.95	IS3025(P11)83Re.02
2	Temperature	oC	30.7	30.5	30.6	30.3	30.3	30.1	29.9	29.8	30	29.8	29.8	29.7	IS3025(P9)84Re.02
3	Total Suspended Solids	mg/L	129	102	112	98	105	118	114	97	121	105	113	93	IS3025(P17)84Re.02
4	BOD (3 Days @ 27°C)	mg/L	4.0	Not Detected	3.9	Not Detected	3.2	Not Detected	3.2	Not Detected	2.9	Not Detected	2.3	Not Detected	IS 3025 (P44)1993Re.03Edition2.1
5	Dissolved Oxygen	mg/L	6.4	6	6.0	5.9	6.0	5.8	5.9	5.7	5.8	5.7	6.0	5.9	IS3025(P38)89Re.99
6	Salinity	ppt	36.9	37.3	37.4	37.6	35.4	35.7	36.12	36.34	35.69	35.98	35.14	35.46	APHA (22ndEdi) 2550 B
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	APHA(22ndEdi)5520D
8	Nitrate as NO_3	µmol/L	2.44	2.65	2.69	2.51	2.75	2.51	2.57	2.39	2.41	2.35	2.57	2.40	IS3025(P34)88
9	Nitrite as NO_2	µmol/L	0.25	0.36	0.57	0.43	0.46	0.42	0.49	0.41	0.73	0.68	0.53	0.34	IS3025(P34)88 NEDA
10	Ammonical Nitrogen as NH_3	µmol/L	2.71	2.84	2.86	2.59	2.61	2.53	2.38	2.18	2.27	2.21	2.36	2.28	IS3025(P34)88Cla.2.3
11	Phosphates as PO_4	µmol/L	2.65	2.78	2.49	2.24	2.37	2.21	2.51	2.39	2.43	2.38	2.31	2.19	APHA(22ndEdi) 4500 C
12	Total Nitrogen	µmol/L	5.4	5.85	6.12	5.53	5.82	5.46	5.44	4.98	5.41	5.22	5.46	5.02	IS3025(P34)88
13	Petroleum Hydrocarbon	µg/L	9.0	Not Detected	16.4	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
14	Total Dissolved Solids	mg/L	37948	38984	38842	39026	37108	37290	37669	37864	37264	37530	36242	36514	IS3025(P16)84Re.02
15	COD	mg/L	29	18	28.7	17.3	21.6	Not Detected	17.8	Not Detected	13.9	10.76	9.94	Not Detected	APHA(22ndEdi) 5520-D Open Reflux
A	**Phytoplankton**														
16.1	Chlorophyll	mg/m^3	2.69	2.48	2.77	2.40	2.67	2.53	2.48	2.37	2.36	2.21	2.2	1.94	APHA (22ndEdi) 10200-H
16.2	Phaeophytin	mg/m^3	0.30	0.43	0.22	0.51	0.3	0.4	0.52	0.54	0.64	0.70	0.80	0.97	APHA (22ndEdi) 10200-H
16.3	Cell Count	No. x 10^3/L	136	104	130	92	152	98	136	90	130	104	124	86	APHA (22nd Edi) 10200-H

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

16.4	Name of Group Number and name of group species of each group	--	Biddulphia sp. Cymbella sp. Thallasionema sp. Melosira sp. Peridinium sp.	Coscinodiscus sp. Navicula sp. Nitzschia sp. Fragillaria sp.	Thallasiosira sp. Rhizosolenia sp. Pleurosigma sp. Coscinodiscus sp. Melosira sp.	Cyclotella sp.Navicula sp.Nitzschia sp.Guinordia sp.	Thallasiosira sp.Rhizosolenia sp.Pleurosigma sp.Coscinodiscus sp.Melosira sp.	Melosira sp.Navicula sp.Nitzschia sp.Synedra sp.	Rhizosolenia sp. Chaetognathes sp.Pleurosigma sp.Skeletonema sp.	Nitzschia sp.Navicula sp.Coscinodiscus sp.Synedra sp.	Amphora sp.Peridinium sp.Skeletonema sp.Thallasiosira sp.Surirella sp.	Navicula sp.Rhizosolenia sp.Synedra sp.Biddulphia sp.	Pinnularia sp.Staurons sp.Cymbella sp.Fragillaria sp.Coscinodiscus sp.	Cyclotella sp.Cheatocerous sp.Gyrosigma sp.Melosira sp.--	APHA (22nd Edi) 10200-H
B	**Zooplanktons**													
17.1	Abundance (Population)	noX10^3/ 100 m^3	29		26		30		24		32		28	APHA (22nd Edi) 10200-G
17.2	Name of Group Number and name of group species of each group	--	GastropodsPolychaetes ForaminiferansOstracods		OstracodsPolychaetes Molluscans		CopepodsPolychaetesForaminiferans Decapods		CopepodsPolychaetes Gastropods		HydrozoaPolychaetes CrustaceansBivalves		Foraminiferans GastropodsAmphipods Bivalves	APHA (22nd Edi) 10200-G
17.3	Total Biomass	ml/100 m^3	2.4		2.1		2.45		2.3		3.0		2.60	APHA (22nd Edi) 10200-G
C	**Microbiological Parameters**													
18.1	Total Bacterial Count	CFU/ml	2440		2370		2270		2490		2340		2610	IS 5402:2002
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present	APHA(22ndEdi)9221-D
18.3	Ecoli	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS:1622:1981Edi.2.4(2003-05)
18.4	Enterococcus	/ml	Present		Present		Present		Present		Present		Present	IS : 15186 :2002
18.5	Salmonella	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS : 5887 (P-3)
18.6	Shigella	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS : 1887 (P-7)
18.7	Vibrio	/ml	Absent		Absent		Absent		Absent		Absent		Absent	IS : 5887 (P-5)

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021		MAY 2021		JUNE 2021		JULY 2021		AUGUST 2021		SEPTEMBER 2021		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1	pH	--	8.45	8.48	8.31	8.26	8.25	8.20	8.16	8.13	8.14	8.10	8.05	7.99	IS3025(P11)83Re .02
2	Temperature	oC	30.6	30.9	30.7	30.5	30.3	30	30	29.9	30	29.8	29.9	29.7	IS3025(P9)84Re. 02
3	Total Suspended Solids	mg/L	101	117	105	96	117	108	104	98	117	103	104	91	IS3025(P17)84Re .02
4	BOD (3 Days @ 27 °C)	mg/L	3.0	Not Detected	3.4	Not Detected	3.2	Not Detected	3.0	Not Detected	2.9	Not Detected	2.3	Not Detected	IS 3025 (P44)1993Re.03E dition2.1
5	Dissolved Oxygen	mg/L	6.1	5.8	6.0	5.8	6.0	5.9	5.9	5.7	5.9	5.8	6.0	5.9	IS3025(P38)89Re .99
6	Salinity	ppt	36.9	37.4	37.2	37.6	35.3	35.6	36.24	36.48	35.73	35.96	35.20	35.72	APHA (22nd Edi) 2550 B
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	APHA(22nd Edi)552 0D
8	Nitrate as NO_3	µmol/L	2.56	2.71	2.89	2.71	2.65	2.47	2.48	2.36	2.56	2.48	2.43	2.37	IS3025(P34)88
9	Nitrite as NO_2	µmol/L	0.2	0.27	0.67	0.53	0.48	0.39	0.7	0.61	0.87	0.79	0.69	0.52	IS3025(P34)88 NEDA
10	Ammonical Nitrogen as NH_3	µmol/L	2.61	2.75	2.51	2.34	2.76	2.62	2.35	2.19	2.27	2.20	2.17	2.04	IS3025(P34)88Cla .2.3
11	Phosphates as PO_4	µmol/L	2.56	2.40	2.47	2.29	2.35	2.17	1.75	1.63	2.16	1.97	2.28	2.13	APHA(22nd Edi) 4500 C
12	Total Nitrogen	µmol/L	5.37	5.73	6.07	5.58	5.89	5.48	5.53	5.16	5.70	5.47	5.29	4.93	IS3025(P34)88
13	Petroleum Hydrocarbon	µg/L	7.0	Not Detected	12.3	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
14	Total Dissolved Solids	mg/L	37844	38814	38652	39034	36914	37214	37782	37982	37306	37512	36284	36764	IS3025(P16)84Re .02
15	COD	mg/L	25	16	20.8	17.2	20.2	Not Detected	16.2	Not Detected	12.9	10.2	9.82	Not Detected	APHA(22nd Edi) 5520-D Open Reflux
A	**Phytoplankton**														
16.1	Chlorophyll	mg/m^3	2.61	2.48	2.67	2.42	2.71	2.5	2.45	2.25	2.28	2.13	2.14	1.93	APHA (22nd Edi) 10200-H
16.2	Phaeophytin	mg/m^3	0.36	0.44	0.30	0.50	0.3	0.4	0.52	0.67	0.69	0.79	0.82	0.99	APHA (22nd Edi) 10200-H
16.3	Cell Count	No. x 10^3/L	148	98	136	90	152	118	134	92	150	104	142	92	APHA (22nd Edi) 10200-H

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

16.4	Name of Group Number and name of group species of each group	--	Rhizosolenia sp. Biddulphia sp. Thallasionema sp. Coscinodiscus sp.	Navicula sp. Fragillaria sp. Nitzschia sp. Melosira sp.	Biddulphia sp. Rhizosolenia sp. Amphipods sp. Thallasiira sp. Coscinodiscus sp.	Nitzschia sp. Pleurosigma sp. Melosira sp. Synedra sp.	Thallasionema sp. Peridinium sp. Thallasiira sp. Melosira sp. Coscinodiscus sp.	Navicula sp. Nitzschia sp. Rhizosolenia sp. Synedra sp.	Rhizosolenia sp. Chaetognathes sp. Thallasiira sp. Biddulphia sp.	Nitzschia sp. Navicula sp. Coscinodiscus sp. Synedra sp.	Skeletonema sp. Synedra sp. Pleurosigma sp. Amphora sp.	Thallasiira sp. Navicula sp. Synedra sp. Surirella sp.	Skeletonema sp. Pleurosigma sp. Cyclotella sp. Melosira sp. Guinardia sp.	Nitzschia sp. Amphipora sp. Biddulphia sp. Gyrosigma sp.--	APHA (22nd Edi) 10200-H
B	**Zooplanktons**														
17.1	Abundance (Population)	noX10^3/ 100 m^3	26		21		27		22		28		25		APHA (22nd Edi) 10200-G
17.2	Name of Group Number and name of group species of each group	--	Amphipods Gastropods Polychaetes Ostracods		Gastropods Decapods Namatodes Fish eggs		Foraminiferans Polychaetes Copepods Ostracods		Decapods Copepods Gastropods		Polychaetes Ostracods Decapods Bivalves		Polychaetes Decapods Lamellibranches Isopods		APHA (22nd Edi) 10200-G
17.3	Total Biomass	ml/100 m^3	2.4		2.1		2.4		2.1		2.7		2.45		APHA (22nd Edi) 10200-G
C	**Microbiological Parameters**														
18.1	Total Bacterial Count	CFU/ml	2410		2320		2490		2570		2840		2480		IS 5402:2002
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present		APHA(22ndEdi)9221-D
18.3	Ecoli	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:1622:1981Edi. 2.4(2003-05)
18.4	Enterococcus	/ml	Present		Present		Present		Present		Present		Present		IS : 15186 :2002
18.5	Salmonella	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 5887 (P-3)
18.6	Shigella	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 1887 (P-7)
18.7	Vibrio	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 5887 (P-5)

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021	MAY 2021	JUNE 2021	JULY 2021	AUGUST 2021	SEPTEMBER 2021	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1	Organic Matter	%	0.57	0.46	0.47	0.54	0.43	0.38	FCO:2007
2	Phosphorus as P	µg/g	518	612	568	603	638	570	APHA(22nd Edi) 4500 C
3	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	--
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
5	**Heavy Metals**								
5.1	Aluminum as Al	%	4.81	4.63	4.76	4.58	4.7	4.56	AAS APHA 3111 B
5.2	Total Chromium as Cr^{+3}	µg/g	135	112	129	117	128	138	AAS 3111B
5.3	Manganese as Mn	µg/g	746	674	583	619	650	564	AAS APHA 3111 B
5.4	Iron as Fe	%	4.73	4.58	4.69	4.52	4.64	4.72	AAS APHA(22nd Edi)3111 B
5.5	Nickel as Ni	µg/g	65	48.35	37.6	31.76	37.93	41.98	AAS APHA(22nd Edi)3111 B
5.6	Copper as Cu	µg/g	53	39.68	43.2	35.2	42.8	32.6	AAS APHA(22nd Edi)3111 B
5.7	Zinc as Zn	µg/g	112	105	128	98.52	110	115	AAS APHA(22nd Edi)3111 B
5.8	Lead as Pb	µg/g	3.18	2.87	2.59	2.18	3.14	2.30	AAS APHA(22nd Edi)3111 B
5.9	Mercury as Hg	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	AAS APHA- 3112 B
6	**Benthic Organisms**								
6.1	Macrobenthos	--	Polychaetes Crustaceans Amphipods	Polychaetes Gastropods Crustaceans	Polychaetes Amphipods Crustaceans	Polychaetes Crustaceans Decapods	Polychaetes Gastropods Amphipods	Gastropods Polychaetes Amphipods	APHA (22nd Edi) 10500-C
6.2	MeioBenthos	--	Nematodes	Foraminiferams	Foraminiferams	Foraminiferams Nematodes	Foraminiferams	Nematodes	APHA (22nd Edi) 10500-C
6.3	Population	no/m^2	379	382	262	408	294	350	APHA (22nd Edi) 10500-C

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021		MAY 2021		JUNE 2021		JULY 2021		AUGUST 2021		SEPTEMBER 2021		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1	pH	--	8.39	8.35	8.31	8.27	8.24	8.19	8.21	8.17	8.17	8.13	8.09	8.02	IS3025(P11)83Re .02
2	Temperature	oC	30.7	30.5	30.6	30.4	30	29.8	29.9	29.7	30	29.8	29.8	29.7	IS3025(P9)84Re. 02
3	Total Suspended Solids	mg/L	107	96	112	98	109	113	112	95	109	87	97	81	IS3025(P17)84Re .02
4	BOD (3 Days @ 27 °C)	mg/L	2.8	Not Detected	3.2	Not Detected	3.0	Not Detected	3.1	Not Detected	2.5	Not Detected	2.4	Not Detected	IS 3025 (P44)1993Re.03E dition2.1
5	Dissolved Oxygen	mg/L	6.2	6	6.0	5.8	6.1	5.9	5.9	5.7	6.0	5.8	6.0	5.8	IS3025(P38)89Re .99
6	Salinity	ppt	37	37.3	37.3	37.7	35.2	35.5	36.42	36.68	35.82	36.24	35.28	35.72	APHA (22nd Edi) 2550 B
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	APHA(22nd Edi)5520D
8	Nitrate as NO_3	µmol/L	2.4	2.71	2.58	2.41	2.64	2.53	2.47	2.35	2.39	2.25	2.48	2.40	IS3025(P34)88
9	Nitrite as NO_2	µmol/L	0.45	0.49	0.69	0.53	0.78	0.69	0.69	0.57	0.58	0.41	0.53	0.42	IS3025(P34)88 NEDA
10	Ammonical Nitrogen as NH_3	µmol/L	2.80	2.54	2.76	2.49	2.45	2.36	2.38	2.19	2.27	2.19	2.35	2.29	IS3025(P34)88Cla .2.3
11	Phosphates as PO_4	µmol/L	2.45	2.16	2.38	2.16	2.57	2.48	1.91	1.77	2.28	2.10	2.24	2.18	APHA(22nd Edi) 4500 C
12	Total Nitrogen	µmol/L	5.65	5.84	6.03	5.43	5.87	5.58	5.54	5.11	5.24	4.85	5.36	5.11	IS3025(P34)88
13	Petroleum Hydrocarbon	µg/L	7.8	Not Detected	10.3	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
14	Total Dissolved Solids	mg/L	37945	38812	38742	39117	36814	37129	38014	38192	36834	37798	36346	36754	IS3025(P16)84Re .02
15	COD	mg/L	25	17	21.8	18.4	20.1	Not Detected	16.4	Not Detected	10.98	Not Detected	9.24	Not Detected	APHA(22nd Edi) 5520-D Open Reflux
A	**Phytoplankton**														
16.1	Chlorophyll	mg/m^3	2.99	2.77	2.93	2.67	2.83	2.61	2.56	2.50	2.5	2.34	2.21	1.92	APHA (22nd Edi) 10200-H
16.2	Phaeophytin	mg/m^3	2.84	2.19	2.89	2.30	2.1	2.1	2.41	2.16	2.16	2.25	0.89	0.59	APHA (22nd Edi) 10200-H
16.3	Cell Count	No. x 10^3/L	158	102	142	94	172	104	138	96	146	106	134	90	APHA (22nd Edi) 10200-H

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

16.4	Name of Group Number and name of group species of each group	--	Biddulphia sp. Coscinodiscus sp. Rhizosolenia sp. Thallasiosira sp.	Nitzschia sp. Thallasiosira sp. Pleurosigma sp.	Coscinodiscus sp. Rhizosolenia sp. Pleurosigma sp. Gyrosima sp. Peridinium sp.	Cyclotella sp. Nitzschia sp. Melosira sp. Synedra sp.	Thallasionema sp. Peridinium sp. Biddulphia sp. Rhizosolenia sp.	Melosira sp. Synedra sp. Nitzschia sp. Skeletonema sp.	Thallasiosira sp. Pleurosigma sp. Biddulphia sp. Skeletonema sp.	Navicula sp. Synedra sp. Coscinodiscus sp. Rhizosolenia sp.	Thallasiosira sp. Amphora sp. Peridinium sp. Gyrosigma sp.	Nitzschia sp. Skeletonema sp. Navicula sp. Synedra sp.	Surirella sp. Amphipro ra sp. Cyclotella sp. Ceratium sp. Guinardia sp.	Biddulphia sp. Cymbella sp. Skeletonema sp. Gyrosigma sp.--	APHA (22nd Edi) 10200-H
B	**Zooplanktons**														
17.1	Abundance (Population)	noX10^3/ 100 m^3	26		22		27		22		28		24		APHA (22nd Edi) 10200-G
17.2	Name of Group Number and name of group species of each group	--	Amphipods Gastropods Ostracods Foraminiferans		Decapods Isopods Polychaetes Namatodes		Decapods Isopods Polychaetes Namatodes		Decapods Gastropods Polychaetes Ostracods		Hydrozoa Gastropods Polychaetes Ostracods		Foraminiferans Polychaetes Gastropods		APHA (22nd Edi) 10200-G
17.3	Total Biomass	ml/100 m^3	2.4		2.0		2.45		2.2		2.7		2.35		APHA (22nd Edi) 10200-G
C	**Microbiological Parameters**														
18.1	Total Bacterial Count	CFU/ml	2290		2430		2510		2400		2480		2540		IS 5402:2002
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present		APHA(22ndEdi)92219.21-D
18.3	Ecoli	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:1622:1981Edi. 2.4(2003-05)
18.4	Enterococcus	/ml	Present		Present		Present		Present		Present		Present		IS : 15186 :2002
18.5	Salmonella	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 5887 (P-3)
18.6	Shigella	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 1887 (P-7)
18.7	Vibrio	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 5887 (P-5)

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

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

SR. NO.	TEST PARAMETERS	UNIT	APRIL 2021		MAY 2021		JUNE 2021		JULY 2021		AUGUST 2021		SEPTEMBER 2021		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1	pH	--	8.47	8.43	8.34	8.29	8.21	8.18	8.17	8.13	8.13	8.09	8.07	8.02	IS3025(P11)83Re.02
2	Temperature	oC	30.6	30.3	30.7	30.4	30.2	30	30	29.9	29.9	29.8	29.7	29.5	IS3025(P9)84Re.02
3	Total Suspended Solids	mg/L	119	133	129	102	114	109	119	105	125	110	114	103	IS3025(P17)84Re.02
4	BOD (3 Days @ 27 °C)	mg/L	4.0	Not Detected	3.5	Not Detected	3.1	Not Detected	3.2	Not Detected	2.9	Not Detected	2.4	Not Detected	IS 3025 (P44)1993Re.03Edition2.1
5	Dissolved Oxygen	mg/L	6.1	5.8	6.0	5.8	6.1	5.9	5.9	5.7	5.9	5.8	6.0	5.7	IS3025(P38)89Re.99
6	Salinity	ppt	37.2	37.5	37.3	37.5	35.5	35.7	36.32	36.58	35.94	36.32	35.32	35.84	APHA (22nd Edi) 2550 B
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	APHA(22nd Edi)5520D
8	Nitrate as NO_3	µmol/L	2.14	2.43	2.47	2.39	2.53	2.39	2.48	2.35	2.68	2.59	2.54	2.48	IS3025(P34)88
9	Nitrite as NO_2	µmol/L	0.35	0.41	0.58	0.47	0.76	0.60	0.81	0.73	0.75	0.63	0.65	0.52	IS3025(P34)88 NEDA
10	Ammonical Nitrogen as NH_3	µmol/L	2.41	2.68	2.93	2.76	2.65	2.47	2.54	2.39	2.39	2.28	2.27	2.20	IS3025(P34)88Cla.2.3
11	Phosphates as PO_4	µmol/L	2.31	2.16	2.57	2.41	2.31	2.28	1.89	1.75	2.24	2.13	2.38	2.31	APHA(22nd Edi) 4500 C
12	Total Nitrogen	µmol/L	5.05	5.42	5.98	5.62	5.94	5.46	5.83	5.47	5.82	5.50	5.46	5.20	IS3025(P34)88
13	Petroleum Hydrocarbon	µg/L	10.1	Not Detected	13.4	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	PLPL-TPH
14	Total Dissolved Solids	mg/L	38689	38974	38759	38927	37093	37276	37294	38094	37498	37846	36384	36928	IS3025(P16)84Re.02
15	COD	mg/L	29	18	24.3	17.5	19.9	Not Detected	16.8	Not Detected	12.8	10.6	9.58	Not Detected	APHA(22nd Edi) 5520-D Open Reflux
A	**Phytoplankton**														
16.1	Chlorophyll	mg/m^3	2.65	2.40	2.61	2.40	2.67	2.45	2.5	2.40	2.56	2.45	2.24	2.16	APHA (22nd Edi) 10200-H
16.2	Phaeophytin	mg/m^3	2.52	2.19	2.58	2.19	2.5	2.1	2.31	2.19	2.26	2.14	0.78	0.33	APHA (22nd Edi) 10200-H
16.3	Cell Count	No. x 10^3/L	144	118	138	103	152	118	126	101	158	103	146	101	APHA (22nd Edi) 10200-H

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

16.4	Name of Group Number and name of group species of each group	--	Biddulphia sp. Rhizosolenia sp. Skeletonema sp. Coscinodiscus sp.	Nitzschia sp. Navicula sp. Pleurosigma sp. Melosira sp.	Guinordia sp. Melosira sp. Peridinium sp. Thallasiosira sp.	Nitzschia sp. Navicula sp. Biddulphia sp. Cyclotella sp.	Rhizosolenia sp. Thallasionema sp. Biddulphia sp. Skeletonema sp. Coscinodiscus sp.	Navicula sp. Nitzschia sp. Melosira sp. Synedra sp.	Biddulphia sp. Coscinodiscus sp. Chaetognathes sp. Rhizosolenia sp.	Nitzschia sp. Navicula sp. Pleurosigma sp. Synedra sp.	Pleurosigma sp. Peridinium sp. Thallasiosira sp. Biddulphia sp. Melosira sp.	Synedra sp. Nitzschia sp. Surirella sp. Navicula sp.	Thallasionema sp. Loscinodiscus sp. Cyclotella sp. Amphipora sp. Rhizosolenia sp.	Nitzschia sp. Synedra sp. Skeletonema sp. Biddulphia sp. Gyro sigma sp.	APHA (22nd Edi) 10200-H
B	**Zooplanktons**														
17.1	Abundance (Population)	noX10^3/ 100 m^3	30		25		27		23		26		23		APHA (22nd Edi) 10200-G
17.2	Name of Group Number and name of group species of each group	--	Polychaetes Decapods Amphipods Mysids		Isopods Decapods Polychaetes Mysids		Copepods Decapods Gastropods Ostracods		Polychaetes Decapods Chaetocenes Ostracods		Polychaetes Gastropods Chaetognaths Bivalves		Polychaetes Gastropods Decapods Lamellibranches		APHA (22nd Edi) 10200-G
17.3	Total Biomass	ml/100 m^3	2.6		2.2		2.25		2.1		2.5		2.25		APHA (22nd Edi) 10200-G
C	**Microbiological Parameters**														
18.1	Total Bacterial Count	CFU/ml	2350		2470		2350		2220		2480		2620		IS 5402:2002
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present		APHA(22ndEdi)92219.21-D
18.3	Ecoli	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:1622:1981Edi. 2.4(2003-05)
18.4	Enterococcus	/ml	Present		Present		Present		Present		Present		Present		IS : 15186 :2002
18.5	Salmonella	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 5887 (P-3)
18.6	Shigella	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 1887 (P-7)
18.7	Vibrio	/ml	Absent		Absent		Absent		Absent		Absent		Absent		IS : 5887 (P-5)

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

RESULTS OF ETP OUTLET

SR. NO.	TEST PARAMETERS	UNIT	Liquid Terminal ETP Outlet						GPCB Permissible Limit
			APR-21	MAY-21	JUN-21	JUL-21	AUG-21	SEP-21	
1	Colour	Co-pt	20	30	30	25	30	25	100
2	pH	--	7.59	7.68	7.99	7.84	7.94	6.58	6.5 to 8.5
3	Temperature	°C	30.2	30.1	30.3	29.9	30.1	30	40
4	Total Suspended Solids	mg/L	29	32	52	24	37	27	100
5	Total Dissolved Solids	mg/L	793	819	2069	1839	1968	1568	2100
6	COD	mg/L	65	72	84	70	86	78	100
7	BOD (3 Days @ 27 °C)	mg/L	12	16	19	15	17	15	30
8	Chloride as Cl	mg/L	243	352	415	408	374	358	600
9	Oil & Grease	mg/L	2.8	3.4	3.6	2.9	3.8	4.2	10
10	Sulphate as SO_4	mg/L	206	238	401	320	276	216	1000
11	Ammonical Nitrogen as NH_3	mg/L	1.76	2.34	5.3	8.56	7.39	8.13	50
12	Phenolic Compound	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	1
13	Copper as Cu	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	3
14	Lead as Pb	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	0.1
15	Sulphide as S	mg/L	0.28	0.14	0.5	0.12	0.16	0.18	2
16	Cadmium as Cd	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	2
17	Fluoride as F	mg/L	0.13	0.12	0.3	0.21	0.32	0.27	2
18	Residual Chlorine	mg/L	0.6	0.8	0.6	0.7	0.8	0.7	0.5 min

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULT OF AMBIENT AIR QUALITY MONITORING

ADANI PORT – TUG BERTH 600 KL PUMP HOUSE								
Sr. No.	Date of Sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM 2.5) µg/m³	Sulphur Dioxide (SO2) µg/m³	Oxides of Nitrogen (NO2) µg/m³	Carbon Monoxide as CO mg/m³	Hydrocarbon as CH_4 mg/m³	Benzene as C_6H_6 µg/m³
1	02/04/2021	62.72	28.62	20.52	34.26	0.30	ND*	ND*
2	06/04/2021	72.44	36.36	16.33	29.48	0.74	ND*	ND*
3	09/04/2021	68.49	27.71	19.59	37.57	0.65	ND*	ND*
4	13/04/2021	76.33	32.37	23.41	40.28	0.55	ND*	ND*
5	16/04/2021	63.47	29.41	17.71	35.43	0.82	ND*	ND*
6	20/04/2021	80.38	46.39	14.43	33.48	0.52	ND*	ND*
7	22/04/2021	74.26	42.52	18.50	30.56	0.76	ND*	ND*
8	26/04/2021	66.53	31.41	15.48	36.22	0.63	ND*	ND*
9	29/04/2021	78.58	35.32	10.57	24.23	0.37	ND*	ND*
10	03/05/2021	57.54	31.54	9.50	24.33	0.29	ND*	ND*
11	07/05/2021	77.56	46.51	15.31	28.61	0.57	ND*	ND*
12	10/05/2021	63.45	34.53	18.46	32.58	0.48	ND*	ND*
13	13/05/2021	70.56	38.40	16.25	29.35	0.47	ND*	ND*
14	19/05/2021	62.51	27.50	12.70	18.66	0.30	ND*	ND*
15	21/05/2021	71.52	37.65	19.40	35.44	0.49	ND*	ND*
16	24/05/2021	80.23	41.56	13.50	31.53	0.66	ND*	ND*
17	27/05/2021	61.56	45.35	17.51	34.52	0.53	ND*	ND*
18	31/05/2021	72.43	40.56	8.78	26.76	0.71	ND*	ND*
19	03/06/2021	80.47	35.70	17.34	33.47	0.37	ND*	ND*
20	07/06/2021	72.66	26.34	18.67	39.53	0.21	ND*	ND*
21	10/06/2021	68.22	31.24	9.85	20.29	0.52	ND*	ND*
22	14/06/2021	77.52	40.27	19.57	30.27	0.66	ND*	ND*
23	17/06/2021	65.45	45.35	16.32	34.56	0.85	ND*	ND*
24	21/06/2021	59.65	32.37	10.26	29.52	0.53	ND*	ND*
25	24/06/2021	75.68	46.26	15.62	37.54	0.89	ND*	ND*
26	28/06/2021	82.62	43.60	12.54	26.61	0.41	ND*	ND*
27	02/07/2021	90.30	50.30	10.66	19.65	0.24	ND*	ND*
28	05/07/2021	95.36	46.85	11.40	23.53	0.38	ND*	ND*
29	08/07/2021	85.36	53.46	16.26	18.67	0.63	ND*	ND*
30	12/07/2021	75.62	36.45	13.41	21.36	0.29	ND*	ND*

Continue …

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULT OF AMBIENT AIR QUALITY MONITORING

ADANI PORT – TUG BERTH 600 KL PUMP HOUSE								
Sr.No.	**Date of Sampling**	**Particulate Matter (PM10) µg/m³**	**Particulate Matter (PM 2.5) µg/m³**	**Sulphur Dioxide (SO2) µg/m³**	**Oxides of Nitrogen (NO2) µg/m³**	**Carbon Monoxide as CO mg/m³**	**Hydrocarbon as CH_4 mg/m³**	**Benzene as C_6H_6 µg/m³**
31	15/07/2021	86.36	47.51	21.36	33.24	0.18	ND*	ND*
32	19/07/2021	77.52	40.23	18.34	22.83	0.33	ND*	ND*
33	22/07/2021	70.37	38.32	12.44	25.58	0.40	ND*	ND*
34	26/07/2021	65.25	28.33	17.36	28.67	0.50	ND*	ND*
35	29/07/2021	79.62	44.35	19.27	32.51	0.76	ND*	ND*
36	16/08/2021	75.34	39.65	8.65	20.31	0.26	ND*	ND*
37	19/08/2021	80.42	35.45	12.39	23.34	0.16	ND*	ND*
38	23/08/2021	72.12	33.53	23.45	38.45	0.55	ND*	ND*
39	26/08/2021	66.60	36.24	20.23	33.45	0.41	ND*	ND*
40	30/08/2021	74.42	40.31	17.42	28.38	0.46	ND*	ND*
41	02/09/2021	70.63	40.23	19.60	33.40	0.41	ND*	ND*
42	06/09/2021	74.35	43.39	12.55	24.31	0.25	ND*	ND*
43	09/09/2021	81.36	45.35	16.23	32.68	0.37	ND*	ND*
44	13/09/2021	86.30	36.40	14.54	25.66	0.23	ND*	ND*
45	16/09/2021	60.33	24.34	9.62	18.70	0.46	ND*	ND*
46	20/09/2021	85.66	47.55	11.21	26.36	0.34	ND*	ND*
47	23/09/2021	67.62	26.38	8.36	16.36	0.39	ND*	ND*
LIMIT#		**100**	**60**	**80**	**80**	**4**	**Not Specified**	**5**
TEST METHOD		**IS:5182(Part 23):Gravimetric CPCB - Method (Vol.I,May-2011)**	**Gravimetric-CPCB - Method (Vol.I,May-2011)**	**IS:5182(Part II):Improved West and Gaeke**	**IS:5182(Part VI):Modified Jacob &Hochheiser (NaOH-NaAsO2)**	**NDIR Digital Gas Analyzer**	**SOP: HC: GC/GCMS/Gas analyzer**	**IS 5182 (Part XI):2006/CPCB Method**

*Not Detected
#: Industrial, Residential, Rural and other Area Notification Dated 16th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULT OF AMBIENT AIR QUALITY MONITORING

NEAR FIRE STATION								
Sr. No.	Date of Sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM 2.5) µg/m³	Sulphur Dioxide (SO2) µg/m³	Oxides of Nitrogen (NO2) µg/m³	Carbon Monoxide as CO mg/m³	Hydrocarbon as CH_4 mg/m³	Benzene as C_6H_6 µg/m³
1	02/04/2021	73.54	32.45	14.58	27.54	0.24	ND*	ND*
2	06/04/2021	84.62	50.39	12.48	22.25	0.62	ND*	ND*
3	09/04/2021	56.37	33.42	8.35	16.69	0.54	ND*	ND*
4	13/04/2021	66.45	37.56	13.68	28.52	0.61	ND*	ND*
5	16/04/2021	54.24	23.63	11.23	20.30	0.49	ND*	ND*
6	20/04/2021	45.96	20.45	6.53	17.60	0.60	ND*	ND*
7	22/04/2021	52.63	38.39	9.42	14.26	0.22	ND*	ND*
8	26/04/2021	61.24	26.43	7.54	25.52	0.36	ND*	ND*
9	29/04/2021	53.23	22.46	15.28	19.27	0.31	ND*	ND*
10	03/05/2021	63.53	28.56	13.57	20.40	0.60	ND*	ND*
11	07/05/2021	72.55	40.27	7.63	15.29	0.41	ND*	ND*
12	10/05/2021	58.46	26.56	14.27	25.38	0.33	ND*	ND*
13	13/05/2021	65.42	23.63	17.59	32.39	0.78	ND*	ND*
14	19/05/2021	50.26	20.49	21.54	29.30	0.54	ND*	ND*
15	21/05/2021	60.23	25.64	15.71	30.57	0.42	ND*	ND*
16	24/05/2021	69.53	36.47	18.36	21.30	0.63	ND*	ND*
17	27/05/2021	57.58	24.34	10.27	16.58	0.70	ND*	ND*
18	31/05/2021	66.54	29.36	12.49	22.38	0.44	ND*	ND*
19	03/06/2021	65.65	26.56	15.32	25.65	0.48	ND*	ND*
20	07/06/2021	55.64	20.33	16.20	23.87	0.58	ND*	ND*
21	10/06/2021	71.33	36.51	11.54	28.53	0.54	ND*	ND*
22	14/06/2021	66.56	27.56	8.66	16.37	0.36	ND*	ND*
23	17/06/2021	60.36	32.66	10.23	20.34	0.70	ND*	ND*
24	21/06/2021	49.55	23.63	12.55	27.51	0.22	ND*	ND*
25	24/06/2021	61.25	33.50	14.22	24.64	0.73	ND*	ND*
26	28/06/2021	88.45	48.64	9.57	21.56	0.63	ND*	ND*
27	02/07/2021	71.81	43.20	8.59	16.37	0.57	ND*	ND*
28	05/07/2021	78.45	41.32	10.70	14.31	0.49	ND*	ND*
29	08/07/2021	73.66	46.34	15.42	15.31	0.30	ND*	ND*
30	12/07/2021	70.36	32.41	9.56	23.41	0.22	ND*	ND*

Continue …

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULT OF AMBIENT AIR QUALITY MONITORING

NEAR FIRE STATION								
Sr.No.	**Date of Sampling**	**Particulate Matter (PM10) µg/m³**	**Particulate Matter (PM 2.5) µg/m³**	**Sulphur Dioxide (SO2) µg/m³**	**Oxides of Nitrogen (NO2) µg/m³**	**Carbon Monoxide as CO mg/m³**	**Hydrocarbon as CH_4 mg/m³**	**Benzene as C_6H_6 µg/m³**
31	15/07/2021	67.34	26.31	11.51	27.68	0.15	ND*	ND*
32	19/07/2021	58.38	29.32	13.66	30.32	0.47	ND*	ND*
33	22/07/2021	66.36	34.17	16.43	33.62	0.23	ND*	ND*
34	26/07/2021	60.27	37.51	14.23	31.21	0.32	ND*	ND*
35	29/07/2021	48.54	24.51	17.82	22.35	0.37	ND*	ND*
36	23/08/2021	92.38	45.33	11.58	32.32	0.48	ND*	ND*
37	26/08/2021	52.45	31.32	9.43	26.25	0.24	ND*	ND*
38	30/08/2021	65.67	36.43	12.81	20.52	0.58	ND*	ND*
39	02/09/2021	52.47	44.21	14.24	29.46	0.34	ND*	ND*
40	06/09/2021	62.36	27.64	7.70	18.48	0.29	ND*	ND*
41	09/09/2021	70.37	32.66	13.24	20.83	0.45	ND*	ND*
42	13/09/2021	80.36	31.45	9.46	28.40	0.14	ND*	ND*
LIMIT#		**100**	**60**	**80**	**80**	**4**	**Not Specified**	**5**
TEST METHOD		**IS:5182(Part 23):Gravimetric CPCB - Method (Vol.I,May-2011)**	**Gravimetric-CPCB - Method (Vol.I,May-2011)**	**IS:5182(Part II):Improved West and Gaeke**	**IS:5182(Part VI):Modified Jacob &Hochheiser (NaOH-NaAsO2)**	**NDIR Digital Gas Analyzer**	**SOP: HC: GC/GCMS/Gas analyzer**	**IS 5182 (Part XI):2006/CPCB Method**

*Not Detected
#: Industrial, Residential, Rural and other Area Notification Dated 16th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULT OF AMBIENT AIR QUALITY MONITORING

ADANI HOUSE								
Sr. No.	Date of Sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM 2.5) µg/m³	Sulphur Dioxide (SO2) µg/m³	Oxides of Nitrogen (NO2) µg/m³	Carbon Monoxide as CO mg/m³	Hydrocarbon as CH_4 mg/m³	Benzene as C_6H_6 µg/m³
1	02/04/2021	56.28	29.60	11.58	23.63	0.34	ND*	ND*
2	06/04/2021	67.57	26.59	19.30	32.54	0.29	ND*	ND*
3	09/04/2021	62.16	31.52	16.53	29.22	0.32	ND*	ND*
4	13/04/2021	70.27	34.58	9.53	22.66	0.24	ND*	ND*
5	16/04/2021	51.55	16.56	15.32	31.56	0.38	ND*	ND*
6	20/04/2021	60.45	35.58	10.36	26.59	0.41	ND*	ND*
7	22/04/2021	58.66	28.68	14.28	21.27	0.58	ND*	ND*
8	26/04/2021	50.42	22.53	12.42	28.45	0.40	ND*	ND*
9	29/04/2021	63.22	25.38	17.60	30.40	0.48	ND*	ND*
10	03/05/2021	52.52	22.67	15.59	27.62	0.23	ND*	ND*
11	07/05/2021	82.42	33.49	9.55	19.40	0.50	ND*	ND*
12	10/05/2021	72.55	30.52	7.84	16.32	0.79	ND*	ND*
13	13/05/2021	60.24	20.53	10.34	17.53	0.58	ND*	ND*
14	19/05/2021	56.36	23.54	19.54	24.35	0.56	ND*	ND*
15	21/05/2021	65.31	34.62	12.40	28.26	0.55	ND*	ND*
16	24/05/2021	59.64	29.43	8.32	20.21	0.37	ND*	ND*
17	27/05/2021	53.41	21.62	11.32	30.34	0.82	ND*	ND*
18	31/05/2021	61.27	26.26	6.22	15.40	0.68	ND*	ND*
19	03/06/2021	71.23	33.41	11.61	20.34	0.31	ND*	ND*
20	07/06/2021	65.37	23.41	13.42	34.27	0.39	ND*	ND*
21	10/06/2021	58.65	26.59	15.30	31.42	0.32	ND*	ND*
22	14/06/2021	70.26	31.65	6.56	23.41	0.23	ND*	ND*
23	17/06/2021	55.31	28.56	8.33	16.56	0.62	ND*	ND*
24	21/06/2021	64.56	35.37	14.40	32.58	0.33	ND*	ND*
25	24/06/2021	52.47	39.30	10.40	35.35	0.68	ND*	ND*
26	28/06/2021	60.42	27.09	7.60	19.38	0.50	ND*	ND*
27	02/07/2021	94.36	55.35	13.40	27.55	0.48	ND*	ND*
28	05/07/2021	82.62	49.67	7.52	17.53	0.56	ND*	ND*
29	08/07/2021	91.36	56.86	9.64	22.6	0.42	ND*	ND*
30	12/07/2021	88.67	44.57	14.35	28.44	0.16	ND*	ND*

Continue …

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

ADANI HOUSE								
Sr. No.	Date of Sampling	Particulate Matter (PM10) µg/m^3	Particulate Matter (PM 2.5) µg/m^3	Sulphur Dioxide (SO2) µg/m^3	Oxides of Nitrogen (NO2) µg/m^3	Carbon Monoxide as CO mg/m^3	Hydrocarbon as CH_4 mg/m^3	Benzene as C_6H_6 µg/m^3
31	15/07/2021	92.36	53.35	12.35	24.68	0.39	ND*	ND*
32	19/07/2021	87.62	46.53	10.23	18.84	0.57	ND*	ND*
33	22/07/2021	93.62	41.52	8.56	21.32	0.46	ND*	ND*
34	26/07/2021	83.43	48.62	11.38	25.38	0.60	ND*	ND*
35	29/07/2021	71.28	35.66	6.39	31.81	0.55	ND*	ND*
36	02/08/2021	60.44	27.26	12.44	20.35	0.53	ND*	ND*
37	05/08/2021	65.16	24.54	15.68	31.31	0.27	ND*	ND*
38	09/08/2021	77.62	28.56	13.72	24.50	0.18	ND*	ND*
39	12/08/2021	69.54	21.41	17.55	29.35	0.50	ND*	ND*
40	16/08/2021	86.28	47.32	11.43	23.47	0.62	ND*	ND*
41	19/08/2021	70.61	29.48	9.45	21.29	0.25	ND*	ND*
42	23/08/2021	80.35	40.60	21.37	41.25	0.57	ND*	ND*
43	26/08/2021	87.62	57.32	16.48	30.40	0.29	ND*	ND*
44	30/08/2021	78.45	43.44	10.62	25.76	0.19	ND*	ND*
45	02/09/2021	67.52	28.43	6.56	18.85	0.49	ND*	ND*
46	06/09/2021	56.51	33.61	16.39	32.50	0.40	ND*	ND*
47	09/09/2021	76.38	38.46	9.35	25.35	0.26	ND*	ND*
48	23/09/2021	71.66	29.31	14.26	33.66	0.21	ND*	ND*
49	27/09/2021	58.45	23.62	10.24	36.50	0.13	ND*	ND*
LIMIT#		**100**	**60**	**80**	**80**	**4**	**Not Specified**	**5**
TEST METHOD		**IS:5182(Part 23):Gravimetric CPCB - Method (Vol.I,May-2011)**	**Gravimetric-CPCB - Method (Vol.I,May-2011)**	**IS:5182(Part II):Improved West and Gaeke**	**IS:5182(Part VI):Modified Jacob &Hochheiser (NaOH-NaAsO2)**	**NDIR Digital Gas Analyzer**	**SOP: HC: GC/GCMS/Gas analyzer**	**IS 5182 (Part XI):2006/CPCB Method**

*Not Detected
#: Industrial, Residential, Rural and other Area Notification Dated 16th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULT OF AMBIENT AIR QUALITY MONITORING

CT-3 RMU-2								
Sr.No.	Date of Sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM 2.5) µg/m³	Sulphur Dioxide (SO2) µg/m³	Oxides of Nitrogen (NO2) µg/m³	Carbon Monoxide as CO mg/m³	Hydrocarbon as CH_4 mg/m³	Benzene as C_6H_6 µg/m³
1	02/04/2021	79.62	37.51	18.66	30.46	0.63	ND*	ND*
2	06/04/2021	93.52	47.62	22.50	38.43	0.46	ND*	ND*
3	09/04/2021	89.62	43.63	12.51	19.59	0.57	ND*	ND*
4	13/04/2021	77.52	38.43	15.40	31.56	0.30	ND*	ND*
5	16/04/2021	92.76	52.40	20.23	39.43	0.77	ND*	ND*
6	20/04/2021	88.24	42.29	8.60	20.62	0.23	ND*	ND*
7	22/04/2021	86.34	48.53	16.24	26.46	0.42	ND*	ND*
8	26/04/2021	94.38	53.61	19.37	22.47	0.50	ND*	ND*
9	29/04/2021	69.52	30.86	21.28	33.60	0.53	ND*	ND*
10	03/05/2021	80.36	44.50	22.62	34.66	0.50	ND*	ND*
11	07/05/2021	66.26	39.51	14.58	26.36	0.24	ND*	ND*
12	10/05/2021	71.86	41.55	16.52	22.64	0.62	ND*	ND*
13	13/05/2021	76.78	35.43	12.21	20.42	0.76	ND*	ND*
14	19/05/2021	82.42	52.61	17.54	27.69	0.34	ND*	ND*
15	21/05/2021	94.38	33.64	9.20	21.62	0.60	ND*	ND*
16	24/05/2021	72.62	50.53	10.87	23.41	0.52	ND*	ND*
17	27/05/2021	95.52	45.70	8.61	19.55	0.40	ND*	ND*
18	31/05/2021	83.42	55.56	15.84	35.22	0.38	ND*	ND*
19	03/06/2021	92.62	45.33	12.62	29.57	0.76	ND*	ND*
20	07/06/2021	85.35	42.67	9.66	22.53	0.65	ND*	ND*
21	10/06/2021	93.42	38.72	17.45	34.66	0.71	ND*	ND*
22	14/06/2021	83.42	50.32	11.63	25.41	0.82	ND*	ND*
23	17/06/2021	90.36	54.52	14.54	28.62	0.98	ND*	ND*
24	21/06/2021	43.61	20.34	16.56	23.70	0.45	ND*	ND*
25	24/06/2021	78.65	49.57	8.59	26.53	0.34	ND*	ND*
26	28/06/2021	94.28	55.35	15.23	30.55	0.60	ND*	ND*
27	02/07/2021	55.96	29.49	16.37	37.56	0.39	ND*	ND*
28	05/07/2021	73.55	36.43	18.56	33.43	0.52	ND*	ND*
29	08/07/2021	51.33	25.49	14.23	28.32	0.82	ND*	ND*
30	12/07/2021	84.35	39.47	17.61	31.58	0.34	ND*	ND*

Continue …

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULT OF AMBIENT AIR QUALITY MONITORING

CT-3 RMU-2								
Sr.No.	Date of Sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM 2.5) µg/m³	Sulphur Dioxide (SO2) µg/m³	Oxides of Nitrogen (NO2) µg/m³	Carbon Monoxide as CO mg/m³	Hydrocarbon as CH_4 mg/m³	Benzene as C_6H_6 µg/m³
31	15/07/2021	77.47	56.52	19.61	38.38	0.24	ND*	ND*
32	19/07/2021	71.36	32.44	12.84	26.40	0.64	ND*	ND*
33	22/07/2021	85.35	45.62	20.22	29.37	0.71	ND*	ND*
34	26/07/2021	78.26	42.63	10.35	34.54	0.54	ND*	ND*
35	29/07/2021	65.65	31.57	8.69	19.36	0.61	ND*	ND*
36	02/08/2021	81.37	48.41	14.37	28.47	0.71	ND*	ND*
37	05/08/2021	78.63	38.47	17.61	35.84	0.36	ND*	ND*
38	09/08/2021	85.64	44.58	19.29	31.31	0.22	ND*	ND*
39	12/08/2021	76.53	41.30	15.37	25.45	0.56	ND*	ND*
40	16/08/2021	90.34	52.57	18.64	39.49	0.47	ND*	ND*
41	19/08/2021	94.35	45.37	20.43	33.45	0.40	ND*	ND*
42	23/08/2021	89.42	51.36	13.94	30.42	0.64	ND*	ND*
43	26/08/2021	93.56	55.39	11.45	18.45	0.38	ND*	ND*
44	30/08/2021	88.43	53.48	16.86	34.54	0.33	ND*	ND*
45	02/09/2021	92.36	37.60	15.32	25.37	0.82	ND*	ND*
46	06/09/2021	80.35	45.37	19.60	36.35	0.61	ND*	ND*
47	09/09/2021	65.38	28.45	21.56	38.44	0.55	ND*	ND*
48	13/09/2021	78.36	43.42	16.33	34.22	0.47	ND*	ND*
49	16/09/2021	82.47	46.37	17.56	29.48	0.64	ND*	ND*
50	20/09/2021	90.33	48.32	8.64	18.62	0.50	ND*	ND*
51	23/09/2021	86.38	42.42	18.44	37.50	0.30	ND*	ND*
52	27/09/2021	70.31	35.43	22.46	40.33	0.66	ND*	ND*
53	30/09/2021	93.42	40.22	13.37	30.63	0.57	ND*	ND*
LIMIT#		**100**	**60**	**80**	**80**	**4**	**Not Specified**	**5**
TEST METHOD		**IS:5182(Part 23):Gravimetric CPCB - Method (Vol.I,May-2011)**	**Gravimetric-CPCB - Method (Vol.I,May-2011)**	**IS:5182(Part II):Improved West and Gaeke**	**IS:5182(Part VI):Modified Jacob &Hochheiser (NaOH-NaAsO2)**	**NDIR Digital Gas Analyzer**	**SOP: HC: GC/GCMS/Gas analyzer**	**IS 5182 (Part XI):2006/CPCB Method**

*Not Detected
#: Industrial, Residential, Rural and other Area Notification Dated 16th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULTS OF NOISE LEVEL MONITORING

Result of Noise level monitoring [Day Time]

SR. NO.	Name of Location	ADANI PORT – TUG BERTH 600 KL PUPM HOUSE					
		Result [Leq dB(A)]					
	Sampling Date & Time	16/04/2021	24/05/2021	23/06/2021	19/07/2021	18/08/2021	17/09/2021
1	6:00-7:00	62.1	60.2	68.8	58.4	68.3	62.9
2	7:00-8:00	68.7	62.5	62.1	63.4	62.1	66.6
3	8:00-9:00	65.2	66.4	69.8	62.3	63.3	61.6
4	9:00-10:00	63.1	68.8	70.4	68.5	68.2	63.6
5	10:00-11:00	69.1	62.4	69.4	65.4	67.5	59.5
6	11:00-12:00	62.8	69.2	73.1	67.1	64.2	69.5
7	12:00-13:00	68.4	69.0	64.5	63.1	61.4	70.1
8	13:00-14:00	63.8	61.7	60.1	60.1	70.6	62.1
9	14:00-15:00	70.4	65.2	62.5	70.4	64.7	71.6
10	15:00-16:00	69.2	70.6	66.1	69.4	61.6	66.1
11	16:00-17:00	72.4	65.8	60.8	73.1	63.5	63.1
12	17:00-18:00	65.1	64.1	63.1	70.1	68.4	69.3
13	18:00-19:00	69.5	60.4	69.5	68.4	64.8	63.5
14	19:00-20:00	66.1	63.4	61.2	61.5	71.4	61.4
15	20:00-21:00	60.2	66.2	62.8	66.5	65.4	66.5
16	21:00-22:00	62.5	68.4	63.8	64.3	60.5	65.4
Day Time Limit*		75 Leq dB(A)					

Result of Noise level monitoring [Night Time]

SR. NO.	Name of Location	ADANI PORT – TUG BERTH 600 KL PUPM HOUSE					
		Result [Leq dB(A)]					
	Sampling Date & Time	16/04/2021	24/05/2021	23/06/2021	19/07/2021	18/08/2021	17/09/2021
1	22:00-23:00	65.5	68.4	63.1	57.4	63.3	64.4
2	23:00-00:00	62.6	63.2	65.8	56.8	66.2	68.4
3	00:00-01:00	60.1	62.4	64.4	61.2	61.4	62.1
4	01:00-02:00	56.8	60.1	60.2	62.8	65.2	63.1
5	02:00-03:00	62.1	62.5	59.8	58.8	63.4	65.8
6	03:00-04:00	63.1	64.8	55.1	63.1	67.1	60.4
7	04:00-05:00	64.8	63.8	62.5	65.4	62.8	63.2
8	05:00-06:00	61.2	65.4	61.5	65.1	63.8	62.6
Night Time Limit*		70 Leq dB(A)					

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULTS OF NOISE LEVEL MONITORING

Result of Noise level monitoring [Day Time]

SR. NO.	Name of Location	NEAR FIRE STATION					
		Result [Leq dB(A)]					
	Sampling Date & Time	28/04/2021	03/05/2021	10/06/2021	16/07/2021	25/08/2021	23/09/2021
1	6:00-7:00	67.1	65.2	64.5	63.5	60.1	64.7
2	7:00-8:00	62.4	69.9	60.1	68.2	69.9	64.6
3	8:00-9:00	69.1	72.1	62.4	60.7	66.3	63.3
4	9:00-10:00	62.5	70.6	62.5	64.5	69.4	66.4
5	10:00-11:00	67.4	65.4	65.3	61.2	63.6	68.3
6	11:00-12:00	62.1	61.2	68.4	61.3	61.2	69.1
7	12:00-13:00	63.5	63.5	67.1	60.6	71.5	62.4
8	13:00-14:00	68.1	68.1	66.1	68.3	64.5	62.3
9	14:00-15:00	65.1	61.4	63.5	72.1	65.5	61.8
10	15:00-16:00	64.1	59.4	62.8	69.9	68.6	64.2
11	16:00-17:00	60.2	66.2	61.5	69.3	61.7	62.2
12	17:00-18:00	68.4	69.4	63.1	65.5	62.6	61.3
13	18:00-19:00	63.4	62.8	65.4	61.4	62.8	68.8
14	19:00-20:00	69.4	60.5	63.2	66.2	63.8	64.0
15	20:00-21:00	61	63.4	62.7	62.8	60.8	64.1
16	21:00-22:00	62.8	61.8	65.5	61.9	62.9	60.3
Day Time Limit*		75 Leq dB(A)					

Result of Noise level monitoring [Night Time]

SR. NO.	Name of Location	NEAR FIRE STATION					
		Result [Leq dB(A)]					
	Sampling Date & Time	28/04/2021	03/05/2021	10/06/2021	16/07/2021	25/08/2021	23/09/2021
1	22:00-23:00	62.1	63.5	63.1	54.1	62.2	58.8
2	23:00-00:00	63.4	64.4	60.1	61.3	61.4	62.2
3	00:00-01:00	65.2	60.4	60.2	58.3	58.2	61.5
4	01:00-02:00	62.8	64.1	65.5	59.4	68.4	63.8
5	02:00-03:00	56.2	59.4	57.4	62.5	63.5	62.8
6	03:00-04:00	53.4	65.4	61.5	63.5	59.4	57.5
7	04:00-05:00	68.4	60.2	62.8	53.2	62.4	63.4
8	05:00-06:00	62.4	62.4	59.2	52.4	61.3	61.4
Night Time Limit*		70 Leq dB(A)					

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULTS OF NOISE LEVEL MONITORING

Result of Noise level monitoring [Day Time]

SR. NO.	Name of Location	ADANI HOUSE					
		Result [Leq dB(A)]					
	Sampling Date & Time	07/04/2021	17/05/2021	01/06/2021	05/07/2021	04/08/2021	23/09/2021
1	6:00-7:00	62.4	58.4	65.2	66.4	67.2	64.7
2	7:00-8:00	69.5	62.1	69.9	60.3	64.3	64.6
3	8:00-9:00	66.1	61.8	68.3	69.6	64.4	63.3
4	9:00-10:00	70.1	68.5	65.1	70.5	62.3	66.4
5	10:00-11:00	68.3	65.3	65.4	65.3	69.6	68.3
6	11:00-12:00	66.2	63.2	68.4	68.8	66.4	69.1
7	12:00-13:00	60.4	62.8	69.5	67.5	61.3	62.4
8	13:00-14:00	58.4	64.1	72.1	72.2	69.7	62.3
9	14:00-15:00	63.4	60.1	62.7	65.2	65.1	61.8
10	15:00-16:00	69.4	65.9	60.4	62.6	69.3	64.2
11	16:00-17:00	70.6	69.5	60.1	66.3	65.8	62.2
12	17:00-18:00	68.4	63.3	66.8	59.2	66.5	61.3
13	18:00-19:00	65.1	65.2	63.4	67.4	68	68.8
14	19:00-20:00	62.5	61.4	68.1	68.1	62.8	64.0
15	20:00-21:00	61.5	66.2	62.4	60.5	61.5	64.1
16	21:00-22:00	63.2	68.7	61.7	62.7	68.5	60.3
Day Time Limit*		75 Leq dB(A)					

Result of Noise level monitoring [Night Time]

SR. NO.	Name of Location	ADANI HOUSE					
		Result [Leq dB(A)]					
	Sampling Date & Time	07/04/2021	17/05/2021	01/06/2021	05/07/2021	04/08/2021	07/09/2021
1	22:00-23:00	65.4	65.8	65.1	63.6	64.4	62.3
2	23:00-00:00	60.1	60.2	69.5	53.5	65.3	68.5
3	00:00-01:00	58.4	58.8	62.4	60.2	60.9	66.8
4	01:00-02:00	56.1	57.4	64.1	55.4	66.1	60.8
5	02:00-03:00	60.7	62.4	59.3	57.7	59.4	62.4
6	03:00-04:00	63.5	64.1	68.4	61.4	62.4	61.2
7	04:00-05:00	61.2	59.8	64.5	68.4	61.5	65.6
8	05:00-06:00	68.4	60.9	62.8	58.7	63.2	67.4
Night Time Limit*		70 Leq dB(A)					

H. T. Shah
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POLLUCON LABORATORIES PVT. LTD. SURAT-7.

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RESULTS OF NOISE LEVEL MONITORING

Result of Noise level monitoring [Day Time]

SR. NO.	Name of Location	CT-3 RMU - 2					
		Result [LeqdB(A)]					
	Sampling Date & Time	12/04/2021	10/05/2021	04/06/2021	20/07/2021	10/08/2021	27/09/2021
1	6:00-7:00	57.4	56.1	60.4	48.9	58.4	57.4
2	7:00-8:00	62.1	62.4	64.5	55.4	55.1	63.2
3	8:00-9:00	56.1	59.1	68.4	59.7	65.3	60.8
4	9:00-10:00	62.5	65.7	62.1	58.3	70.5	66.0
5	10:00-11:00	65.4	57.4	66.2	53.4	63.1	64.9
6	11:00-12:00	68.4	63.4	67.8	62.5	62.7	66.2
7	12:00-13:00	60.1	66.3	69.4	63.3	62.5	69.4
8	13:00-14:00	63.1	68.5	70.4	56.9	66.2	70.5
9	14:00-15:00	60.2	65.2	69.5	51.8	60.4	69.9
10	15:00-16:00	65.8	62.3	65.2	67.3	63.4	72.8
11	16:00-17:00	61.6	68.4	61.4	69.8	70.7	67.9
12	17:00-18:00	66.2	69.4	60.3	57.8	66.1	63.7
13	18:00-19:00	58.7	64.2	63.5	61.8	62.8	65.1
14	19:00-20:00	64.1	61.5	66.8	63.2	69.8	65.7
15	20:00-21:00	60.8	68.1	62.4	52.7	62.4	68.4
16	21:00-22:00	62.8	60.9	59.4	48.7	61.8	67.4
Day Time Limit*		75LeqdB(A)					

Result of Noise level monitoring [Night Time]

SR. NO.	Name of Location	CT-3 RMU -2					
		Result [LeqdB(A)]					
	Sampling Date & Time	12/04/2021	10/05/2021	04/06/2021	20/07/2021	10/08/2021	27/09/2021
1	22:00-23:00	68.8	62.4	62.1	58.5	57.5	61.6
2	23:00-00:00	62.1	55.4	69.8	59.5	60.3	65.1
3	00:00-01:00	56.1	52.4	62.4	56.4	62.3	64.3
4	01:00-02:00	52.4	60.8	66.1	60.1	64.1	64.2
5	02:00-03:00	59.8	60.4	69.4	61.5	61.2	58.5
6	03:00-04:00	57.1	58.7	63.1	63.3	60.5	58.2
7	04:00-05:00	62.5	59.8	67.4	63.4	63.2	61.8
8	05:00-06:00	65.1	62.7	64.8	64.8	62.8	68.7
Night Time Limit*		70LeqdB(A)					

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULT OF STACK MONITORING

SR. NO.	TEST PARAMETERS	UNIT	STD. LIMIT	THERMIC FLUID HEATER (BITUMEN-01)	THERMIC FLUID HEATER (BITUMEN-02)	HOT WATER SYSTEM-1	HOT WATER SYSTEM-2	TEST METHOD
					APRIL 2021			
1	Particulate Matter	mg/Nm^3	**150**	25.43	--	30.46	--	IS:11255 (Part-I):1985
2	Sulfur dioxide	ppm	**100**	4.43	--	6.76	--	IS:11255 (Part-II):1985
3	Oxides of Nitrogen	ppm	**50**	28.54	--	34.65	--	IS:11255 (Part-VII):2005
					MAY 2021			
1	Particulate Matter	mg/Nm^3	**150**	20.61	--	--	32.56	IS:11255 (Part-I):1985
2	Sulfur dioxide	ppm	**100**	5.72	--	--	7.19	IS:11255 (Part-II):1985
3	Oxides of Nitrogen	ppm	**50**	32.53	--	--	36.51	IS:11255 (Part-VII):2005
					JUNE 2021			
1	Particulate Matter	mg/Nm^3	**150**	--	--	26.41	--	IS:11255 (Part-I):1985
2	Sulfur dioxide	ppm	**100**	--	--	5.56	--	IS:11255 (Part-II):1985
3	Oxides of Nitrogen	ppm	**50**	--	--	30.37	--	IS:11255 (Part-VII):2005
					JULY 2021			
1	Particulate Matter	mg/Nm^3	**150**	25.61	--	33.44	--	IS:11255 (Part-I):1985
2	Sulfur dioxide	ppm	**100**	6.67	--	7.46	--	IS:11255 (Part-II):1985
3	Oxides of Nitrogen	ppm	**50**	29.38	--	33.64	--	IS:11255 (Part-VII):2005
					AUGUST 2021			
1	Particulate Matter	mg/Nm^3	**150**	23.42	--	--	--	IS:11255 (Part-I):1985
2	Sulfur dioxide	ppm	**100**	5.52	--	--	--	IS:11255 (Part-II):1985
3	Oxides of Nitrogen	ppm	**50**	26.80	--	--	--	IS:11255 (Part-VII):2005
					SEPTEMBER 2021			
1	Particulate Matter	mg/Nm^3	**150**	--	--	35.42	--	IS:11255 (Part-I):1985
2	Sulfur dioxide	ppm	**100**	--	--	6.12	--	IS:11255 (Part-II):1985
3	Oxides of Nitrogen	ppm	**50**	--	--	38.50	--	IS:11255 (Part-VII):2005

*Below detection limit
Results on 11 % O_2 Correction when Oxygen is greater than 11 %. And 12% CO_2correction when $CO_2$is less thsn 12%

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Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

RESULTS OF D.G. STACK MONITORING

24/09/2021							
SR. NO.	TEST PARAMETERS	Unit	South Basin CT-3			GPCB Limit	Test Method
			D.G. Set-1 (1500 KVA)	D.G. Set-2 (1500 KVA)	D.G. Set-3 (1500 KVA)		
1	Particulate Matter	mg/Nm^3	22.61	26.75	30.41	150	IS:11255 (Part-I):1985
2	Sulphur Dioxide	ppm	4.48	3.73	6.60	100	IS:11255 (Part-II):1985
3	Oxide of Nitrogen	ppm	30.76	34.54	36.78	50	IS:11255 (Part-VII):2005

*DG sets are used as standby, so stack monitoring is done on quarterly basis. Results on 15 % O2 Correction when Oxygen is greater than 15 %

14/07/2021							
SR. NO.	TEST PARAMETERS	Unit	South Basin CT-4			GPCB Limit	Test Method
			D.G. Set-1 (1500 KVA)	D.G. Set-2 (1500 KVA)	D.G. Set-3 (1500 KVA)		
1	Particulate Matter	mg/Nm^3	24.38	28.41	20.84	150	IS:11255 (Part-I):1985
2	Sulphur Dioxide	ppm	5.57	6.51	4.32	100	IS:11255 (Part-II):1985
3	Oxide of Nitrogen	ppm	31.52	34.54	32.59	50	IS:11255 (Part-VII):2005

*DG sets are used as standby, so stack monitoring is done on quarterly basis. Results on 15 % O2 Correction when Oxygen is greater than 15 %

H. T. Shah
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POLLUCON LABORATORIES PVT. LTD. SURAT-7.

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Lab Manager (Q)

28/08/2021							
SR. NO.	TEST PARAMETERS	Unit	Adani Port			GPCB Limit	Test Method
			D.G. Set-1 (500 KVA)	D.G. Set-2 (500 KVA)	D.G. Set-3 (500 KVA)		
1	Particulate Matter	mg/Nm^3	21.61	24.86	19.41	150	IS:11255 (Part-I):1985
2	Sulphur Dioxide	ppm	4.68	6.80	5.78	100	IS:11255 (Part-II):1985
3	Oxide of Nitrogen	ppm	31.84	35.44	33.82	50	IS:11255 (Part-VII):2005

28/08/2021						
SR. NO.	TEST PARAMETERS	Unit	Adani Port		GPCB Limit	Test Method
			D.G. Set-4 (500 KVA)	D.G. Set-5 (500 KVA)		
1	Particulate Matter	mg/Nm^3	22.46	25.42	150	IS:11255 (Part-I):1985
2	Sulphur Dioxide	ppm	7.71	5.44	100	IS:11255 (Part-II):1985
3	Oxide of Nitrogen	ppm	32.86	31.28	50	IS:11255 (Part-VII):2005

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

Minimum Detection Limit [MDL]

Ambient Air Parameters		
Sr. No.	**Test Parameter**	**MDL**
1	Particulate Matter (PM10) (µg/m^3)	10
2	Particulate Matter (PM 2.5) (µg/m^3)	10
3	Sulphur Dioxide (SO_2) (µg/m^3)	5
4	Oxides of Nitrogen (µg/m^3)	5
5	Hydrogen Sulphide as H_2S (µg/m^3)	6

Stack Parameters		
Sr.No.	**Test Parameter**	**MDL**
1	Particulate Matter (mg/Nm^3)	10
2	Sulphur Dioxide (ppm)	1.52
3	Oxides of Nitrogen (ppm)	2.65
4	Carbon Monoxide (mg/Nm^3)	0.1
5	Haydro Carbon NMHC (ppm)	1.0

Sea Water Parameters			
SR. NO.	**TEST PARAMETERS**	**UNIT**	**MDL**
1	pH	--	2
2	Temperature	°C	2
3	Total Suspended Solids	mg/L	2
4	BOD (3 Days @ 27 °C)	mg/L	1
5	Dissolved Oxygen	mg/L	0.1
6	Salinity	ppt	1
7	Oil & Grease	mg/L	2
8	Nitrate as NO_3	µmol/L	0.5
9	Nitrite as NO_2	µmol/L	0.01
10	Ammonical Nitrogen as NH_3	µmol/L	0.2
11	Phosphates as PO_4	µmol/L	0.5
12	Petroleum Hydrocarbon	µg/L	1
13	Total Dissolved Solids	mg/L	10
14	COD	mg/L	3
15	Primary productivity	mgC/L/day	0.1
16	Chlorophyll	mg/m^3	0.1
17	Phaeophytin	mg/m^3	0.1
18	Cell Count	No. x 10^3/L	1

Sea Sediment Parameters			
SR. NO.	**TEST PARAMETERS**	**UNIT**	**MDL**
1	Organic Matter	%	0.1
2	Phosphorus as P	µg/g	1
3	Petroleum Hydrocarbon	µg/g	1
4	Aluminum as Al	%	0.1
5	Manganese as Mn	µg/g	1
6	Mercury as Hg	µg/g	0.1

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

STP Water parameter(mg/L)		
Sr. No.	**Test parameter**	**MDL**
1	pH	2
2	Total Suspended Solids (mg/L)	2
3	BOD (3 days @ 270 C) (mg/L)	1
4	Residual Chlorine (mg/L)	0.2
5	Fecal Coliform (MPN INDEX/100 mL)	1.8

ETP Water Parameters			
SR. NO.	**TEST PARAMETERS**	**UNIT**	**MDL**
1	Colour	Co-pt	2
2	pH	--	2
3	Temperature	^{o}C	2
4	Total Suspended Solids	mg/L	2
5	Total Dissolved Solids	mg/L	10
6	COD	mg/L	3
7	BOD (3 Days @ 27 ^{o}C)	mg/L	1
8	Chloride as Cl	mg/L	1
9	Oil & Grease	mg/L	2
10	Sulphate as SO_4	mg/L	1
11	Ammonical Nitrogen as NH_3	mg/L	0.2
12	Phenolic Compound	mg/L	0.005
13	Copper as Cu	mg/L	0.01
14	Lead as Pb	mg/L	0.01
15	Sulphide as S	mg/L	0.1
16	Cadmium as Cd	mg/L	0.002
17	Fluoride as F	mg/L	0.05

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

"HALF YEARLYENVIRONMENTAL MONITORING REPORT"

FOR

BORE HOLE WATER
ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED
TAL: MUNDRA, KUTCH,MUNDRA – 370 421

MONITORING PERIOD:
APRIL 2021 TO SEPTEMBER 2021

PREPARED BY:

POLLUCON LABORATORIES PVT.LTD.

**PLOT NO.5/6 "POLLUCON HOUSE", OPP. BALAJI INDUSTRIAL SOCIETY,
OLD SHANTINATH SILK MILL LANE, NEAR GAYTRI FARSAN MART,
NAVJIVAN CIRCLE, UDHANA MAGDALLA ROAD, SURAT-395007.
PHONE/FAX – (+91 261) 2455 751, 2601 106, 2601 224.
E-mail: pollucon@gmail.com Web: www.polluconlab.com**

TC - 5945 ISO 9001:2015 ISO 14001:2015 ISO45001:2018

RESULTS OF BORE HOLE WATER

SR. NO	TEST PARAMETERS	UNIT	RESULTS			TEST METHOD
			PUMP HOUSE-1	PUMP HOUSE-2	PUMP HOUSE-3	
	Sampling Date		22/06/2021	22/06/2021	22/06/2021	
1	pH	--	7.89	8.35	8.01	IS 3025 (Part 5) 2017 Electrometric Method
2	Salinity	ppt	4.69	0.97	0.91	APHA 2520 B
3	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	APHA(23rd Edition) 5520 B 2017
4	Hydrocarbon	mg/L	Not Detected	Not Detected	Not Detected	GC/GC-MS
5	Lead as Pb	mg/L	0.037	0.032	0.042	APHA (23rd Edition) 3111 B 2017
6	Arsenic as As	mg/L	Not Detected	Not Detected	Not Detected	APHA (23rd Edition) 3114 B 2017
7	Nickel as Ni	mg/L	Not Detected	Not Detected	Not Detected	APHA (23rd Edition) 3111 B 2017
8	Total Chromium as Cr	mg/L	Not Detected	0.021	0.037	APHA (23rd Edition) 3111 B 2017
9	Cadmium as Cd	mg/L	Not Detected	Not Detected	Not Detected	APHA (23rd Edition) 3111 B 2017
10	Mercury as Hg	mg/L	Not Detected	Not Detected	Not Detected	APHA (23rd Edition) 3112 B 2017
11	Zinc as Zn	mg/L	Not Detected	0.35	0.14	APHA (23rd Edition) 3111 B 2017
12	Copper as Cu	mg/L	Not Detected	Not Detected	Not Detected	APHA (23rd Edition) 3111 B 2017
13	Iron as Fe	mg/L	0.28	2.62	2.76	APHA (23rd Edition) 3500 Fe B 2017
14	Insecticides/Pesticides	mg/L	Absent	Absent	Absent	GC/GC-MS
15	Depth of Water Level from Ground Level	meter	1.90	2.10	1.95	--

H. T. Shah
Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai
Lab Manager (Q)

SR. NO	TEST PARAMETERS	UNIT	RESULTS		TEST METHOD
			UNLOADING BAYS	NEAR ETP	
	Sampling Date		22/06/2021	22/06/2021	
1	pH	--	7.93	7.94	IS 3025 (Part 5) 2017 Electrometric Method
2	Salinity	ppt	7.44	0.95	APHA 2520 B
3	Oil & Grease	mg/L	Not Detected	Not Detected	APHA(23rd Edition) 5520 B 2017
4	Hydrocarbon	mg/L	Not Detected	Not Detected	GC/GC-MS
5	Lead as Pb	mg/L	0.22	0.016	APHA (23rd Edition) 3111 B 2017
6	Arsenic as As	mg/L	Not Detected	Not Detected	APHA (23rd Edition) 3114 B 2017
7	Nickel as Ni	mg/L	Not Detected	Not Detected	APHA (23rd Edition) 3111 B 2017
8	Total Chromium as Cr	mg/L	Not Detected	0.024	APHA (23rd Edition) 3111 B 2017
9	Cadmium as Cd	mg/L	Not Detected	Not Detected	APHA (23rd Edition) 3111 B 2017
10	Mercury as Hg	mg/L	Not Detected	Not Detected	APHA (23rd Edition) 3112 B 2017
11	Zinc as Zn	mg/L	0.64	0.19	APHA (23rd Edition) 3111 B 2017
12	Copper as Cu	mg/L	Not Detected	Not Detected	APHA (23rd Edition) 3111 B 2017
13	Iron as Fe	mg/L	3.86	2.12	APHA (23rd Edition) 3500 Fe B 2017
14	Insecticides/Pesticides	mg/L	Absent	Absent	GC/GC-MS
15	Depth of Water Level from Ground Level	meter	2.15	2.0	--

H. T. Shah
Lab Manager

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Lab Manager (Q)

Borehole Water Parameters			
SR. NO.	**TEST PARAMETERS**	**UNIT**	**MDL**
1	pH	--	2
2	Salinity	mg/L	0.5
3	Oil & Grease	mg/L	2
4	Hydrocarbon	mg/L	0.01
5	Lead as Pb	mg/L	0.005
6	Arsenic as As	mg/L	0.001
7	Nickel as Ni	mg/L	0.01
8	Total Chromium as Cr	mg/L	0.05
9	Cadmium as Cd	mg/L	0.002
10	Mercury as Hg	mg/L	0.0006
11	Zinc as Zn	mg/L	0.05
12	Copper as Cu	mg/L	0.02
13	Iron as Fe	mg/L	0.05
14	Insecticides/Pesticides	mg/L	0.1

H. T. Shah

Lab Manager

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

Dr. ArunBajpai

Lab Manager (Q)

Annexure – 2

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:313294 - Analysis Completion:08/10/2021

Ports and harbour, jetties and dredging operations / LAB Inward : 7026

Gujarat Pollution Control Board, Kutch West
Katira Commercial Complex-1, First Floor
Near Income Tax office, Manglam Char rasta ,Sanskar nagar,
BHUJ - 370 001

TEST REPORT

Test Report No. : 7026 **Date: 11/10/2021**

1. Name of the Customer : **Adani Ports & Special Economic Zone Ltd. - 17739**
2. Address : **169/P,AT-NAVINAL ISLAND,MUNDRA, KUTCH Mundra-370421, Taluka : Mundra, District : Kutch East, GIDC : MPSEZ**
3. Nature of Sample : **REP-Representative/Grab, (Insp Type : APP-On Application)**
4. Sample Collected By : **MR. HARSH BAHECHARBHAI PATEL**
5. Quantity of Sample Received : **5 lits**
6. Code No. of the Sample : **313294**
7. Date & Time of Collection & Inwarding : **23/09/2021 , (1315 to 1316) & 27/09/2021**
8. Date of Start & Completion of Analysis : **27/09/2021 & 08/10/2021**
9. Sampling Point : **## Final Outlet of the ETP ~ sample collected from final outlet of ETP**
10. Flow Details (Remarks) : **.....**
11. Mode of Disposal : **on land for gardening and plantation**
12. Ultimate Receiving Body : **onland for irrigation.**
13. Temperature on Collection : **30 & pH Range on pH Strip :7 to 8 on pH strip**
14. Carboys Nos for : **barcode & Color & Appearance :COLOURLESS**
15. Water Consumption & W.W.G (KLPD) : **Ind :1304.110 , Dom :370.000 & Ind :90.310 , Dom :263.000**

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	30
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.76
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	30
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	1624
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	32
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standai	1 - 2000 mg/l.	1.12
7	Percent Sodium	%Na	IS11624-1986(Reaffirmed 2009)	0.01 – 100%.	55
8	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	490
9	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	270
10	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	74
11	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	1.2
12	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.0
13	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmec	05–50000 mg/l	24

Laboratory Remarks : Freeze By:251-r.o_251 Dt.: 11/10/2021

T. C. Barmeda

T.C Barmeda, ROH

Field Observation : colourless sample

Note :
1. * - These parameters are NOT covered under the scope of NABL.
2. The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
3. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
4. This report is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
5. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
6. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
7. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
8. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23rd Edition by APHA.
9. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

29/10/2021 17:43:16

Annexure – 3

TÜVRheinland®
Precisely Right.

Certificate

Standard: **Zero Waste to Landfill Management System (ZWTL MS 2020)**

Certificate Holder: **Adani Ports and Special Economic Zone Limited**
Mundra Port, Kutch - 370421,
Gujarat,India

Scope: **Providing Port Facilities for Import and Export of Bulk, Break Bulk, Liquid and Containerized Cargo, its Storage and RORO Operation for Export of Vehicles**

Proof has been furnished by means of an audit that the Requirements of ZWTL MS 2020 are met, with the achievement of waste diversion rate of above 99%

Validity: This certificate is valid from 01-06-2021 until 31-05-2024
Subject to satisfactory annual surveillance audits.

Certificate No. TUV/ZWLMS/2021/Adani Ports/0501

New Delhi, 01-06-2021

TÜV Rheinland India Pvt. Ltd.
Office 610, 6rd Floor, iThum Tower, A–40, Sector-62,
Noida- 201301, India

CII-ITC Centre of Excellence for Sustainable Development

Confederation of Indian Industry

Certificate

Single-use Plastic Free

Adani Ports and Special Economic Zone Limited

Adani Mundra Port, Adani House, PO Box No. 1, Mundra, Kutch 370 421, Gujarat, India

This is to certify that Adani Ports and Special Economic Zone Limited, at the location mentioned above, is Single-use Plastic Free as verified by the Confederation of Indian Industry, under the provisions of the **Plastics-use Protocol: Verification and Certification (1.0)**.

This Certificate is valid from 26 May 2021 to 25 May 2022.

PLASTICS-USE PROTOCOL

CONFEDERATION OF INDIAN INDUSTRY CII NEW DELHI

Ms Seema Arora
Deputy Director General
Confederation of Indian Industry (CII)
Centre of Excellence for Sustainable Development (CESD)

Certificate Date: 07 June 2021

Certificate No.: CII/PuP/2021/012

This certificate has been awarded after the company fulfilled the requirements for phasing-out single-use plastics and providing evidence for it. Responsibility for the data provided to CII rests solely with the company. The conditions of certification and items are detailed in the Annex.

Annex

The certification applies to the following single-use plastic items:

- Cutlery (knives, forks, spoons, chopsticks)
- Crockery (plates, glasses, cups, lids, bowls)
- Food containers
- Straws
- Stirrers
- Carry bags
- Items of decoration (polystyrene)
- Garbage bags

Organizational Boundary: Adani Ports and Special Economic Zone Limited

Operational Boundary: Administration, canteen, kitchen and operational areas

Material Boundary: Single-use Plastics

Reference
Verification Date: 26 May 2021
Verification Report No.: PuP/Verification/2021/AdaniPorts/004
Mode: On account of the COVID-19 pandemic, the verification process was virtual and followed provisions outlined in the Verification Procedure 1.0 of the Protocol

Annexure – 4

Details of Greenbelt Development at APSEZ, Mundra

Total Green Zone Detail Till Up to Sep – 2021					
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
Total			**2889.9**			

Annexure – 5

adani
Foundation

CSR KUTCH

Six Monthly Report 2021-22

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

PREFACE

Corporate Social Responsibility in India is going through an interesting phase where the need for community centered impact is increasingly becoming more important than ever before. It is not just about the compliance with the laws an 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.

In Year 2021-22 Uthhan Project spread the wings from 17 Primary schools to 31 Primary schools with MOU with Education Department. Natural Farming Promotion concept is started as a mission with training to 500+ Farmers and pure chemical free farming with 50+ Farmers. Mangroves costal biodiversity, water harvesting structures and Tissue is ongoing sustainable Project with proper documentation and demarcation. Adani Vidya Mandir has proven best in education by reaching to unreached through digital technology, happy to see the fisherman students studying sincerely sitting in fisherfolk settlements by operating tablets. "

Under guidance of seniors proper frame work was developed for supporting community as a bridge between various Government schemes and needy people by "Community Resource Centre" its true need and real sustainable way. Fisherman and women employment sourcing created very positive impact as a regular source of income for them.

Adani skill Development center started General Duty Assistant Course training under DDUGKY. 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 Kachchh also.

Success is due to presence of torch barer and mentor in life who is Respected Dr. Priti Adani. We heartily thanks our Rakshit bhai, Respected Gadhvi sir and Respected COO sir for guidance and motivation.

We wish all the very best to whole Adani Foundation Parivar !

INDEX

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

Reducing Carbon footprint

1. Miyawaki – Nana Kapaya

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 Bavar etc. Shrubs species like- Akado and Aavar are also predominant close to site; while, grasses like Chhabar and Dhrab are 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

Reducing Carbon footprint

Species Name/ Botanical Name	Local Name in Gujarati	Saplings Required	TOTAL ACTUAL	TOTAL ACTUAL	Mixed Plantation dominant Drought Resistant Plants PLOT 1	Mixed Plantation dominant by Larger Leaves PLOT 2	Mixed Plantation dominant by Saline Resistant Plants PLOT 3	Mixed Plantation dominant by Medicinal Values PLOT 4	Mixed Plantation dominant Drought Resistant Plants PLOT 1	Mixed Plantation dominant by Larger Leaves PLOT 2	Mixed Plantation dominant by Saline Resistant Plants PLOT 3	Mixed Plantation dominant by Medicinal Values PLOT 4
Acacia nilotica (L.) Del. subsp. indica (Bth.) Brenan	દેશી બાવળ	300	500	500	200	75	150	75	6	15	9	15
Cordia gharaf (Forsk.) E.&.A.	નાના ગુંદા, લિયાર	500	400	400	80	100	140	80	16	11	10	14
Pithecellobium dulce (Roxb.) Bth.	ગોરસ આમલી	400	400	400	80	100	150	70	16	11	9	16
Moringa oleifera Lam.	મીઠો સરગવો	300	300	300	75	75	90	60	17	15	15	19
Salvadora persica L.	ખાળી જાળ- પીલુડી ખાળી	100	250	250	40	60	100	50	32	19	14	23
Derris indica (Lam.) Bennet	કરંજ	200	200	200	25	75	25	75	52	15	55	15
Azadirachta indica A. Juss.	લીમડો	200	200	200	40	40	70	50	32	28	20	23
Moringa concanensis Nimmo	ખારો- જંગલી સરગવો	200	200	200	50	50	60	40	26	23	23	29
Morus alba L.	શેતુર	200	200	200	50	50	50	50	26	23	28	23
Tinospora cordifolia Roxb.	ગળો, ગિલોય	200	200	200	50	50	50	50	26	23	28	23
Tecomella undulata(Sw.) Seem.	રગત રોહિડો	300	200	200	50	60	60	30	26	19	23	38
Commiphora wightii (Arn.) Bhandari	ગુગળ	200	200	200	75	25	25	75	17	46	55	15
Dalbergia sissoo Roxb.	સીસમ	200	200	200	100	25	25	50	13	46	55	23
Zizyphus mauritiana Lam.	બોરડી, મોટા બોર	200	180	180	50	30	70	30	26	38	20	38
Vitex negundo L.	નગોડ	200	150	150	35	55	30	30	37	21	46	38

Reducing Carbon footprint

Species Name/ Botanical Name	Local Name in Gujarati	Saplings Required	TOTAL ACTUAL	TOTAL ACTUAL	Mixed Plantation dominant Drought Resistant Plants PLOT 1	Mixed Plantation dominant by Larger Leaves PLOT 2	Mixed Plantation dominant by Saline Resistant Plants PLOT 3	Mixed Plantation dominant by Medicinal Values PLOT 4	Mixed Plantation dominant Drought Resistant Plants PLOT 1	Mixed Plantation dominant by Larger Leaves PLOT 2	Mixed Plantation dominant by Saline Resistant Plants PLOT 3	Mixed Plantation dominant by Medicinal Values PLOT 4
Adhatoda zeylanica Medic.	અરડૂસી	100	100	100	15	20	25	40	86	57	55	29
Parkinsonia aculeata	રામ બાવળ	100	100	100	20	10	50	20	65	114	28	58
Albizia lebbeck (L.) Bth.	કાળો શિરીષ	100	100	100	25	20	35	20	52	57	40	58
Terminalia arjuna (Roxb.) W. & A.	અર્જુન સાદડ	100	80	80	20	20	20	20	65	57	69	58
Grewia tiliaefolia Vahl var. tiliaefolia	ફાલસા	100	60	60	15	20	10	15	86	57	139	77
Abrus precatorius L.	ચણોઠી	50	50	50	15	10	15	10	86	114	92	115
Aegle marmelos (L.) Corr.	બીલીપત્ર	50	50	50	15	10	10	15	86	114	139	77
Ailanthus excelsa Roxb.	અરડૂસો	50	50	50	15	10	10	15	86	114	139	77
Asparagus racemosus Willd. var. javanicus	શતાવરી	50	50	50	15	10	10	15	86	114	139	77
Cassia fistulaL.	ગરમાળો	50	50	50	15	10	10	15	86	114	139	77
Cordia dichotoma Forst.	મોટા ગુંદા	50	50	50	15	10	10	15	86	114	139	77
Holoptelia integrifolia	કણજી	50	50	50	10	15	10	15	129	76	139	77
Murraya koenigii (L.) Spr.	મીઠો લીમડો	50	50	50	10	15	10	15	129	76	139	77
Psidium guajava L.	જામફળ	50	50	50	15	10	10	15	86	114	139	77
Punica granatum L.	દાડમ	50	50	50	15	10	10	15	86	114	139	77
Syzygium cumini	જાંબુ	50	50	50	15	10	10	15	86	114	139	77

Reducing Carbon footprint

Species Name/ Botanical Name	Local Name in Gujarati	Saplings Required	TOTAL ACTUAL	TOTAL ACTUAL	Mixed Plantation dominant Drought Resistant Plants PLOT 1	Mixed Plantation dominant by Larger Leaves PLOT 2	Mixed Plantation dominant by Saline Resistant Plants PLOT 3	Mixed Plantation dominant by Medicinal Values PLOT 4	Mixed Plantation dominant Drought Resistant Plants PLOT 1	Mixed Plantation dominant by Larger Leaves PLOT 2	Mixed Plantation dominant by Saline Resistant Plants PLOT 3	Mixed Plantation dominant by Medicinal Values PLOT 4
Tamarindus indica L.	આમલી ખાટી	50	50	50	15	10	10	15	3	6	4	Tamarindus indica L.
Butea monosperma (Lam.) Taub.	કેસુડો	30	30	30	5	10	5	10	8	6	7	Butea monosperma (Lam.) Taub.
Manilkara zapota (L.) van Royen	ચિકકુ	30	30	30	5	10	5	10	8	6	7	Manilkara zapota (L.) van Royen
Mimusops elengi L.	બોરસલી	30	30	30	5	10	5	10	8	6	7	Mimusops elengi L.
Plumeria rubra L.	ચંપો સફેદ કે ગુલાબી	30	30	30	5	10	5	10	8	6	7	Plumeria rubra L.
Ficus benghalensis L.	વડ	10	10	10	2	4	2	2	20	15	18	Ficus benghalensis L.
Ficus religiosa L.	પીપળો	10	10	10	2	4	2	2	20	15	18	Ficus religiosa L.
Gmelina arborea L.	શેવન	30	5	5	1	1	1	2	40	59	35	Gmelina arborea L.
Arygyreia nervosa (Burm.f.) Boj.	સમુદ્ર શોષ	50	0	0	0	0	0	0	0	0	0	Arygyreia nervosa (Burm.f.) Boj.
Bauhinia racemosa Lam.	આસીત્રો	50	0	0	0	0	0	0	0	0	0	Bauhinia racemosa Lam.
Ficus racemosa L.	ઉમરો	10	0	0	0	0	0	0	0	0	0	Ficus racemosa L.
Grewia tenax (Forsk.) Fiori	ગાંગણી	300	0	0	0	0	0	0	0	0	0	Grewia tenax (Forsk.) Fiori
Grewia villosa Willd.	લુસ્કા	200	0	0	0	0	0	0	0	0	0	Grewia villosa Willd.
Prosopis cineraria (L.) Druce	ખીજડો	200	0	0	0	0	0	0	0	0	0	Prosopis cineraria (L.) Druce
Salvadora oleoides Decne.	મીઠી જાળ-પીલુડી મીઠી	100	0	0	0	0	0	0	0	0	0	Salvadora oleoides Decne.

TOTAL SAPLINGS PLANTED 4965

Reducing Carbon footprint

Smritivan Memorial park– Bhuj

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

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

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.

Reducing Carbon footprint

Smritivan Memorial park– Bhuj

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 **58** such kind of project of Terrestrial afforestation, across India and this will be their 59th project. (***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 under their proposal. All Corporate of Kutch has supported fund for the same. APSEZ has done monitory support under CSR and Adani Foundation is coordinating for monitoring

Reducing Carbon footprint

Grassland Ecosystem Restoration project - Guneri

As a part of Biodiversity initiatives, 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 involving Gujarat Ecology Society (GES) – A Nonprofit Organization, based in Vadodara, Gujarat.

The Restoration & Conservation Plan, will be executed in a phase wise manner over 40Ha of the area, over a period of 4 years

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 project aims to take the pioneering steps towards building sustainable growth in the Lakhpat region by taking the initiation of restoring the natural habitats along the Guneri village. In the long run, this area can be declared as a Indigenous and Community Conserved Area (ICCA) in lines with a new category of protection status followed by IUCN.

Despite changes in hydrological regimes, there are certain pockets where unique biodiversity endemic to the area has established itself with relics of past vegetation, theinland mangroves are one such area. Inland mangroves of Guneri village are a living example of the presence of rich estuary in the region sustained by a larger riverine system. The area has been well documented and proposed as Biodiversity Heritage Site. The rare and threatened species present in the area include Helichrysum cutchicum (endemic species), Cistanche tubulosa, Campylanthus ramoissimus, and Sida tiagii. Apart from the listed species, Guneri's unique ecosystem sustains good faunal diversity from herpetofauna to birds to mammals.

It is combined efforts of Environment APSEZ and Adani Foundation under consultation of GEC

Reducing Carbon footprint

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Reducing Carbon footprint

Coastal Biodiversity

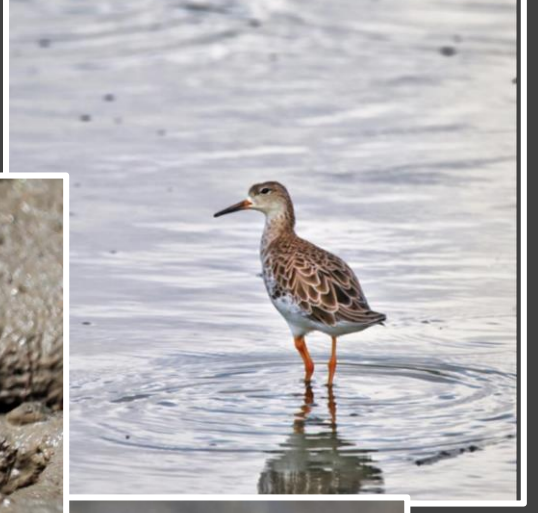
In the coastal environment mangroves and mudflats are dynamic ecosystems that usually support a large population of floral and faunal life forms. Mangrove forests are highly productive ecosystems, which provide numerous goods and services both to the marine environment and people. Mangroves in India are spread over nine maritime states and three Union Territories. Gujarat has the longest (1,650 km) coastline among the maritime states of the country. With the second largest mangrove cover in India after West Bengal, Gujarat's mangrove area has increased from 1,140 km2in 2017 to 1,177 km2now.

A major portion of human population of Gujarat is solely dependent on these coastal ecosystems for their livelihood. Thus, several mangrove restoration programme/ activities are in progress in the state. Mangrove restoration activities in Gujarat are mostly single species stands of Avicennia marina. Adani Foundation at Mundra 's initiated multi-species plantation of mangroves in Kutch association with GUIDE. 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. Due to geological set up of Kutch where fresh water source is atypical, the survival and growth of mangrove plantation remains poor. Thus, a survival rate of 30% is expected for this multi-species plantation. Mangrove biodiversity park of its kind will help in disseminating knowledge on mangrove ecosystem and simultaneously conserving the species.

Since, some of the mangrove species are not readily available in Kutch, their seeds/ propagates were procured from other districts of Gujarat and other states. The proposed species of mangroves that have the potential for enhancing mangrove biodiversity in and around APSEZL include Rhizophora mucronata, Ceriops tagal, Ceriops decandra, Rhizophora apiculata and Aegiceroscorniculatum.

Current year 3 hector development is planned to extend biodiversity park









Reducing Carbon footprint

Homebiogas -

Home biogas is the Israel based company was founded in 2012 manufactures dynamic biogas unit not only for farm waste but for kitchen waste too.
Under Gram Utthan Project, Adani Foundation is supporting home biogas to farmers to Uthhan Villages phase wise. Current year supported 117 home biogas in Dhrub, Zarpara and Navinal Villages.
•Reducing organic waste,
•Transitioning to renewable energy
•Motivation for reduction in use for fertilizer
Promotion of Natural Farming–Home biogas
And Improving the health and living conditions for the millions of families that are still cooking on charcoal and wood. Adani Foundation is not only supporting but creating awareness to save environment and health of the community who regularly cooking on Chula. **It is proven that one hour cooking on Chula is as dangerous as smoking 40 cigrates**.
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.
Earlier we had proceeded for capacity 2 cum but after visit and series of meetings with farmer group –we need to take up plant capacity 6 cum. Till date 120 farmers are utilizing it with satisfaction and considerable outcome by saving Average Rs. 23,400 for gas and fertilizer as well - Homebiogas is base of promotion of natural farming.

2,053 TONS OF ANIMAL MANURE TREATED

159,687 HOURS OF CLEAN COOKING;
4.3 TONS OF BIOGAS CREATED
125 TONS OF FIREWOOD REPLACED;
27,375 HOURS SAVED ON REDUCTION OF FIREWOOD &COLLECTION
625 TONS CO2 EMISSION REDUCTION

Reducing Carbon footprint

See Weed Culture -

Vision

The consortium aims to take a holistic view of transforming seaweed resources as natural capital and use open source knowledge to build an innovative technology platform for harnessing the economic potentials along with the associated ecological benefits thereof. Also, foster a cordial relationship with visionary sponsors and collaborators from India and abroad for sustainable production and utilisation of seaweed resources for the production of innovative products while engaging the coastal communities as direct beneficiaries (human capital) of this unique effort.

Collabration

Agrocel, Piddilite, Adani Foundation has jointly initited the Pilot Project with a objective transform sew weed into Natual Capital as well as engaging community as a human capital.

Achievements

A pilot cultivation facility (5 KL tanks in 6 nos) for the farming of different economically important seaweeds in the tanks on the onshore has been established and commenced the cultivation trials with red seaweeds *Kappaphycus alvarezii*, *Gracilaria dura* and green seaweed *Ulva*. The initial trials have given very promising results and harvested 6-7 times the seeded material in a 40-45 days cultivation period. The successful completion of pilot cultivation trials of Kappaphycus has helped to move forward to set up raceway type tanks of 26 m Length × 6 m Width × 1.1 m Height in 2 nos for large scale cultivation of *Kappaphycus* in Balavadi campus at Juna Bandar, Mundra. The cultivation trials are in progress.

Water conservation Project

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

- A large number of water harvesting structure (18 Nos. of check dams in coordination with salinity department) and Augmentation of 2 check dams **(1 Check dam current year)**
- Ground recharge activities (pond deepening work for more than 52 ponds) individually and 26 ponds under Sujlam Suflam Jal Abhiyan were built leading to a significant increase in water table and higher returns to the farmers
- Roof Top Rain Water Harvesting 90 Nos. **(35 Nos current year)** which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family.
- Recharge Bore well 125 Nos **(50 Nos current year)** which is best ever option to
- Drip Irrigation 980 Farmers **(56 Application current year)** benefitted in coordination with Gujrat Green Revolution Company
- Bund construction on way of Nagmati River could save more than 575 MCFT water quantity which recharged in ground due to which bore well depth decreased by 50-100 Ft in Zarpara, Bhujpur and Navinal Vadi Vistar.
- **Luni Pond Bund Repairing Work is completed**

Water conservation Project

- **Basis of Requirements of Drip Irrigation**

The main source of livelihood being agriculture, the cultivators tend to use more and more underground water for irrigation. Underground waters have gone very highly saline. The use of such water for irrigation has made the soil also saline and the crop yields have dwindled.

- **Process of Drip Support**

Farmer have to applied in the prescribed form of Adani foundation with photograph.
Inspection and verification will be by AF representative.
Ration card, work order of G.G.R.C, 7/12 certificate and all bills must be attached.
Farmer will be informed by telephonic to have form query.
Primary information about farmer land will be received by telephone.
Farm visit within 10 days of after received of application and verified the installation of system as per map and material as per bill will be checked and get farmer feed back.
Verification report submitted to account office.
Payment within 20 days if all document is complete through net banking.
Farmer economic study after our support. – Follow up

- **We have covered 295 farmers and 1422 acre drip irrigation area in last two years which is remarkable for water conservation in first phase – in this phase we have covered 66 farmers and 360 Acre land for the same.**
- **Total 968 Farmers and 5626 Acre Drip since 2011-12 to 2020-21 and process is going on for 56 farmers for year 2021-22.**

Education Projects

Utthan

- The Virtual and Offline classes (Shri sikshan) with parents permission with all precautionary measures as Government Guide Lines. Its very encouraging that inspired by Our Sheri Sikshan Initiative - Gov Teachers also started same approach.
    - **Online Outreach-259 Students**
    - **Individual Home visit-415 Students**
    - **Sheri sikshan and school students- 838 Students**
- Coaching of 49 students for National Means cum Merit Cum Scholarship Scheme (NMMS).
- Coaching of 34 Students for Javahar Navoday Entrance Exam by Utthan Sahayak since last Three Months.
- Total 93 Meetings were carried out with parents to create awareness for education progress. Apart from that aware about Precautionary measures and Covid -19 vaccination and Gyan-setu Program Telecast on Girnar Channel regularly approximately 1503 Mothers were engaged through various events and programmes.
- As Schools learning is not possible, our Library books corner Initiate is not in Function. Hence started to issue Library books to Students during Home Visit.
- Total 394 webinar and capacity building program were arrenged for Utthan Sahayaks and Government Officers.
- **Uthhan First phase 17 Schools and 2951 students were part of the program, and second phase 14 Schools and 1952 Students were part of the programme. Total 4903 students are getting benefit from Utthan.**
- Second phase inauguration was held in last week of September in which District Primary Education Officer was remained present.

Education Projects

- Tree plantation at Utthan Primary School - Total 1000 saplings have been planted in the schools premises and laid responsibility for nurturing and care.
- Celebrated World Emoji Day. Its an unofficial holiday that is celebrated every year on July 17. Students prepared / draw 157 no of various and gifted to their friends and teachers.
- International Yoga Day celebration on 21st June Through Virtually and Physically. More than 520 Family members were participated
- Utthan Students had participated in **Lets us sing the National Anthem Contents** ,an Initiative of Government to Mark Azadi ka Amrit Mahotsav. Total 389 students and 76 parents have participated.
- Celebrated 75th Independence day with Commemorate 75 untold story , A Freedom Fighters who paid remarkable contribution for Indian Independence.

Activities	Location	
	Mundra	Nakhatrana
Silent reading	367	253
Virtual group reading – Classes: 7 and 8	42	30
Book review – Classes: 5 and 6	38	22
Puppetry show- Classes: 1-4	80	28
Total	**527**	**333**

Education Projects

- On the Rakhi festival Students made Eco friendly Rakhi and tied to the **104 Frontline corona warriors** who had paid remarkable service during Pandemic. (Doctor, Police, PHS and health Staff ,Sarpanch as well as Collector, Kutch and DDO ,Kutch).
- Arranged **Virtual Tour** regarding Plastic Waste Management with Municipal Corporation, Surat and aware about waste Collection , Segregation, treatment and Disposal Process. **Total 178 Students were participated for the same.**
- Teacher day celebration by preparing gratitude wall with card at all 17 schools.
- D- Talks are an Initiative of Global Dream, a Disruptive Movement for Universal Foundational Literacy and Numera. Mr. Jatin Upadhayay Talk On "Empowering the Marginalized Communities in Gujarat Through rejuvenating Education.
- World Book Day celebration on 23 April with various activities

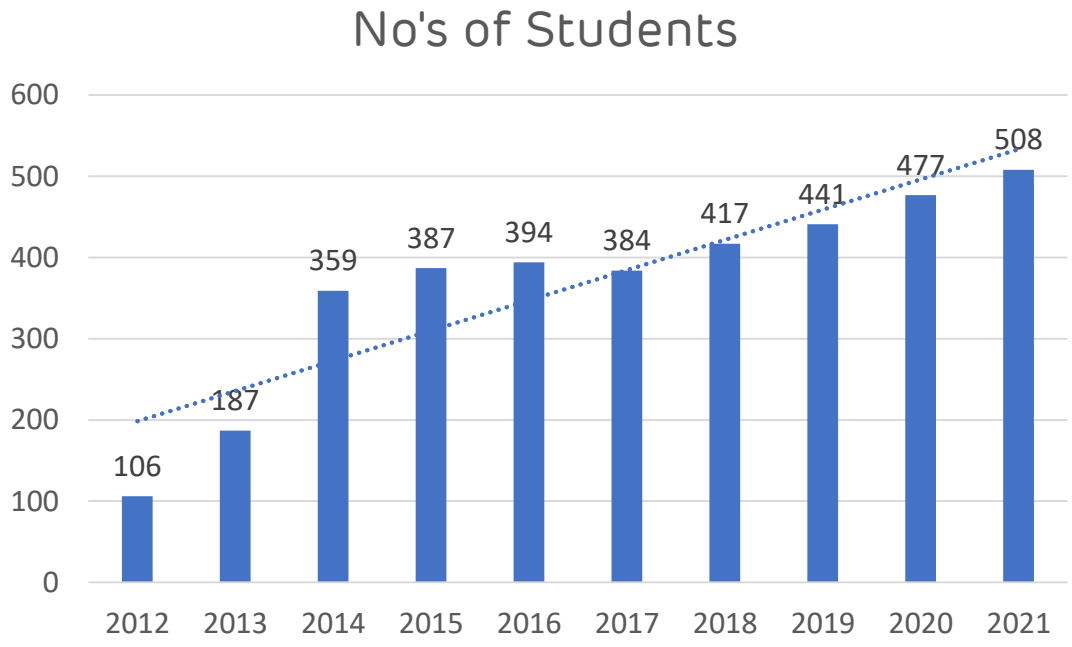
Education Projects

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 Pendamic this year Class 1st Admission was done -

Education Projects



Adani Vidya Mandir Bhadreshwar Gujrat Board Standard 10th Examination Result is 100% as board examination was not held due to Covid. Adani Foundation will take all 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 initiatives. Not only that, our teachers started visiting their home and initiated sheri shikshan concept.

Adani Vidya Mandir, Bhadreshwar

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
- 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

- **508 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

Closer to SDG

- 1. No poverty
- 2. Zero hunger
- 3. Good Health & Well-being
- 4. Quality Education

Farmers Sustainable Livelihood Projects

Promotion of Natural Farming

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

- **Implementation**
- Survey and identification of farmers to adopt Natural farming –Total 50 Farmers are selected as criteria in first phase of the Project.
- Water & Soil Testing- Most of Farm soil contain low organic carbon.
- Arranged Workshop & Hands on training for them which was conducted by Agri expert ,KVK and Progressive farmers with 500+ farmers
- 23 wormi compost unit have been set-up. Which is facilitated through Government with farmer Contribution.
- 50 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
- Two Farmers Groups is registered with **ATMA –Agricultural technology management Agency – it will leverage Government schemes**


adani Foundation
પ્રાકૃતિક ખેતી
ઉત્થાન
જીવામૃત : દુનિયાના શ્રેષ્ઠ ખાતર
જીવામૃત બનાવવા માટેની સામગ્રી
વસ્તુ | પ્રમાણ | ઉપયોગીતા
ગાયનું તાજુ છાણ | ૧૦ કિલો | નાઈટ્રોજન,પોટાશ,કેલ્શિયમ,મેગ્નેશીયમ,ગંધક,લોહ મેંગેનિઝ,જસત,તાંબુ,બોરોન,મોલીબ્લેડમ
દેશી ગાયનું ગૌમુત્ર | ૧૦ લીટર | નાઈટ્રોજન,સલ્ફર,કોપર આર્યન,સેમોનીયમ,યુરીક-એસીડ,ફોસ્ફેટ,સોડીયમ,પોટેશિયમ,મેંગેનિઝ,કાર્બન એસીડ,કેલ્શિયમ,નમક અન્ય મિનરલ્સ,વિટામીન-એ,બી,સી,ડી,તેકટો-એન્જાઈમ,પાણી,હ્યુમીક એસીડ સાયટોકાયનીન,હાઈડ્રોઓકસાઈડ
કોઈપણ કઠોળ નો લોટ | ૧ કિલો | પ્રોટીન અને ફાઈબર
દેશી ગોળ | ૧ કિલો | યુકોસ અને અસંખ્ય બેકટેરીયા
વડની નીચે (તલાવની માટી) | ૫૦૦ ગ્રામ | અસંખ્ય બેકટેરીયા
જીવામૃત બનાવવાની રીત
૨૦૦ લીટર પાણીમાં બધી જ વસ્તુઓ ઉમેરો
દિવસમાં સવાર-સાંજ ઘડીયાલના કાંટાની દિશામાં 3-3 મિનિટ હલાવવું
જીવામૃતને છાંયડામાં રાખવું
૪ - ૬ દિવસમાં જીવામૃત તૈયાર.
જીવામૃતનો ઉપયોગ
જુના કપડાથી ગાળીને ૧ થી 3 વાર છંટકા
છંટકાવ વખતે પંપમાં ૨ થી ૨.૫ લીટર જી
પ્રમાણ રાખવું
જીવામૃત ૧૫ દિવસે આપવું - કઠોળ,પાક,ધાન્યપાક
ફળઝાડ,શાકભાજી કે કંદમુળ તેમજ કોઈપણ પાકમાં
આપી શકાય
જીવામૃત
પ્રાકૃતિક ખેતી
ગૌ કૃપા

Farmers Sustainable Livelihood Projects

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

- Adani Foundation provides Good Quality dry and green fodder to 24 Villages. Project is covering total 14116 Cattels / 3008 farmers and hence enhancing cattle productivity. Dry Fodder 895398 Kg Green – 2425230Kg
- Fodder Cultivation- To made fodder sustain villages - 25 Acre Gauchar land of Siracha village is being cultivated for the same.
- To protect Cattles against Bovine Brucellosis zoonotic disease, Awareness and vaccination program is ongoing with Kutch fodder fruit & Forest development trust (KFFT) in our 11 Villages , **Total 1076 Female calves** below 3 years have been vaccinated in six months.

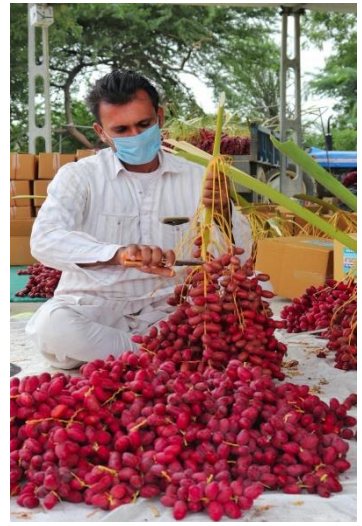
Farmers Sustainable Livelihood Projects

Promotion of Horticulture : Date Palm and Dragon fruits

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 196-shares of 89 Farmers , that is Rs.0.96 lacs Fund in the year of 2020. 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.

Dragon fruit farming is on going by Five farmers each farmer is doing in 2 Acre farm – Total 11000 plants. Pleasure to share that Auspicious presence of Respected Douglas Smith sir, our CEO ,APSEZ the First batch of fruit was harvested.



Fisher folk Sustainable Livelihood Projects

- Get the technical and Non-technical Man-power Requirement details from CFS and APSEZ, Mundra And inform to fishermen Youth and Leader. Later Eligible fisher Youth had trained for interview facing and soft skilled practices and interviewed in respective Company. 11 Fisher Youth were interviewed among that 5 have been selected. Our target is to support 60+ Fisherman in alternative livelihood till March 2022.

- Fishermen Government Scheme awareness Program was Arranged at Adani Guest House Mundra on 11th Augusts. The schematic details was Felicitated by Fisheries Department Staff. As well as Facilitation of Pagadiya Welfare scheme & boat license sanction letter to 06 Fishermen. Till date 59 Form has been submitted to fisheries department ,Bhuj for pagadiya and boat License.

- ASDC Courses Induction Meeting with Fishermen Youth at Navinal and as well as listed out their name to start computer & Spoken English classes through Adani Skill Development Center, Mundra.

- During the **Taukate cyclone** fishermen family had been shifted to safe Places As well as support to disaster management team for advance preparation.

- Fishermen's boat get across the vessel approach often while fishing Often , which create issue due to miscommunication Between Fishermen and Vessel crew members to clear vessel approach. its delay vessel berthing

Women Empowerment Projects

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

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

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

- Education – Uthhan Project promotes girl child education, Creating awareness through various Govt schemes i.e. Vahali Dikri Yojana, Sukanya Samriddhi Yojana etc. till date covered more than 1200 girl child to get benefit out of it.
- Health and Nutrition – 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 group 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 89 Roof Top Rain Water Harvesting is supported for reducing hassle of the women to fetch the water as well as making clean water available.

Women Sustainable Livelihood Projects

- Total 15 Active SHG Group are engage as Mentioned Income generation activity. We facilitate them capacity building training for quality ,Marketing Finance and team work to made them self sustain.
- Saheli Swa Sahay Juth have completed order of 1500 Sanitary pad from District Health Department.
- "Shradhha Saheli Sva sahay Juth" is won the tender to provide Catering service in Block level Government
- Tejasvini SHG has received order of 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.

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	Sanitaty Pad Sale	10
15	Sonal Krupa Saheli Swa Sahay Juth	Stitching	10
		168 Members in Group	

Women Sustainable Livelihood Projects

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 Health Projects

Mobile Heath Care Units and Rural Clinics

9 Rural Clinics

06 from Mundra 02 from Anjar & 01 from Mandvi block treated ;
3843 patients.

31 villages covered, with 94 types of general and life saving medicines through Mobile healthcare unit

3364 patients benefited during six months

Community Health Projects

Swasthaya Seva to needy Patients

06 patients are provided Dialysis treatment at 133 times with nominal charges at Adani Hospital

471 – Economically Challenged patients have been supported for operation ,OPD ,IPD ,Medicines and lab-test.

Promoting preventive health care

Initiated identifying patients of NCD-Non communicable disease by survey which will help to diagnosed chronic disease at early stage and treated as well. From 960 patients - **80 Patients are find symptomatic to Hype, tension, Diabetic.**

As a part of emergency situation - Rural clinic and Mobile van are equipped with Portable ECG machine & Life saving medicines to treat cardiac patients

For Preventive health care General and multispecialty camps Pediatric camp, General Health camps in nine villages and Super specialist camp which benefitted more than 1100 patients of Mundra Taluka.

16 Senior Citizen have been linked with Government Niradhar pension scheme, 34 senior citizen linked up with Ayushman Yojana and 67 Senior Citizens were referred to GKGH Bhuj for chronic illness.

Community Health Projects

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 Medical Prescription and advise for further treatment & co-ordination.
- AF team voluntary performed patients care and co-coordination duty at GKGH ,Bhuj for 23 days.
- AHMPL,Mundra was converted into Covid Hospital with 100 bed Facilities with oxygen to extend Covid medical treatment over community. All related coordination done by our team for more than 353 OPD and IPD.
- Provided Oxygen Concentrator machines for Home isolated patients resulted in goodwill.
- Provide Dead body van service to shift covid demise patients to Crematorium with all dignity.
- Precautionary voice message dissemination through Awaj de voice message service Over Community.
- Started Village Sanitizing activities and Ukalo, Vitamin C tablet distribution

Community Resource Center

Scheme	Detail	Total
Widow	Widow pension	78
Fishermen	Pagadiya License & Boat License	59
Kitchen Garden Kit	Kitchen Garden kit	20
Mukhya Mantri Yojna	Orphan Covid Child	14
Su-kanya Yojna	Fix deposit	11
Manav Garima	Tools & Kit support	1
Agriculture	Barrel & Chaft Cutter	12
Bal Ayog Yojna	health	19
Senior Citizen	Pension Yojna	06
Vahali Dikri Yojna	Fix deposit	2
Total		222

Though there are huge number of Government welfare scheme but people could not get it s benefit because of awareness and access facilities.

We have started community resource center at Field office Mundra to facilitated Government scheme as below

Till the date more than 2100 beneficiaries and during past six months 222 application have been submitted to Government Department i.e. widow pension scheme, Senior Citizen pension scheme, agriculture and fisherfolk related scheme, child support scheme after pandemic, vahali dikri Yojana etc.

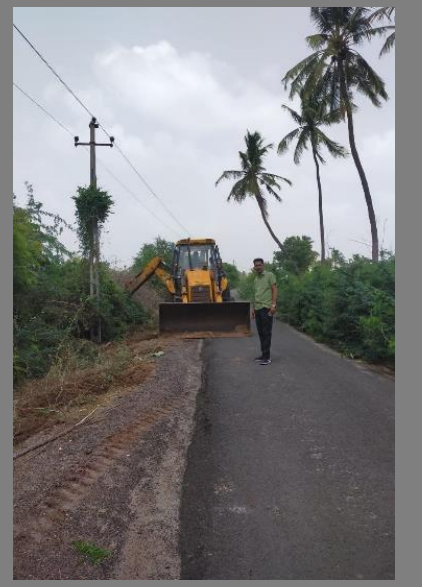
Community Infrastructure

Work Completed

- 31 RRWHS structure have been completed
- 45 Bore-well recharging activity is completed .
- Development Approach road Prasala vadi vistar Gogan Pachim at Zarpara
- Earthen bund Repairing work at Pond, Luni.
- Pre-moon soon activity Approach repairing, Village Pond lake strengthen and river cleaning (babul cutting) work is ongoing in Various Villages
- Approach Road repairing at Various Fishermen Vasahat(ARC).

Work in progress

1. Construction of common Gathering Rooms at Wandi village.
2. Development of Chain Link Fencing at tree forestation at Nana Kapaya.
3. Construction of community gathering Shed at Mundra- work in final Stage.

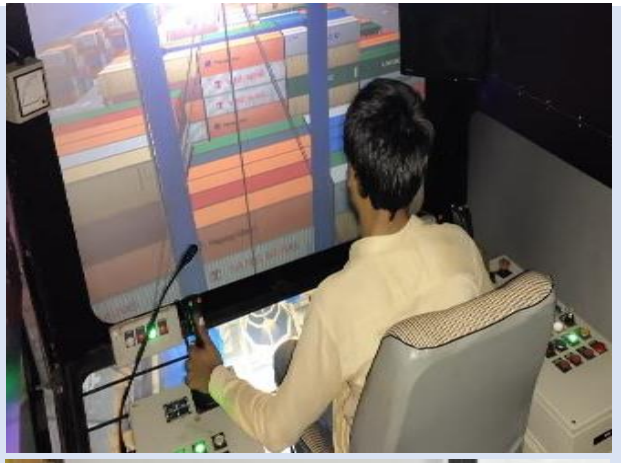


Adani Skill Development Centre

ASDC, Mundra

Courses	Female	Male	Total
Digital Literacy	10	20	30
Tally with GST	02	03	05
General Duty Assistant	04	01	05
Dori work	21	00	21
Mudwork	18	00	18
Basic Functional English	09	12	21
Beauty Therapist	01	00	01
Manicure and pedicure	20	0	20
Data entry operator	02	0	2
Junior crane operator	00	48	48
Total	87	84	171

RPL – Recognition of Prior Learning Training given to Adani Group Contractual Employees –Total 218 Employees have been benefitted
Junior Crane Operator practical training to 36 Candidates for (Group-1,2 & 3) At MICT Port
Guest Lecture On Mehendi products , Beauty Therapist & Resin art Total 100 candidate have been benefitted.
Certificate Distributed to Mud work candidates at MICT Colony-30 women learnt Mud work.
Volunteer Support in GKGH and Adani Hospital during covid pandemic
21 students were coordinated for interview in sea bird CFS of Mundra.
Centre Inspection by Mr. Krunal (GSDM) At Solar Mundra Under Sankalp project
We Received 4 Star rating from the Department.



Adani Skill Development Centre

ASDC,Bhuj

Courses	Female	Male	Total
General Duty Assistant	47	16	63
Diet & Nutrition (Chanakya College)	36	5	41
Digital Literacy (Chanakya College: 30 + Online: 5 + University: 3)	26	12	38
GST with Tally (Online: 1 + University: 22)	20	3	23
First Aid (Chanakya College)	35	6	41
Basic Functional English	3	1	4
Beauty Therapist	3	0	3
Financial Literacy (Chanakya College: 18+ University: 3)	20	1	21
Junior Crane Operator	0	3	3
Welding Technician	0	1	1
Logistics & Supply Chain Management	0	1	1
Frontline Health Worker	5	0	5
Occupational Safety and Health Administration	1	0	1
Domestic Data Entry Operator	0	1	1
Total	**196**	**50**	**246**

Other Activities:

Launched New online General Duty Assistant & Beauty Therapist for 63 candidates under (DDU-GKY).

Certificate Distribution program to Old GDA batch (DDU-GKY).

Soft Skills Training Certificate distribution to Prisoners of Palara Special Jail.

Guest lecture on **" Tally: Older vs New" & " Concept of Emerging E-way Bill"**

total 100 Candidate had attend Guest Lecture.

Nakhatrana CSR

CSR activities being executed for the holistic development of eight most effected villages. in four core area Education, health, SLD and CID

.

- Carried out Survey of Widow women for Gov Pension scheme. There are Total 246 widow women among them 121 have been facilitated with Widow pension scheme@ Rs.1250/Month i.e. Rs.121250 /Month.
- To increase the ground water table we have started Ground water Recharging activity.Total 22 Bore well have been recharged at Ugedi and Deshalpar Villages.
- Repairing of Four Old check dam ,two pond have been deepen in Ugedi Village.
- World Environment day celebration on 5th June by tree Plantation at Jinjay & Ugedi Villages.
- Tree Plantation at Ugedi primary School with nurturing responsibility over Students **one Tree one Child.**
- Respected Gautam sir Birthday celebration with Tree Plantation at Ugedi schools.
- Adani Foundation day celebration at Deshpar –Gantuli Wiodw pension Government scheme form filling and brief about adani foundation activities.
- Mangoes sapling have been Given to Farmers and aware and awake about the important of Horticulture Cropping to doubling the farmer Income. 1000 Mangoes Sapling had been Distributed to Ugedi and Deshalpar Villages Farmers Accordingly.

Sr. No	Village Name	Total Widow woman	Eligible for Pension scheme	Total remaining	Facilitated Through AF
1	Ratdiya	45	27	18	26
2	Ugedi	42	36	6	19
3	Amara	43	17	26	17
4	Deshalpar (G)	69	44	25	39
5	Jinjay	25	18	7	12
6	Dhamay Navi	13	5	8	5
7	Dhamay Juni	9	3	6	3
Total		246	150	96	121

Nakhatrana CSR

- Under Utthan project total 8 schools and 1165 students are getting benefit since two years
- Even though the covid pendamic Uthhan education is ongoing with innovative teaching method.
    - **Online Outreach- Students-375**
    - **Individual Home visit-138**
    - **Sheri sikshan and school students- 313**
- Apart from regular classes Utthan Sahayks conducted online Covid awareness session. In which 100+ students and 80+ mothers took participate
- Utthan Sahayks approached Virtual classes for progressive learner before 9:00 am and after 8:30 pm.
- 21 students have been coached guided for National Means cum Merit Cum Scholarship Scheme (NMMS).
- Mothers Day Celebration and sensitized about how they are key point for their family growth. Total 350 mothers were participated
- International Yoga Day celebration on 21st June Through Virtually and Physically. More than 100 Family had participated
- More than 504 Mother were informed and awaked durinh mother meeting in Utthan Villages and aware about their wards education progress Health ,Hygine.
- Capacity building program for Utthan Sahayaks and Government Officers.
- Celebrated 75th Independence day with Commemorate 75 untold story , A Freedom Fighters who paid remarkable contribution for Indian Independence. And 139 Utthan school students and 53 parents had participated in Rashtragaan ,an initiative by the Ministry of Culture to Mark Azadi ka Amrit Mahotsav.
- Rakhi festival Students made Eco friendly Rakhi and tied to the 108 Frontline corona warriors.
- Arranged Virtual Tour on Plastic Waste Management with Municipal Corporation, Surat 73 Students were participated for the same.
- Teacher day celebration by preparing gratitude wall with card at 08 Utthan schools.
- D- Talks are an Initiative of Global Dream, a Disruptive Movement for Universal Foundational Literacy and Numera. Mr. Jatin Upadhayay Talk On "Empowering the Marginalized Communities in Gujarat Through rejuvenating Education.
- World Bool day celebration and started issue our library corner Books ,297 Books were issued by 6 to 9 standard students through our Library corner initiative which promted them for reading nd created curiosity to know more.
- Teacher day celebration by preparing gratitude wall with card at all 08 schools.
- 25 Students are being taught for Javahar Navoday Entrance Exam by Utthan Sahayak since last Three Month.

Tuna CSR



CSR activities being executed for the holistic development of three most effected villages and two fisherfolk settlement AKBTPL, Tuna.

We are Providing sage and clean potable water to Vira and Ghavarvado Fishermen vasahat and Vandi Village.
Total 11310 KL water was supplied by coordination with GWIL.

Two Pond Deepening at at Rampar Village and Community training center construction at Vandi Village.

Tree Plantation at Rampar primary School with **one Tree one Child concept to Nurturing Environment. 500+ trees planted**

Fodder distribution to Rampar and Tuna Villages.
Green Fodder -720310Kg
Dry Fodder -26680Kg Green.

Bitta CSR

Under Adani Solar Limited – 40 MW Solar Panel Power Unit is Situated at Bitta Village in Abdasa Taluka. We have done various activity under the CSR work.

As Abdasa is water scared region awareness for water conservation was provided to 50+ farmers of Bitta, Dhrufi and Moti Dhrufi villages.

Cleanliness of village Pond inlet in the Bita Village which lead more storage capacity and Village. Pond bunding construction in Dhufi village.

Panchayat Building construction was carried out by Adani Foundation's support and technical guidance.

Drainage line maintenance and Cleanliness is frequently done in Bita which lead Swachh Village

Dignity of Work Force Programme - EVP

Presently in Mundra Population of migrated labour community is increasing. Some of them are living in pathetic condition due to lack of awareness and education. It is true that we cannot achieve our goal of development until we support to up bring lives of this community. Basic needs of this labour force needs to be address. In labour Vasahats they are not getting facility of health facilities, proper living condition, sanitation or proper living atmosphere. This leads to addiction and various diseases.

Under Employee Volunteering Programme, Adani Foundation employees are supporting to more than 800 students of Hindi Medium from workforce background.

Adani Foundation Medical officers are providing their services at Labour clinic at Every Saturday Sunday and covering more than 150 patients in a week.

Joy of giving week celebration is scheduled twice in a year. In June 2021, more than 7500+ cloth distribution to workforce families by Employees of Adani Group under EVP.

DE addiction Awareness Campaign is going on with "Prajapita 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.

Rakshabandhan and Ashadhi bij celebration by Mundra Solar

Dignity of workforce programme is arranged by joing collaboration with Adani Wilmar Limited, APSEZ, labour contractor and leaders of union. adan

Dignity of Work Force Programme - 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 galvanise 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.

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 labours 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.

Success Stories : Stories of 9 Empowered Women of Mundra

Educating and investing in women and girls has a multiplier effect on productivity, efficiency and economic growth but economically strengthening women is not only a means by which to spur and sustain inclusive industrial development, it is also a matter of advancing women's human rights.

Success Stories

"Biogas asanje kutum jo hakdo sabhy j aay" (Homebiogas is our family member now) words by Gita Bharu sheda residing in Zarpara village. We get bio slurry which is golden material for growth and I am so happy to cook on gas flame !! Earlier we have to collect wood and 5 hours per day breathing carbon during cooking period..
We will create awareness of the same to other farmers also.

Jetbai Gadhvi residing in Bhorara, she is saying " Now rural women can enjoy a smoke free life and almost entirely freedom from firewood collection and management. We feel safer, healthier and less worried - now we have time for other activities.

Success Stories

Valbai Sheda is residing at Zarpara village Prasla Vadi Vistar. She is Arts graduate and very much interested in developing various types of fodder. Having 5 cows and 2 buffalos, use of biogas since 4 years soil become fertile. She is developing Super Napier Bajra - NB21 and using chalf cutter for cutting it. She always use to make silage and cattle food with high protein.
With all experiments milk quality and also quantity increased by half ltr to one ltr per day per cow

Heerbai sodham residing at Nana kapaya who is progressive lady farmer. She lost her husband in 2015 in road accident. Responsibility of 4 children made her determined to earn for family. Her mother in law encouraged her for continue agriculture work. Her daughter is studying BSc nursing at Ahmedabad.
Since 3 years she is doing cow based natural farming. After knowing about homebiogas she approached Adani foundation and today on world environment day with her contribution installation carried out at her farm.
We salute her strong approach for natural farming and courage to take care of whole family with confidence

Success Stories

Gitaben is lady farmer doing natural farming at Bhorara Village. She is taking care of her dragon fruit farm having more than 3000 plants with zero chemicals. She is widow and having 3 children . Her daughter is civil engineer and helping her in cultivation.
When we meet her in month of March and offered our support – she told she just required guidance for jeevamrut and Gau Krupa Amrutam. She took part in "Kamlam" Exhibition at Ahmedabad. Adani Foundation salutes her confidence and self respect.

When a sweet little angel came into this world she was not at all aware about condition of her parents !!
Divyanen soni residing at Gandhidham was nine month pregnant, delivery date was having only 7 days time period.
In this happiness time - suddenly symptoms of corona appeared and corona test came out positive.
Her husband Nikunj soni inquired to many private hospital but nobody was ready to take responsibility of delivery of corona patient.
Finally the couple came to Adani GKGH hospital. Including corona treatment safe Delivery happened of patient - saved two lives !!
When divya ben left for home with a cute baby girl she said " Thanks word is very small for this nobel help - I got great gift of the God "

Success Stories

Ranjana ba is 28 years old lady lives in bhorara. She has 4 children. Her husband Raghuvirsinh lost his life before 3 months due to corona.
For Ranjan ba it was a very crucial time - socially and financially..
Jagrutiben meet her n fill forms of bal sanrakshan for 4 children. She will start getting 2000 per child - Rs 8000 per month from GOG. This support will be blessings for her.

Diwali Ben Parmar age 62 Years living at Mundra. Her name is totally opposite to her personality - she is 100 percent blind. With help of karsanbhai she started getting Niradhar vriddh pension Rs 750 per month as well as she received bus pass today. We can see her blessings by her innocent smile..

Success Stories

"if you are planning for one year grow crops, if you are planning for 10 years grow the fruit saplings, but if your planning is for 100 years grow education" – this is a well-known proverb. It is not that person does not know about education but when a person has to make choice of education v/s hunger the later one wins the battle. Dearth for education burns to extinguish fire of hunger.

The war of Education v/s hunger was the same in the house of Haribhai Khetshi Sheda a resident of Zarpara Village of Mundra. The couple Haribhai Sheda has 7 daughters and 5 sons was earning livelihood through grazing animals, working in others farm, and trying to grow something in his own farm with great difficulty. In the grave financial conditions there was no scope that children could be educated as all were occupied as child labourers and all gave priority to work as compared to education. But, story was different with the fourth child Nagajan Sheda. For him detection of polio followed by permanent defect in leg due to doctors fault turned as a blessing in disguise as he completed education till class 9 and dropped out after failing in class 10.

In 1991, when Adani Company started Mr Nagajan got labour work from a contractor. His first marriage had failed but was comfortable with the second wife. His first daughter from first marriage was Jyoti. He tried to give her best of childhood. He took an oath to educate the daughter by any means and make her doctor. It was his burning desire to see the upcoming generation of Charan samaj educated. He determined to do anything to have the tag of Dr. for his daughter.

Mr Nagajan started a tea stall for the people coming to work at Adani Port. But too bad of his fate nobody turned up for 08 days as he was using cow and buffalos milk and not of the packet. He didn't have enough fund to invest for the same. Meanwhile one contractor came with 50 labourers to do some civil work and they all started coming to his tea stall. Gradually, he borrowed 5000 rupees to bring things for the shop and also took the franchisee for Amul. He admitted Jyoti in the govt school of Dhrub. The family of Nagajanbhai also got two more sons and a daughter.

In order to fulfill his desire Nagajanbhai started searching for a good school in nearby area and narrowed down to Adani Public School, CBSE school. The family members opposed for the same as it would increase the expense for all. He was firm and said " I will eat chapatti and salt but will educate my daughter".

Success Stories

Jyoti was admitted in the school in Jr.Kg. The teachers of the school could understand the passion of the parent and her journey in APS started which was followed by her 03 siblings joining her in the same school.

Inspite of distance, different timings of all the section Mr Nagajan use to meticulously do pickup and drop for all the children. His wife supported him by doing all the household chores on her own, managing livestock and farm to earn some amount.

Time flied and Ms Jyoti secured 92% in Class 12 Science. The first target of Mr Nagajan was achieved. He received great appreciation and could set an example for his community. At present his two sons Rudra and Shivam are in 11th and 7th respectively and daughter Sonal is in class 9. It is not been an easy task to regularly pay fees of 04 kids. Yet he managed to do so. At times he has become fee defaulter which created various issues like result on hold etc. At one point of time he sold his plot and paid fees. His all the four children are good at studies and other co-curricular activities. Jyoti has got first position in district level throw ball, has got the best school award in swachagraha, gave a speech on kargil day and many others.

Jyoti is firm to fullfil the dream of her parents. She is able to drive vehicles like bolero, bike and grows different plants.

In the community of Nagajan Bhai early marriages are still prevalent. But, he has not done so for any of his kids. Nagajan bhai has proved to be a living example that if one decides he could achieve anything be it education of kids or their bright future.

Our country needs many such Nagajan bhai to have many Jyoti's!!!!

Events

Inauguration of **Community Resource Centre on 3rd April** to bridge the gap between Government and community to facilitate government schemes with Launching of "Super 51" Book Let by auspicious presence of Respected DM kutchh Ms.Pravina D K - IAS, District Development Officer Mr Bhavya Verma - IAS, Director, DRDA Mr Joshi , Director- Social welfare office Mr Arvind Rohadiya, Mr Chaudhary Sub Divisional Magistrate.

All dignitaries has visited Sanitary pad making unit and discussed with Saheli group women regarding orders and capacity. Pravina D K mam meet all women groups and asked NRLM department to prepare empowerment plan for the SHG's.

Events

❖ **Super specialist health camps**

With Joint Collaboration of Adani Foundation, Adani Hospital Mundra & Sterling Ramakrishna Hospital Gandhidham at Adani Hospital Mundra on 26th August. With availability of **Dr. Ankur Gupta** (Neuro & spine surgeon**), Dr. Tausif Sauravardi** (Pulmonologist), **Dr. Gautam Pipara** (Urologist), **Dr. Kunal Thakkar** (Endocrinologist) form Sterling Ramakrishna Hospital Gandhidham render their services accordingly.

With Joint Collaboration of Adani Foundation, Adani Hospital Mundra & Sterling Ramakrishna Hospital Gandhidham at Rotary hall on 28th September. **Dr. Ankur Gupta** (Neuro & spine surgeon**), Dr. Tausif Sauravardi** (Pulmonologist), **Dr. Gautam Pipara** (Urologist), **Dr. Kunal Thakkar** (Endocrinologist) Dr. Sachin Patel (MD), Dr. Rajesh Shukla (Surgeon) and Dr. Treyank Shukla (Pediatrician) had provided their services

Total 961 **Patients** had benefitted.

Doctor's Day Celebration

Kutch Kalpataru farmer producer organization is working for promoting dates of Kutch. On the occasion of Doctor day on 1ST July , KKPC Farmers honored Doctor, Nurses and House keeping staff of GKGH,Bhuj & AHMPUL,Mundra with great respect to paid theirs sincere contribution during Covid -19 Pandemic.

On this day all Directors of KKPC were remain present and facilitate all medical staff with dates packet. More than 800 Staff members have been facilitated with the same.

This shows great feelings of farmers towards remarkable work of Adani healthcare in pandemic condition at Mundra and Bhuj Hospital.

Events

We **celebrated 25th Silver Jubilee of Adani Foundation** at Adani House Mundra. On this Auspious day We facilitated 11 women of Mundra Villages who have done Remarkable work in their filed in the Presence of EDM Shree Rakshit sir and HOD of APSEZ. acquainted about Adani Foundation Journey.

As well as Appointment letter Felicitated to Mamd Shakil Manjaliya, a First Fisher Youth who have peruse Mechanical Diploma

On the occasion of **Respected Dr. Pritiben Birthday** at 29th August, 21 Ration kit were distributed by APSEZ & AWL Employee To needy widow and senior citizen Women who are alone & passing measurable life

As well as ensure to continue ration kit support for life long to them.

Events

World Environment Day Celebration

Miyawaki forest development inauguration was held in coordination with Gram Panchayat, Forest Department and Mnrega. Additional collector, Sub division Magistrate, Range forest officer, TDO, Head environment, Panchayat members and Talati remained present. Press media was also live in this virtual event. Executive Director Mr. V. S. Gadhvi had given motivational speech on the occasion.
MOU signing ceremony for promotion of Natural farming with KSKV kutchh University. Dr.Jayrajsinh Jadeja vice chancellor and Dr.Mrugesh trivdi HOD of earth and environmental science were present and discussed about the road map for involving more than 2000 farmers for natural farming

International Coastal Clean up Day

Adani foundation MUNDRA has celebrated International Coastal Clean up Day with Coast Guard" with theme swachhagraha.. School students, Coast Guard staff and Adani foundation staff had cleaned Mandvi beach and give a message of swachhagraha.. In this event more than 150 students and 120 staff members of coast guard and Adani Foundation had taken part

Visits

- **ESG team** of Adani Group had visited AF Mundra - sustainable Project & business
- **Adani Foundation COO**, Respected Chandrasekhar Gowda sir-COO Adani Foundation had visit of all AF Project Mundra.
- **Adani Digital Lab & AF Communication Team**, had visit all AF Project Mundra.
- **MOEF team** had visit about APSEZ & AF Sustainability Projects.
- **EDI -Entrepreneurship Development Institute Team** had visit to frame out sustainable SHG development Project
- Gujrat Ecology Commission has visited grassland development project
- **100 VVIP Investor had Visit** APSEZ ,Mundra as well as Briefed about CSR activities and Gifted with NAMDA Frame which is unique combination to Revival of NAMDA craft and Mangrove Bio diversity- Fauna.

Mapping AF Projects with Sustainable Development Goals...

Sr No	UN-Sustainable Development Goals	Illustrative Mapping of Mundra Projects
1	No Poverty	Support to Farmers, Fishermen and Locals, Adani Skill Development Centre (ASDC)
2	Zero Hunger	Natural Farming, Drip Irrigation Project, Dragon Fruit Farming, Date Tissue Culture
3	Good Health & Well-being	Gujarat Adani Institute of Medical Sciences (GAIMS), Health Clinics, Mobile Health Vans
4	Quality Education	Adani Vidya Mandir, GAIMS & ASDC
5	Gender Equality	Co-education in Adani Vidya Mandir & ASDC, Saheli Samitis, Support to Women Farmers
6	Clean Water & Sanitization	Water Conservation Projects, Potable Water to Fishermen
7	Affordable & Clean Energy	Usage of Solar Energy, Promotion of Bio-Gas Plants
8	Decent Work & Economic Growth	ASDC, Self Help Groups (SHG), Local Arts Revival
9	Industry, innovation & infrastructure	Tissue Culture, Seaweed Culture, Local Arts Revival
10	Reduced Inequalities	SHGs, Local CSR Leadership
11	Sustainable Cities & Communities	Community Infrastructure, Smriti Van
12	Responsible Consumption & Production	Usage of Solar Energy, Natural Farming
13	Climate Action	Mangroves Conservation, Biodiversity, Water Conservation, Seaweed Culture
14	Life below Water	Mangroves Conservation, Seaweed Culture
15	Life on Land	Mangroves Conservation, Smriti Van, Animal Husbandry
16	Peace, Justice & Strong Institutions	Local CSR Leadership, Self-sustained Open Structures
17	Partnerships for Goals	Revival of Local Arts, Smriti Van, Project Swavalamban, Seaweed Culture

Stories of change - impact in numbers...

175+
Hectares of Land Luni Mangroves Biodivesity

5820+
Fisherman person days employed in Mangroves Plantation

41000+
Plantations at Smriti Van of **115 varieties**

950+
Beneficiaries of multispecialty health camp

500+
Students at Adani Vidya Mandir

8900+
Beneficiaries of Health Initiatives

15
SHGs under 'Saheli' initiative for Women

121
Home Biogas Plants installed in 5+ villages

8700+
Special health care for Sr Citizens in **68 Villages**

1632+
Beneficiaries enrolled in Govt Schemes in FY21

20
Check Dams constructed and rejuvenated

5000+
Students under Utthan initiative in **39 Schools**

Summary - Budget Utilization of six month F.Y. 2021-2022

Sr No	Particulars	Approved Budget	Budget Utilization	% of utilization
A.	General Management and Administration	76.12	23.67	31.10%
B.	Education	172.05	18.07	10.50%
B1	Utthan-Education -Mundra & Anjar	149.51	16.91	11.31%
B2	Utthan : Fisherfolk	22.54	1.16	5.14%
C.	Community Health	330.38	107.47	32.53%
D.	Sustainable Livelihood Development	426.28	171.64	40.26%
E.	Community Infrastructure Development	141.35	11.18	7.91%
F.	EDM Recommended Projects	100.00	2.65	2.65%
G.	COVID 19 Support	25.00	12.16	48.63%
	Total AF CSR Budget :	1,271.18	346.84	27.28%
[I]	Adani Vidya Mandir-Bhadreshwar	189.84	40.41	21.28%
[II]	Project Udaan-Mundra	167.42	17.99	10.75%
	GRAND TOTAL Budget F.Y. 2021-22 :	1,628.45	405.24	24.89%

Media coverage

અદાણી ફાઉન્ડેશન દ્વારા નાના કપાયા ખાતે ગાઢ જંગલ ઉભું કરાશે

નદી-નાળા અને ઉંડાણવાળા ખારી વિસ્તારમાં જાહેરની કંપની નિયમના વરસાદી પાણીના પંપેક્ટ માટે ટેંકા બનાવવામાં આવશે

અદાણી ફાઉન્ડેશન અને કચ્છ યુનિ. વચ્ચે સહયોગ ખેતી માટે રોબમોગ્રો

કચ્છ પત્રિકા

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

મુંદરા વિસ્તારની મહિલાઓ સ્વરોજગારી મેળવતી થઇ હતી એ જૂથ જોવા મળે છે.

કોરોનાકાળમાં મહિલાઓએ મેળવી રોજગારી

અદાણી ફાઉન્ડેશનના પ્રયાસો રંગ લાવ્યા...

માછીમારનો દીકરો મિકેનિકલ એન્જિનીયર બન્યો, મોટી કંપનીમાં નોકરી પણ મળી

અદાણી પોર્ટ-સેઝમાં નોકરીનો પત્ર રક્ષિતભાઇ શાહે આપતાં પરિવાર ગદગદ થયો

adani Foundation

અદાણી ફાઉન્ડેશનનો મંત્ર : સેવાનું ઉત્તરદાયિત્વ

કચ્છ પત્રિકા

"શાળા બંધ પણ શિક્ષણ નહિ"

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

મુંદરામાં કોમ્યુનિટી રિસોર્સ સેન્ટરનો કરાયેલો પ્રારંભ

મુંદરામાં અદાણી ફાઉન્ડેશન દ્વારા કોમ્યુનિટી રિસોર્સ પ્રારંભ પોજાયેલા કાર્યક્રમમા કલેક્ટર તથા અન્યો જોવા મળે છે.

મુન્દ્રાની અદાણી હોસ્પિટલમાં કોરોના પોઝિટીવ દર્દીઓની કરાતી સેવા-ચાકરી

ગંભીર પરિસ્થિતિમાં આવતા દર્દીઓ સ્વસ્થ થઈ ઘરે પરત ફર્યા : વીડિયોકોલથી સ્વજનો સાથે કરાવાય છે વાતચીત : પોઝિટીવ વાતાવરણ ઉભું કરવા ભજન અને સંગીતની સુચાવલી પણ કરાય છે પ્રસ્તુત

Adani Foundation Kutch

Thank You

Annexure – 6

GPCB

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

CORRECTION TO CONSOLIDATED CONSENT TO AUTHORIZATION (CC & A)

NO: PC/ CCA- KUTCH-39(7) /GPCB ID 17739/ **Date:**

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

SUB: Correction in Consolidated consent & Authorization (CC &A)
REF: 1) Consolidated consent & Authorization (CC&A) order no. AWH- 83561 vide order no. PC/CCA-KUTCH 39(4) /GPCB ID 17739/ 403658 dated 09/02/2017.
2) Your letter dated 01/09/2020.

In exercise of the power conferred under section-27 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 & Other Waste (Management & Transboundary Movement) Rules-2016 and without reducing your responsibility under the said Acts/ Rules in anyway.

And whereas Board is empowered to amend consent order conditions.

Accordingly, CCA order no. AWH-83561 vide order no. PC/CCA-KUTCH 39(4) /GPCB ID 17739/ 403658 dated 09/02/2017 is hereby corrected as below;

1. Sr. no. 2 of conditions no. 5.2 of the said CC&A order no. AWH-83561 vide order no. PC/CCA-KUTCH 39(4) /GPCB ID 17739/ 403658 dated 09/02/2017 shall be read as under:

Sr. No.	Waste	Quantity per Annum	Schedule &Category	Facility
2.	ETP Sludge	109.5 MT	I-34.3	Collection, Storage, Transportation and disposal by co-processing at cement industries and /or CHWIF site.

2. Rest of all conditions mentioned in CCA order no.AWH-83561 issued vides this office order no. PC/CCA-KUTCH 39(4) /GPCB ID 17739/ 403658 dated 09/02/2017 & industry shall comply with the same judiciously.

For and on behalf of
Gujarat Pollution Control Board

(Smt U.K. Upadhyay)
Environment Engineer

Annexure – 7

Forwarding & Undertaking Letter from Industry

Application for consent for establishing / operation the industrial plant / plants under Section 21 of the Air (prevention & Control of Pollution) Act, 1981

Important Note : This Document or its copy does "NOT" serve as a Supporting Document Proof of Industry's Submission of an Application for a NOC / Consent. This Letter does "NOT" ensure that the Application FEES has been paid.

Application Purpose : Applying for the CCA renewal, there are no changes in details related to Air, Water & Hazardous waste, Previous CC&A order is - Order No. AWH-83561, vide letter No. PC/ CCA – KUTCH -39(4)/ ID 17739/403658 valid up to 20/11/2021.

Print Date: 23/09/2021

From : **Adani Ports & Special Economic Zone Ltd., Category: RED / LARGE**
PLOT NO: 169/P,
at-navinal island, mundra, kutch,
Mundra - 370421
Contact Person: Chirag Rajput, Mob:6359981629, Ph:02838255187
DIST: Kutch East, TAL: Mundra, SIDC: MPSEZ

PCB-ID : 17739
INWARD : 202362
Dt:19/09/2021

Scrutinized By: B.M.Dolasiya,SSA(M)(452)

To,
The Member Secretary,
Gujarat Pollution Control Board
Paryavaran Bhavan, Sector-10/A,
Gandhinagar - 382010

I / We here by Submitting application for CCA ,Inward No : 202362 ,Date : 19/09/2021 for COW(CCA-Renewal).

Applying For : A,W,H Validity : 5 Years Grant By : CHR

Air Sector :20000~Large Scale Industry Water Consumption : 1674.110 klpd

Haz Sector : 5000~Large Scale Industry No of Plants : 1 Incenerator : 0

Investment	Air	Water	Hazardous
3394.621 Crs	20000	40000	5000+30000
0 Rs	5 Years	5 Years	5 Years

Payable Fees : Air : 100000, Water : 200000, Haz : 175000

Paid Amount : 475000, DD No : WAXC0277668539, Dt: 9/18/2021, at AXC , ***

Query / Reply:

	I / We have Uploaded the following PDFs	Date	# Files	Size(kb)	#Page
1	000 - Any Specific Information Called for [in SCRUTINY]	10/09/21	1	193869	940
2	ENV - Environment Statement , Form-V	06/09/21	1	4248	14
3	APC - Air Pollution Control Measures-Details	25/08/21	1	14708	59
4	ANN - Annual Return : Form 4	13/05/21	1	3132	10
5	SHT - Storage Handling & Transportation Plan	13/10/20	1	29251	96
6	EIA - Executive Summary Statement	22/04/20	1	41910	195
7	CER - Compliances for Reconsideration of Rejected-NOC	29/05/18	1	6698	35
8	C&A - Previous Consent-Reject / CCA Order / NOC Order	26/03/18	1	20175	136
9	SSI - SSI-IEM-C.A Certi / Investment Proofs	30/12/16	1	1375	8
10	CMP - Compliance of earlier CCAs - (ONLY Renewal cases)	22/09/16	1	22695	157
11	PLI - PLI Policy	10/06/16	1	564	8
12	PLL - Plan LayOut + Site Plan	17/03/15	1	2221	3
13	WAT - *** BreakUp of Water Uses & balance	10/11/08	1	231	2
14	INV - *** Pls ADD this file in SSI tag- Previous Cases	10/11/08	1	221	1
15	HW3 - *** N.A Now !!! (Details of HW - 2008 rules)	06/09/08	1	1239	4
16	PHT - *** Photos of Haz Waste Storage Facilities	06/09/08	1	91	2
17	RAW - *** Raw materials / Products with QTY-Month	06/09/08	1	11	1
18	EAR - Env. Audit Compliance/Auditor Recommendations,3Pgs		0	0	0

I, the applicant declare that I have submitted full and complete documents and information in conformity to the applicable acts / rules. I am aware that, any delay / rejection in the processing of application on account of incorrect / incomplete information shall be mine responsibility.

Company s SEAL **1 (Through XGN)** O/C 21/09/2021 N I C

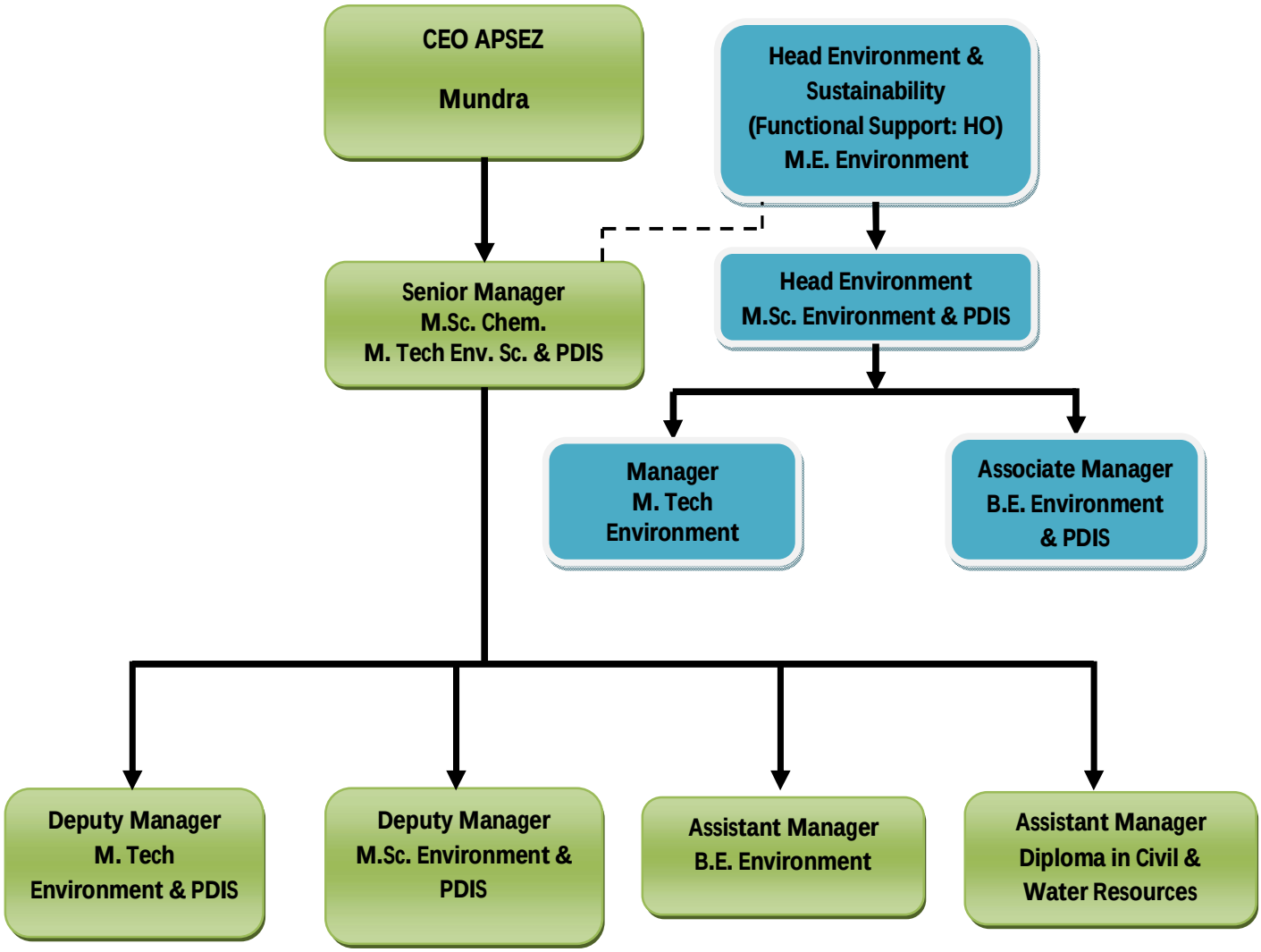
(Bhagwat Swaroop Sharma, Head - Environment, Adani Ports & SEZ Ltd.)

Note: I am hereby enclosing Form-I(AIR),Form-D(WATER),Form-1(HAZARDOUS) along with my application.

Please Attach Copy of NEFT/RTGS Challan with this Letter if you are paying through NEFT/RTGS.

Annexure – 8

Organogram of Environment Management Cell, APSEZ, Mundra



Annexure – 9

Cost of Environmental Protection Measures

Sr. No.	Activity	Cost incurred (INR in Lacs)			Budgeted Cost (INR in Lacs)
		2019 – 20	2020 – 21	2021 – 22 (Till Sep'21)	2021 – 22
1.	Environmental Study / Audit and Consultancy	0.33	6.2	6.82	7.0
2.	Legal & Statutory Expenses	0.84	10.58	10.04	12.0
3.	Environmental Monitoring Services	21.74	19.17	9.56	20.0
4.	Hazardous / Non-Hazardous Waste Management & Disposal	108.43	83.55	57.64	114.10
5.	Environment Days Celebration and Advertisement / Business development	1.5	5.3	1.81	7.0
6.	Treatment and Disposal of Bio-Medical Waste	1.62	2.09	0.89	2.04
7.	Mangrove Plantation, Monitoring & Conservation	Nil	32.59	Nil	Nil
8.	Other Horticulture Expenses	734.18	689	605.58	865.11
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	95.53	219.24
10.	Expenditure of Environment Dept. (Apart from above head)	105.13	89.11	88.28	85.35
	Total	**1083.95**	**1086.08**	**876.15**	**1331.84**