

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,  
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**Sub** : Half yearly Compliance report for Environment and CRZ Clearance for the "Multi Product SEZ, Desalination, Sea Water Intake, Outfall Facility and Pipeline at Mundra, Dist. Kachchh, Gujarat of M/s. Adani Ports and SEZ Limited"

**Ref** :

1. Environment and CRZ clearance granted to M/s Adani Ports and SEZ Limited vide letter dated 15<sup>th</sup> July, 2014 bearing MoEF&CC letter No. 10-138/2008-IA.III.
2. MoEF&CC's Order dated 18.09.2015
3. Amendment in EC & CRZ Clearance vide letter dated 15<sup>th</sup> July, 2022 bearing MoEF&CC letter No. 10-138/2008-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 2024 to September 2024 is being submitted through soft copy (e-mail communication).

Kindly consider above submission and acknowledge.

Thank you,

Yours Faithfully,

For, **M/s Adani Ports and Special Economic Zone Limited**



**Bhagwat Swaroop Sharma**  
**HEAD – ENVIRONMENT**  
**Mundra & Tuna Port**

**Encl: As above**

**Copy to:**

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

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# Environmental Clearance Compliance Report



Multi Product SEZ,  
Mundra, Dist. Kutch, Gujarat

Adani Ports and SEZ Limited

For the period of  
April-2024 to September-2024

## Index

Sr. No.	Particulars	Page Nos.	
1	<b>Environment and CRZ Compliance Report</b>	1-44	
2	<b>Annexures</b>		
	<b>Annexure - A</b>	Compliance of CRZ Recommendation	46-46
	<b>Annexure - B</b>	Compliance of MoEF&CC Order dated 18th Sep, 2015	48-71
	<b>Annexure - C</b>	Compliance of conditions of EC & CRZ amended order dated 15/07/2022	73-73
	<b>Annexure - 1</b>	Mangrove Conservation Day Celebration Report	75-79
	<b>Annexure - 2</b>	Adani Foundation – CSR Report for the FY 2023-24	81-106
	<b>Annexure - 3</b>	Details on Mangroves afforestation & Green belt development	108-109
	<b>Annexure - 4</b>	Compliance report of environmental management plan and mitigation measures proposed as part of the EIA report	111-112
	<b>Annexure - 5</b>	Half Yearly Environment Monitoring Summary Report	114-242
	<b>Annexure - 6</b>	Environment Management Expenditure Details	244-244
	<b>Annexure - 7</b>	Updated Environment Management Cell Organogram	246-246
	<b>Annexure - 8</b>	Acknowledged copy of submission of Environment Statement FY 2023-24	248-248
	<b>Annexure - 9</b>	Details of fisherfolk expenditure	250-250
	<b>Annexure - 10</b>	Compliance report of IGFRl site visit report recommendation	252-264
	<b>Annexure - 11</b>	Compliance Report of CIA EMP	266-358
<b>Annexure - i</b>	Dump Pond Water Analysis Report	360-367	



**Adani Ports and Special Economic  
Zone Limited, Mundra.**

**From : Apr'24  
To : Sep'24**

**Status of the conditions stipulated in Environment and CRZ Clearance**

# **EC and CRZ Clearance Compliance Report**

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'24 To : Sep'24</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

M/s. APSEZ has been granted Environmental / CRZ clearance vide letter no. 10-138/2008-IA.III, dated 15<sup>th</sup> July, 2014 for development of "Multi Product SEZ, Desalination, Sea Water Intake, Outfall Facility and Pipeline".

Activities / Facilities approved are as below:

Facilities / Components Approved	Capacity	Status as on 30.09.2024
Desalination Plant	150 MLD	Construction has not been started.
Sea water Intake & Outfall Facility	375 MLD: Intake 241 MLD: Outfall	Construction has not been started.
Common Effluent Treatment Plant	17 MLD	MPSEZ Utilities Ltd. (MUL) has been granted environmental clearance for CETP having 17.0 MLD capacities. Out of which at present one module of CETP having 2.5 MLD capacities has been constructed and is in operation.
	50 MLD	Construction has not been started.
Social Infrastructure Projects	--	Adani Mundra SEZ Infrastructure Pvt. Ltd. (AMSIPL) has granted environmental clearance for township and area development project in 255 Ha. Out of approved 10,000 no. of residential units, 1917 units are constructed.
Sewage Treatment Plant	62 MLD	APSEZ has installed Sewage Treatment Plant @ 2.835 MLD (335 KLD SEZ-STPs + 2.5 MLD AMSIPL-STP) Capacities within SEZ for treatment of sewage generated from port user buildings.
Airstrip	--	Airstrip has been developed within SEZ area after obtaining requisite permissions.
Municipal Solid Waste Site	--	Material Recovery site is provided for the management of Municipal Solid Waste.
Free Trade & Ware House Zone (FTWZ)	--	Construction is completed and in operation.

Other utility developments and modification, as a part of SEZ, to facilitate various units coming as a part of SEZ are being done on continuous basis.

**Note:**

Environmental / CRZ clearance has been granted for additional facilities like Processing Zones, Non-processing Zones, Warehousing Zones, Road Network (Trunk as well as Internal), Bridges or Culverts over natural drain, Rail Network, IT-Telecommunication Network, Electric Network, Water Supply, Conservation & Drainage Network, Effluent Collection Network and Utilities & Supporting Infrastructure within SEZ area.

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'24 To : Sep'24</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Boundary wall is constructed along the project periphery. In some of areas level raising and area development of SEZ area, wherever required is also under progress.

APSEZ has been granted Environment and CRZ clearance for 'Expansion of notified Multi-product SEZ by adding 1840 Ha notified SEZ with existing approved area of 6641.2784 ha to make it 8481.2784 ha at Mundra vide letter no. F. No. 10-138/200E-IA.III, dated 12<sup>th</sup> February, 2020. (Compliance report of the said EC & CRZ clearance is being submitted separately)

\*Inline to the APSEZ's request, Ministry of Commerce & Industry (MoCI) vide Gazette order dtd. 4<sup>th</sup> July 2019 has de-notified 46.6894 from total area of 8481.2784 Ha, thereby making resultant area of notified Multiproduct SEZ as 8434.5890 Ha.

\*\*After that Inline to the APSEZ's request, Ministry of Commerce & Industry (MoCI) vide Gazette order dtd. 29<sup>th</sup> November, 2021 and 21<sup>st</sup> September, 2022 has de-notified 200.405 Ha from total area of 8434.5890 Ha, thereby making resultant area of notified Multiproduct SEZ as 8234.184 Ha. Copy of MoCI Gazette Notification dated 21<sup>st</sup> September, 2022 submitted during the last compliance period Apr'22 to Sep'22.

APSEZ has been granted for Amendment in Specific Conditions of EC & CRZ Clearance vide File No. 10-138/2008-IA.III, dated 15<sup>th</sup> July, 2022.

**Status of the conditions stipulated in Environment and CRZ Clearance**

**List of Industrial Units within SEZ area**

SN	Name of SEZ Unit	Business	Status
1	GSPC LNG Limited	Regasification of LNG	Operational
2	The Adani Harbour Services Pvt Ltd	Service Provider Marine Operations	Operational
3	Moana Impex	Trading Service	Operational
4	Borochemie India Private Limited	Trading Unit	Under Construction
5	Mundra Crude Oil Terminal Private Limited	Warehousing of Crude Oil	Under Construction
6	Adani Container Terminal Limited Unit I	Container Terminal Operations	Under Construction
7	Adani Container Terminal Limited Unit II	Container Terminal Operations	Under Construction
8	Mumbai Travel Retail Pvt Ltd	Trading Service	Operational
9	Dorf Ketel Chemical India Pvt. Ltd.	Chemical	Operational
10	Garg Tubes Export LLP Ltd.	Chemical	Operational
11	Gujarat Credo Alumina Chemicals Pvt. Ltd	Chemical	Operational
12	Mundra Oil Pvt Ltd (Unit I)	Chemical	Operational
13	Mundra Oil Pvt Ltd (Unit II)	Chemical	Operational
14	Oriental Carbon & Chemicals Pvt. Ltd.	Chemical	Operational
15	Jesons Techno Polymers LLP	Chemical	Operational
16	Mundra Petrochem Limited Unit I	Chemical	Under Construction
17	Mundra Petrochem Limited Unit II	Chemical	Under Construction
18	Shital Metallics ans Additives LLP	Chemical	Under Construction
19	Adani Container Manufacturing Ltd	Container Manufacturing	Under Construction
20	Avesta Engineering Pvt. Ltd.	Engineering	Under Revival of LoA
21	MD Equipments Pvt. Ltd.	Engineering	Operational
22	Thermax Babcock and Wilcox Energy	Engineering	Operational
23	JNK India Pvt Ltd	Engineering	Operational
24	Britannia Industries Ltd.	Food Products	Operational
25	Hehong Paper India Technology Pvt Ltd	Paper	Operational
26	Ahlstorm Munksjo Fibercomposites India Pvt. Ltd.	Textile	Operational
27	Audax Protective Fabrics Pvt Ltd (Previous Name: Ashapura Garments Ltd)	Textile	Under Construction
28	Anjani Udyog Pvt. Ltd.	Textile	Operational
29	Bombay Bazar Readymade Garments Unit I	Textile	Operational
30	Bombay Bazar Readymade Garments Unit II	Textile	Operational
31	Skaps Industries India Pvt. Ltd (Unit-I)	Textile	Operational
32	Skaps Industries India Pvt. Ltd (Unit-II)	Textile	Operational
33	Terram Geosynthetics Pvt. Ltd.	Textile	Operational
34	Anya Composite Private Limited	Textile	Operational
35	Adani Enterprise Limited	Trading Unit	Operational
36	Planets F&B Park	Trading Unit	Operational
37	Ruby Shipping	Trading Unit	Operational
38	Suresh Biz Globe	Trading Unit	Operational
39	Adani CMA Mundra Terminal Pvt Ltd.	Warehouse	Operational
40	Adani Warehousing Services Pvt Ltd. Unit I	Warehouse	Operational
41	Adani Warehousing Services Pvt Ltd. Unit II	Warehouse	Under Construction
42	Empezar Logistics Pvt.Ltd.	Warehouse	Operational
43	Fast Track CFS Pvt. Ltd.	Warehouse	Operational
44	Kerry Indev Logistics Pvt. Ltd.	Warehouse	Operational
45	Oil Field Warehouse & Services Pvt. Ltd.	Warehouse	Operational
46	OWS Warehouse Services LLP	Warehouse	Operational
47	Safal Logistics LLP	Warehouse	Operational
48	Steinweg Sharaf India Pvt Ltd.	Warehouse	Operational
49	Sea Shore Logistics	Warehouse	Operational
50	Rudraksh Terminal LLP	Warehouse	Operational
51	Adani Logistics Limited	Warehouse	Operational
52	Shoolin Trade Link LLP	Warehouse	Operational



**Adani Ports and Special Economic  
Zone Limited, Mundra.**

**From : Apr'24  
To : Sep'24**

**Status of the conditions stipulated in Environment and CRZ Clearance**

53	Shivansh Terminals LLP	Warehouse	Operational
54	Holistic Global Corporation	Warehouse	Operational
55	Adani Warehousing Services Pvt Ltd. Unit III	Warehouse	Under Construction
56	Adani Bulk Terminals (Mundra) Ltd	Warehouse	Under Construction
57	Adani International Container Terminal Pvt. Ltd.	Warehouse	Operational
58	Adani Renewable Energy (KA) Ltd.	Wind Energy	Operational
59	Fast Track CFS Pvt. Ltd.	Warehouse	Operational
60	Konic Expo Private Limited	Trading and Warehousing Unit	Under Construction
61	DS Port Services	Warehousing Unit	Under Construction





**Adani Ports and Special Economic  
Zone Limited, Mundra.**

**From : Apr'24  
To : Sep'24**

**Status of the conditions stipulated in Environment and CRZ Clearance**

# **Compliance Report of Environmental and CRZ Clearance**

**Status of the conditions stipulated in Environment and CRZ Clearance**

**Compliance report of Environment Clearance for the project "Multi Product SEZ" and CRZ Clearance for the project "Desalination, Sea Water Intake, Outfall Facility and Pipeline at Mundra, Dist. Kachchh, Gujarat of M/s. Adani Ports and SEZ Limited" vide MoEF letter No. 10-138/2008-IA.III dated 15<sup>th</sup> July, 2014.**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
<b>Part – A: Specific Conditions</b>		
i.	PP shall abide by the final order/decision of Hon'ble Supreme Court in SLP (Civil) no. 1526/2014 and connected matters.	Point noted and will be complied.  Vide order dated 14.07.2014, the Hon'ble Supreme Court directed MoEF&CC to complete the process of environmental clearance to the MSEZ project of APSEZ within eight weeks. MoEF&CC issued EC and CRZ clearance to the proposed project vide letter dated 15.07.2014. Hence, the SLP (Civil) no. 1526/2014 is deemed closed. Details of the same were submitted along with EC Compliance report for the period Apr'18 to Sep'18.
ii.	Properly conserve the creeks, river and the mangroves area in the area.	Complied.  This reply covers condition no ii, iii, ix, x, xi, xii & xiii.  <b><u>Conservation of creeks and rivers:</u></b> <ul style="list-style-type: none"> <li>• The prominent creek system (main creeks and small branches of creeks) in and around APSEZ are: (1) Kotdi (2) Baradimata (3) Navinal (4) Bocha (5) Mundra (Oldest port (Juna Bandar) leading to Bhukhi river).</li> <li>• Rivers passing through the APSEZ area are: (1) Khari (2) Nagmati (3) Phot (4) Bhukhi (5) Dhaneshwari (6) Buchiya (7) Jidal.</li> <li>• All the rivers passing through the SEZ area are dry throughout the year except for monsoon season.</li> <li>• All creeks as well as rivers are in existence allowing free flow of water and there is no filling or reclamation of any creek or river area. APSEZ has so far constructed 19 culverts having total length of approx. 1100 m with total cost of INR 20 Crores. Three RCC Bridges have also been constructed over Kotdi creek with total length of 230 m and cost of INR 10 Crores. Details were submitted along with compliance report submission for the</li> </ul>

Status of the conditions stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 30.09.2024																																					
		<p>period of Apr'17 to Sep'17.</p> <ul style="list-style-type: none"> <li>This aspect is also confirmed from the study of NCSCM in 2017-18, which highlights the bathymetry data of the entire coast around APSEZ.</li> <li>From the bathymetry data it can be concluded that there are sufficient depths at the creek mouths and all creek mouths are open allowing flushing of water.</li> <li>From the APSEZ operations, there is no discharge of any sewage or effluent to the water streams.</li> </ul> <p><b>Summary of Conservation of mangroves:</b></p> <table border="1" data-bbox="711 898 1446 1213"> <thead> <tr> <th rowspan="2">Mangrove mapping Year</th> <th rowspan="2">Monitoring Agency</th> <th rowspan="2">Mangrove cover total Area (Ha.)</th> <th colspan="2">Mangrove cover area Increased</th> </tr> <tr> <th>Hac.</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td rowspan="2">NCSCM</td> <td>2094</td> <td>-</td> <td>-</td> </tr> <tr> <td>2011 to 2016-17</td> <td>2340</td> <td>246</td> <td>11.75%</td> </tr> <tr> <td>2017 to 2019 till March</td> <td>NCSCM</td> <td>2596</td> <td>256</td> <td>10.94%</td> </tr> <tr> <td>2019 to 2021 till March</td> <td>GUIDE</td> <td>2723</td> <td>127</td> <td>4.89%</td> </tr> <tr> <td><b>Total</b></td> <td></td> <td><b>2723</b></td> <td><b>629</b></td> <td><b>--</b></td> </tr> </tbody> </table> <p>Hence, overall increase in mangrove cover area in creek system in and around APSEZ from 2011 (2094 Ha) to 2021 (2723 Ha) is <b>629 Ha (30%)</b>.</p> <p>As a part of GCZMA recommendations and NCSCM mangrove conservation action plan, APSEZ has undertaken following activities.</p> <table border="1" data-bbox="704 1528 1453 1917"> <thead> <tr> <th>Sr. No</th> <th>Recommendations</th> <th>Compliance</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Mangrove mapping and monitoring in and around APSEZ</td> <td> <ul style="list-style-type: none"> <li>APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island.</li> <li>As a part of this study, overall growth of mangroves in the creeks in and around APSEZ was assessed comparing Google earth images of 2017 &amp; 2019 and it is observed that there was increase in</li> </ul> </td> </tr> </tbody> </table>	Mangrove mapping Year	Monitoring Agency	Mangrove cover total Area (Ha.)	Mangrove cover area Increased		Hac.	%	2011	NCSCM	2094	-	-	2011 to 2016-17	2340	246	11.75%	2017 to 2019 till March	NCSCM	2596	256	10.94%	2019 to 2021 till March	GUIDE	2723	127	4.89%	<b>Total</b>		<b>2723</b>	<b>629</b>	<b>--</b>	Sr. No	Recommendations	Compliance	1.	Mangrove mapping and monitoring in and around APSEZ	<ul style="list-style-type: none"> <li>APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island.</li> <li>As a part of this study, overall growth of mangroves in the creeks in and around APSEZ was assessed comparing Google earth images of 2017 &amp; 2019 and it is observed that there was increase in</li> </ul>
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**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		<p>mangrove cover between March 2017 and September 2019 to the extent of 256 Ha, which is about 10.94%.</p> <ul style="list-style-type: none"> <li>• This suggests that the mangroves and the tidal system in the creeks remain undisturbed over this period. Analysis of data between categories indicated that there was an increase in dense mangroves and also conversion of scattered to sparse which also shows that the growth of mangroves in a progressive direction.</li> <li>• Hence, there is an overall growth of mangroves in creeks in and around APSEZ, Mundra is 502 Ha between 2011 and 2019.</li> <li>• The cost of the said study was INR 23.56 Lacs incurred by APSEZ.</li> <li>• According to GUIDE Mangrove monitoring study report November 2023 (the report was submitted during the last compliance report submission Apr'23 to Sep'23)), the distribution of mangroves in Kotadi, Baradi mata, Navinal, Bocha and Khari creeks as well as in the Bocha island was studied using LISS IV satellite images for the duration of March 2019 to March 2021. The mangrove cover in the creeks in and around APSEZ showed a positive trend from March 2019 to March 2021, with an overall increase of 52.79 ha (1.9%) compared to the cover during the year 2019. The total mangrove cover during 2019 was 2670 ha which has increased to 2723 ha during the year 2021.</li> <li>• Hence, overall increase in mangrove cover area in creek system in and around APSEZ from 2011 (2094 Ha) to 2021 (2723 Ha) is 629 Ha (30%).</li> <li>• The cost of the said study was INR 23.60 Lacs incurred by APSEZ.</li> </ul> <p><b>Summary of Mangrove mapping and monitoring (from 2011 to 2021):</b></p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

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2.	Tidal observation in creeks in and around APSEZ	<ul style="list-style-type: none"> <li>APSEZ carried out the tidal observations at locations similar to 2017 in Kotdi, Baradimata, Navinal, Bocha and Khari creeks under the guidance of NCSCM.</li> <li>The observed tidal ranges indicate that the creeks experience normal tidal ranges, adequate for the growth of mangroves.</li> <li>The cost of the said activity was INR 1.0 Lacs.</li> </ul>																													
3.	Removal of Algal and Prosopis growth from mangrove areas	<ul style="list-style-type: none"> <li>Algal and Prosopis growth monitoring was done in and around mangrove area and algal encrustation was found in some of the mangrove areas, which has been removed manually.</li> <li>The cost of the said activity was Rs. 80000 during FY 2023-24. The algal removal report was submitted during the last compliance report submission Oct'23 to Mar'24.</li> </ul>																													
4.	Awareness of mangroves importance in surrounding communities	<ul style="list-style-type: none"> <li>Adani Foundation – CSR Arm of Adani group has done awareness camps/activities created in the community regarding importance of mangroves. Adani Foundation provides Good Quality dry and green fodder to 25 Villages. Project is covering total 15005 Cattels and hence enhancing cattle productivity. Dry Fodder 10,90,875 Kg Green – 27,64,920 Kg.</li> <li>Awareness of mangroves</li> </ul>																													

Status of the conditions stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 30.09.2024	
			<p>importance in surrounding communities &amp; Fodder support - The expenditure for fodder supporting activities was approx. 132.0 Lacs during FY 2024-25 till Sep'24, which was incurred by APSEZ.</p> <ul style="list-style-type: none"> <li>• <b>Grass Land development:</b> 213 acres of gauchar land has been cleaned and allocated for Grass land development with strong Community Contribution and Mobilization.</li> <li>• Other than this dedicated security guard with gate system deployed by APSEZ across the coastal area and no any unauthorized persons allowed within coastal as well as mangrove areas.</li> <li>• APSEZ has celebrated the International Day for the Conservation of the Mangrove Ecosystem on 24th to 26th July 2024 to raise awareness of the importance of mangrove ecosystems as "a unique, special and vulnerable ecosystem". The report for the same is attached as <b>Annexure - 1.</b></li> <li>• Refer CSR report attached as <b>Annexure - 2.</b></li> </ul>
		<p>To comply with the GCZMA recommendations regarding mangrove monitoring at every 2 years, presently APSEZ has awarded the work order to NCSCM, Chennai vide order no. 4802055905, dated 24/09/2024 with cost 45.87 Lacs for mangrove mapping in and around APSEZ March 2021 to March 2023. The said work will be undertaken by NCSCM shortly.</p>	
iii.	Ensure that mouths of all the creeks are kept open to ensure flushing of the creeks.	<p>Complied.</p> <ul style="list-style-type: none"> <li>• The prominent creek system (main creeks and small branches of creeks) in and around APSEZ are: (1) Kotdi (2) Baradimata (3) Navinal (4) Bocha (5) Mundra (Oldest port (Juna Bandar) leading to Bhukhi river).</li> <li>• All above creek mouths are open allowing free flow</li> </ul>	

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		<p>of water in to the creeks and surrounding areas and there is no filling or reclamation of any creek area.</p> <ul style="list-style-type: none"> <li>• This aspect is also confirmed from the recent study of NCSCM which highlights the bathymetry data of the entire coast around APSEZ.</li> <li>• From the bathymetry data it can be concluded that there are sufficient depths at the creek mouths and all creek mouths are open allowing flushing of water.</li> <li>• Please refer Specific Condition no. ii for further details.</li> </ul>
iv.	Bring the creeks to the condition as was seen in the satellite map of 2005 which will be a "reference" satellite map and a copy of which shall be sent to you separately.	<p>Not applicable</p> <p>This reply covers condition no iv, v, vi.</p> <p>The stated conditions were stipulated in the EC and CRZ clearance with respect to the pending SCNs and based on Ms. Sunita Narain committee report. In continuation to the SCNs and subsequent submissions by APSEZ, MoEF&amp;CC issued a final order vide letter dated 18.09.2015 (which disposed the pending Show Cause Notices). Full compliance of the directions issued vide the said order is provided as <b>Annexure – B.</b></p>
v.	Submit once in a year latest satellite map which can be compared with the reference satellite map of 2005 to ensure that no modifications in the creeks, rivers, mangroves and mouth of creeks have taken place.	<p>It may be noted that the stated conditions related to the satellite image of 2005 are not imposed to APSEZ as part of the said order. Hence, APSEZ has made submission to MoEF&amp;CC vide letters dated 23.05.2016 and 07.11.2016. Copies of the said letters were submitted along with compliance report submission for the period from Oct'16 to Mar'17. Further there are no directions from MoEF&amp;CC.</p>
vi.	Any direction issued by the MoEF with respect to the report submitted by Ms. Sunita Narain Committee shall be complied with by the Proponent as applicable.	<p>Complied.</p> <p>The last site visit was conducted on 20<sup>th</sup> &amp; 21<sup>th</sup> September, 2023 for the previous compliance report verification of the period from Oct'22 to Mar'23 was reviewed by NEERI. It has been concluded all the conditions stipulated in EC are being complied and there is no violation of any condition. Copy of the</p>
vii.	At its cost get Inspection study done once in a year by the organizations like NEERI or any organization approved by this Ministry to - (i) ensure compliance of all the EC conditions (ii) development of SEZ meeting of the environment norms, and (iii)	<p>Complied.</p> <p>The last site visit was conducted on 20<sup>th</sup> &amp; 21<sup>th</sup> September, 2023 for the previous compliance report verification of the period from Oct'22 to Mar'23 was reviewed by NEERI. It has been concluded all the conditions stipulated in EC are being complied and there is no violation of any condition. Copy of the</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024															
	advise any mid-term correction that can be introduced depending on the recommendation of the independent Third Party.	<p>certificate –was submitted along with compliance report for the period Apr'23 to Sep'23.</p> <p>Presently APSEZ is in process for award the PO to CSIR - National Institute for Interdisciplinary Science &amp; Technology, Thiruvananthapuram (Kerala) to carry out the Inspection study for complying this condition.</p>															
viii.	"Consent for Establishment" for the SEZ shall be obtained from Gujarat Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.	<p>Complied.</p> <p>Consent to Establish (CtE) is obtained for the project from Gujarat Pollution Control Board vide their letter no. GPCB/CCA-KUTCH-1044/ GPCB ID 31463/109800, dated 16.04.2012. Copy of the same was submitted to MoEF&amp;CC, Regional Office, Bhopal vide our letter dated 5<sup>th</sup> Aug, 2014. The CtE was also submitted with compliance report submission for the period Oct'15 to Mar'16.</p> <p>The project has been developed as per Consent to Establish (CtE) and Consent to Operate (CtO) granted by SPCB. The present in-force CtO are mentioned below.</p> <table border="1" data-bbox="706 1241 1446 1472"> <thead> <tr> <th>S. No.</th> <th>Permission</th> <th>Project</th> <th>Ref. No. / Order No.</th> <th>Valid till</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CTE- Amendment for Validity Extension</td> <td>Multi-Product SEZ</td> <td>CTE - 122249</td> <td>15.07.2025</td> </tr> <tr> <td>2</td> <td>CC&amp;A – Renewal Cum Amendment</td> <td>Multi-Product SEZ</td> <td>AWH – 122250</td> <td>21.08.2027</td> </tr> </tbody> </table> <p>GPCB has granted CTE-Amendment for Validity Extension vide CTE No.-122249 Valid upto: 15/07/2025. Consolidated Consent &amp; Authorization (CC&amp;A) – Renewal Cum Amendment order granted vide Consent No. AWH-122250 Valid upto: 21/08/2027. The copy of CTE-Amendment for Validity Extension and Consolidated Consent &amp; Authorization (CC&amp;A) – Renewal Cum Amendment was submitted during the compliance period Apr'22 to Sep'22.</p>	S. No.	Permission	Project	Ref. No. / Order No.	Valid till	1	CTE- Amendment for Validity Extension	Multi-Product SEZ	CTE - 122249	15.07.2025	2	CC&A – Renewal Cum Amendment	Multi-Product SEZ	AWH – 122250	21.08.2027
S. No.	Permission	Project	Ref. No. / Order No.	Valid till													
1	CTE- Amendment for Validity Extension	Multi-Product SEZ	CTE - 122249	15.07.2025													
2	CC&A – Renewal Cum Amendment	Multi-Product SEZ	AWH – 122250	21.08.2027													
ix.	PP shall get detailed bathymetry done for all the	Complied															



**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	<p>creeks and rivers within Port and SEZ areas along with mapping of co-ordinates, running length, HTL, CRZ boundary, mangrove area including buffer zone through NCSCM /NIOT. PP shall also get prepared a detailed action plan for conservation and protection of creeks /mangrove area etc through NCSCM/NIOT and submit the same to GCZMA for their examination and recommendation. GCZMA will submit its recommendations to MoEF for approval.</p>	<p>Based on the MoEF&amp;CC directions, APSEZ has entrusted NCSCM to carry out the detailed study. Scope of the study include the following:</p> <ul style="list-style-type: none"> <li>• Detail bathymetry and topography survey of creeks</li> <li>• Demarcation of mangrove areas and buffer zone</li> <li>• Demarcation of HTL and CRZ areas with co-ordinates</li> <li>• Preparation of a comprehensive and integrated conservation plan for protection of creeks and mangroves</li> </ul> <p>In order to complete the study, NCSCM has carried out number of site surveys which are mentioned below:</p> <ul style="list-style-type: none"> <li>• Bathymetry survey of creeks</li> <li>• Topography survey of intertidal areas</li> <li>• Mangrove survey (health and area demarcation)</li> <li>• Sampling of soil and water for analysis of physico-chemical and biological parameters</li> <li>• Tide and currents data collection (including residence time of tidal water) study</li> </ul> <p>Based on the study, the following points can be summarized:</p> <ul style="list-style-type: none"> <li>• There is no obstruction to any water stream (creeks / branches of creeks / rivers)</li> <li>• The mangrove cover in the creeks in and around APSEZ showed a positive trend from March 2019 to March 2021, with an overall increase of 52.79 ha compared to the cover during the year 2019. The total mangrove cover during 2019 was 2670 ha which has increased to 2723 ha during the year 2021.</li> <li>• Overall increase in mangrove cover area in creek system in and around APSEZ from 2011 (2094 Ha) to 2021 (2723 Ha) is 629 Ha (30%).</li> <li>• Majority of the development at Mundra has happened between this tenure. Hence it can be interpreted that the infrastructure development</li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		<p>has not left any adverse impacts on ecology.</p> <p>Please refer specific condition no. ii above for further details.</p>
x.	<p>PP shall demarcate the CRZ area on land with GPS coordinates in consultation with GCZMA/ the agency which has done the HTL /LTL demarcation for the area. There shall be no allotment of plot/s in CRZ area to industries. No industrial activity within CRZ area except the port and harbor &amp; the foreshore facilities shall be allowed as committed.</p>	<p>Being complied</p> <p>CZMP of Kutch region has been finalized and published on GCZMA website in the Month of Feb-2022. NCSCM has issued final authorized maps for HTL and CRZ Boundary prepared in line with approved CZMP of Gujarat State as per CRZ Notification, 2011. The details of the same were submitted during the compliance period Oct'21 to Mar'22.</p> <p>As per the approved map of CZMP Kutch region APSEZ has demarcated the HTL boundary line within APSEZ area. Photographs of the demarcated HTL boundary line were submitted along with EC Compliance report for the period Apr'23 to Sep'24.</p>
xi.	<p>Till the approval of action plan for conservation and protection of creeks /mangrove area, the CRZ area within SEZ shall be demarcated as "No Development Zone". PP shall not allow / undertake any development in CRZ area of SEZ.</p>	<p>The action plan for conservation of creeks and mangrove areas is prepared by NCSCM and the same is submitted to GCZMA and MoEF&amp;CC for their examination and recommendation. The main action plan as per the study are mentioned summarized below:</p> <ul style="list-style-type: none"> <li>• Monitoring of mangrove cover in Jan/Mar, 2020 using latest satellite images and validation with field observations</li> <li>• Monitoring of tidal range in the mangrove areas and comparison with the data collected during 2017.</li> <li>• Removal of silt / sand spits from the central part of navinal creek</li> <li>• Dredging of shallow area off Bocha Island to reduce current velocity.</li> </ul> <p>Please refer specific condition no. ii for further details w.r.t. Mangrove Conservation Action Plan.</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		<p>On dated 15/07/2022 MoEF&amp;CC have issued new four conditions in place of condition no. x &amp; xi. The copy of EC amendment order was submitted during the last compliance period Apr'22 to Sep'22.</p> <p>Full compliance of conditions of the above issued EC &amp; CRZ amended order provided as <b>Annexure - C.</b></p>
xii.	<p>The implementation of action plan approved by the MoEF shall be monitored by the NCSCM/NIOT. Compliance with action plan shall be submitted to GCZMA and to MoEF, RO at Bhopal along with six monthly monitoring report.</p>	<p>Point noted and being complied. The action plan for conservation of creeks and mangrove areas is prepared by NCSCM and the same was submitted to GCZMA and MoEF&amp;CC for their examination and recommendation.</p> <p>Please refer specific condition no. ii for further details w.r.t. Mangrove Conservation Action Plan.</p>
xiii.	<p>PP shall earmark separate budget for the implementation of the above action plan. The details of the expenditure shall be submitted to GCZMA and to MoEF, RO at Bhopal along with six monthly monitoring report.</p>	<p>Point noted and being complied.</p> <p>A separate budget has been allocated and incurred by APSEZ for implementation of mangrove conservation action plan.</p> <ul style="list-style-type: none"> <li>• Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island was 23.56 Lacs</li> <li>• Algal and Prosopis growth monitoring was done in and around mangrove area and algal encrustation was found in some of the mangrove areas, which has been removed manually. The cost of the said activity was Rs. 80000 during the FY 2023-24. The report of Algal and Prosopis removal was submitted along with half yearly EC Compliance report for the period Oct'23 to Mar'24.</li> <li>• Tide Level Monitoring within creeks around APSEZ – 1.0 Lac</li> <li>• Fodder supply to the villagers in FY 2024-25 till Sep'24– 132.0 Lacs.</li> </ul> <p>Please refer specific condition no. ii above for further details.</p>
xiv.	<p>All the industry in SEZ shall be connected through impervious drainage lines to the STP/CETP</p>	<p>Complied.</p> <p>As per the Lease Deed agreement, existing industries</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	<p>for the discharge of their sewage or industrial effluent. There shall not be any discharge to creeks / rivers. PP shall be accountable for implementing this condition and necessary clause shall be incorporated in the MoU while allotting the plot to the individual industries.</p>	<p>are well connected with impervious pipeline to discharge their effluent / sewage after confirming to the inlet norms of CETP. Typical copy of the Lease Deed (Agreement) was submitted along with compliance report submission for the duration of Oct'16 to Mar'17.</p> <p>Entire quantity of treated wastewater from CETP is being utilized for horticulture purpose within SEZ area. No discharge is allowed into creeks / rivers. Same practice will be continued in future as well and capacity enhancement of CETP will be carried out based on requirement.</p> <p>List of CETP member units were submitted along with half yearly EC compliance report for the period Oct'19 to Mar'20. And there is no further change.</p> <p>The industries which treat the sewage / effluent within their premises comply the stipulated norms of discharge given by GPCB. Through regular monitoring it is ensured by APSEZ that the treated water is used for gardening within the respective industries and there is no discharge to any water body including rivers or creeks.</p>
xv.	<p>PP shall not carry out any river course modification.</p>	<p>Complied</p> <p>The project was conceptualized in such a way that no river course modification is required to be carried out. All the rivers passing through SEZ are maintained through proper path for area drainage.</p>
xvi.	<p>The individual industrial units shall obtain prior EC under EIA Notification, 2006 as applicable.</p>	<p>Complied.</p> <p>All industrial units coming up in within the SEZ are informed and aware about the said requirement. Out of total units established within SEZ, only Adani Power Limited, Dorf Ketal, Jesons Techno Polymers LLP, Kutch Copper Limited (KCL) and Mundra Petrochemicals Ltd. Industries falls under purview of EIA Notification 2006 and they have obtained their specific EC as applicable. The condition is being followed on case-to-case basis as applicable.</p>
xvii.	<p>Proponent shall identify 200</p>	<p>Complied.</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	ha of land for mangrove plantation as per the condition laid by SEAC.	<p>100 Ha. Mangrove plantation is carried out by SAVE at Tala Tadav village of Khambhat Taluka of Anand district. A final report of SAVE was submitted along with half yearly compliance report for the period Apr'17 to Sep'17.</p> <p>100 Ha. Mangrove plantation is carried out by GEC. From which 38 ha. plantation is completed at Tala Tadav village of Khambhat Taluka of Anand district during 2017-18 and remaining 62 ha. Plantation is completed at Aliya Bet of Bharuch district during 2018-19. A final report of GEC was submitted along with half yearly compliance report for the period Oct'18 to Mar'19.</p>
xviii.	50 meter buffer from the existing mangrove area should be provided for any developmental activity.	<p>Complied.</p> <p>50-meter buffer from the existing mangrove area as per the CRZ notification is being maintained and all developmental activities are being carried out as per the approval only.</p>
xix.	Proponent shall develop the green belt with 3 layers of canopy all along the periphery.	<p>Being complied.</p> <p>APSEZ has developed "Dept. of Horticulture" which is taking measures/ steps for terrestrial greening as well as mangrove plantation. Development of greenbelt at various locations within the SEZ is an ongoing activity. Green belt of 3-layer canopy will be developed as part of the development of SEZ.</p> <p>The species such as Ficus Infectoria, Ficus religiosa, Terminalia arjuna, Cocos nucifera, Washingtonia fillifera, Casurina spp., Azadirachta Indica, Eucalyptus spp., Jatropha curacus, Ficus bengalensis, Subabool spp., Casia fistula, Date Palm and Delonix regia were grown in SEZ area.</p> <p>Width of the green belt varies from 2 m to 8 m and density varies from 1500 to 1750 trees per hectare at various locations. Total 145.88 hectares of land with approx. 2.54 Lacs trees is developed within SEZ area till date. So, far APSEZ has developed 458 Ha area as greenbelt with plantation 9.06 Lacs trees within the entire APSEZ area.</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024																					
		<p>Please refer <b>Annexure - 3</b> for further details regarding greenbelt development and mangrove afforestation. An updated green belt development plan is also attached as part of the said annexure. The spent budget of Horticulture Department for the period of financial year 2024-25 is INR 831 lacs. and out of which, Approx. INR 253 lakh are spent during the financial year 2024-25 till Sep'24..</p> <p>It may be noted that individual industrial units have developed the greenbelt within their premises based on their planning &amp; approvals and new industries coming up any will also comply as per their approvals. The same is being ensured by the environment monitoring committee of APSEZ.</p> <p>For the area where further development is yet to be carried out, APSEZ will ensure that greenbelt with 3-layer canopy is developed by either APSEZ or the industrial unit to whom the land is allotted. Photographs showing the 3-layer canopy greenbelt developed within APSEZ were along with half yearly compliance report for the period Oct'18 to Mar'19.</p>																					
xx.	All the recommendation of the EMP shall be complied with in letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to MoEF along with half yearly compliance report to MoEF-RO.	<p>Complied.</p> <p>Compliance report of environmental management plan and mitigation measures proposed as part of the EIA report is summarized below. The same is submitted to the concerned authorities including Integrated Regional Office (IRO), MoEF&amp;CC @ Gandhinagar as part of the six-monthly compliance reports. Details of the past six compliance reports are mentioned below.</p> <table border="1" data-bbox="701 1654 1456 1915"> <thead> <tr> <th>Sr. No.</th> <th>Compliance period</th> <th>Date of submission</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Apr'21 to Sep'21</td> <td>30.11.2021</td> </tr> <tr> <td>2</td> <td>Oct'21 to Mar'22</td> <td>30.05.2022</td> </tr> <tr> <td>3</td> <td>Apr'22 to Sep'22</td> <td>30.11.2022</td> </tr> <tr> <td>4</td> <td>Oct'22 to Mar'23</td> <td>30.05.2023</td> </tr> <tr> <td>5</td> <td>Apr'23 to Sep'23</td> <td>30.11.2023</td> </tr> <tr> <td>6</td> <td>Oct'23 to Mar'24</td> <td>28.05.2024</td> </tr> </tbody> </table>	Sr. No.	Compliance period	Date of submission	1	Apr'21 to Sep'21	30.11.2021	2	Oct'21 to Mar'22	30.05.2022	3	Apr'22 to Sep'22	30.11.2022	4	Oct'22 to Mar'23	30.05.2023	5	Apr'23 to Sep'23	30.11.2023	6	Oct'23 to Mar'24	28.05.2024
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1	Apr'21 to Sep'21	30.11.2021																					
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6	Oct'23 to Mar'24	28.05.2024																					

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		Summary of the compliance to the measures suggested in EMP are given in <b>Annexure - 4.</b>
xxi.	<p>There shall be no disturbance to the sand dunes. The pipelines shall be laid using advanced method viz. Horizontal Directional Drilling (HDD) so as to avoid disturbance to the sand dunes/creeks/ mangroves.</p>	<p>Complied. There is no sand dune in the SEZ area. Point noted. No pipelines for intake and outfall of sea water are laid till now and same will be studied as and when required. HDD method will be explored for creek crossing for other pipelines.  APSEZ, Mundra has laid down 91.35 km. (approx.) long underground LPG pipeline starting from Mundra LPG Terminal Pvt. Ltd (MLTPL), Mundra to existing GAIL Facility, Mithi Rohar, Gandhidham. The LPG pipeline has been laid down using the Horizontal Directional Drilling (HDD) method without affecting the flow of the creek and mangrove where it is crossing through it. Some stretch of said LPG pipeline project is falling under CRZ area and hence attracts CRZ Notification, 2011. For which APSEZ has been granted separate CRZ clearance from MoEF&amp;CC vide F. No. 11-9/2023.IA.III dated 05.04.2023. The copy of CRZ Clearance was submitted with compliance report submission for the period Apr'23 to Sep'23.</p>
<b>Part – B: General Conditions</b>		
<b>Construction Phase</b>		
i.	<p>Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.</p>	<p>Not applicable at present.  Most of the construction labours reside in the nearby villages where all basic facilities are easily available. There are no housing requirements for labours inside the project area.</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024												
ii.	A first aid room will be provided in the project both during construction and operation of the project.	<p>Complied.</p> <p>APSEZ has established Occupational Health Center &amp; First Aid facility at different locations within SEZ, which will be utilized during entire construction as well as operation phase of SEZ project. In case of emergency situation requiring higher level of treatment, the facilities at Adani hospital (Multi-Specialty) having 110 bedded facilities located with SEZ area can be utilized.</p>												
iii.	All the topsoil excavated during construction phase should be stored for use in horticulture/landscape development within the project site.	<p>Complied.</p> <p>Excavated topsoil, if any, will be used for the horticulture /landscape development within the project site.</p>												
iv.	Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed, taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	<p>Complied.</p> <p>No excavated muck has been generated and disposed-off. Construction waste, if any, is utilized for area development within the project site.</p>												
v.	Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.	<p>Complied.</p> <p>Environment Monitoring is being carried out on regular basis in Port &amp; SEZ areas through NABL accredited and MoEF&amp;CC approved agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Summary of the ground water as well as soil assessment for duration from Apr'24 to Sep'24 is mentioned below.</p> <p><b><u>Bore Hole Water Sampling:</u></b></p> <p><b>Sampling locations &amp; frequency: 4 nos. (Half Yearly)</b></p> <table border="1" data-bbox="706 1827 1453 1921"> <thead> <tr> <th data-bbox="706 1827 755 1921">Sr. No.</th> <th data-bbox="763 1827 950 1921">Parameter</th> <th data-bbox="958 1827 1039 1921">Unit</th> <th data-bbox="1047 1827 1177 1921">MIN</th> <th data-bbox="1185 1827 1315 1921">MAX</th> <th data-bbox="1323 1827 1453 1921">AVERAGE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Sr. No.	Parameter	Unit	MIN	MAX	AVERAGE						
Sr. No.	Parameter	Unit	MIN	MAX	AVERAGE									



**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024				
		1	pH @ 25 ° C	--	7.11	8.54
2	Salinity	ppt	1.68	18.38	7.27	
3	Oil & Grease	mg/L	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	
4	Hydrocarbon	mg/L	Not Detected	Not Detected	Not Detected	
5	Lead as Pb	mg/L	0.02	0.02	0.02	
6	Arsenic as As	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	
7	Nickel as Ni	mg/L	0.12	0.19	0.15	
8	Total Chromium as Cr	mg/L	0.00	0.00	0.00	
9	Cadmium as Cd	mg/L	0.06	0.12	0.10	
10	Mercury as Hg	mg/L	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	
11	Zinc as Zn	mg/L	0.07	0.14	0.10	
12	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	
13	Iron as Fe	mg/L	0.12	0.19	0.15	
14	Insecticides/Pesticides	Absent / Present	Absent	Absent	Absent	
15	Depth of Water Level from Ground Level	meter	2.10	2.15	2.14	

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

Comparison of the present data with baseline data for the nearest locations for Bore Hole water.

Sr. No.	Parameter	Unit	Dhrub station*	Zarpara village
1	pH	--	7.96	8.1
2	Lead as Pb	mg/L	BDL(MDL:0.01)	ND*
3	Nickel as Ni	mg/L	BDL(MDL:0.02)	0.146
4	Total Chromium as Cr	mg/L	BDL(MDL:0.05)	0.039
5	Iron as Fe	mg/L	0.124	0.258
6	Insecticides/Pesticides	Absent / Present	Absent	ND*
7	Depth of Water Level from GL	meter	2.15	1.7

\*ND = Not Detected  
\*BDL – Below Detection Limit  
\*MDL – Minimum Detection Limit

**Soil Sampling:**  
Sampling locations & frequency: 4 nos. (Half Yearly)

Sr. No.	Parameter	Unit	Min. Value	Max. Value	Average
1	pH	--	8.42	9.14	8.67
2	Nitrogen as N	%	0.19	0.52	0.39

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024																																	
		3	Phosphorus as P	mg/kg	710.40	5090.60	1981.98																												
4	Potassium as K	mg/kg	44.50	1258.00	423.95																														
5	Barium as B	mg/kg	1.82	3.11	2.27																														
6	Calcium as Ca	mg/kg	334.20	3260.80	1264.55																														
7	Magnesium as Mg	mg/kg	102.30	5584.20	1586.93																														
8	Iron as Fe	%	0.74	1.42	1.04																														
9	Moisture	%	0.28	1.65	0.82																														
10	Organic Matter	%	0.84	1.59	1.30																														
11	CEC	meq/100 gm	10.10	14.90	11.48																														
12	TVC	CFU/gm	2.1 x 10 <sup>6</sup>	2.7 x 10 <sup>6</sup>	2.45 x 10 <sup>6</sup>																														
Heavy Metal																																			
13	Cadmium as Cd	mg/kg	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)																														
14	Antimony as Sb	mg/kg	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)																														
15	Arsenic as As	mg/kg	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)																														
16	Thorium as Th	mg/kg	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)																														
17	Lead as Pb	mg/kg	7.41	16.88	10.81																														
18	Chromium (VI) as Cr	mg/kg	3.11	9.18	5.02																														
19	Cobalt as Co	mg/kg	8.84	10.62	9.84																														
20	Copper as Cu	mg/kg	8.24	31.08	16.94																														
21	Nickel as Ni	mg/kg	12.40	15.11	13.88																														
22	Manganese as Mn	mg/kg	180.85	402.20	257.94																														
23	Vanadium as V	mg/kg	7.49	8.76	8.12																														
<p>*BDL – Below Detection Limit *MDL – Minimum Detection Limit</p> <p>Comparison of the present data with baseline data for the nearest locations for Soil.</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Parameter</th> <th>Unit</th> <th>Dhruv station</th> <th>Zarpara village</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>pH</td> <td>--</td> <td>8.56</td> <td>6.45</td> </tr> <tr> <td>2</td> <td>Nitrogen as N</td> <td>%</td> <td>0.19</td> <td>1.38 gm/kg</td> </tr> <tr> <td>3</td> <td>Phosphorus as P</td> <td>mg/kg</td> <td>1256.4</td> <td>1230</td> </tr> <tr> <td>4</td> <td>Potassium as K</td> <td>mg/kg</td> <td>44.5</td> <td>62120</td> </tr> <tr> <td>5</td> <td>Calcium as Ca</td> <td>mg/kg</td> <td>334.2</td> <td>1500</td> </tr> </tbody> </table>						Sr. No.	Parameter	Unit	Dhruv station	Zarpara village	1	pH	--	8.56	6.45	2	Nitrogen as N	%	0.19	1.38 gm/kg	3	Phosphorus as P	mg/kg	1256.4	1230	4	Potassium as K	mg/kg	44.5	62120	5	Calcium as Ca	mg/kg	334.2	1500
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Status of the conditions stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 30.09.2024				
		6	Magnesium as Mg	mg/kg	158.6	1580
		7	Iron as Fe	%	0.74	1.34
		8	Organic Matter	%	0.84	0.98
		9	CEC	meq/100 gm	10.1	7.4
		<p>From the above results it can be inferred that</p> <ul style="list-style-type: none"> <li>• The ground level in this area is saline in nature due to close proximity to the coast.</li> <li>• There is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.</li> <li>• There is no leaching of heavy metals and other toxic contaminants through soil.</li> </ul> <p>Please refer <b>Annexure - 5</b> for detailed analysis reports. Budget for environmental management measures (including horticulture) for the FY 2024-25 is to the tune of INR 1340.21 lakh. Out of which, Approx. INR 365.97 lakh are spent during the year 2024-25 till Sep'24. Detailed breakup of the expenditures for the past 3 years is attached as <b>Annexure - 6</b>.</p>				
vi.	Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.	<p>Complied.</p> <p>Construction spoils including bituminous material is being kept at identified temporary storage area outside CRZ and is being utilized for area development purpose as and when required.</p> <p>Hazardous materials such as diesel, lube oil etc. are handled with utmost care and all applicable rules are followed. Storage area is provided with paving and spill kit to ensure there is no contamination to soil or ground water.</p> <p>Used/Waste Oil is sold to GPCB authorized recyclers / re-processors namely M/s. Western India Petro Chem Ind - Bhavnagar, K Kasha Enterprises, Ahmedabad &amp; Jawrawala Petroleum, Ahmedabad. It is also being reused within organization for lubrication purpose. Oily rags are being disposed through co-processing at</p>				

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		<p>cement industries namely M/s. Ambuja Cement Ltd., Kodinar. Renewed copy of agreement with M/s. Ambuja Cement Ltd., Kodinar was submitted along with half yearly EC Compliance report for the period Oct'23 to Mar'24.</p> <p>Individual units within SEZ are handling their hazardous wastes as per Hazardous waste rules – 2016 after obtaining necessary permissions from GPCB.</p>
vii.	Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Gujarat Pollution Control Board.	<p>Complied.</p> <p>All the hazardous wastes are being handled as per Hazardous Waste Rules – 2016.</p> <p>Please refer Point No. vi (General Condition: Construction Phase) for further details.</p>
viii.	The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.	<p>Complied.</p> <p>Emergency DG sets are being used only as power back up source in case of power failure. Presently, cumulative capacity of all emergency DG sets installed at APSEZ within SEZ area is 3735 KVA. During the compliance period of Apr'23 to Sep'23, there was no instance of power failure hence it was not required to operate the emergency DG sets on continuous basis.</p> <p>All the emergency DG sets are of low sulphur diesel type. Details of the same were submitted along with half yearly compliance report for the period Apr'20 to Sep'20. Emergency DG sets are being used in conformance to the EPA norms and proof for the same was submitted along with compliance period i.e. Apr'17 to Sep'17.</p>
ix.	The diesel required for operating DG sets shall be stored in underground tanks if required; clearance from Chief Controller of Explosives shall be taken.	<p>Complied.</p> <p>Diesel is stored in the underground tank located in existing port area and approval of the same from Chief Controller of Explosives is obtained from PESO with License no. P/HQ/GJ/15/2050 (P12369) dated 20.02.2019 and is valid till 31.12.2024. The copy of</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024																																										
		PESO License was submitted during the last compliance period Oct'22 to Mar'23.																																										
x.	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should operate only during non-peak hours.	<p>Complied.</p> <p>The vehicles of on-going construction work enter inside the premises only after passing through the fitness check at vehicle health-check centre established by APSEZ. At the vehicle health check-up centre, parking light, reverse light, Horne, wheel, breaks, mirror, etc. are checked before allowing the vehicle to enter the site.</p> <p>Valid PUC Certification is also being checked for all the vehicles while entering into APSEZ premises.</p> <p>Majority of the vehicles bringing construction materials are operated during non-peak hours.</p>																																										
xi.	Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/GPCB.	<p>Complied.</p> <p>Ambient Air Quality and Noise monitoring are being carried out by NABL accredited and MoEF&amp;CC authorized agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Summary of the same for duration from Apr'24 to Sep'24 is mentioned below.</p> <p><b>Air sampling locations &amp; frequency: 10 nos. (twice a week)</b></p> <table border="1" data-bbox="706 1413 1453 1759"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>Min</th> <th>Max</th> <th>Average</th> <th>Permissible Limit</th> </tr> </thead> <tbody> <tr> <td>PM<sub>10</sub></td> <td>µg/m<sup>3</sup></td> <td>30.61</td> <td>85.42</td> <td>61.11</td> <td>100</td> </tr> <tr> <td>PM<sub>2.5</sub></td> <td>µg/m<sup>3</sup></td> <td>12.84</td> <td>40.13</td> <td>24.84</td> <td>60</td> </tr> <tr> <td>SO<sub>2</sub></td> <td>µg/m<sup>3</sup></td> <td>7.13</td> <td>26.63</td> <td>14.30</td> <td>80</td> </tr> <tr> <td>NO<sub>2</sub></td> <td>µg/m<sup>3</sup></td> <td>9.63</td> <td>28.00</td> <td>18.77</td> <td>80</td> </tr> </tbody> </table> <p><b>Noise sampling locations &amp; frequency: 6 nos. (once in a month)</b></p> <table border="1" data-bbox="706 1829 1453 1904"> <thead> <tr> <th>Noise</th> <th>Unit</th> <th>Leq Min</th> <th>Leq Max</th> <th>Leq Average</th> <th>Leq Permissible</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Parameter	Unit	Min	Max	Average	Permissible Limit	PM <sub>10</sub>	µg/m <sup>3</sup>	30.61	85.42	61.11	100	PM <sub>2.5</sub>	µg/m <sup>3</sup>	12.84	40.13	24.84	60	SO <sub>2</sub>	µg/m <sup>3</sup>	7.13	26.63	14.30	80	NO <sub>2</sub>	µg/m <sup>3</sup>	9.63	28.00	18.77	80	Noise	Unit	Leq Min	Leq Max	Leq Average	Leq Permissible						
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**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024					
						Limit *	
		Day Time	dB(A)	57.40	68.70	64.12	75
		Night Time	dB(A)	57.20	64.10	60.78	70
		<p>§ as per NAAQ standards, 2009 * as per CC&amp;A granted by GPCB Values recorded confirms to the stipulated standards.</p> <p>Such environmental monitoring is being carried out on continuous basis at stipulated frequencies. The analysis results are being closely observed for incremental pollution load. From the above results and past data, it can be inferred that the emission levels are well within the prescribed standards. All the analysis data collected are submitted to the concerned authorities as part of the six-monthly compliance reports. The data is also submitted to GPCB on monthly basis as part of the online submission – Monthly Patrak.</p> <p>Please refer <b>Annexure - 5</b> for detailed analysis reports. Budget for environmental management measures (including horticulture) for the FY 2024-25 is to the tune of INR 1340.21 lakh. Out of which, Approx. INR 365.91 lakh are spent during the year 2024-25 till Sep'24.</p> <p>Following safeguard measures are taken for abatement of dust and noise emissions.</p> <ul style="list-style-type: none"> <li>• Regular sprinkling on road and other open area</li> <li>• Regular cleaning of roads through mechanized equipments</li> <li>• Development of greenbelt along the periphery of the storage yards/back up area</li> <li>• D.G. Sets having Acoustic enclosures</li> <li>• Transportation of loose dry cargo through covered vehicles / wagons / conveyer system</li> <li>• Regular maintenance of plant machineries and equipments</li> </ul> <p>Individual member units are also carrying out environmental monitoring in line with their</p>					

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		permissions and the same is also being ensured during industry site visit. Analysis reports of member units are also attached as <b>Annexure – 5</b> .
xii.	Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27 <sup>th</sup> August, 2003. (The above condition is applicable only if the project site is located within 100 Kms of Thermal Power Stations).	Complied.  Fly ash generated from Adani Power Limited, Mundra is being disposed by selling to Cement and Brick Manufacturing units. During the compliance period Apr'24 to Sep'24 approx. 0.359 MMT of fly ash has been disposed by selling to cement industry, export to domestic traders, etc. Fly ash mixed paver blocks are being used for development of back up area, footpath, colonies area, parking area, approach road etc. as and when require.  Fly ash based PPC cement is used for construction activity.
xiii.	Ready mixed concrete must be used in building construction.	Complied.  Only RMC is used for construction activity.
xiv.	Storm water control and its re-use should be regulated as per CGWB and BIS standards for various applications.	Complied.  Storm water drainage systems are provided. There are no perennial rivers and the possibility of storm water run-off is only during monsoon season. The area is receiving scanty rainfall and there is no continuous flow of water during monsoon. Therefore presently, the storm water drainage is designed to facilitate the area drainage meeting with the downstream part of water area.
xv.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other referred best practices.	Complied.  Only RMC is used for construction activity.
xvi.	Permission to draw ground water shall be obtained from the competent Authority prior to construction /operation of the project.	Complied.  No ground water is used during construction & operation stage of the project. Current sources of water are through GWIL and desalination plant of APSEZ. Average, water consumption for entire APSEZ area is 5.34 MLD during the compliance period Apr'24 to Sep'24.

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
xvii.	Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.	<p>Not applicable</p> <p>As per the master planning all types of wastewater generated are transferred through common conveying system for providing desired treatment at CETP. Treated wastewater is utilized for gardening purpose within the premises of APSEZ / individual industries.</p> <p>It may be noted that condition number xvi to xxi are imposed on all member industries coming up within the SEZ areas (as part of the Lease Deed agreement). The same practice will be continued in future also. As suggested by RO, Bhopal during the site visit, an environment monitoring committee is formed which are ensuring strict compliance of the stipulated conditions by individual industries.</p>
xviii.	Fixtures for shower, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.	<p>Complied.</p> <p>Water flow reducers are installed at various locations within APSEZ. The water flow reducers consume approx. 66% less water compared to the normal tap. Water free urinals are also installed at Port User Buildings for water conservation. In phase wise manner, all the fixtures will be replaced with such water efficient devices.</p> <ul style="list-style-type: none"> <li>• Water flow reducers are provided in taps of various operation and administrative buildings to reduce the water consumption and are in use.</li> <li>• Water-free urinals are installed and in operation within APSEZ.</li> </ul>
xix.	Use of glass may be reduced by up to 40% to reduce the electricity consumption and load on air-conditioning. If necessary, use high quality double glass with special reflective coating in windows.	<p>Complied</p> <p>Majority of the building envelopes are constructed with energy efficient building materials. While using glass, wherever required, it is ensured that only high-quality glass with reflective coating is used.</p>
xx.	Roof should meet prescriptive requirements as per Energy Conservation Building Code by	<p>Complied</p> <p>Majority of the building envelopes (including roofs) are</p>



**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	using appropriate thermal insulation material to fulfill requirements.	constructed with ECBC compliant building materials having appropriate thermal insulation.
xxi.	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all air-conditioned spaces while it is aspirational for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfil these requirement.	<p>Complied</p> <p>Majority of the building envelopes (including walls) are constructed with ECBC compliant building materials having appropriate thermal insulation.</p>
xxii.	The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of firefighting equipments, etc. as per National Building Code including protection measures from lightning etc.	<p>Complied</p> <p>Mundra falls in seismic zone V. All the building structures constructed, if any, will meet the requirements of the applicable guidelines for safety. The same practice will continue in future also. However, being a developer, no buildings are constructed by APSEZ.</p>
xxiii.	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.	<p>Complied.</p> <p>SEZ industries were visited to check measures taken for Energy Conservation, Water Conservation, Waste and Hazardous waste management and phase out plan of Ozone depleting substance during the compliance period. Various industries shared the data in line with above reference. Details of the same were submitted along with EC compliance report for the period Apr'18 to Sep'18.</p> <p>It may be noted that condition number xvi to xxi are imposed on all member industries coming up within the SEZ areas (as part of the Lease Deed agreement). The same practice will continue in future also. As suggested by RO, Bhopal during the site visit, an environment monitoring committee is formed and ensures strict compliance of the stipulated conditions by individual industries.</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on <b>30.09.2024</b>
		EMS and Compliance verification of individual SEZ units carried out during the compliance period w.r.t. Water & Wastewater Management, Air Management, Hazardous & Non-Hazardous Waste Management, Greenbelt, etc. in line with their statutory permissions and there was no any major non-compliance observed.
xxiv.	Under the provisions of Environment (Protection) Act 1986, legal action shall be initiated against the project proponent if it is found that construction of the project has been started without obtaining environmental clearance.	Point noted.  Wherever applicable, construction activities have started only after obtaining environmental clearance.
	<b>Operation Phase</b>	
i.	The PP while issuing the allotment letter to individual member units shall specifically mention the allowable maximum quantity of water usage and effluent generated by each member unit.	Complied.  Provisions are made while issuing the allotment letter to individual member units for specifically mentioning the allowable maximum quantity of water usage and effluent generated by each member unit. Sample copy of one of such letter was submitted along with compliance report submission for the period Oct'16 to Mar'17.
ii.	The PP shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest improvements.	Complied.  APSEZL has a well-structured Environment Management Cell, staffed with qualified manpower for implementation of the Environment Management Plan at site. Site environment team direct report to site Chief Executive Officer (CEO) and the CEO directly reports to the top management. Updated Environment Management Cell Organogram is attached as <b>Annexure - 7</b> .  Separate budget for the Environment protection measures is earmarked every year. All environment and horticulture activities are considered at corporate level and budget allocation is done accordingly. No separate bank account is maintained for the same however, all the expenses are recorded in advanced accounting system of the organization.

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024																														
		<p>Budget for environmental management measures (including horticulture) for the FY 2024-25 is to the tune of INR 1340.21 lakh. Out of which, Approx. INR 365.97 lakh are spent during the year 2024-25 till Sep'24. Detailed breakup of the expenditures for the past 3 years is attached as <b>Annexure - 6</b>.</p> <p>Please refer Point No. xxiii (General Condition: Construction Phase) for further details.</p>																														
iii.	<p>Treated effluent emanating from STP shall be recycled / reused to the maximum extent possible. Treatment of 100% grey water by decentralized treatment should be done. Discharge of unused treated effluent shall conform to the norms and standards of the Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.</p>	<p>Complied.</p> <p>APSEZ has total installed capacity of 6.255 MLD for treatment of effluent / sewage generated at various locations. Details regarding the same are mentioned below. The treated sewage from these decentralized units meets the norms stipulated by GPCB and it is used for gardening purpose.</p> <table border="1" data-bbox="727 1100 1432 1457"> <thead> <tr> <th>Location</th> <th>Capacity</th> <th>Technology</th> </tr> </thead> <tbody> <tr> <td>CETP</td> <td>2.5 MLD</td> <td>Aerobic Digestion</td> </tr> <tr> <td>Shantivan Colony STP</td> <td>350 KLD</td> <td>Aerobic Digestion</td> </tr> <tr> <td>Shantivan Colony STP</td> <td>250 KLD</td> <td>Aerobic Digestion</td> </tr> <tr> <td>Adani House STP</td> <td>150 KLD</td> <td>PVA Gel Technology</td> </tr> <tr> <td>Samudra Township STP</td> <td>2.5 MLD</td> <td>MBR</td> </tr> <tr> <td>Liquid Terminal ETP</td> <td>265 KLD</td> <td>Aerobic Digestion</td> </tr> <tr> <td>West Port STP</td> <td>55 KLD</td> <td>FAB</td> </tr> <tr> <td>SEZ north Gate Complex</td> <td>175 KLD</td> <td>Aerobic Digestion</td> </tr> <tr> <td>Agri Park</td> <td>10 KLD</td> <td>Aerobic Digestion</td> </tr> </tbody> </table> <p>CETP of 2.5 MLD capacity is also constructed in SEZ area (having a separate independent environmental clearance). Sewage generated from individual industry is treated by individual industry itself. However, some of the industries are giving their sewage to the CETP for treatment and final disposal. List of CETP member units were submitted along with half yearly EC compliance report for the period Oct'19 to Mar'20. And there is no further change.</p> <p>The treated effluent from CETP confirms to the GPCB norms. Treated water is used for gardening /</p>	Location	Capacity	Technology	CETP	2.5 MLD	Aerobic Digestion	Shantivan Colony STP	350 KLD	Aerobic Digestion	Shantivan Colony STP	250 KLD	Aerobic Digestion	Adani House STP	150 KLD	PVA Gel Technology	Samudra Township STP	2.5 MLD	MBR	Liquid Terminal ETP	265 KLD	Aerobic Digestion	West Port STP	55 KLD	FAB	SEZ north Gate Complex	175 KLD	Aerobic Digestion	Agri Park	10 KLD	Aerobic Digestion
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**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024																																				
		<p>horticulture purpose within CETP premises and SEZ areas. Online monitoring system at the discharge point is provided to get the system alert in case of any deviation from discharge norms.</p> <p>STP of 2.5 MLD capacity is also constructed in SEZ area as part of social infrastructure project (having a separate independent environmental clearance).</p> <p>Assessment of treated sewage is being carried out by NABL accredited and MoEF&amp;CC approved agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. The summary of analysis results is mentioned below.</p> <p><b>Treated Water Analysis (Frequency Twice in a Month - 3 STPs)</b></p> <table border="1" data-bbox="706 1031 1451 1360"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>Min</th> <th>Max</th> <th>Avg.</th> <th>Perm. Limit<sup>§</sup></th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>--</td> <td>6.79</td> <td>7.53</td> <td>7.29</td> <td>6.5 to 9.0</td> </tr> <tr> <td>TSS</td> <td>mg/L</td> <td>10</td> <td>46</td> <td>19.56</td> <td>100</td> </tr> <tr> <td>BOD (3 Days @ 27 oC)</td> <td>mg/L</td> <td>11</td> <td>22</td> <td>15.71</td> <td>30</td> </tr> <tr> <td>Residual Chlorine</td> <td>ppm</td> <td>0.58</td> <td>0.94</td> <td>0.74</td> <td>--</td> </tr> <tr> <td>Fecal Coliform</td> <td>MPN/100 ml</td> <td>22</td> <td>140</td> <td>67.36</td> <td>&lt; 1000</td> </tr> </tbody> </table> <p style="text-align: right;"><sup>§</sup> as per CC&amp;A granted by GPCB</p> <p>Please refer <b>Annexure - 5</b> for detailed analysis reports.</p> <p>GPCB also done site visit and collected and analyzed the STP's treated water sampling. GPCB last sampling collected on 4/7/2022 and copy of analysis report was submitted during the last compliance period Apr'22 to Sep'22, which shows that all the parameters are well within the permissible norms.</p> <p>Budget for environmental management measures (including horticulture) for the FY 2024-25 is to the tune of INR 1340.21 lakh. Out of which, Approx. INR 365.97 lakh are spent during the year 2024-25 till Sep'24 for overall APSEZ, Mundra.</p>	Parameter	Unit	Min	Max	Avg.	Perm. Limit <sup>§</sup>	pH	--	6.79	7.53	7.29	6.5 to 9.0	TSS	mg/L	10	46	19.56	100	BOD (3 Days @ 27 oC)	mg/L	11	22	15.71	30	Residual Chlorine	ppm	0.58	0.94	0.74	--	Fecal Coliform	MPN/100 ml	22	140	67.36	< 1000
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BOD (3 Days @ 27 oC)	mg/L	11	22	15.71	30																																	
Residual Chlorine	ppm	0.58	0.94	0.74	--																																	
Fecal Coliform	MPN/100 ml	22	140	67.36	< 1000																																	

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		Greenbelt area developed around the treatment plants act as barrier for odour. In addition to this, regular supervision is done to ensure there is no odour problem from any of the treatment plants.
iv.	The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.	<p>Complied.</p> <p><b>Waste Management</b> – APSEZ has adopted 5R concept for environmentally sound management of different types of solid &amp; liquid wastes. Please refer below details about management of each type of waste.</p> <p><b>Solid Waste:</b> A well-established system for segregation of dry &amp; wet waste is in place. All wet waste (Organic waste) is being segregated &amp; utilized for compost manufacturing and/or biogas generation for cooking purpose. The compost is further used by in house horticulture team for greenbelt development. Whereas dry recyclable waste is being sorted in various categories. Presently manual sorting is being done for sorting of different types of solid waste. Segregated recyclable materials such as Paper, Plastic, Cardboard, PET Bottles, and Glasses, etc. are then sent to respective recycling units, whereas remaining non-recyclable waste is bailed and sent to cement plant (M/s. Ambuja Cement Ltd., Kodinar) for Co-processing as RDF (Refused Derived Fuel).</p> <p>APSEZ, Mundra is certified for Zero Waste to Landfill management system (ZWTL MS 2020) by TUV Rheinland India Pvt. Ltd.</p> <p><b>Hazardous &amp; Other Waste:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• E – Waste is being sold to GPCB registered recyclers namely M/s. Galaxy Recycling, Rajkot.</li> <li>• Used Batteries are being sold to GPCB registered</li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		<p>recyclers namely M/s. Sabnam Enterprise, Kutch and M/s. S K Metal Industries, Rajkot.</p> <ul style="list-style-type: none"> <li>• Solid Hazardous Waste is being disposed through co-processing / incineration through common facility i.e. M/s. Saurashtra Enviro Projects Pvt. Ltd., Bhachau, Safe Enviro Private Limited, Bharuch and/or cement industries of Ambuja Cement Ltd., Kodinar.</li> <li>• Used/Waste Oil is being sold to GPCB authorized recyclers / re-processors namely M/s. Western India Petro Chem Ind - Bhavnagar, K Kasha Enterprises, Ahmedabad &amp; Jawrawala Petroleum, Ahmedabad. It is also being reused within organization for lubrication purpose.</li> <li>• ETP Sludge, Oily Cotton Waste, Pig Waste are being disposed through co-processing in cement industries of Ambuja Cement Ltd., Kodinar.</li> <li>• Discarded drums / barrels are being sold to authorized decontamination facility i.e. M/s. Jawrawala Petroleum, Ahmedabad. It is also being reused within organization for filling hazardous waste.</li> <li>• Solid hazardous waste i.e. Tank bottom sludge was sold to authorized recycler namely M/s. Mundra Oil Pvt. Ltd., Mundra for recycling. However during the compliance period, there was no disposal of downgrade chemicals.</li> <li>• Expired paint materials was disposed by incineration through common facility i.e. M/s. Saurashtra Enviro Projects Pvt. Ltd., Bhachau. However, during the compliance period, there was no disposal of downgrade chemicals.</li> <li>• Downgrade chemicals generated from cleaning of storage tanks / pipelines were 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.</li> <li>• Slop Oil received from vessels is treated to separate water and oil particles in Oil Water Separator system. Separated oil from the same is sold to authorized recycler / reprocessor namely</li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on <b>30.09.2024</b>																																																		
		<p>M/s. Western India Petro Chem Ind - Bhavnagar, Aviation Corporation - Kutch &amp; Aroma Petrochem – Bhavnagar and water is sent to ETP for further treatment. However, during the compliance period, there was no received or disposal of Slope Oil.</p> <ul style="list-style-type: none"> <li>Horticulture waste is collected from various green belt areas and it is using for making of manure and manure is being utilizing in horticulture purpose within plant premises.</li> </ul> <p>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.</p> <p>The following table summarizes the waste management practice (from Apr'24 to Sep'24) for different types of wastes at APSEZ:</p> <table border="1" data-bbox="706 1031 1446 1929"> <thead> <tr> <th>Type of Waste</th> <th>Name of Waste</th> <th>Quantity (MT)</th> <th>Disposal Method</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Hazardous Waste</td> <td>Discarded Containers / Barrels</td> <td>0.57</td> <td>Sell to registered recycler</td> </tr> <tr> <td>ETP/CETP Sludge</td> <td>15.07</td> <td>Co-processing at cement industries</td> </tr> <tr> <td>Oily Cotton Waste</td> <td>39.8</td> <td>Co-processing at cement industries</td> </tr> <tr> <td>Pig Waste</td> <td>5.07</td> <td>Co-processing at cement industries</td> </tr> <tr> <td>Used / Spent / Waste Oil</td> <td>86.88</td> <td>Sell to registered recycler</td> </tr> <tr> <td colspan="2"><b>Hazardous Waste Total</b></td> <td><b>147.39</b></td> <td></td> </tr> <tr> <td rowspan="4">Non-Hazardous Waste</td> <td>RDF (Non Recyclable Waste)</td> <td>145.88</td> <td>Co-processing at cement industries</td> </tr> <tr> <td rowspan="2">Recyclables Dry Waste / Scrap</td> <td>1938.24</td> <td>After recovery sent for recycling / Reuse within premises</td> </tr> <tr> <td>359.15</td> <td>Used for making of manure and utilize for horticulture purpose</td> </tr> <tr> <td>Wet Waste (Food waste + Organic waste)</td> <td>537.95</td> <td>Converted to Manure for Horticulture use / Biogas for cooking purpose</td> </tr> <tr> <td colspan="2"><b>Non-Hazardous Waste Total</b></td> <td><b>2981.21</b></td> <td></td> </tr> <tr> <td rowspan="3">Other Waste</td> <td>Battery Waste</td> <td>3.04</td> <td>Sell to registered recycler</td> </tr> <tr> <td>Bio Medical Waste</td> <td>4.81</td> <td>To approved CBWTF Site and registered recyclers</td> </tr> <tr> <td>E-Waste</td> <td>15.07</td> <td>Sell to registered recycler</td> </tr> </tbody> </table>	Type of Waste	Name of Waste	Quantity (MT)	Disposal Method	Hazardous Waste	Discarded Containers / Barrels	0.57	Sell to registered recycler	ETP/CETP Sludge	15.07	Co-processing at cement industries	Oily Cotton Waste	39.8	Co-processing at cement industries	Pig Waste	5.07	Co-processing at cement industries	Used / Spent / Waste Oil	86.88	Sell to registered recycler	<b>Hazardous Waste Total</b>		<b>147.39</b>		Non-Hazardous Waste	RDF (Non Recyclable Waste)	145.88	Co-processing at cement industries	Recyclables Dry Waste / Scrap	1938.24	After recovery sent for recycling / Reuse within premises	359.15	Used for making of manure and utilize for horticulture purpose	Wet Waste (Food waste + Organic waste)	537.95	Converted to Manure for Horticulture use / Biogas for cooking purpose	<b>Non-Hazardous Waste Total</b>		<b>2981.21</b>		Other Waste	Battery Waste	3.04	Sell to registered recycler	Bio Medical Waste	4.81	To approved CBWTF Site and registered recyclers	E-Waste	15.07	Sell to registered recycler
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**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024																																																																										
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v.	Diesel power generating sets proposed as source of backup power for elevators and common area illumination during operational phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Low sulphur diesel should be used. The location of the DG sets may be decided in consultation with the Gujarat Pollution Control Board.	<p>Complied.</p> <p>Emergency DG sets are being used only as power back up source in case of power failure.</p> <p>Please refer Point No. viii &amp; ix (General Condition: Construction Phase) for further details.</p> <p>Heights of stacks are maintained as needed for the combined capacity of all attached emergency DG Sets. Locations of the emergency DG sets are checked by GPCB officials during the site visits. Details of all emergency DG set stack heights are mentioned below.</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>DG Location</th> <th>Capacity/KV A</th> <th>Stack height</th> </tr> </thead> <tbody> <tr><td>1</td><td>Adani House</td><td>750</td><td>15M</td></tr> <tr><td>2</td><td>PUB</td><td>500</td><td>15M</td></tr> <tr><td>3</td><td>PMC Store</td><td>82.5</td><td>10M</td></tr> <tr><td>4</td><td>R&amp;D Yard</td><td>50</td><td>8M</td></tr> <tr><td>5</td><td>North Gate</td><td>320</td><td>8M</td></tr> <tr><td>6</td><td>CRC North Gate</td><td>5</td><td>5M</td></tr> <tr><td>7</td><td>North in Gate</td><td>5</td><td>5M</td></tr> <tr><td>8</td><td>North Outgate</td><td>5</td><td>5M</td></tr> <tr><td>9</td><td>East Gate</td><td>30</td><td>6 M</td></tr> <tr><td>10</td><td>Airport</td><td>140</td><td>10M</td></tr> <tr><td>11</td><td>Airport</td><td>125</td><td>10M</td></tr> <tr><td>12</td><td>Gohersama Gate</td><td>5</td><td>5M</td></tr> <tr><td>13</td><td>Airport crrossing Gate</td><td>5</td><td>5M</td></tr> <tr><td>14</td><td>Kharimithi Road Gate</td><td>5</td><td>5M</td></tr> <tr><td>15</td><td>Old port Gate</td><td>5</td><td>5M</td></tr> <tr><td>16</td><td>West Gate</td><td>30</td><td>6 M</td></tr> <tr><td>17</td><td>MRSS</td><td>250</td><td>6 M</td></tr> </tbody> </table>			Sr. No.	DG Location	Capacity/KV A	Stack height	1	Adani House	750	15M	2	PUB	500	15M	3	PMC Store	82.5	10M	4	R&D Yard	50	8M	5	North Gate	320	8M	6	CRC North Gate	5	5M	7	North in Gate	5	5M	8	North Outgate	5	5M	9	East Gate	30	6 M	10	Airport	140	10M	11	Airport	125	10M	12	Gohersama Gate	5	5M	13	Airport crrossing Gate	5	5M	14	Kharimithi Road Gate	5	5M	15	Old port Gate	5	5M	16	West Gate	30	6 M	17	MRSS	250	6 M
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**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024			
		18	Mitap Substaion	62.5	5M
19	Zarpara Gate	5	5M		
20	Navinal Gate	5	5M		
21	Culvert NO 109	5	5M		
22	Culvert NO 109	15	5M		
23	Agri Park	250	6 M		
24	APL Road	7.5	5M		
25	APL Road	7.5	5M		
26	Trolley Mounted	30	6 M		
27	Trolley Mounted	15	6 M		
28	Trolley Mounted	15	6 M		
		The cumulative capacity of all emergency DG sets installed at APSEZ within SEZ area is 3735 KVA.			
vi.	Noise should be controlled to ensure that it does not exceed the prescribed standards, During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.	<p>Complied.</p> <p>Noise monitoring is being carried out by NABL accredited and MoEF&amp;CC authorized agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi.</p> <p>Please refer Point No. xi (General Condition: Construction Phase) for further details.</p>			
vii.	Green belt of adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.	<p>Being complied.</p> <p>APSEZ has developed "Dept. of Horticulture" which is taking measures/ steps for terrestrial greening as well as mangrove plantation. Development of greenbelt at various locations within the SEZ is an ongoing activity.</p> <p>Please refer condition no. xix (Specific Condition) for further details.</p>			
viii.	Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.	<p>Complied.</p> <p>Boundary walls are constructed in such a way by keeping weep holes for defined river path to facilitate free flow of water and it is ensured that water is not stagnant at any given point during rainy season.</p>			
ix.	Rain water harvesting for roof run-off and surface run-off, as	Complied.			

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	<p>plan submitted should be implemented.</p>	<p>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.</p> <p>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 FY 2024-25 till Sep'24, 7.31 ML of rain water has been recharged to increase the ground water table.</p> <p>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.</p> <p>However, Adani Foundation – CSR arm of Adani Group has carried out rainwater harvesting activities in the nearby villages for benefit of the locals.</p> <p>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. Including this a big recharge operation by bunding was taken up for Zarpara village as rainfall was very good during compliance period.</p> <p>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.</p> <p>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</p>

Status of the conditions stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 30.09.2024																																			
		<p>Government Figures.</p> <p><b>Our water conservation work is as below.</b></p> <p>The Water Conservation Projects completed during last Compliance period:</p> <p><b><u>Water Conservation Projects:</u></b></p> <p><b><u>Swajal Project:</u></b></p> <ul style="list-style-type: none"> <li>➤ <b>Aim:</b> The Foundation's Water Conservation program, SWAJAL, is aimed at addressing the alarming depletion of groundwater levels and reduction in water sources in various parts of Kutch district.</li> <li>➤ <b>Water Security Plan:</b> Due to arid climatic characters of the Kutch region, it is essential to plan for water security drinking and livelihood purposes. Considering weather condition, rainfall characters, geohydrological condition and water demand, water security plan has been prepared for the Seven villages.</li> </ul> <table border="1" data-bbox="735 1228 1427 1488"> <thead> <tr> <th>Block Name</th> <th>Water conservation structure</th> <th>Total no. of Structure</th> <th>Total Capacity Created (CUM)</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Mundra</td> <td>Check Dam</td> <td>23</td> <td>6,07,332.80</td> </tr> <tr> <td>Pond Deepening</td> <td>66</td> <td>1,89,121.08</td> </tr> <tr> <td>RRWHS</td> <td>275</td> <td>2750</td> </tr> <tr> <td>Recharge Borewell</td> <td>209</td> <td>-</td> </tr> <tr> <td>Percolation Well</td> <td>24</td> <td>-</td> </tr> </tbody> </table> <p><b>Earlier Completed Activities/Projects:</b></p> <table border="1" data-bbox="706 1575 1458 1927"> <thead> <tr> <th>Sr. No.</th> <th>Project</th> <th>Unit</th> <th>Outcome</th> <th>Impact</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Check dam Restrengthening- Nana Kapaya</td> <td>1</td> <td>Water Storage Capacity increased by 48000 Cum</td> <td>60 + farmer's 120+Acre Area of Agri land can be Irrigated</td> </tr> <tr> <td>2</td> <td>Recharge Borewell</td> <td>21</td> <td>Reduce Salinity ingress, and preventing water run</td> <td>150+ farmer's 260+ Acre Area of Agri land for Irrigated</td> </tr> </tbody> </table>	Block Name	Water conservation structure	Total no. of Structure	Total Capacity Created (CUM)	Mundra	Check Dam	23	6,07,332.80	Pond Deepening	66	1,89,121.08	RRWHS	275	2750	Recharge Borewell	209	-	Percolation Well	24	-	Sr. No.	Project	Unit	Outcome	Impact	1	Check dam Restrengthening- Nana Kapaya	1	Water Storage Capacity increased by 48000 Cum	60 + farmer's 120+Acre Area of Agri land can be Irrigated	2	Recharge Borewell	21	Reduce Salinity ingress, and preventing water run	150+ farmer's 260+ Acre Area of Agri land for Irrigated
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**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024		
		3	Pipe Culvert at Checkdamat Bhujpur	1 prevent water runoff into seaside. 35 farmers' 120+Acre Area of Agri land can be Irrigated
		<ul style="list-style-type: none"> <li>✓ Large number of water harvesting structure (18 Nos. of check dams in coordination with salinity department) and Augmentation of 3 check dams.</li> <li>✓ Ground recharge activities (pond deepening work for 61 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.</li> <li>✓ New Pond Deepening Under Ajadi ka Amrut Mahotsav done in Goyarsama village Approx Deepening Capacity is 12000 Cum.</li> <li>✓ Roof Top Rainwater Harvesting 145 Nos. (40 Nos. current FY 2022-23) which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family.</li> <li>✓ Recharge Borewell 208 Nos (19 Nos. current FY 2022-23) which is best ever option to direct recharge the soil.</li> <li>✓ Drip Irrigation approx. 1505 Farmers benefitted in coordination with Gujrat Green Revolution Company till date.</li> <li>✓ 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.</li> <li>✓ Pond Pipeline work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area.</li> <li>✓ Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year.</li> </ul> <p>With the objective of to preserve the rainwater 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.</p> <p>It may be noted that the individual industrial units will also be encouraged for taking various initiatives</p>		

**Status of the conditions stipulated in Environment and CRZ Clearance**

<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30.09.2024</b>
		for rainwater harvesting within their premises / in the villages around the SEZ area.
x.	The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.	<p>Complied.</p> <p>Ground Water Monitoring is being carried out on regular basis in SEZ areas through NABL accredited and MoEF&amp;CC approved agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi.</p> <p>Please refer Point No. v (General Condition: Construction Phase) for further details.</p> <p>It may be noted that the analysis results of ground water quality are submitted to CGWB, West Central region, Ahmedabad vide our e-mail dated 08.05.2024. The mail acknowledge copy of the same - was submitted along with half yearly EC Compliance report for the period Apr'19 to Sep'19.</p>
xi.	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.	<p>Complied.</p> <p>The entry and exit gates of SEZ and port are provided with ample parking area (210838 m<sup>2</sup>) near the gate. The entry / exit complex is fully equipped with traffic control equipments and round the clock security is provided for seamless support. No public space is utilized for parking of the vehicle. Details of the same were submitted along with half yearly EC Compliance Report for the period Apr'18 to Sep'18.</p>
xii.	A report on the energy conservation measures conforming to energy conservation norms finalized by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & D Factors etc. and submitted to the Ministry along with six monthly monitoring report.	<p>Complied</p> <p>Energy audit of port user buildings (including the details about building materials and technology etc.) is carried out once every three years. The most recent audit was conducted during 18<sup>th</sup> to 20<sup>th</sup> Jan-2022 by M/s. ECO ENERGY SOLUTION. Report of the same is submitted to Chief Electrical officer, Gandhinagar. Report of the same was submitted during the previous compliance period from Apr'22 to Sep'22.</p>
xiii.	Energy conservation measures like installation of CFLs/TFLs for the lighting the areas	<p>Complied</p> <p>Energy Conservation through Installation of Motion</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	<p>outside the building should be an integral part of the project design and should be in place before project commissioning. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines / rules of the regulatory authority to avoid mercury contamination. Solar panels may be used to the extent possible.</p>	<p>Sensor (Occu switch) &amp; AC Temp. controls in few of the buildings are provided. Measures for energy conservation are incorporated at design stage. Few of the buildings in MSTPL are designed as green building. Some features of the same are as below.</p> <ul style="list-style-type: none"> <li>• Used fly ash based cement and bricks</li> <li>• Special types of glasses were used which gives maximum sunlight and less heat</li> <li>• VOC free paint used certified by CII (Certificate of Indian Industries)</li> <li>• Water flow reducer installed in the entire building</li> </ul> <p>CFL / LED lighting are being used at various common areas of SEZ as well buildings and townships. Used CFL are collected and sent for recycling through authorized e-waste collection agency.</p> <p>APSEZ has installed &amp; commissioned 8.8 MW roof top solar plants within APSEZ and Township premises. APSEZ has also installed and commissioned 12 MW windmill and whatever electricity generated is being supplied to grid. Details of the same were submitted along with half yearly compliance report for the period Oct'18 to Mar'19.</p> <p>In additionally 10.4 MW capacity of windmill has been installed by Adani New Energy and as now total capacity of windmill energy is 22.4 MW existed in APSEZ premises.</p> <p>It may be noted that the individual industrial units will also be encouraged for taking various initiatives with respect to energy conservation (such as energy audit, installation of renewable energy sources, utilization of energy efficient fixtures etc.).</p>
xiv.	<p>Adequate measures should be taken to prevent odour problems from solid waste processing plant and STP.</p>	<p>Complied</p> <p>5R principals are adopted for sustainable waste management at APSEZ. Utmost care is being taken during the waste management and sewage /effluent treatment to ensure that there is no odour</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		generation. Proper secondary treatment and disinfection is provided to the domestic sewage and treated sewage is utilized for horticulture purpose. These measures ensure that odor problem is not created in the surrounding area. Furthermore, greenbelt on the periphery of the treatment plant as well as waste management sites help to prevent odour problems.
xv.	The buildings should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.	Complied.  Presently, all the buildings have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation. The same practice will be continued in future also.  It may be noted that the individual industrial units will also be encouraged for consideration of these design parameters.
xvi.	The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.	Complied.  Compliance report of all the environmental safeguards contained in the EMP report is attached as <b>Annexure - 4</b> .
xvii.	Adequate drinking water facility be provided.	Complied.  Drinking water facility at approx. 200 locations within APSEZ area is provided.
xviii.	Incremental pollution loads on the ambient air quality, noise and water quality should be periodically monitored after commissioning of the project.	Complied.  Environment Monitoring (air, noise, water, soil) is being carried out on regular basis in Port & SEZ areas through NABL accredited and MoEF&CC approved agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi.  Please refer following condition nos. for further details. <ul style="list-style-type: none"> <li>• v, viii &amp; xi of General Conditions – Construction Phase</li> <li>• iii of General Conditions – Operation Phase</li> </ul>
xix.	Application of solar energy	Complied.

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	<p>should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid system or fully solar system for portion of the apartments should be provided.</p>	<p>APSEZ has installed &amp; commissioned 8.8 MW roof top solar plants within APSEZ and Township premises. APSEZ has also installed and commissioned 12 MW windmill and electricity generated from it is being supplied to grid.</p> <p>In additionally 10.4 MW capacity of windmill has been installed by Adani New Energy and as now total capacity of windmill energy is 22.4 MW existed in APSEZ premises.</p> <p>Please refer condition no. xiii of the General Conditions – Operation Phase for further details.</p>
xx.	<p>Ozone depleting substance (Regulation &amp; Control) Rules should be followed while designing the air conditioning system of the project.</p>	<p>Complied.</p> <p>APSEZ is not procuring air conditioning systems which use ozone depleting gases. All the HVAC systems are with Ozone friendly gases within APSEZ. All new air conditioning systems installed, if any, will be designed in line with Ozone depleting substance (Regulation &amp; Control) Rules.</p> <p>It may be noted that the individual industrial units will also be encouraged to follow Ozone depleting substance (Regulation &amp; Control) Rules while designing the air conditioning system of the project. The same will be implemented by individual unit as per project suitability.</p>
12	<p>Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional Office of MOEF, Bhopal.</p>	<p>Complied.</p> <p>Full support is always extended to officers of regulatory authorities (including MoEF&amp;CC and GPCB) visiting the project site. The documents as per their requirements are provided to them.</p> <p>The communication documents like application Form – 1, ToR received from MoEF&amp;CC, Final EIA report, Public Hearing proceedings and recommendations of GCZMA are submitted to MoEF&amp;CC, RO, Bhopal for necessary records.</p> <p>APSEZ was visited by RO, MoEF&amp;CC Bhopal on 3<sup>rd</sup></p>



**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		<p>May, 2018 for compliance verification. APSEZ provided all requisite information and documents required by the Regional Officer. During the said compliance verification visit, and as per the compliance certificate by Ro-MOEF&amp;CC vide dated, 7<sup>th</sup> June 2018, there was no major non-compliance observed.</p> <p>Inline to the compliance certification process of Environment Clearance condition of Waterfront Development Plan, RO, MoEF&amp;CC Bhopal had visited the site on 27<sup>th</sup> &amp; 28<sup>th</sup> January, 2020 for compliance verification. APSEZ provided all requisite information and documents required by the Regional Officer (MoEF&amp;CC). During the said compliance verification visit and as per the compliance certification received, there was no non-compliance observed.</p> <p>Inline to the compliance certification process of Consent to Operates of existing facilities developed under Waterfront Development Plan, RO, GPCB, Gandhidham had visited the site on 17<sup>th</sup> March, 2021 for compliance verification. APSEZ provided all requisite information and documents required by the Regional Officer (GPCB). During the said compliance verification visit and as per the compliance certification received, there was no non-compliance observed.</p> <p>Inline to the compliance of MoEF&amp;CC Order dated 18<sup>th</sup> September, 2015, Joint Review Committee (JRC) comprising officials from various competent authorities visited the APSEZ, Mundra from 1<sup>st</sup> to 3<sup>rd</sup> September, 2021 to monitor the progress of implementation of the conditions stipulated in the order. APSEZ provided all requisite information and documents required by the JRC. As per the report received by MoEF&amp;CC vide dated 01.12.2021, there was no non-compliance observed.</p> <p>It also be noted that officials from GPCB Regional office is also doing regular site visit. Last visit of Regional Office, GPCB was done on 03.10.2022.</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		<p>There was no any inspection remarks during the site visit.</p> <p>Inline to the compliance certification process of Environment Clearance of Waterfront Development Plan, IRO- MoEF&amp;CC Gandhinagar has lastly visited the site on 18<sup>th</sup> to 20<sup>th</sup> December, 2023 for compliance verification. APSEZ provided all requisite information and documents required by the Regional Officer (MoEF&amp;CC). During the said compliance verification visit and as per the compliance certification received, there was no non-compliance observed. Copy of CCR &amp; submitted action taken report w.r.t. certified compliance was submitted along with half yearly EC Compliance report for the period Oct'23 to Mar'24.</p>
13	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.	Point noted and agreed.
14	The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provision of the Environmental (Protection) Act, 1986, to ensure effective implementation of the safeguard measures in a time bound and satisfactory manner.	Point noted and agreed.
15	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project	<p>Not Applicable at present.</p> <p>The mentioned approvals are not applicable to APSEZ since we are the infrastructure support provider. However, the applicable approvals will be availed by the individual member industries prior to construction of work. The environment management committee will ensure strict adherence to the condition by the individual industries.</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	proponent from the respective competent authorities.	
16	These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.	Point noted and agreed.
17	The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Clearance and copies of clearance letters are available with the Gujarat Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a> . The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bhopal.	Complied  APSEZ has advertised Environmental and CRZ Clearance in two local newspapers "The Indian Express" (in English language) and "Kutch Mitra" (in vernacular language) on 24.07.14 (within 10 days from the date of receipt of the clearance letter) and copy of the same was submitted vide letter dated 05.08.2014 to Ministry of Environment, Forests & Climate Change, Bhopal.
18	Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004 as may be applicable to this project.	Point noted and agreed.

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2024																		
19	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Point noted and agreed.																		
20	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	<p>Complied</p> <p>Copy of clearance letter was sent to concerned Panchayats, Zilla Parishad, Urban Local Body, Local NGOs and from whom suggestion/representation received. Details regarding the same were submitted to the MoEF &amp; CC along with half yearly compliance report for the period from Apr – 2014 to Sep – 2014.</p> <p>Clearance letter is also put up on the website of the Adani ports <a href="https://www.adaniports.com/ports-downloads">https://www.adaniports.com/ports-downloads</a></p>																		
21	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	<p>Complied.</p> <p>Compliance report of EC conditions is uploaded regularly. Last compliance report including results of monitoring data for the period of Oct'23 to Mar'24 was submitted to Integrated Regional Office (IRO), MoEF&amp;CC @ Gandhinagar, Zonal Office of CPCB @ Baroda, GPCB @ Gandhinagar &amp; Gandhidham and Dept. of Forests &amp; Env., Gandhinagar vide our letter dated 25.05.2024. Copy of the same is also available on our web site <a href="https://www.adaniports.com/ports-downloads">https://www.adaniports.com/ports-downloads</a>. A soft copy of the same was also submitted through e-mail on 28.05.2024. to all the concern authorities. Please refer below for the details regarding past six compliance submissions.</p> <table border="1" data-bbox="768 1686 1391 1932"> <thead> <tr> <th>Sr. No.</th> <th>Compliance period</th> <th>Date of submission</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Apr'21 to Sep'21</td> <td>30.11.2021</td> </tr> <tr> <td>2</td> <td>Oct'21 to Mar'22</td> <td>30.05.2022</td> </tr> <tr> <td>3</td> <td>Apr'22 to Sep'22</td> <td>30.11.2022</td> </tr> <tr> <td>4</td> <td>Oct'22 to Mar'23</td> <td>30.05.2023</td> </tr> <tr> <td>5</td> <td>Apr'23 to Sep'23</td> <td>30.11.2023</td> </tr> </tbody> </table>	Sr. No.	Compliance period	Date of submission	1	Apr'21 to Sep'21	30.11.2021	2	Oct'21 to Mar'22	30.05.2022	3	Apr'22 to Sep'22	30.11.2022	4	Oct'22 to Mar'23	30.05.2023	5	Apr'23 to Sep'23	30.11.2023
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5	Apr'23 to Sep'23	30.11.2023																		
22	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.																			

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'24 To : Sep'24</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2024			
		6	Oct'23 to Mar'24	28.05.2024	
23	<p>The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environmental (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.</p>	<p>Complied.</p> <p>Environmental statement for each financial year is submitted to GPCB. The same for the FY ending 31.03.2024 in Form-V is submitted to GPCB vide our letter dated 2<sup>nd</sup> September, 2024. The acknowledgement copy of the Environmental Statement (Form V) of FY 2023-24 is attached as <b>Annexure - 8</b>. Copy of the submitted Environmental Statement FY 2023-24 is also available on our web site <a href="https://www.adaniports.com/ports-downloads">https://www.adaniports.com/ports-downloads</a>.</p>			

**ANNEXURE A  
Compliance Report of CRZ  
Recommendation**

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'24 To : Sep'24</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

**Note:**

With respect to the project components attracting CRZ recommendation from GCZMA, following points shall be noted:

- GCZMA has recommended the CRZ proposal for Sea Water Intake, Outfall system and Pipeline.
- Construction with respect to Desalination Plant, sea water intake and outfall system has not been started yet.
- Existing units are having requisite environmental permissions (from state or central body, as the case may be) for discharging their wastewater, if any, to the Common Effluent Treatment Plant of MPSEZ Utilities Pvt. Ltd. having 2.5 MLD capacity (having a separate individual environmental clearance).
- Treated wastewater is being utilized within the premises of CETP and / or SEZ for the gardening / horticulture activities.
- As soon as the need for discharging the effluent / reject form the desalination plant into sea will arise, constriction work for the intake and outfall will be started.

In view of the above-mentioned facts, the compliance to the conditions stipulated in the CRZ recommendation will be submitted to all the competent authorities when the construction and operation activities are initiated for the project components attracting CRZ recommendation.

 adani Ports and Logistics	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'24 To : Sep'24</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

## **Annexure – B Compliance Status of MoEF & CC Order dated 18.09.2015**

Based on the report submitted by Sunita Narain committee, MoEF&CC issued a Show Cause Notice (SCN) to APSEZ vide their letter dated 30.09.2013. APSEZ replied to the SCN vide letter dated 14.10.2013. Further, an order (containing 10 directions) was issued by MoEF&CC vide their letter dated 18.09.2015. Compliance to these 10 directions is mentioned below.



**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024
i	The proposal of extension of the validity of environmental clearance granted to the North Port vide letter dated 12.01.2009 will be considered separately at later stage.	<p>Point Noted &amp; Complied</p> <p>After receipt of this order, so far APSEZ has not done any application to MoEF&amp;CC for the proposed North port. The expansion of Waterfront Development plan has been proposed excluding North Port area.</p>
ii	Bocha island, ecologically sensitive geomorphological features and areas in the island and creeks around the island will be declared as conservation zone action plan for its conservation must be prepared. M/s. APSEZ should provide necessary financial assistance for this purpose.	<p>Complied</p> <p>This reply covers condition no ii, iv and v.</p> <p>Based on the MoEF&amp;CC directions,</p> <ol style="list-style-type: none"> <li>1. APSEZ, vide letter dtd. 19<sup>th</sup> October 2015 had requested GCZMA, for consideration of project for finalization of ToR for NCSCM.</li> <li>2. Project was considered on 28<sup>th</sup> GCZMA meeting, scheduled on 22<sup>nd</sup> April 2016, where ToR was discussed and agreed, upon.</li> <li>3. APSEZ, vide its letter dtd. 25<sup>th</sup> April 2016, submitted the proposal to GCZMA along with Scope of work, as submitted by NCSCM.</li> </ol>
iv	A comprehensive and integrated study and protection of creeks/mangrove area including buffer zone, mapping of co-ordinates, running length, HTL, CRZ boundary, will be put in place. The plan will take note of all the conditions of approvals granted to all the project proponents in this area e.g. the reported case of	<ol style="list-style-type: none"> <li>4. Service Order was issued to NCSCM vide SO dtd. 29<sup>th</sup> Aug 2016. Cost of the study as per the NCSCM proposal was 315 Lakh and 100% of payment has already paid to NCSCM.</li> <li>5. NCSCM has carried out number of site surveys during the period, February 2017 – April 2018 as per the defined scope</li> <li>6. The study report was submitted to GCZMA (with a copy to MoEF&amp;CC vide letter dated 04.06.2018) for their consideration and recommendation if any.</li> <li>7. A reminder letter was submitted to GCZMA vide letter dated 4<sup>th</sup> Jan 2019.</li> </ol> <p>Details of above chronology were submitted along with half yearly compliance report for the period Apr'19 to Sep'19.</p> <p>The site survey carried out by NCSCM includes:</p> <ol style="list-style-type: none"> <li>1. Bathymetry survey of creeks</li> <li>2. Topography survey of intertidal areas</li> </ol>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024
	<p>disappearance of mangroves near navinal creek. The preservation of entire area to maintain the fragile ecological condition will be a part of the plan in relation to the creeks, mangrove conservation and conservation of bocha island up to baradimata and others.</p>	<ol style="list-style-type: none"> <li>3. Mangrove survey (health and area demarcation)</li> <li>4. Sampling of soil and water for analysis of physico-chemical and biological parameters</li> <li>5. Tide and currents data collection (including residence time of tidal water)</li> <li>6. Focus Group Discussions with the community in the close vicinity of the project area</li> </ol> <p>In addition to the site surveys, NCSCM has procured satellite images for analysis of mangrove cover.</p> <p>The data collected (through site surveys and analysis of satellite maps) was used as input for mathematical modelling. The modelling studies were carried out to understand the impacts of the development activities. Based on the outcome of the modelling studies the necessary conservation plan for protection of creeks and mangrove areas is prepared.</p>
v	<p>NCSCM will prepare the plan in consultation with NIOT, PP and GCZMA. In recognition of the fact that the existing legal provisions under the E(P) Act 1986 do not provide for any authority to impose ERF by the government, the plan will be financed by the PP. the implementation will be carried out by GCZMA. The monitoring of the implementation will be carried by NCSCM.</p>	<p>Based on the final study report, outcome is summarized in to following points:</p> <ol style="list-style-type: none"> <li>1. There is no obstruction to any water stream (creeks / branches of creeks / rivers)</li> <li>2. The mangrove cover in and around APSEZ was over 2596 ha. There was substantial growth in mangrove cover to the tune of 502 ha (comparison between 2011 and 2019)</li> <li>3. Mundra has undergone substantial development during this tenure. Hence it can be interpreted that the infrastructure development has not left any adverse impacts on ecology.</li> </ol> <p>NCSCM study same was submitted to the GCZMA on 04.06.2018. Details of the same were submitted along with half yearly EC Compliance report for the period Apr'19 to Sep'19. The same was further submitted to GCZMA and MoEF&amp;CC for their examination and recommendation vide (with a copy to MoEF&amp;CC vide letter dated 04.06.2018 &amp; reminder letter vide dated 4<sup>th</sup> Jan, 2019). Presentation on the findings of the report was made to GCZMA committee on 4<sup>th</sup> October 2019 and the recommendation for the same has been received vide email dtd 22<sup>nd</sup> Sept, 2020 with conditions. Details of the same were submitted as a part of half yearly EC compliance report for the period Oct'20 to Mar'21.</p> <p><b>Summary of Conservation of mangroves:</b></p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024																																					
		<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Mangrove mapping Year</th> <th rowspan="2">Monitoring Agency</th> <th rowspan="2">Mangrove cover total Area (Ha.)</th> <th colspan="2">Mangrove cover area Increased</th> </tr> <tr> <th>Ha.</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td rowspan="2">NCSCM</td> <td>2094</td> <td>-</td> <td>-</td> </tr> <tr> <td>2011 to 2016-17</td> <td>2340</td> <td>246</td> <td>11.75%</td> </tr> <tr> <td>2017 to 2019 till March</td> <td>NCSCM</td> <td>2596</td> <td>256</td> <td>10.94%</td> </tr> <tr> <td>2019 to 2021 till March</td> <td>GUIDE</td> <td>2723</td> <td>127</td> <td>4.89%</td> </tr> <tr> <td><b>Total</b></td> <td></td> <td><b>2723</b></td> <td><b>629</b></td> <td><b>--</b></td> </tr> </tbody> </table> <p>Hence, overall increase in mangrove cover area in creek system in and around APSEZ from 2011 (2094 Ha) to 2021 (2723 Ha) is <b>629 Ha (30%)</b>.</p> <p>As a part of GCZMA recommendations and NCSCM mangrove conservation action plan, APSEZ has undertaken following activities.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Sr. No.</th> <th style="text-align: center;">Recommendations</th> <th style="text-align: center;">Compliance</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td>Mangrove mapping and monitoring in and around APSEZ</td> <td> <ul style="list-style-type: none"> <li>• APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island.</li> <li>• As a part of this study, overall growth of mangroves in the creeks in and around APSEZ was assessed comparing Google earth images of 2017 &amp; 2019 and it is observed that there was increase in mangrove cover between March 2017 and September 2019 to the extent of 256 Ha, which is about 10.94%.</li> <li>• This suggests that the mangroves and the tidal system in the creeks remain undisturbed over this period. Analysis of data between categories indicated that there was an increase in dense mangroves and also conversion of scattered to sparse which also shows that the growth of mangroves in a progressive direction.</li> <li>• Hence, there is an overall growth of mangroves in creeks in and around APSEZ, Mundra is 502 Ha between 2011 and 2019.</li> <li>• The cost of the said study was INR 23.56 Lacs incurred by APSEZ.</li> <li>• According to GUIDE Mangrove monitoring</li> </ul> </td> </tr> </tbody> </table>	Mangrove mapping Year	Monitoring Agency	Mangrove cover total Area (Ha.)	Mangrove cover area Increased		Ha.	%	2011	NCSCM	2094	-	-	2011 to 2016-17	2340	246	11.75%	2017 to 2019 till March	NCSCM	2596	256	10.94%	2019 to 2021 till March	GUIDE	2723	127	4.89%	<b>Total</b>		<b>2723</b>	<b>629</b>	<b>--</b>	Sr. No.	Recommendations	Compliance	1.	Mangrove mapping and monitoring in and around APSEZ	<ul style="list-style-type: none"> <li>• APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island.</li> <li>• As a part of this study, overall growth of mangroves in the creeks in and around APSEZ was assessed comparing Google earth images of 2017 &amp; 2019 and it is observed that there was increase in mangrove cover between March 2017 and September 2019 to the extent of 256 Ha, which is about 10.94%.</li> <li>• This suggests that the mangroves and the tidal system in the creeks remain undisturbed over this period. Analysis of data between categories indicated that there was an increase in dense mangroves and also conversion of scattered to sparse which also shows that the growth of mangroves in a progressive direction.</li> <li>• Hence, there is an overall growth of mangroves in creeks in and around APSEZ, Mundra is 502 Ha between 2011 and 2019.</li> <li>• The cost of the said study was INR 23.56 Lacs incurred by APSEZ.</li> <li>• According to GUIDE Mangrove monitoring</li> </ul>
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1.	Mangrove mapping and monitoring in and around APSEZ	<ul style="list-style-type: none"> <li>• APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island.</li> <li>• As a part of this study, overall growth of mangroves in the creeks in and around APSEZ was assessed comparing Google earth images of 2017 &amp; 2019 and it is observed that there was increase in mangrove cover between March 2017 and September 2019 to the extent of 256 Ha, which is about 10.94%.</li> <li>• This suggests that the mangroves and the tidal system in the creeks remain undisturbed over this period. Analysis of data between categories indicated that there was an increase in dense mangroves and also conversion of scattered to sparse which also shows that the growth of mangroves in a progressive direction.</li> <li>• Hence, there is an overall growth of mangroves in creeks in and around APSEZ, Mundra is 502 Ha between 2011 and 2019.</li> <li>• The cost of the said study was INR 23.56 Lacs incurred by APSEZ.</li> <li>• According to GUIDE Mangrove monitoring</li> </ul>																																					

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024																											
			<p>study report November 2023 (the report was submitted during the last compliance report submission Apr'23 to Sep'23), the distribution of mangroves in Kotadi, Baradi mata, Navinal, Bocha and Khari creeks as well as in the Bocha island was studied using LISS IV satellite images for the duration of March 2019 to March 2021. The mangrove cover in the creeks in and around APSEZ showed a positive trend from March 2019 to March 2021, with an overall increase of 52.79 ha (1.9%) compared to the cover during the year 2019. The total mangrove cover during 2019 was 2670 ha which has increased to 2723 ha during the year 2021.</p> <ul style="list-style-type: none"> <li>Hence, overall increase in mangrove cover area in creek system in and around APSEZ from 2011 (2094 Ha) to 2021 (2723 Ha) is 629 Ha (30%).</li> <li>The cost of the said study was INR 23.60 Lacs incurred by APSEZ.</li> </ul> <p><b>Summary of Mangrove mapping and monitoring (from 2011 to 2021):</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Mangrove mapping Year</th> <th rowspan="2" style="text-align: center;">Mangrove cover total Area (Ha.)</th> <th colspan="2" style="text-align: center;">Mangrove cover area increased</th> </tr> <tr> <th style="text-align: center;">Hac.</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2011</td> <td style="text-align: center;">2094</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td style="text-align: center;">2011 to 2016-17</td> <td style="text-align: center;">2340</td> <td style="text-align: center;">246</td> <td style="text-align: center;">11.75%</td> </tr> <tr> <td style="text-align: center;">2017 to 2019 till March</td> <td style="text-align: center;">2596</td> <td style="text-align: center;">256</td> <td style="text-align: center;">10.94%</td> </tr> <tr> <td style="text-align: center;">2019 to 2021 till March</td> <td style="text-align: center;">2723</td> <td style="text-align: center;">127</td> <td style="text-align: center;">4.89</td> </tr> <tr> <td style="text-align: center;"><b>Total</b></td> <td style="text-align: center;"><b>2723</b></td> <td style="text-align: center;"><b>629</b></td> <td style="text-align: center;"><b>--</b></td> </tr> </tbody> </table>	Mangrove mapping Year	Mangrove cover total Area (Ha.)	Mangrove cover area increased		Hac.	%	2011	2094	-	-	2011 to 2016-17	2340	246	11.75%	2017 to 2019 till March	2596	256	10.94%	2019 to 2021 till March	2723	127	4.89	<b>Total</b>	<b>2723</b>	<b>629</b>	<b>--</b>
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2.	Tidal observation in creeks in and around APSEZ		<ul style="list-style-type: none"> <li>APSEZ carried out the tidal observations at locations similar to 2017 in Kotdi, Baradimata, Navinal, Bocha and Khari creeks under the guidance of NCSCM.</li> <li>The observed tidal ranges indicate that the creeks experience normal tidal ranges, adequate for the growth of mangroves.</li> <li>The cost of the said activity was INR 1.0 Lacs.</li> </ul>																										
3.	Removal of Algal and Prosopis growth from		<ul style="list-style-type: none"> <li>Algal and Prosopis growth monitoring was done in and around mangrove area and</li> </ul>																										

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024	
		mangrove areas	<p>algal encrustation was found in some of the mangrove areas, which has been removed manually.</p> <ul style="list-style-type: none"> <li>The cost of the said activity was Rs. 80000 during FY 2023-24. The algal removal report was submitted during the last compliance report submission Oct'23 to Mar'24.</li> </ul>
		4. Awareness of mangroves importance surrounding communities in	<ul style="list-style-type: none"> <li>Adani Foundation – CSR Arm of Adani group has done awareness camps/activities created in the community regarding importance of mangroves. Adani Foundation provides Good Quality dry and green fodder to 25 Villages. Project is covering total 15005 Cattles and hence enhancing cattle productivity. Dry Fodder 10,90,875 Kg Green – 27,64,920 Kg.</li> <li>Awareness of mangroves importance in surrounding communities &amp; Fodder support - The expenditure for fodder supporting activities was approx. 132.0 Lacs during FY 2024-25 till Sep'24, which was incurred by APSEZ.</li> <li><b>Grass Land development:</b> 213 acres of gauchar land has been cleaned and allocated for Grass land development with strong Community Contribution and Mobilization.</li> <li>Other than this dedicated security guard with gate system deployed by APSEZ across the coastal area and no any unauthorized persons allowed within coastal as well as mangrove areas.</li> <li>APSEZ has celebrated the International Day for the Conservation of the Mangrove Ecosystem on 24th to 26th July 2024 to raise awareness of the importance of mangrove ecosystems as “a unique, special and vulnerable ecosystem”. The report for the same is attached as <b>Annexure - 1</b>.</li> <li>Refer CSR report attached as <b>Annexure - 2</b>.</li> </ul>
		<p>To comply with the GCZMA recommendations regarding mangrove monitoring at every 2 years, presently APSEZ has awarded the work order to NCSCM, Chennai vide order no. 4802055905, dated 24/09/2024 with cost 45.87 Lacs for mangrove mapping in and around APSEZ March 2021 to March 2023. The said work will be undertaken by NCSCM</p>	

**Status of the conditions stipulated in Environment and CRZ Clearance**

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		<p>shortly.</p> <p>CZMP of Kutch region has been finalized and published on GCZMA website in the Month of Feb-2022. NCSCM has issued final authorized maps for HTL and CRZ Boundary prepared in line with approved CZMP of Gujarat State as per CRZ Notification, 2011. The details of the maps were submitted during the previous compliance period Oct'21 to Mar'22.</p> <p>As per the approved map of CZMP Kutch region APSEZ has demarcated the HTL boundary line within APSEZ area. Photographs of the demarcated HTL boundary line were submitted during the last compliance period Apr'23 to Sep'23.</p>																												
iii	The violations of specific condition of all the ECs and CRZ clearances, if any, will be examined and proceeded with the provisions of EP Act, 1986 independently.	<p>Complied</p> <p>During the said site visits from various regulatory authorities and as per the compliance certification received, there was no non-compliance observed.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #cccccc;">Sr. No.</th> <th style="background-color: #cccccc;">Authority</th> <th style="background-color: #cccccc;">Date of Visit</th> <th style="background-color: #cccccc;">Purpose of Visit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>RO, MoEF&amp;CC, Bhopal</td> <td>21<sup>st</sup> - 22<sup>nd</sup> Dec, 2016</td> <td>EC Compliance Certification of WFDP</td> </tr> <tr> <td>2</td> <td>RO, MoEF&amp;CC, Bhopal</td> <td>3<sup>rd</sup> May, 2018</td> <td>EC Compliance Certification of WFDP &amp; MSEZ</td> </tr> <tr> <td>3</td> <td>RO, MoEF&amp;CC, Bhopal</td> <td>3<sup>rd</sup> &amp; 4<sup>th</sup> Sep, 2019</td> <td>Compliance of the order of the Hon'ble HIGH COURT of Gujarat vide letter dated 22<sup>nd</sup> Aug. 2019 w.r.t. compliance verification of MoEF&amp;CC order dated 18<sup>th</sup> Sep, 2015.</td> </tr> <tr> <td>4</td> <td>RO, MoEF&amp;CC, Bhopal</td> <td>27<sup>th</sup> &amp; 28<sup>th</sup> Jan, 2020</td> <td>EC Compliance Certification of WFDP</td> </tr> <tr> <td>5</td> <td>SPCB, Gandhinagar</td> <td>17<sup>th</sup> March, 2021</td> <td>CC&amp;A Compliance Certification of existing facilities developed under WFDP</td> </tr> <tr> <td>6</td> <td>Joint Review Committee</td> <td>1<sup>st</sup> to 3<sup>rd</sup> Sep, 2021</td> <td>Compliance of the order of the Hon'ble HIGH COURT of Gujarat vide letter dated 22<sup>nd</sup> Aug. 2019 w.r.t. compliance verification of MoEF&amp;CC order dated 18<sup>th</sup> Sep, 2015.</td> </tr> </tbody> </table>	Sr. No.	Authority	Date of Visit	Purpose of Visit	1	RO, MoEF&CC, Bhopal	21 <sup>st</sup> - 22 <sup>nd</sup> Dec, 2016	EC Compliance Certification of WFDP	2	RO, MoEF&CC, Bhopal	3 <sup>rd</sup> May, 2018	EC Compliance Certification of WFDP & MSEZ	3	RO, MoEF&CC, Bhopal	3 <sup>rd</sup> & 4 <sup>th</sup> Sep, 2019	Compliance of the order of the Hon'ble HIGH COURT of Gujarat vide letter dated 22 <sup>nd</sup> Aug. 2019 w.r.t. compliance verification of MoEF&CC order dated 18 <sup>th</sup> Sep, 2015.	4	RO, MoEF&CC, Bhopal	27 <sup>th</sup> & 28 <sup>th</sup> Jan, 2020	EC Compliance Certification of WFDP	5	SPCB, Gandhinagar	17 <sup>th</sup> March, 2021	CC&A Compliance Certification of existing facilities developed under WFDP	6	Joint Review Committee	1 <sup>st</sup> to 3 <sup>rd</sup> Sep, 2021	Compliance of the order of the Hon'ble HIGH COURT of Gujarat vide letter dated 22 <sup>nd</sup> Aug. 2019 w.r.t. compliance verification of MoEF&CC order dated 18 <sup>th</sup> Sep, 2015.
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**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024			
		7	NEERI, Nagpur	21 <sup>st</sup> & 22 <sup>nd</sup> Sep 2023.	EC Compliance verification site visit of MSEZ for the period Oct'22 to Mar'23. Copy of last EC compliance verification certificate was submitted during the last EC compliance report submission from Apr'23 to Sep'23.
		8	IRO-MoEF&CC, Gandhinagar	18 <sup>th</sup> to 20 <sup>th</sup> Dec 2023	EC Compliance Certification of WFDP. During the said compliance verification visit and as per the compliance certification received, there was no non-compliance observed. Copy of CCR & submitted action taken report w.r.t. certified compliance was submitted during the last EC compliance report submission for the period Oct'23 to Mar'24.
		<p>It may also be noted that GPCB, Regional Office does regular site visit of APSEZ area and no non-compliance observed.</p> <p>Last visit of Regional Office, GPCB was done on 09.04.2021 for West Port APSEZL has submitted the reply to the site visit report vide letter dated 12.04.2021. Details of the same were submitted as part of compliance report submission for the duration of Apr'21 to Sep'21. No site visit carried out by SPCB during compliance period.</p> <p>Last visit of Regional Office, GPCB was done on 23.03.2022 for Main port and APSEZL has submitted the reply report vide letter dated 05.04.2022. Details of the same were submitted along with compliance report for the period Apr'22 to Sep'22. No site visit carried out by SPCB during compliance period.</p>			
vi	There will be no development in the area restricted by the High court of Gujarat. APSEZ shall abide by the outcome of the PIL 12 of 2011 and other relevant cases.	<p>Complied</p> <p>The order passed by Hon' ble high court in context of PIL 12 of 2011 vide dated 10<sup>th</sup> Nov 2011. Subject PIL has been disposed off by Hon'ble High Court vide their order dated 17.04.2015 and now there is no restriction on development in the subject area. The order reads as <i>"In view of the aforesaid discussion, we do not find any merit in this writ petition. This writ petition fails and is accordingly dismissed. No order as to cost."</i> Copy of the order was submitted along with half yearly EC Compliance report for</p>			

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024
		<p>the period Apr'18 to Sep'18.</p> <p>Considering the above status and in line to submission of compliance of all the directions under this order, this condition is closed.</p>
vii	<p>APSEZ will submit specific action plan to protect the livelihood of fishermen along with budget.</p>	<p>Complied.</p> <p>Adani Foundation (AF) is the CSR arm of the Adani Group actively working for upliftment of the communities in the surroundings of various project sites of Adani Group. AF has prepared a specific action plan to protect livelihood of fishermen at Mundra.</p> <p>Various initiatives, as stated below are discussed in detail in the report namely "Silent Transformation of Fisher folk at Mundra". Said report also includes the information related to the planned expenses to the tune of approx. 13.5 Cr. INR for various initiatives for the next five years (2016 – 2021) (Budget details provided in Page No. 68 of report). Copy of the same is already submitted to MoEF&amp;CC vide our letter dated 10.09.2016.</p> <p>Till, Sep'24 approx. 15.07 Cr. INR, has already been invested fisherfolk livelihood. Further, details regarding the expenditure incurred against the commitment are attached as <b>Annexure - 9</b>.</p> <p>APSEZ has been carried out various initiatives specific to the Fisherfolk community which includes:</p> <ul style="list-style-type: none"> <li>• <b>Vidya Deep Yojana</b> Developing school preparedness programme and empowering balwadis at fisherfolk settlement Under this scheme, 4 balwadis at different settlement has been constructed. This programme include nutrition food, hygiene, awareness of health, cleanliness, discipline, regularity and development of basic age appropriate conception</li> <li>• <b>Youth employment:</b> Our main objective is to offer sustainable employment opportunities to the local fishing community in APSEZ Mundra. We bridge the gap between industries and Fisherfolk youth by facilitating job placements.</li> <li>• Currently, we have successfully engaged a total of 12 Fisherfolk youth in this endeavor.</li> <li>• <b>Vidya Sahay Yojana – Scholarship Support</b> All basic education supportive facilities have been created to promote education in fisher folk community. We are deeply committed to empowering the future of fisherfolk</li> </ul>



**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024
		<p>communities through education. To this end, we provide scholarship support to 30 deserving students, covering their actual school fees. In our unwavering commitment to promoting gender equality and advancing girl child education, we extend 100% fee support to female candidates and 80% to male candidates."</p> <ul style="list-style-type: none"> <li>• <b>Adani Vidya Mandir</b> Children of the family with the income of salary less than 1.5 lac/annum are admitted. School focusses on nutrition food, uniform and other services to the children for free.</li> <li>• <b>Fisherman Approach in SEZ</b> After due consultative process, APSEZ has provided 7 fishermen access roads for to approach to the sea for fishing activity.</li> <li>• <b>Machhimar Arogya Yojana</b> The Fisher folk communities are disposed to several water and air abided diseased due to exposure to unhygienic working conditions. Frequently Special Health care Camps are organized at Vasahat. Our Mobile health care unit van regularly visit fisher folk settlements.</li> <li>• <b>Machhimar Kaushalya Vardhan Yojana</b> Based on need assessment a number of trades were introduced through the Adani Skill Development Centre in Mundra, where in fisher folk youth could join and get a number of technical and non-technical training</li> <li>• <b>Machhimar Sadhan Sahay Yojana</b> Fishing material support was provided by AF at Mundra as per the requests of Pagadiya fishermen. According to their needs, fishing nets, ropes, buoys, ice boxes, crates, weighing scales, anchors, solar lights etc., were provided.</li> <li>• <b>Machhimar Awas Yojana</b> Shelters, equipped with basic facilities of a toilet. and pure drinking water have been constructed for living while fishing and to provide a healthy and hygienic residence.</li> <li>• <b>Machhimar Shudhh Jal Yojana</b> This scheme of providing potable water has helped in reducing the drudgery of women and contributed largely towards general wellbeing.</li> <li>• <b>Sughad Yojana</b> Toilets for men and women are constructed at all three Vasahats. Infrastructure was accompanied with continuous awareness campaign on hygiene sanitation and use of toilets in particular.</li> <li>• <b>Machhimar Akshay kiran Yojana</b> Solar street lights at each settlement have been installed. For fish landing shed and school extension room have been fitted with solar invertor allowing late evening video shows for awareness and fish sorting work at ease.</li> <li>• <b>Machhimar Suraksha Yojana</b> Distance Alarm Transmission System – DATS’ project was introduced in order to promote safety of the fishermen. Forced to be at sea to earn their livelihood puts the lives of many fishermen at risk.</li> <li>• <b>Machhimar Ajivika Uparjan Yojana</b> Mangrove plantation in the area as means of alternate income generating activity for the fisher folk community during the non-fishing months. During the non-fishing months, the fishermen under usual circumstances were benefited by other alternate economic activity to sustain them.</li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024				
		<ul style="list-style-type: none"> <li>• <b>Bandar Svachhata Yojana</b> Waste bins have been provided for proper collection and segregation of waste.</li> </ul> <p>Further, APSEZ is actively working with local community around the project area and provides required support for their livelihood and other concerns through the CSR arm – Adani Foundation. Adani Foundation is working in main five persuasions as below.</p> <ul style="list-style-type: none"> <li>❖ Education</li> <li>❖ Community Health</li> <li>❖ Rural Infrastructure</li> <li>❖ Sustainability Livelihood</li> <li>❖ Skill Development</li> </ul> <p>Brief information about activities in the main five persuasions is mentioned below. Activities carried out for the same are summarized as below.</p> <table border="1" data-bbox="548 1087 1453 1911"> <thead> <tr> <th data-bbox="548 1087 755 1129">Area</th> <th data-bbox="755 1087 1453 1129">Activity</th> </tr> </thead> <tbody> <tr> <td data-bbox="548 1129 755 1911">Community Health</td> <td data-bbox="755 1129 1453 1911"> <ul style="list-style-type: none"> <li>• Mobile Health Care Units and Rural Clinics</li> <li>• 07 Rural Clinics</li> <li>• 05 villages of Mundra &amp; 02 village Mandvi block has benefited by rural clinic service.</li> <li>• Total 5519 Patients Benefitted FY 24-25 till Sep'24 (direct &amp; indirect) by Mobile van and rural clinic.</li> <li>• 2 financially challenged patients has been supported with Dialysis treatment at 22 Times which added day in their Life.</li> <li>• Provided 27,355 medical health services.</li> <li>❖ <b>Burn &amp; Intensive Care Unit</b> <ul style="list-style-type: none"> <li>• On August 11 (Adani Foundation Day), the foundation stone for the Burn Ward at GK General Hospital, Bhuj, was laid.</li> <li>• This center will provide comprehensive care for burn victims, from emergency treatment to long-term rehabilitation. It will benefit 22 lakh population of Kutch.</li> </ul> </li> <li>❖ <b>Eye Vision Care:</b> <ul style="list-style-type: none"> <li>• To address these challenges, the Adani Foundation, in collaboration with Vision Spring, is launching a holistic eye care initiative for the community.</li> </ul> </li> </ul> </td> </tr> </tbody> </table>	Area	Activity	Community Health	<ul style="list-style-type: none"> <li>• Mobile Health Care Units and Rural Clinics</li> <li>• 07 Rural Clinics</li> <li>• 05 villages of Mundra &amp; 02 village Mandvi block has benefited by rural clinic service.</li> <li>• Total 5519 Patients Benefitted FY 24-25 till Sep'24 (direct &amp; indirect) by Mobile van and rural clinic.</li> <li>• 2 financially challenged patients has been supported with Dialysis treatment at 22 Times which added day in their Life.</li> <li>• Provided 27,355 medical health services.</li> <li>❖ <b>Burn &amp; Intensive Care Unit</b> <ul style="list-style-type: none"> <li>• On August 11 (Adani Foundation Day), the foundation stone for the Burn Ward at GK General Hospital, Bhuj, was laid.</li> <li>• This center will provide comprehensive care for burn victims, from emergency treatment to long-term rehabilitation. It will benefit 22 lakh population of Kutch.</li> </ul> </li> <li>❖ <b>Eye Vision Care:</b> <ul style="list-style-type: none"> <li>• To address these challenges, the Adani Foundation, in collaboration with Vision Spring, is launching a holistic eye care initiative for the community.</li> </ul> </li> </ul>
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		<ul style="list-style-type: none"> <li>❖ <b>This initiative focuses on:</b> <ul style="list-style-type: none"> <li>• Student: See to Learn, SHG Women: See to Earn, Driver of APSEZ: See to be Safe</li> <li>• Total Screening 7476 (Students) + 3958 (Drivers) = 11434</li> </ul> </li> <li>❖ <b>Vision Aids:</b> 621 (Students) + 1110 (Drivers) = 1731</li> <li>❖ <b>Cataract Screening:</b> 366 nos. of peoples</li> <li>❖ <b>Cataract Surgery:</b> 18 nos. of peoples</li> </ul> <p><b>Medical Services Data April to Sep - 2024:</b></p> <ul style="list-style-type: none"> <li>• Ayushman Card: 243 beneficiaries</li> <li>• Eye Vision Care; 7740 beneficiaries</li> <li>• Driver Health Check-up: 2423 beneficiary</li> <li>• Blood Donation Camp: 2902 beneficiary</li> <li>• Specialty Health Camp: 2578 beneficiary</li> <li>• General Health Camp: 1074 beneficiary</li> <li>• Rural Clinic: 5519 beneficiaries</li> <li>• Mobile Health Care Unit: 4348 beneficiaries</li> <li>• Medical Supports: 1071 beneficiary</li> </ul> <ul style="list-style-type: none"> <li>• <b>Dialysis Support:</b> During this year, 2 patients were supported for regular dialysis with 22 Times which added day in their Life.</li> <li>• 1094 –Economically Challenged patients have been supported for operation, OPD, IPD, Medicines and lab-test.</li> </ul> <p><b>Animal Husbandry:</b></p> <ul style="list-style-type: none"> <li>• Fodder support to 25 villages, benefiting 15005 cattle, Dry Fodder Support - 10,90,875 Kg &amp; Green Fodder Support - 27,64,920 Kg</li> <li>• Launched a vaccination camp for 20,000 cattle, in collaboration with the Animal Health Department of Bhuj. 6,200+ cattle have been successfully vaccinated,</li> </ul>
	Sustainable Livelihood – Fisher folk, Agriculture & Women	<ul style="list-style-type: none"> <li>❖ <b>"CHETNA"</b> - initiative with gender diversity           <ul style="list-style-type: none"> <li>• Adani Foundation, in collaboration with Unnati Portal and Adani Solar, launched an initiative to provide equal opportunities for employment and self-development to women from Kutch.</li> <li>• Till Now 167 Female Joined Adani Solar @Pan India, 154 are from Kutch (92.21%)</li> </ul> </li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024
		<p>❖ <b>Saheli Groups:</b> Form 82 Self Help Groups in coordination with National Rural Livelihood Mission (850+ Members). 16 SHG are on pathways of self-reliance their total Corpus Rs. 32,27,100 in 6 months.</p> <p>❖ 3 women SHGs from Adani Foundation Mundra participated in the prestigious Sathwaro Mela in Ahmedabad, showcasing Mud Art, Bead Art, and Soof Art, along with two artisans specializing in Rabari and Doorri work, achieving an impressive turnover of Rs.1,30,000/-</p> <p><b>Empowering Fisherfolk Community:</b></p> <ul style="list-style-type: none"> <li>• Education Support: Vehicle transportation facilities to 86 fisherfolk students, Education kits Support to 77 students, Scholarship support of Rs. 3,58,765 to 34 students.</li> <li>• Job Support: Facilitated job placements for 75 fisherfolk as RTG operators, in the HR department, professional painting roles and as supervisors in APSEZ companies.</li> </ul> <p><b>Animal Husbandry:</b></p> <ul style="list-style-type: none"> <li>• Fodder support to 25 villages, benefiting 15005 cattle, Dry Fodder Support - 10,90,875 Kg &amp; Green Fodder Support - 27,64,920 Kg</li> <li>• Launched a vaccination camp for 20,000 cattle, in collaboration with the Animal Health Department of Bhuj. 6,200+ cattle have been successfully vaccinated,</li> </ul> <p><b><u>Last Year conducted activities:</u></b></p> <p><b><u>Overall Persistent efforts for Fisherman development:</u></b></p> <ul style="list-style-type: none"> <li>• 598 Education Kit Support</li> <li>• 273 Fisherman Shelter Support</li> <li>• 1,247 Vehicle transportation support of Mundra and Mandvi taluka</li> <li>• 106 Cycle Support to high school going students.</li> <li>• 613 Scholarship Support</li> <li>• 419 Youth Employment</li> <li>• 195 Linkages with Fisheries Scheme</li> </ul>

Status of the conditions stipulated in Environment and CRZ Clearance

Sr. No.	Condition	Compliance Status as on 30.09.2024
		<ul style="list-style-type: none"> <li>• 3,534 Ramaotsav Community Engagement</li> <li>• 56,523 Man days Mangroves Plantation</li> </ul> <p><b><u>Empowering Fisherfolk Communities through Education:</u></b></p> <ul style="list-style-type: none"> <li>• <b>Vehicle Transportation Facilities:</b> 146 Students supported Mundra Taluka and 58 Students supported at Mandvi Taluka during the compliance period.</li> <li>• <b>Education Kits Support:</b> Education Kits including notebooks, guides, and bags, to fisherfolk students studying in 9th to 12th standard to enhance their learning experience (57 nos. students benefitted).</li> <li>• <b>Educational Awareness Sessions:</b> Through targeted awareness sessions in Fisherfolk Vasahats, we promote the transformative power of education, with a particular focus on advancing girl-child education. (487 Students motivated for high school Education).</li> <li>• <b>Scholarship Support:</b> Provide scholarship support to 31 deserving students, covering their higher secondary school fees. Emphasizing gender equality, we offer 100% fee support to female candidates and 80% to male candidates.</li> <li>• <b>Cycle Support:</b> Overcoming transportation obstacles, our cycle support initiative enables six 9<sup>th</sup> standard fisherfolk students from Juna Bandar to continue their education with ease.</li> <li>• <b>Assisting During Emergencies:</b> Fisherfolk Home were significantly damaged by the Biporjoy Cyclone. In response to that we provided 2696 cement sheets to 336 fisherfolk households of Juna Bandar, Luni, and Randh Bandar to support their recovery. (336 Fisherfolk house benefitted)</li> <li>• <b>Fostering Youth Employment:</b> At APSEZ Mundra, our mission revolves around providing sustainable employment opportunities for the local fishing community. We serve as a bridge between industries and Fisherfolk youth, facilitating job placements to enhance livelihoods. This year, we have successfully engaged 115+ Fisherfolk youth, paving the way for a brighter future. (115+ Fisherfolk youth employed)</li> <li>• <b>Strengthening Fisherfolk women:</b> Through</li> </ul>

Status of the conditions stipulated in Environment and CRZ Clearance

Sr. No.	Condition	Compliance Status as on 30.09.2024
		<p>comprehensive health and hygiene initiatives, we empower Fisherfolk women. Our programs include family planning resources, menstrual hygiene workshops, nutrition advocacy, and health awareness sessions covering vaccinations, clean water access, and mental health support. (449 Women benefited)</p> <ul style="list-style-type: none"> <li>• <b>Potable Water Distribution:</b> Providing potable water facilities to 9 Fisherfolk Vasahats daily, either through water tankers or by establishing linkages with the nearest Gram Panchayat. This initiative benefits over 5000 Fisherfolk, significantly improving their health and productivity. (5000+ Population benefited).</li> </ul> <p><b>Sustainable Livelihood - Agriculture:</b> During compliance period This year, the Adani Foundation continued its strong commitment to advancing natural farming in Mundra. Through various initiatives and partnerships, we provided crucial support to local farmers, empowering them with knowledge and resources to transition to sustainable practices.</p> <ul style="list-style-type: none"> <li>• 2200+ Farmers educated in natural farming.</li> <li>• 800+ Farmers embracing natural farming methods.</li> <li>• 200 Farmers got financial assistance of Rs. 10,000</li> <li>• 3 District level exposure visit</li> <li>• ₹ 36.7 lakh Business done by our benefited Farmers.</li> </ul> <p><b>Promoting Natural Farming:</b></p> <ul style="list-style-type: none"> <li>• <b>Training:</b> Conducted training for 1250 farmers in 16 villages, enlightening them about the harmful effects of chemical fertilizers. Demonstrated how to produce organic fertilizer using household products, emphasizing its benefits and cost-effectiveness. After adopting it, they witnessed its positive effects on their fields.</li> <li>• <b>Kitchen Garden Kit:</b> We have supported vegetable kitchen garden kits to 500 farmers with the aim to enable them to grow fresh and nutritious, chemical-free vegetables. This will enhance their food security and promote self-</li> </ul>

Status of the conditions stipulated in Environment and CRZ Clearance

Sr. No.	Condition	Compliance Status as on 30.09.2024
		<p>reliance.</p> <ul style="list-style-type: none"> <li>• <b>Empowering Farmers:</b> This year, amidst the aftermath of the cyclone, we stood by our farmers and held dedicated meetings with KVK, KCS, and DRC to restore the fallen date trees. Collaboratively, provided JCB, technical support, organic fertilizer etc. Successfully restored 615 trees. Each Date trees is projected to yield approximately Rs. 25,000, Total Yield in Next Season:- Rs.1.53 Cr.</li> <li>• <b>Financial Assistance:</b> Extend financial support to 200 farmers, each receiving Rs. 10,000, a transaction gracefully facilitated by Mr. R. N. Parmar, virtually transferring funds to their bank accounts, funded by Adani Petrochemicals. This fund will help farmers in planting a total of 53,136 fruit-bearing plants.</li> </ul> <p><b><u>Raj Shakti Prakrutik Kheti Sahkari Mandali:</u></b></p> <ul style="list-style-type: none"> <li>• <b>Appreciation by Governor:</b> Governor of Gujarat, Shree Acharya Devvratji, encouraged 25 of our farmers practicing natural farming at the Krushi and Dairy Expo event in Bhuj.</li> <li>• <b>Exposure Visits Certification by GOPCA:</b> Our farmers embarked on three eye-opening exposure visits to Gautech-2023,</li> <li>• <b>Certification by GOPCA:</b> We have successfully certified 28 farmers under the Gujarat Organic Products and Certification Agency (GOPCA).</li> </ul> <p><b><u>Kutch Kalptaru FPO (KKPC) and Prakrutik Mandli</u></b></p> <ul style="list-style-type: none"> <li>• To promote horticulture, the Kutch Kalptaru FPO (KKPC) was established in 2020 by farmers from Mundra Block to address various challenges they faced. With an initial 350 shares held by 280 shareholders, the company is now expanding to include up to 5000 farmers and 537 registered shareholders. (800 Farmers benefited and ₹ 33.67 lacs Turn over)</li> <li>• 19 nos. of Market Linkage for supporting to Green carnival at Samudra Township &amp; Shantivan colony Now 302+ farmers are collaborated with Mandli. Total Green Carnivals 37, Total Sell 8,623 kg and Revenue generated ₹ 30184805. by connecting directly with</li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024
		<p>consumers, they've seen a remarkable 35% increase in their income.</p> <ul style="list-style-type: none"> <li>Adani Foundation has also provided 14.38 lacs kg Dry Fodder and 45.85 lacs kg Green fodder in 31 villages of Mundra and Anjar Block to support the resource dependent villagers, to avoid their dependency on mangroves. The expenditure for fodder supporting activities was approx. 305.55 Lacs during FY 2023-24.</li> <li>Adani Foundation provides Good Quality dry and green fodder to 24 Villages. Project is covering total 15005 Cattels / 2070 farmers and hence enhancing cattle productivity during FY 2023-24.</li> <li><b>Grass Land development:</b> AF converted 18 acres of denuded village common pastureland gauchar into fertile and productive grassland in Zarpara, Siracha, Gundal , Kukadsar village to transform into Fodder Sustain village during FY 2023-24.</li> </ul> <p><b>Women Empowerment:</b></p> <ul style="list-style-type: none"> <li><b>Self Help Groups (SHGs):</b> Established 82 self-help groups in various rural and urban areas to provide financial and social support to women We provided training and capacity building workshops to members of these SHGs to help them develop income generating activities and improve their livelihoods Through this initiative, we have empowered over 850 women to become self-reliant with Savings of more than Rs 35 Lacs.</li> </ul> <p>❖ <b>Making SHG Self Reliant:</b></p> <ul style="list-style-type: none"> <li>16 SHG are on pathways of self-reliance.</li> <li>Various handicraft, dry and fresh food making, stitching, tie and die etc.</li> <li>175+ women - Monthly average income @ 7000 of each member over Month.</li> </ul> <p>❖ <b>Job Sourcing – Govt:</b></p> <ul style="list-style-type: none"> <li>11 Women supported for application and process of Gram Rakshak Dal, Bank Sakhi, Bima Sakhi and Professional Resouce Person.</li> <li>Average income 4200 Per Month.</li> </ul> <p>❖ <b>Job Sourcing – Private:</b></p>



**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024	
			<ul style="list-style-type: none"> <li>• Coordination for Job by Unnati Portal with Adani Group company companies, Britania, B Medical and Emphazer company.</li> <li>• 398 Women supported till date for job sourcing of more than 18 villages.</li> <li>• Average income 10200 Per Month.</li> <li>❖ <b>Social Empowerment:</b> <ul style="list-style-type: none"> <li>• 2 Livelihood Enhancement Training through RSETI.</li> <li>• Financial support for business set up.</li> <li>• Legal rights and domestic violence workshops.</li> <li>• Family counselling for Job sourcing.</li> <li>• During FY2023-24 Approx. INR 122.32 lakh were spent for Fisherfolk Amenities work in different core areas.</li> <li>• Till FY 2023-24 Adani Foundation has done total expenditure of INR 1460.50 lakh for Fisherfolk Amenities work in different core areas.</li> <li>• Skill Development and Income Generation – Adani Foundation is working with 82 Self-help group and supporting to develop entrepreneur skills to become self-reliant, sourcing more than 850 women to absorb in various job.</li> </ul> </li> </ul>
		Education	<p><b>Key programmatic accomplishments:</b></p> <ul style="list-style-type: none"> <li>• 69 Primary schools (10452 Students)</li> <li>• 8 High schools (1211 Students)</li> <li>• 12000+ Students</li> <li>• 2371 Progressive learner</li> <li>• 3421 IT on Wheels</li> <li>• 2449 Adani competitive coaching center</li> <li>• 250 Adani Evening Education center</li> <li>• Library Activity: 45000+ Books issued. 300+ Oasis workshop arranged to increase reading habits of students.</li> <li>• Mothers Meet: Mothers’ meetings conducted every second Saturday in Utthan schools. 10,000+ mothers have participated.</li> <li>• Vedic maths and Abacus</li> </ul>
		Rural Infrastructure &	Adani foundation designed and build various structure and provide service in the Health, Education, agriculture and sustainable livelihood

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024	
		Environmental Sustainability	<p>area.</p> <ul style="list-style-type: none"> <li>❖ Renovation of Zarpaar High School - benefit 450+ students/annually</li> <li>❖ Construction of Madhav seva trust School at Zararpa - benefit 250+ students/annually</li> <li>❖ Renovation of AVMB school - benefit 640+ students/annually</li> <li>❖ <b>Vruksh Se Vikas – Massive Drive</b> <ul style="list-style-type: none"> <li>• In the 6 months we establish 3 Adani Van, planting 22,460 trees in 9.5 acres area in N khakhar, Borana, and Dhruh village. Till Date 8 Adani Van 75,078 Trees @28 acres</li> <li>• Prakrutik Rath: Empowering Communities Through Green Initiatives 7,136 saplings distributed and planted in 6 months.</li> <li>• <b>Total 1.79 Lac tree plantation done till date.</b></li> </ul> </li> <li>❖ <b>Mangrove Nursery Development with 10,000 seeds.</b></li> <li>❖ <b>Costal Clean up day:</b> At Kashivishvnath Beach, Mandvi, 200+ students and 80 Utthan Sahayaks cleaned a 1 km stretch, collecting significant plastic waste as part of a coastal cleanup and awareness drive.</li> <li>❖ <b>Green Schools:</b> Eco-clubs in 77 Utthan Schools and 12000+ students participate in “No Plastic” activities.</li> </ul> <p><b>Last Year Completed Activities/Projects:</b></p> <p><b>Water Conservation Projects:</b></p> <p><b>Swajal Project:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Aim:</b> The Foundation’s Water Conservation program, SWAJAL, is aimed at addressing the alarming depletion of groundwater levels and reduction in water sources in various parts of Kutch district.</li> <li>➤ <b>Water Security Plan:</b> Due to arid climatic characters of the Kutch region, it is essential to plan for water security drinking and livelihood</li> </ul>

Status of the conditions stipulated in Environment and CRZ Clearance

Sr. No.	Condition	Compliance Status as on 30.09.2024																									
			<p>purposes. Considering weather condition, rainfall characters, geohydrological condition and water demand, water security plan has been prepared for the Seven villages.</p> <table border="1" data-bbox="756 600 1451 995"> <thead> <tr> <th data-bbox="756 600 894 726">Block Name</th> <th data-bbox="894 600 1097 726">Water conservation structure</th> <th data-bbox="1097 600 1260 726">Total no. of Structure</th> <th data-bbox="1260 600 1451 726">Total Capacity Created (CUM)</th> </tr> </thead> <tbody> <tr> <td data-bbox="756 726 894 764">Mundra</td> <td data-bbox="894 726 1097 764">Check Dam</td> <td data-bbox="1097 726 1260 764">23</td> <td data-bbox="1260 726 1451 764">6,07,332.80</td> </tr> <tr> <td data-bbox="756 764 894 831"></td> <td data-bbox="894 764 1097 831">Pond Deepening</td> <td data-bbox="1097 764 1260 831">66</td> <td data-bbox="1260 764 1451 831">1,89,121.08</td> </tr> <tr> <td data-bbox="756 831 894 869"></td> <td data-bbox="894 831 1097 869">RRWHS</td> <td data-bbox="1097 831 1260 869">275</td> <td data-bbox="1260 831 1451 869">2750</td> </tr> <tr> <td data-bbox="756 869 894 936"></td> <td data-bbox="894 869 1097 936">Recharge Borewell</td> <td data-bbox="1097 869 1260 936">209</td> <td data-bbox="1260 869 1451 936">-</td> </tr> <tr> <td data-bbox="756 936 894 995"></td> <td data-bbox="894 936 1097 995">Percolation Well</td> <td data-bbox="1097 936 1260 995">24</td> <td data-bbox="1260 936 1451 995">-</td> </tr> </tbody> </table> <p data-bbox="756 1031 987 1058"><b>Soil Conservation:</b></p> <ul data-bbox="784 1062 1445 1696" style="list-style-type: none"> <li>• <b>1250 Farmers Awareness Sessions at Village Level:</b> Spreading awareness on natural farming benefits and address their concerns.</li> <li>• <b>7 exposure of Hands-On Training &amp; Exposures:</b> Arranged Workshop and training to emphasizing on real-world techniques.</li> <li>• <b>857 Farmers link with Government Scheme:</b> facilitation of govt. Cow Nurturing scheme to promote eco- friendly farming practices.</li> <li>• <b>258 Gobardhan Bio-gas Support:</b> Link with Gov Gobar Dhan Biogas Unit Nutrient-rich slurry serves as an essential organic fertilizer for natural farming.</li> <li>• <b>35 Farmers Natural Farming Certification</b> Process to obtain natural farming certification through the GOPCA for the 35 Farmers who are Members of Raj shakti Sahakrai Mandali.</li> <li>• <b>Rs.9.88 Lacs RG Marketing Assistance:</b> Provide platforms and resources ensuring fair prices and broader consumer reach.</li> </ul> <p data-bbox="537 1707 756 1923">Skill Development</p> <p data-bbox="756 1707 1468 1923"><b>Empowering Youth: Impact of ASDC in Mundra and Bhuj Center</b> ASDC has significantly enhanced employability in Mundra and Mandvi. Training programs in digital literacy, RTG crane operation, beauty therapy, and advanced Excel have provided practical skills and certifications. Real-time exposure along with the</p>	Block Name	Water conservation structure	Total no. of Structure	Total Capacity Created (CUM)	Mundra	Check Dam	23	6,07,332.80		Pond Deepening	66	1,89,121.08		RRWHS	275	2750		Recharge Borewell	209	-		Percolation Well	24	-
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**Status of the conditions stipulated in Environment and CRZ Clearance**

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		<p>Entrepreneurship Development Program (EDP), has further empowered youth. Successful placements have resulted in well-paying jobs, contributing to regional economic growth. Overall, ASDC's initiatives have transformed the lives of many individuals, fostering both personal and professional development.</p> <p><b><u>ASDC Mundra Center Activities &amp; Achievements:</u></b></p> <ul style="list-style-type: none"> <li>• <b>Women Empowerment through Skill Training:</b> Provided Mud work training to 180 women in Mundra taluka villages supported by MPL.</li> <li>• <b>RTG Crane Operator Training:</b> Collaborated with APSEZ HR Team to train 79 students.</li> <li>• <b>Dori Work and Hand Embroidery Training:</b> Benefited 90 women in various Mundra villages supported by MPL.</li> <li>• <b>Health Awareness and Career Sessions:</b> 108 Ambulance Department enlightened GDA trainees at Adani Institute of Medical Sciences. Guest session on career advancement led by Mr. Kapil Goswami.</li> <li>• <b>Exposure Visit for Women:</b> Women trained in Mud Work, Dori Work, and Hand Embroidery showcased their skills during a visit by foreign delegates to the Solar Plant.</li> <li>• <b>Women's Related Training Seminar:</b> Held at Matr Vandana College, Bidada, Mandvi.</li> </ul> <p><b><u>ASDC Bhuj Center Activities &amp; Achievements:</u></b></p> <ul style="list-style-type: none"> <li>• <b>Commendation from Shree Jeet Adani:</b> Received appreciation for supporting the Divyang job fair.</li> <li>• <b>Employee Development Initiatives:</b> Conducted Advanced Excel training for 18 Sumitomo India Ltd employees.</li> <li>• <b>Entrepreneurship Development Program:</b> Organized a comprehensive 12- day program with 60 diverse candidates.</li> <li>• <b>New Trainee Orientation:</b> Conducted sessions about SAKSHAM center and LMS registration at the Bhuj Centre.</li> <li>• <b>Civil Defense Training (5 days):</b> Covered essential topics including Disaster Management, First Aid, 181 Mahila Helpline, 108 Emergency Services, and Fire Safety.</li> <li>• <b>F&amp;B &amp; Housekeeping Batch Inauguration:</b> 92 students trained to enhance employability.</li> <li>• <b>Indo-Euro Project Seminar:</b> Arranged at various Nursing Colleges in Kutch District. Focused on German Language training and job placements.</li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024	
			<ul style="list-style-type: none"> <li>• <b>Crucial Meeting with ISAR &amp; UNICEF:</b> Discussed future skill development challenges and transgender equality on 9th December 2023.</li> </ul>
viii	APSEZ will voluntarily return the grazing land, if any, in their possession.	Point noted.	<p>All lands are acquired through proper procedure prescribed by State Government. However, APSEZ has agreed for voluntarily giving land back to Zarpara village for the purpose of Gauchar. Land has been identified in the presence and confirmation of Gram Panchayat. Necessary procedure has been initiated by APSEZ vide its letter dated 09<sup>th</sup> Aug 2012 with concerned revenue authority with respect to surrender of gauchar land at village Zarpara. Same has been taken up by revenue department for necessary procedure of transfer and is under process. Details of the same were submitted along with half yearly compliance report for the period Apr'19 to Sep'19.</p> <p>As per recommendations given in Joint Review Committee visit report dated 1<sup>st</sup> December 2021, APSEZ has approached M/s. Indian Grassland and Fodder Research Institute (IGFRI), Jhansi to get the consultancy work for enhancing / upscaling the forage production in Gauchar Land at Zarpara in 400 acres. Proposal received from IGFRI was submitted along with half yearly compliance report for the period Apr'22 to Sep'22.</p> <p>The officials of M/s. Indian Grassland and Fodder Research Institute (IGFRI), Jhansi have visited at proposed Gauchar Land development site at Zarpara village dated 8<sup>th</sup> to 10<sup>th</sup> May 2023 for site survey work and according guidance &amp; suggestion of IGFRI, APSEZ will start the work for developing the Gauchar Land. IGFRI has provided site visit report with technical recommendation. Final Report with conclusion /</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024
		<p>recommendations from IGFR and compliance report of its recommendation were submitted along with EC compliance report for the period Apr'23 to Sep'24.</p> <p>Current status of implementation report of IGFR recommendations and action taken from APSEZ is attached as <b>Annexure - 10.</b></p>
ix	<p>A regional strategic impact assessment report with a special focus on Mundra region will also be prepared. The cost towards these studies will also be borne by PP.</p> <p>In the subject matter of thermal power plant, the proposed regional strategic Impact assessment analysis will take In to account salinity aspect along with its potential environmental Impact to suggest future corrective actions as well as the guiding tool on extension and addition of the capacities.</p>	<p>Complied</p> <p>This reply covers direction no ix and x.</p> <ol style="list-style-type: none"> <li>1. APSEZ vide its letter dtd. 24<sup>th</sup> Feb 2014 has submitted draft ToR for preparation of CIA report to GCZMA for their approval.</li> <li>2. GCZMA vide its letter dtd. 19<sup>th</sup> Dec 2014, has approved ToR for CIA.</li> <li>3. Based on the ToR finalized by GCZMA (as per the instructions of MoEF&amp;CC) for carrying out regional impact assessment study, APSEZ awarded the work to NABET accredited consultant M/s. Cholamandalam MS Risk Services Ltd. to carry out the studies, vide SO dtd 10<sup>th</sup> Feb 2016 as stated in these directions.</li> <li>4. Primary baseline environmental monitoring data collection during March – June 2016 and published secondary data on various environmental attributes. have been considered for the study.</li> <li>5. The study has been concluded and the final report was submitted to GCZMA and MoEF&amp;CC for their consideration vide our letter dated 30.04.2018.</li> <li>6. Reminder letter has been submitted to GCZMA for their comments and consideration vide letter dated 4<sup>th</sup> Jan 2019.</li> </ol> <p>Details of above chronology were submitted along with half yearly compliance report for the period Apr'19 to Sep'19.</p> <p>Total cost of the study is approx. INR 1.3 cr. which is financed by APSEZ.</p> <p>The stated study was carried out in following 3 phases.</p> <ul style="list-style-type: none"> <li>• Baseline data collection and review of the past EIA reports and clearances issued to APSEZ.</li> <li>• Mathematical modelling and other technical studies for identification of potential impacts (for the year 2030) of the approved and existing project activities.</li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on 30.09.2024
		<ul style="list-style-type: none"> <li>• Development of macro level EMP for the phase wise implementation of actionable points.</li> </ul> <p>As part of the study, following modelling exercises / technical studies have been carried out to study the impacts on all environmental attributes:</p> <ul style="list-style-type: none"> <li>• Ambient air quality</li> <li>• Marine (Hydrodynamic, Thermal &amp; Salinity dispersion, Sediment transport)</li> <li>• Noise level</li> <li>• Traffic assessment</li> <li>• Oil spill contingency plan</li> <li>• Water resource and salinity ingress</li> <li>• Land Use / Land Cover</li> <li>• Socioeconomic, Regional infrastructure</li> <li>• Waste management</li> <li>• Ecology, Bio diversity and Fisheries</li> <li>• Shoreline change assessment</li> </ul> <p>Preparation of these reports require extensive use of modelling software and study of the available information / research reports to assess the impacts on individual attribute of environment. Based on the modelling outcomes and findings of the technical studies, a macro level environment management plan is prepared.</p> <p>Inline to the present stage of the project, APSEZ is already complying, as per Environment Management Plan and further recommendations, applicable to APSEZ as mentioned in the EMP, wrt Traffic Management Plan, Ground water quality management, Salinity ingress programme, Air and Noise quality Management, Surface and Marine water quality management, Ecology and Biodiversity Management, Solid &amp; Hazardous waste management, Socio-economic Management and Shoreline Management, will be implemented in phase wise manner as per the progress of development within the boundary limits of APSEZ.</p> <p>The final CIA Report was prepared inline to the ToR by Chola MS and the same was submitted to the GCZMA on 30.04.2018. Details of the same were submitted along with half yearly EC Compliance report for the period Apr'18 to Sep'18. Presentation on the findings of the report was made to GCZMA committee on</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status as on <b>30.09.2024</b>
		<p>4<sup>th</sup> October 2019 and after detailed discussion, authority has decided to constitute committee to discuss the details of the report further.</p> <p>Reminder Letter vide dated 07.09.2020 &amp; 10.03.2021 submitted to the GCZMA, Gandhinagar for further directives to present the findings of the CIA report in detail. Details were submitted as a part of half yearly EC compliance report for the period Oct'20 to Mar'21.</p> <p>Presentation done before GCZMA on 31.10.2021 and 16.02.2021 to discuss proposed EMP of CIA study in detail and way forward.</p> <p>GCZMA, Gandhinagar issued a letter to co-ordinate with various departments in the matter of CIA with Gujarat Pollution Control Board as Nodal Agency vide dated 12th July, 2022. APSEZ submitted the letter to GPCB for detailed deliberation and suitable action / way forward vide letter dated 20th July, 2022. The copy of acknowledgement was submitted in the last compliance period Apr'22 to Sep'22.</p> <p>However, APSEZ is already complying with the Environment Management Plan (applicable to APSEZ) suggested in Cumulative Impact Assessment report. The detailed compliance, applicable to APSEZ is attached as <b>Annexure - 11</b>.</p>



**Annexure - C**  
**Compliance Status of MoEF &**  
**CC Recommendation of the**  
**proposal No.**  
**IA/GJ/NCP/261191/2022**  
**of dated 15<sup>th</sup> July, 2022**

**Status of the conditions stipulated in Environment and CRZ Clearance**

<b>Sr. No.</b>	<b>Condition</b>	<b>Compliance Status as on 31-03-2024</b>
1	CRZ area within the project boundary can be used for carrying out permissible activities either by APSEZ or any Industry through specific permission. However, if activities other than those recommended by the GCZMA earlier is proposed, fresh recommendations need to be obtained.	Point noted and agreed.  APSEZ or any other industry will obtain requisite permissions from regulatory authorities for utilization of CRZ area falls within the APSEZ boundary for carrying out permissible activities in line with CRZ Notification, 2011.
2	Individual industries/APSEZ will obtain CRZ clearance a fresh from concerned authorities to carry out permissible activities within CRZ area.	APSEZ has applied for getting CRZ clearance from concerned authority for utilization of CRZ area within SEZ area for development of 253 MLD Desalination Plant out of approved 300 MLD capacities.
3	All the recommendations stipulated in the Mangrove Conservation Plan to be implemented in totality.	Complied  This reply covers condition no ii, iii, ix, x, xi, xii & xiii in EC compliance report.
4	All other conditions mentioned in the letter No. 10-138/2008-IA.III and dated 15th July 2014 shall remain unchanged	Point noted and agreed.

# **Annexure – 1**

## Report on World Mangroves Day Celebration by Adani Foundation

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**Mundra, July 24-26, 2024** - Adani Foundation organized a three-day celebration for World Mangroves Day, focusing on raising awareness about the conservation and maintenance of mangroves. The Adani Foundation has been actively working towards community support and development, with key areas including health, education, rural infrastructure, and agriculture and animal husbandry. The Adani Foundation has been actively involved in the conservation and restoration of mangroves, recognizing their crucial role in maintaining coastal ecosystems.

### Day 1: Awareness Lecture at Adani Vidya Mandir, Bhadreswar

On July 24, an awareness lecture was conducted by Dr. Mansi Goswami, Biodiversity expert, for the students of Adani Vidya Mandir, Bhadreswar. The lecture aimed to educate the students about the significance of mangroves, their environmental benefits, medicinal properties, and natural resources. Through interactive quizzes and presentations, **more than 50 students** were made aware of the ecological importance of mangroves and their role in maintaining environmental balance.



**Awareness Lecture at Adani Vidhya Mandir- Bhadreswar**

## Day 2: Mangrove Nursery Preparation at Luni Site

On July 25, a nursery for **10,000 mangrove seeds** was established at the Luni site with the active participation of local fishermen. The fishermen were trained in proper planting techniques and the care of mangrove saplings. This initiative aimed to enhance local biodiversity, provide employment opportunities for fishermen, and stabilize coastal areas. The nursery project also served to raise awareness among fishermen about the importance of mangroves and encouraged their active involvement in conservation efforts.



**Mangrove Nursery Preparation and training at Luni Coast**

## Day 3: Workshop on Mangrove Ecosystem

On July 26, a one-day workshop was held at Adani House, involving students from various departments of Kutch University and Government Science College, Mandvi. The workshop aimed to educate students about mangrove ecosystems and conservation strategies. **More than 100 students** were participated in the workshop from different educational institutions.

Key speakers included Dr. Paurav Mehta, Principal of Government Science College, Mandvi, and Dr. Mansi Goswami, Biodiversity Expert at Adani Foundation. Dr. Mehta provided detailed information on the adaptations, characteristics, and

conservation of mangroves, while Dr. Goswami discussed mangrove habitats, their status in India and Gujarat, and their global significance.

The workshop included a quiz competition for students, with prizes awarded to the winners. Additionally, group discussions, project planning, and networking opportunities for future conservation projects were provided. Each student received a certificate of participation.

Through these programs, Adani Foundation - Mundra aimed to foster greater understanding and commitment to mangrove conservation among community members. The foundation has planted mangrove trees over 162 hectares, significantly contributing to marine environmental protection. Such awareness programs by Adani Foundation inspire hope and active participation among various communities, including school children, fishermen, and subject-specific students.

The celebration of World Mangroves Day by Adani Foundation underscores their commitment to environmental conservation and community development, fostering a sustainable future for all.



**Mangrove Day Celebration with Subjective students of Kutch University and Government colleges**





# **Annexure – 2**



# Mundra

Half Yearly update: Apr – Sept 2024

# Utilization status

Rs. in Lakhs

Site name: Mundra

Adani Foundation - Mundra Budget Tracking CSR Budget-AF-Mundra_F.Y.-2024-25											
( Amount in Lakhs)											
Sr No	Particulars	Proposed Budget			Salary & Admin Not Req.NFA	NFA Planned	NFA	PR	PO	Utilization	Percentage
		CAPEX	OPEX	Total							
A.	General Management and Administration	1.30	87.61	88.91	41.12	47.79	47.44	39.77	39.50	40.08	45.08%
B.	Education		45.26	45.26	28.66	16.60	16.04	15.69	11.65	27.43	60.60%
B1	Utthan-Education -Mundra		39.26	39.26	28.66	10.60	10.04	9.10	5.36	22.67	57.74%
B2	Utthan : Fisherfolk		6.00	6.00	-	6.00	6.00	6.59	6.29	4.76	79.29%
C.	Community Health		82.22	82.22	53.37	28.85	28.85	33.71	33.21	44.82	54.51%
D.	Sustainable Livelihood		162.68	162.68	37.68	125.00	125.01	124.25	5.49	43.49	26.74%
E.	Climate Action		10.00	10.00	-	10.00	10.00	9.65	7.50	3.92	39.22%
F.	Community Development		42.85	42.85	9.41	33.44	32.94	32.94	12.80	9.59	22.39%
G	EDM Recommended Projects		100.00	100.00	-	100.00	61.94	52.32	37.59	30.79	30.79%
<b>Total AF CSR Budget :</b>		<b>1.30</b>	<b>530.62</b>	<b>531.92</b>	<b>170.24</b>	<b>361.68</b>	<b>322.21</b>	<b>308.33</b>	<b>147.75</b>	<b>200.13</b>	<b>37.62%</b>
							<b>89.09%</b>	<b>95.69%</b>	<b>47.92%</b>	<b>37.62%</b>	
<b>Fodder Support- 1 Cr +</b>										<b>56.42%</b>	

# Key programmatic accomplishments

## Community Health

Education

Sustainable Livelihoods

Community Infrastructure

Stakeholder engagement

Medical Services Data April to Sep - 2024



# Key programmatic accomplishments

## Community Health

## Education

## Sustainable Livelihoods

## Community Infrastructure

## Stakeholder engagement

### ❖ **Burn & Intensive Care Unit**

- On August 11 (Adani Foundation Day), the foundation stone for the Burn Ward at GK General Hospital, Bhuj, was laid.
- This center will provide comprehensive care for burn victims, from emergency treatment to long-term rehabilitation. **It will benefit 22 lakh population of Kutch..**

### ❖ **Eye Vision Care:**

- To address these challenges, the Adani Foundation, in collaboration with Vision Spring, is launching a holistic eye care initiative for the community.

### ❖ **This initiative focuses on:**

- Student: See to Learn , SHG Women: See to Earn, Driver of APSEZ: See to be Safe

❖ **Total Screening 7476 ( Students) + 3958 ( Drivers) = 11434**

❖ **Vision Aids 621 ( Students) + 1110 ( Drivers) = 1731**

❖ **Cataract Screening 366**

❖ **Cataract Surgery 18**

# Highlights: Community Health



Eye Vision Care



Cataract Surgery



Nutritional kits to 153 children with thalassemia

# Key programmatic accomplishments

## Community Health

## Education

## Sustainable Livelihoods

## Community Infrastructure

## Stakeholder engagement

- 69 Primary schools (10452 Students)
- 8 High schools (1211 Students)
- 12000+ Students
- 2371 Progressive learner
- 3421 IT on Wheels
- 2449 Adani competitive coaching center
- 250 Adani Evening Education center
- Library Activity: 45000+ Books issued. 300+ Oasis workshop arranged to increase reading habits of students.
- Mothers Meet: Mothers' meetings conducted every second Saturday in Utthan schools. 10,000+ mothers have participated.
- Vedic maths and Abacus

# Highlights: Education



Abacus Mathematics



Eye Vision Care in Utthan School



Green School Initiative – plastic collection



# Key programmatic accomplishments

## Community Health

## Education

## Sustainable Livelihoods

## Community Infrastructure

## Stakeholder engagement

- ❖ **"CHETNA"** - initiative with gender diversity
  - Adani Foundation, in collaboration with Unnati Portal and Adani Solar, launched an initiative to provide equal opportunities for employment and self-development to women from Kutch.
  - Till Now 167 Female Joined Adani Solar @Pan India, 154 are from Kutch (92.21%)
- ❖ **Saheli Groups:** Form 82 Self Help Groups in coordination with National Rural Livelihood Mission (850+ Members). 16 SHG are on pathways of self-reliance their total Corpus Rs. 32,27,100 in 6 months.
- ❖ 3 women SHGs from Adani Foundation Mundra participated in the prestigious Sathwaro Mela in Ahmedabad, showcasing Mud Art, Bead Art, and Soof Art, along with two artisans specializing in Rabari and Doori work, achieving an impressive turnover of Rs.1,30,000/-

# Key programmatic accomplishments

Community Health

Education

Sustainable Livelihoods

Community Infrastructure

Stakeholder engagement

## Empowering Fisherfolk Community:

- Education Support: Vehicle transportation facilities to 86 fisherfolk students, Education kits Support to 77 students, Scholarship support of Rs. 3,58,765 to 34 students.
- Job Support: Facilitated job placements for 75 fisherfolk as RTG operators, in the HR department, professional painting roles and as supervisors in APSEZ companies.

## Animal Husbandry:

- Fodder support to 25 villages, benefiting 15005 cattle, Dry Fodder Support - 10,90,875 Kg & Green Fodder Support - 27,64,920 Kg
- Launched a vaccination camp for **20,000 cattle**, in collaboration with the Animal Health Department of Bhuj. 6,200+ cattle have been successfully vaccinated,

# Highlights: Sustainable Livelihood



Local women of Kutch confidently working in Adani Solar



SHGs participating in SATHWARO'24 Powering Art, Empowering Artisans



Educational and Job Support to Fisherfolk youth

# Key programmatic accomplishments

Community Health

Education

Sustainable Livelihoods

Community Development

Stakeholder engagement

- ❖ Renovation of Zarpaar High School - benefit 450+ students/annually
- ❖ Construction of Madhav seva trust School at Zararpa - benefit 250+ students/annually
- ❖ Renovation of AVMB school - benefit 640+ students/annually



# Key programmatic accomplishments

## Community Health

## Education

## Sustainable Livelihoods

## Community Infrastructure

## Climate Action

### ❖ **Vruksh Se Vikas – Massive Drive**

- In the 6 months we establish 3 Adani Van, planting 22,460 trees in 9.5 acres area in N khakhar, Borana, and Dhruh village. Till Date 8 Adani Van 75,078 Trees @28 acres
- Prakrutik Rath: Empowering Communities Through Green Initiatives 7,136 saplings distributed and planted in 6 months.
- **Total 1.79 Lac tree plantation done till date.**

### ❖ **Mangrove Nursery Development with 10,000 seeds.**

- ❖ **Costal Clean up day:** At Kashivishvnath Beach, Mandvi, 200+ students and 80 Utthan Sahayaks cleaned a 1 km stretch, collecting significant plastic waste as part of a coastal cleanup and awareness drive.

- ❖ **Green Schools:** Eco-clubs in 77 Utthan Schools and 12000+ students participate in “No Plastic” activities.

# Highlights: Vruksh Se Vikas



Vruksh Se Vikas – Massive Drive: Adani van & Prakrutik Rath

Costal cleanup Day

# Adani skill development center

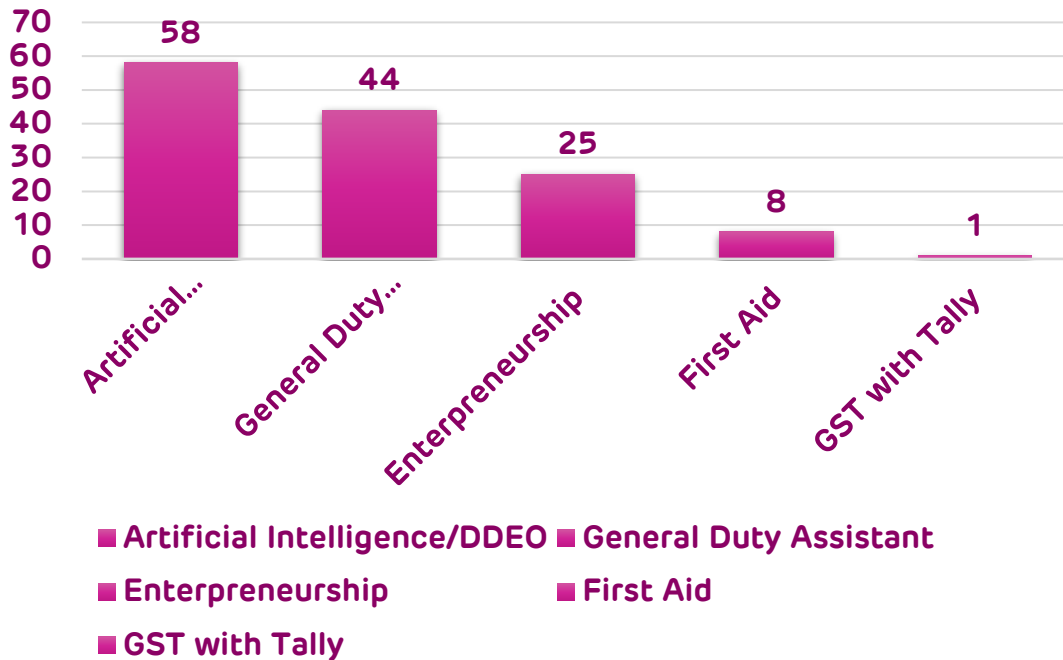


Adani Skill Development Centre (ASDC) plays a pivotal role in empowering individuals through skill enhancement. By offering a wide range of training programs, ASDC aims to bridge the gap between industry requirements and workforce capabilities. This initiative not only helps individuals stay adaptable in a rapidly evolving job market but also opens up opportunities for career advancement and higher productivity. In rural areas, many youth possess degrees but lack the practical skills needed for employment; ASDC addresses this gap by providing targeted training to enhance their employability. Through continuous learning and development, participants can achieve greater job satisfaction and personal fulfillment. On a broader scale, ASDC contributes to economic growth by fostering a skilled workforce that drives innovation and provides businesses with a competitive edge. Ultimately, the Adani Skill Development Centre is dedicated to building a future-ready workforce that supports the overall progress of society.

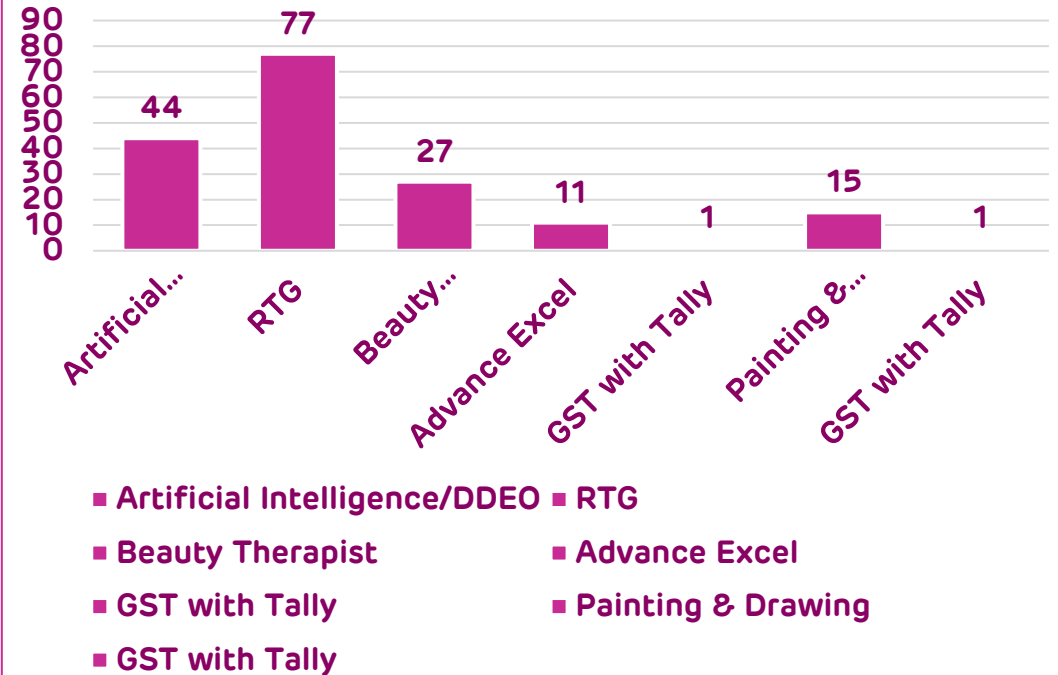
## Empowering Youth : Impact of ASDC in Mundra and Bhuj Center

ASDC has significantly enhanced employability in Mundra and Mandvi. Training programs in digital literacy, RTG crane operation, beauty therapy, and advanced Excel have provided practical skills and certifications. Real-time exposure along with the Entrepreneurship Development Program (EDP), has further empowered youth. Successful placements have resulted in well-paying jobs, contributing to regional economic growth. Overall, ASDC's initiatives have transformed the lives of many individuals, fostering both personal and professional development.

### Percentage of Students in course, Bhuj



### Percentage of Students in course, Mundra

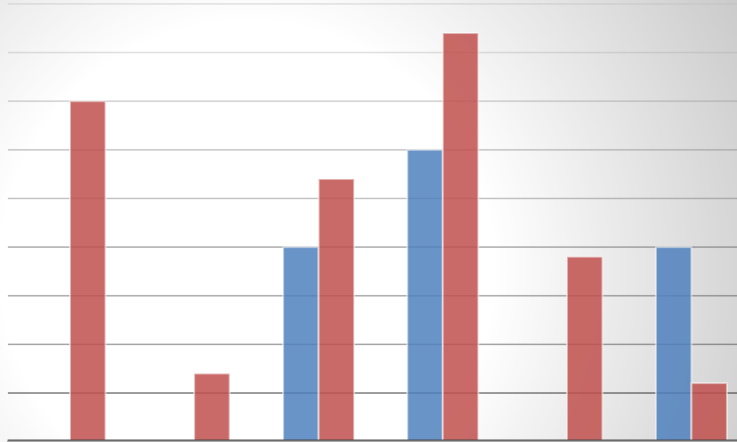




## Some glimpse of ASDC Mundra and Bhuj

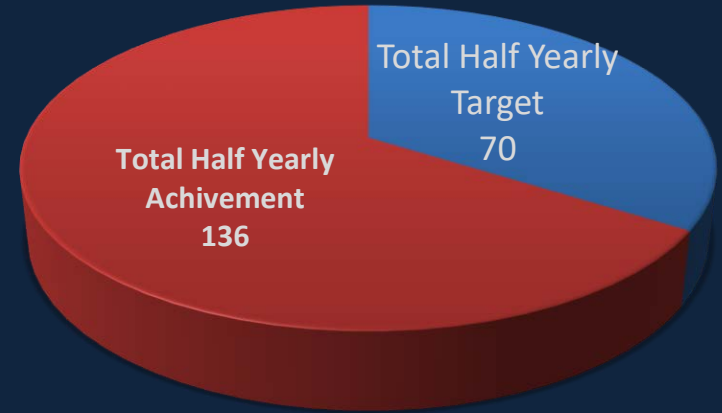


## Half Yearly Target Vs Achievement Bhuj



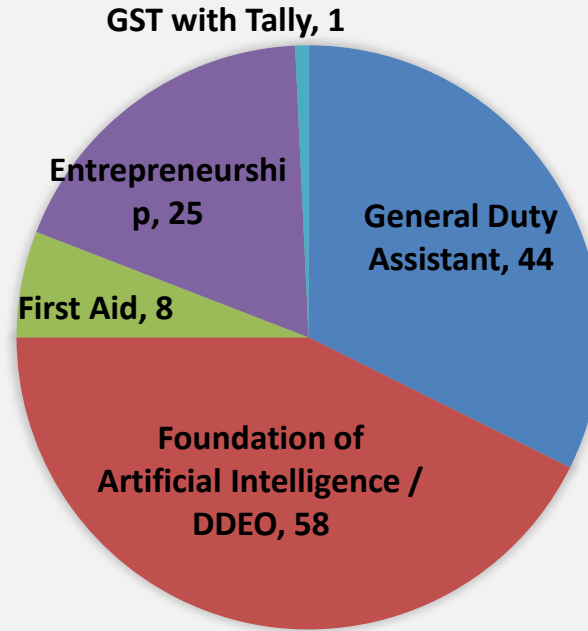
	Apr	May	Jun	Jul	Aug	Sep
■ Target	0	0	20	30	0	20
■ Achivement	35	7	27	42	19	6

## Half Yearly Target Vs Achievement



■ Total Half Yearly Target ■ Total Half Yearly Achivement

## JOB ROLE WISE STUDENTS DETAILS, BHUJ



**Total Students = 136**

# Revenue Generation Bhuj \_Centre & Tie Up

Job Role	Student Paid	Tie Ups	Any other	Total Income
General Duty Assistant	284500	0	0	<b>284500</b>
Foundation of Artificial Intelligence / DDEO	177000	0	0	<b>177000</b>
First Aid	4792	0	0	<b>4792</b>
Tally with GST	8000	0	0	<b>8000</b>
<b>Total</b>	<b>4,74,292</b>	<b>0</b>	<b>0</b>	<b>4,74,292</b>

# Bhuj Center Activities Photos



# Bhuj Center Press Notes



## અનુશાસનનું પાલન લક્ષ્યસિદ્ધિનું પ્રથમ સોપાન

■ કચ્છ આઈસીસ | ભુજ  
ભુજ ખાતે અદાણી સ્ટીલ ડેવલપમેન્ટ કોર્પોરેશન દ્વારા શરૂ કરાયેલા અનુશાસનના પાલનને પ્રોત્સાહન આપવા માટે આજે અહીંનું આયોજીત સમારોહમાં ભાગ લેવા માટે આઈસીસના અધિકારીઓએ ભાગ લીધો હતો.

આઈસીસના અધિકારીઓએ ભાગ લીધો હતો. આઈસીસના અધિકારીઓએ ભાગ લીધો હતો. આઈસીસના અધિકારીઓએ ભાગ લીધો હતો.

■ ભુજ ખાતે અદાણી સ્ટીલ ડેવલપમેન્ટ કોર્પોરેશન દ્વારા શરૂ કરાયેલા અનુશાસનના પાલનને પ્રોત્સાહન આપવા માટે આજે અહીંનું આયોજીત સમારોહમાં ભાગ લેવા માટે આઈસીસના અધિકારીઓએ ભાગ લીધો હતો.

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## જવાબોની જીવનશૈલી અનુરૂપ રાંધણ કલા વિકાસ માટે ૨૪ બહેનોએ તાલીમ લીધી



■ કચ્છ આઈસીસ | ભુજ  
ભુજ ખાતે અદાણી સ્ટીલ ડેવલપમેન્ટ કોર્પોરેશન દ્વારા શરૂ કરાયેલા અનુશાસનના પાલનને પ્રોત્સાહન આપવા માટે આજે અહીંનું આયોજીત સમારોહમાં ભાગ લેવા માટે આઈસીસના અધિકારીઓએ ભાગ લીધો હતો.

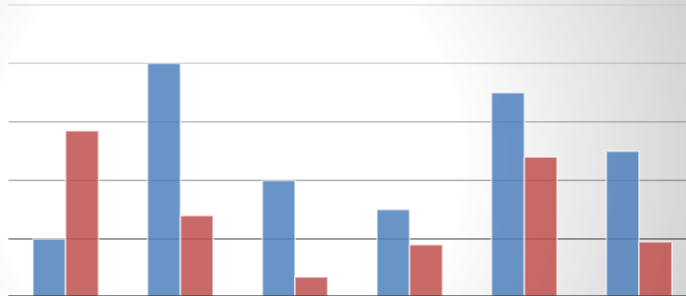
આપાયેલી ડાયેટ એંડ ન્યુટ્રીશનમાં ૨૪ બહેનોએ સફળતાપૂર્વક ટ્રેનિંગ પૂર્ણ કર્યા બદલ તેમને પ્રમાણપત્ર વિતરણ કરવાનો કાર્યક્રમ યોજાયો હતો. આમાં સ્ટેશનના ઓરિન્ટીરિંગમાં યોજાયેલા કાર્યક્રમમાં પ્રમાણપત્ર સ્વીકાર

■ આમાં મથક ખાતે અદાણી સ્ટીલ ડેવલપમેન્ટ કોર્પોરેશન દ્વારા શરૂ કરાયેલા અનુશાસનના પાલનને પ્રોત્સાહન આપવા માટે આજે અહીંનું આયોજીત સમારોહમાં ભાગ લેવા માટે આઈસીસના અધિકારીઓએ ભાગ લીધો હતો.



ભુજમાં સાસરેથી પાછી કરેલી ટીકરીને વેદનામાંથી બહાર લાવી માતાએ નિર્સિંગ આર્ટ્સ ડે-ટ એન્યુ માટે સ્થાય મનાવી

## Half Yearly Target Vs Achievement Mundra



■ Target

■ Achivement

Apr May Jun Jul Aug Sep

20 80 40 30 70 50

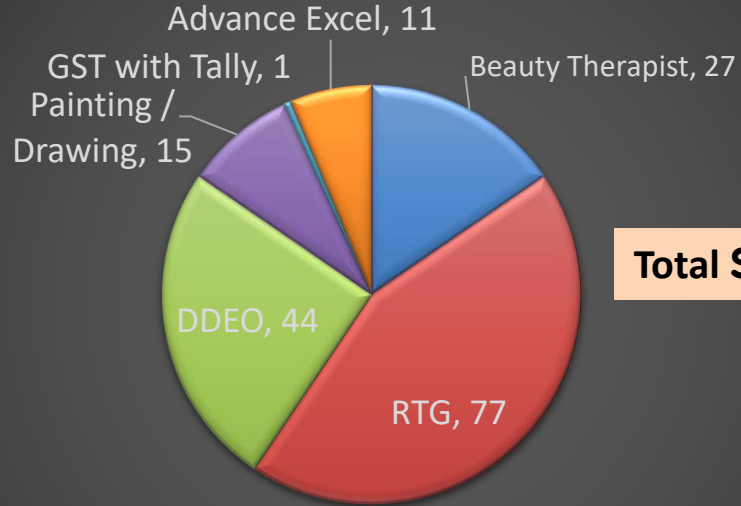
57 28 7 18 48 19

## Yearly Target Vs Achievement Mundra



■ Total Half Yearly Target ■ Total Half Yearly Achivement

## Job Role Wise Details Mundra



**Total Students = 177**

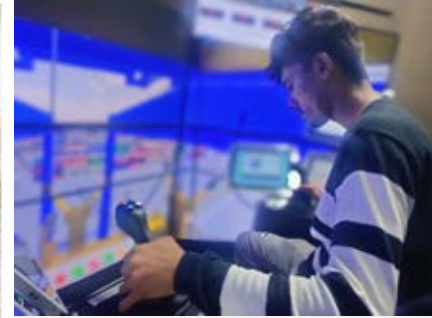
- Beauty Therapist
- RTG
- DDEO
- Painting / Drawing
- GST with Tally
- Advance Excel



# Revenue Generation Mundra \_Centre & Tie Up

Job Role	Student Paid	Tie Ups	Any other	Total Income
RTG	0	756000	0	<b>756000</b>
German Language Training	10000	0	0	<b>10000</b>
Beauty Therapist	54000	0	0	<b>54000</b>
DDEO	28000	0	0	<b>28000</b>
Tally with GST	3000	0	0	<b>3000</b>
Drawing/ Painting	18000	0	0	<b>18000</b>
<b>Total</b>	<b>1,13,000</b>	<b>7,56,000</b>	<b>0</b>	<b>8,69,000</b>

# Mundra Center Activities Photos



# Mundra Center Press note

## મુન્દ્રામાં યુવાનો કેન ઓપરેટરની તાલીમ પ્રાપ્ત કરી રોજગાર મેળવવા બન્યા સુસજ્જ અદાણી કૌશલ્ય વિકાસ કેન્દ્ર દ્વારા સફળ તાલીમાર્થીને પ્રમાણપત્રનું કરાયું વિતરણ

ભાસ્કર ન્યૂઝ | મુન્દ્રા

તાજેતરમાં મુન્દ્રા ખાતે અદાણી સ્કીલ ડેવલોપમેન્ટ સેન્ટર દ્વારા નવી બેચના ઉદ્દઘાટન સાથે તાલીમાર્થીઓને આરટીકે કેન ઓપરેટર પ્રમાણપત્રો વિતરીત કરવામાં આવ્યા હતા. આમ સફળતા પૂર્વક તાલીમ પ્રાપ્ત કરનાર યુવાઓ હવે રોજગાર મેળવવા સુસજ્જ બન્યા છે.

એ સી ડી એસ યુવાઓને આત્મનિર્ભર બનાવવાના ઉદ્દેશ્ય સાથે ધોરણ દસ બાદ આઈટીઆઈ અથવા ધોરણ બાર ઉત્તીર્ણ વિદ્યાર્થીઓને તાલીમ આપી રોજગાર અર્થે સક્ષમ બનાવવામાં આવે છે. એસી ડી એસ દ્વારા છેલ્લા બે વર્ષમાં કેન ઓપરેશન ટ્રેડમાં 120 છાત્રોને સફળતાપૂર્વક ટ્રેનિંગ



અપાઈ છે. જેમાંથી 80 ઉમેદવારો અદાણી પોર્ટ પર જ નોકરી મેળવી આત્મનિર્ભર બન્યા છે. નવી બેચમાં 70 ટકા ઉમેદવારો કચ્છ જિલ્લાના અને અન્ય 30 ટકા પ્રમાણપત્ર વિતરણ સમારંભ માં ઉપસ્થિત ખાસ મહેમાનોને પણ સન્માનિત કરવામાં આવ્યા હતા. મુખ્ય અતિથી તરીકે ઓપીસેકના એચ આર હેડ રનેહાશીષ ભટ્ટાચાર્યએ કેન ઓપરેટર ની ભૂમિકા અંગે વિસ્તૃત માહિતી આપી હતી. અને તાલીમાર્થીઓને અદ્યતન ટેકનોલોજી સાથે અપડેટ રહેવા અને સતત નવું શીખતું રહેવા પ્રોત્સાહિત કર્યા હતા. રાષ્ટ્ર નિર્માણમાં યોગદાનના ઉદ્દેશ્ય થી ભારતના યુવાધન ને સક્ષમ બનાવવા અદાણી કૌશલ્ય વિકાસ કેન્દ્ર ની સ્થાપના 16 મેં 2016 ન રોજ કરવામાં આવી હતી. અને હવે તે વર્ટિકલ ભવિષ્ય માટે તૈયાર વ્યાવસાયિકો અન્યાયુનિક ટેકનોલોજી નો ઉપયોગ કરી તાલીમ આપવાના મિશન ને સતત આગળ ધપાવી રહ્યું છે.

## અદાણી કૌશલ્ય વિકાસ કેન્દ્ર દ્વારા સફળ તાલીમાર્થીઓને પ્રમાણપત્ર વિતરણ કરાયા એએસડીસી યુવાઓને આત્મનિર્ભર બનાવવાની દિશામાં અગ્રેસર

લોકમાન્ય મુન્દ્રા: અદાણી કૌઉરેશન યુવા રોજગારીને પ્રાથમ્ય આપતા અનેક કાર્યક્રમોમાં પ્રવૃત્ત છે. તાજેતરમાં અદાણી સ્કિલ ડેવલપમેન્ટ સેન્ટર મુન્દ્રા દ્વારા નવી બેચના ઉદ્દઘાટન સાથે તાલીમાર્થીઓને આરટીકે કેન ઓપરેટર પ્રમાણપત્રો વિતરીત કરવામાં આવ્યા હતા. એમ ઓપરેટરની તાલીમ સફળતાપૂર્વક પૂર્ણ કરનાર યુવાઓ આત્મનિર્ભર બની સમાજમાં તેમની આગવી ઓળખ ઉભી કરશે.



અદાણી સ્કીલ ડેવલપમેન્ટ સેન્ટરનું મુખ્ય પુરાવનને રોજગારબંધમાં પ્રવિશિત કરવા માટે ભંડોળ ઉપલબ્ધ કરાશે. એએસડીસી દ્વારા છેલ્લા ૨ વર્ષમાં આરટીકે કેન ઓપરેશન ટ્રેડમાં ૧૨૦ ઉમેદવારોને સફળતાપૂર્વક તાલીમ આપવામાં આવી છે. જેમાં ૮૦ ઉમેદવારો અદાણી પોર્ટ પર જ નોકરીએ

મુખ્ય આત્મનિર્ભર બન્યા છે. નવી બેચમાં ૭૦ ટકા ઉમેદવારો કચ્છ જિલ્લાના અને અન્ય ૩૦ ટકા વિવિધ સ્થળેએથી લેવામાં આવશે. સક્ષમ પ્રમાણપત્ર વિતરણ કાર્યક્રમમાં ઉપસ્થિત ખાસ મહેમાનોને પણ સન્માનિત કરવામાં આવ્યા હતા, જેમાં અદાણી કૌશલ્ય વિકાસ કેન્દ્રના સ્વરૂપ હેડ, અદાણી પોર્ટ પર અને સંવિધ્ય ડેવલપમેન્ટ ઝોન અને રેવેન્યુ કમિશની આરમાપનિર્ભર બનાવવાની દિશામાં અગ્રેસર

સંવિધ્ય માહિતી આપી હતી. તેમણે તાલીમાર્થીઓને અદ્યતન ટેકનોલોજી સાથે અપડેટ રહેવાના અને સતત નવું શીખતું રહેવા માટે પ્રોત્સાહિત કર્યા હતા. રાષ્ટ્રનિર્માણમાં યોગદાનના દિશાથી ભારતના યુવાધનને સક્ષમ બનાવવા અદાણી કૌશલ્ય વિકાસ કેન્દ્રની સ્થાપના ૧૬ મે, ૨૦૧૬ના રોજ કરવામાં આવી હતી. એએસડીસી વર્ટિકલ ભવિષ્ય માટે તૈયાર વ્યાવસાયિકોને અન્યાયુનિક ટેકનોલોજીનો ઉપયોગ કરી તાલીમ આપવાના મિશનને સતત આગળ ધપાવી રહ્યું છે.

## અદાણી કૌશલ્ય વિકાસ કેન્દ્ર દ્વારા કેન ટ્રેડની ૧૨૦ ઉમેદવારને તાલીમ

મુન્દ્રા, તા. ૧૮ : અદાણી કૌઉરેશન યુવા રોજગારીને પ્રાથમ્ય આપતા અનેક કાર્યક્રમોમાં પ્રવૃત્ત છે. તાજેતરમાં અદાણી સ્કિલ ડેવલપમેન્ટ સેન્ટર મુન્દ્રા દ્વારા નવી બેચના ઉદ્દઘાટન સાથે તાલીમાર્થીઓને આરટીકે કેન ઓપરેટર પ્રમાણપત્રો વિતરિત કરવામાં આવ્યા હતા. આ તાલીમ સફળતાપૂર્વક પૂર્ણ કરનારા યુવાઓ આત્મનિર્ભર બની સમાજમાં તેમની આગવી ઓળખ ઊભી કરશે.

એએસડીસી દ્વારા છેલ્લા ૨ વર્ષમાં આરટીકે કેન ઓપરેશન ટ્રેડમાં ૧૨૦ ઉમેદવારોને સફળતાપૂર્વક તાલીમ આપવામાં આવી છે, જેમાંથી ૮૦ ઉમેદવારો અદાણી પોર્ટ પર જ નોકરીએ મેળવી આત્મનિર્ભર બન્યા છે. નવી બેચમાં ૭૦ ટકા ઉમેદવારો કચ્છ જિલ્લાના અને અન્ય ૩૦ ટકા વિવિધ સ્થળેએથી લેવામાં આવશે.

સક્ષમ પ્રમાણપત્ર વિતરણ કાર્યક્રમમાં ઉપસ્થિત ખાસ મહેમાનોને પણ સન્માનિત કરવામાં આવ્યા હતા, જેમાં અદાણી કૌશલ્ય વિકાસ કેન્દ્રના

સ્વરૂપ હેડ, અદાણી પોર્ટ પર અને સંવિધ્ય ડેવલપમેન્ટ ઝોન અને રેવેન્યુ કમિશની આરમાપનિર્ભર બનાવવાની દિશામાં અગ્રેસર

સંવિધ્ય માહિતી આપી હતી. તેમણે તાલીમાર્થીઓને અદ્યતન ટેકનોલોજી સાથે અપડેટ રહેવાના અને સતત નવું શીખતું રહેવા માટે પ્રોત્સાહિત કર્યા હતા.

આરતના યુવાધનને સક્ષમ બનાવવા અદાણી કૌશલ્ય વિકાસ કેન્દ્રની સ્થાપના ૧૬ મે, ૨૦૧૬ના કરવામાં આવી હતી. જે વ્યાવસાયિકોને અન્યાયુનિક ટેકનોલોજીનો ઉપયોગ કરી તાલીમ આપવાના મિશનને સતત આગળ ધપાવી રહ્યું છે.



અદાણી કૌશલ્ય વિકાસ કેન્દ્રના તાલીમાર્થીઓને પ્રમાણપત્ર વિતરણ કાર્યક્રમનું દર્શન.

# **Annexure – 3**

## Details of Greenbelt Development at APSEZ, Mundra

	Total Green Zone Detail till Up to September 2024				
LOCATION	Area (In Ha.)	Trees (Nos.)	Palm (Nos.)	Shrubs (SQM)	Lawn (SQM)
SV COLONY	72.29	34920.00	7962.00	69696.00	100646.00
PORT & NON SEZ	81.61	149359.00	19220.00	75061.78	62966.38
SEZ	115.70	226120.00	20489.00	220583.60	28162.03
MITAP	2.47	8113.00	33.00	3340.00	4036.00
WEST PORT	104.29	248074.00	66816.00	24112.00	16369.00
AGRI PARK	8.94	17244.00	1332.00	5400.00	2121.44
SOUTH PORT	14.45	27530.00	3470.00	3882.00	3327.26
Samundra Township	58.26	63722.00	11834.00	23908.89	47520.07
Productive Farming (Vadala Farm)	0.00	0.00	0.00	0.00	0.00
<b>TOTAL (APSEZL)</b>	<b>457.99</b>	<b>775082</b>	<b>131156</b>	<b>425984.27</b>	<b>265148.18</b>
		<b>906238.00</b>			

## 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 & Biodiversity	GUIDE, Bhuj
9	Dandi Village	Navsari	800	2006 - 2011	Avicennia marina, Rhizophora mucronata, Ceriops tagal	GEC, Gandhinagar
10	Talaja Village	Bhavnagar	50	2011-12	Avicennia marina	Forest Dept, Talaja
11	Narmada Village	Bhavnagar	250	2014 - 2015	Avicennia marina	GEC, Gandhinagar
12	Malpur Village	Bharuch	200	2012-14	Avicennia marina	SAVE, Ahmedabad
13	Kantiyajal Village	Bharuch	50	2014-15	Avicennia marina	SAVE, Ahmedabad
14	Devla Village	Bharuch	150	210-16	Avicennia marina	SAVE, Ahmedabad
15	Village Tala Talav (Khambhat)	Anand	100	2015 - 2016	Avicennia marina	SAVE, Ahmedabad
16	Village Tala Talav (Khambhat)	Anand	38	2015 - 2016	Avicennia marina	GEC, Gandhinagar
17	Aliya Bet, Village Katpor (Hansot)	Bharuch	62	2017-18	Avicennia marina & Rhizophora spp.	GEC, Gandhinagar
18	Kukadsar- (Bhadeswar- Mundra)	Kutch	250	2021-22	Avicennia marina	Shreeji Enterprise, Amreli
19	Kukadsar- (Bhadeswar- Mundra)	Kutch	750	2022-23	Avicennia marina	Shreeji Enterprise, Amreli
20	Kukadsar- (Bhadeswar- Mundra)	Kutch	250	2023-24	Avicennia marina	Shreeji Enterprise, Amreli
<b>Total</b>			<b>4140</b>			

# **Annexure – 4**

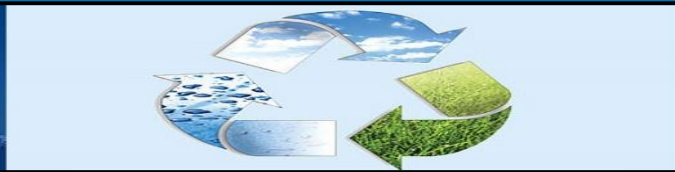
## Compliance Report of EMP & Mitigation Measures

Sr. No.	Suggested Measures	Compliance Status
<b>✍ Construction Phase:</b>		
<b>A Air Environment</b>		
1	Water sprinkling in vulnerable areas	Water sprinkling on road and other construction area as well as on construction materials is being carried out on regular bases.
2	Enforce proper maintenance of vehicles and construction equipment. Allowing only PUC approved vehicles in the site.	Please refer Condition No. ix of Part-B (General Conditions Construction phase) of EC and CRZ Clearance.
3	Enforce usage of covered trucks for transport of construction material.	Covered trucks are being used for handling of construction materials.
<b>B Noise Environment</b>		
4	Enforce proper maintenance of vehicles and construction equipment. Enforce use of earmuffs / earplugs to workers in high noise level areas.	The vehicles of on-going construction work enter inside the premises after the fitness check. Ear protection device is provided to workers in high noise areas.
<b>C Water Environment</b>		
5	Provide temporary drinking water supply and proper sanitation facilities within the site	Provision of drinking water and sanitation facility is being provided.
<b>D Land / Soil Environment</b>		
6	Proper disposal of construction debris at regular intervals	Construction debris is being kept at identified temporary storage area and is being utilized for area development.
<b>E Thermal Environment</b>		
7	Enforce (i) use of Portland Pozzallano Cement / (ii) use of Portland Slag Cement / (iii) use fly ash as admixture in construction	Fly ash mixed paver blocks are being used are used for development of back up area, footpath, colonies area, parking area, approach road etc.  Please refer Condition No. xii of Part-B (General Conditions: Construction phase) of EC and CRZ Clearance.
<b>F Energy</b>		
8	Wherever possible, piping shall be along the natural topography to permit gravity flow. Else, energy efficient pumps shall be used. Pipe material shall be such as to minimize friction losses.	Energy efficient pumps and HDPE Pipelines are used for supply of utilities. Refer point no. xii of EC & CRZ Clearance in Part – B (Operation Phase) for energy efficient electrical fittings. Few of the buildings in MSTPL are designed as green building.
9	Wherever possible, natural light shall be used. Energy efficient electrical fittings and fixtures shall be used.	
<b>✍ Operation Phase:</b>		



Sr. No.	Suggested Measures	Compliance Status
<b>A</b>	<b>Land / Soil Environment</b>	
1	Good quality non-corrosive type pipeline should be used. Regular checking of the pipelines for early detection of any possible leakage and damage. Regular ground water monitoring should be done within the SEZ.	<p>HDPE pipelines are used for supply of utility. Regular visual surveillance along the utility lines corridor is being done to check leakage or damage.</p> <p>Third party analysis of the ground water is being carried out at every three month by NABL and MoEF&amp;CC accredited agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi.</p> <p>Please refer Condition No. v of Part-B (General Conditions: Construction phase) of EC and CRZ Clearance.</p>
2	<p>The waste should be transported in covered trucks. Vermi-composting is highly recommended for treatment and disposal of biodegradable and kitchen wastes.</p> <p>Other domestic solid waste (garbage) shall be disposed through MSW facility or as per prevailing norms.</p>	Please refer Condition No. iv of Part-B (General Conditions: Construction phase) of EC and CRZ Clearance.
3	The waste should be transported in covered trucks. Transporter should be informed of remedial measures required to be taken in case of spillage of waste	Waste handling vehicles are being handled through covered trucks only. Details were submitted along with compliance report submission i.e. Apr'17 to Sep'17.
<b>B</b>	<b>Socio-Economic Environment</b>	
4	It will encourage development of surrounding areas & further generate employment. People from various cultures shall mingle encouraging a more tolerant society.	Please refer Condition No. vii of <b>Annexure - B</b> (Compliance Status of MoEF & CC Order dated 18.09.2015).

# **Annexure – 5**



## “Half Yearly Environmental Monitoring Reports “

For,  
**adani**  
Ports and  
Logistics

**M/S. ADANI PORTS & SEZ Limited.**

Notified SEZ area, Tal. – Mundra, Dist. – Kutch – 370421.

Monitoring Period: April - 2024 to September - 2024

Submitted By



**UniStar Environment & Research Labs Pvt. Ltd.**

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



### RESULTS OF STP OUTLET WATER

SR.NO.	TEST PARAMETERS	UNIT	PUB ADANI HOUSE STP OUTLET						GPCB Permissible Limit	TEST METHOD
			Apr-24		May-24		Jun-24			
			11-04-2024	27-04-2024	10-05-2024	24-05-2024	12-06-2024	26-06-2024		
1.	pH @ 25 ° C	--	7.33	7.42	7.51	7.48	7.28	7.24	6.5 to 9	IS 3025 (Part-11):2022
2.	Total Suspended Solids	mg/L	22	24	22	20	20	22	100	APHA 24th Ed.2023,2540 - D
3.	Biochemical Oxygen Demand (BOD) (5 days at 20 ° C)	mg/L	15	18	17.2	15.4	14.5	14.9	30	APHA 24th Ed.2023,5210-B
4.	Residual chlorine	mg/L	0.66	0.74	0.79	0.76	0.75	0.82	0.5 Min.	APHA 24th Ed.2023,4500-Cl-G
5.	Fecal Coliform	MPN Index/100ml	70	130	80	140	90	130	1000	IS 1622: 1981

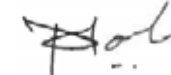
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### RESULTS OF STP OUTLET WATER

SR.NO.	TEST PARAMETERS	UNIT	PUB ADANI HOUSE STP OUTLET						GPCB Permissible Limit	TEST METHOD
			Jul-24		Aug-24		Sep-24			
			05-07-2024	24-07-2024	13-08-2024	24-08-2024	05-09-2024	20-09-2024		
1.	pH @ 25 ° C	--	7.34	7.19	7.12	7.18	7.22	7.28	6.5 to 9	IS 3025 (Part-11):2022
2.	Total Suspended Solids	mg/L	16	20	12	16	12	14	100	APHA 24th Ed.2023,2540 - D
3.	Biochemical Oxygen Demand (BOD) (5 days at 20 ° C)	mg/L	15.8	14.6	18.2	16.8	14	15.5	30	APHA 24th Ed.2023,5210-B
4.	Residual chlorine	mg/L	0.74	0.75	0.66	0.74	0.68	0.64	0.5 Min.	APHA 24th Ed.2023,4500-Cl-G
5.	Fecal Coliform	MPN Index/100ml	80	110	90	140	80	110	1000	IS 1622: 1981



**Mr. Nilesh Patel**  
Sr. Chemist

**Mr. Nitin Tandel**  
Technical Manager

### RESULTS OF STP OUTLET WATER

SR.NO.	TEST PARAMETERS	UNIT	SAMUNDRA TOWNSHIP STP OUTLET						GPCB Permissible Limit	TEST METHOD
			Apr-24		May-24		Jun-24			
			11-04-2024	27-04-2024	10-05-2024	24-05-2024	12-06-2024	26-06-2024		
1.	pH @ 25 ° C	--	7.39	7.38	7.19	7.24	7.45	7.33	6.5 to 9	IS 3025 (Part-11):2022
2.	Total Suspended Solids	mg/L	24	22	22	20	20	20	100	APHA 24th Ed.2023,2540 - D
3.	Biochemical Oxygen Demand (BOD) (5 days at 20 ° C)	mg/L	16	18	16.8	14.8	14.5	14.2	30	APHA 24th Ed.2023,5210-B
4.	Residual chlorine	mg/L	0.69	0.78	0.75	0.84	0.78	0.75	0.5 Min.	APHA 24th Ed.2023,4500-Cl-G
5.	Fecal Coliform	MPN Index/100ml	22	34	26	33	27	34	1000	IS 1622: 1981

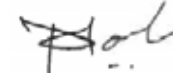
Continue...

### RESULTS OF STP OUTLET WATER

SR.NO.	TEST PARAMETERS	UNIT	SAMUNDRA TOWNSHIP STP OUTLET						GPCB Permissible Limit	TEST METHOD
			Jul-24		Aug-24		Sep-24			
			06-07-2024	24-07-2024	13-08-2024	24-08-2024	05-09-2024	20-09-2024		
1.	pH @ 25 ° C	--	7.25	6.79	7.1	7.14	7.53	7.42	6.5 to 9	IS 3025 (Part-11):2022
2.	Total Suspended Solids	mg/L	16	20	18	10	BDL(MDL:4.0)	14	100	APHA 24th Ed.2023,2540 - D
3.	Biochemical Oxygen Demand (BOD) (5 days at 20 ° C)	mg/L	14.5	15	14.6	14.8	11	16	30	APHA 24th Ed.2023,5210-B
4.	Residual chlorine	mg/L	0.76	0.84	0.64	0.68	0.74	0.88	0.5 Min.	APHA 24th Ed.2023,4500-Cl-G
5.	Fecal Coliform	MPN Index/100ml	26	33	27	34	26	33	1000	IS 1622: 1981



**Mr. Nilesh Patel**  
Sr. Chemist

**Mr. Nitin Tandel**  
Technical Manager

### RESULTS OF STP OUTLET WATER

SR.NO.	TEST PARAMETERS	UNIT	North Gate STP OUTLET						GPCB Permissible Limit	TEST METHOD
			Apr-24		May-24		Jun-24			
			11-04-2024	27-04-2024	10-05-2024	24-05-2024	12-06-2024	26-06-2024		
1.	pH @ 25 ° C	--	7.39	7.42	7.46	7.25	7.21	7.36	6.5 to 9	IS 3025 (Part-11):2022
2.	Total Suspended Solids	mg/L	22	18	20	20	20	22	100	APHA 24th Ed.2023,2540 - D
3.	Biochemical Oxygen Demand (BOD) (5 days at 20 ° C)	mg/L	14	16	14.8	15.2	16	16.8	30	APHA 24th Ed.2023,5210-B
4.	Residual chlorine	mg/L	0.68	0.74	0.72	0.76	0.81	0.74	0.5 Min.	APHA 24th Ed.2023,4500-Cl-G
5.	Fecal Coliform	MPN Index/100ml	60	80	70	90	60	80	1000	IS 1622: 1981

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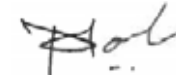


### RESULTS OF STP OUTLET WATER

SR.NO.	TEST PARAMETERS	UNIT	North Gate STP OUTLET						GPCB Permissible Limit	TEST METHOD
			Jul-24		Aug-24		Sep-24			
			05-07-2024	24-07-2024	13-08-2024	24-08-2024	05-09-2024	20-09-2024		
1.	pH @ 25 ° C	--	7.26	6.9	7.38	7.44	7.27	7.24	6.5 to 9	IS 3025 (Part-11):2022
2.	Total Suspended Solids	mg/L	18	20	18	20	46	34	100	APHA 24th Ed.2023,2540 - D
3.	Biochemical Oxygen Demand (BOD) (5 days at 20 ° C)	mg/L	14	15	14.4	16.2	21	22	30	APHA 24th Ed.2023,5210-B
4.	Residual chlorine	mg/L	0.58	0.66	0.74	0.81	0.94	0.65	0.5 Min.	APHA 24th Ed.2023,4500-CI-G
5.	Fecal Coliform	MPN Index/100ml	50	70	60	80	50	70	1000	IS 1622: 1981



Mr. Nilesh Patel  
Sr. Chemist

Mr. Nitin Tandel  
Technical Manager

### Results of Ambient Air Quality Monitoring

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>	HC µg/m <sup>3</sup>	Benzene µg/m <sup>3</sup>
1.	01-04-2024	72.38	29.81	23.13	26.79	0.71	--	NOT DETECTED
2.	04-04-2024	70.76	27.54	20.84	24.51	0.63	2.64	NOT DETECTED
3.	08-04-2024	65.24	30.12	21.25	22.94	0.68	2.56	NOT DETECTED
4.	11-04-2024	63.71	28.15	20.86	24.63	0.64	2.39	NOT DETECTED
5.	15-04-2024	68.12	27.36	21.74	23.46	0.67	2.48	NOT DETECTED
6.	18-04-2024	73.31	31.98	23.47	26.48	0.70	2.67	NOT DETECTED
7.	22-04-2024	69.53	29.78	21.47	25.10	0.65	2.55	NOT DETECTED
8.	25-04-2024	75.82	30.85	24.19	27.15	0.62	2.74	NOT DETECTED
9.	29-04-2024	72.46	31.82	21.86	24.35	0.68	2.61	NOT DETECTED
10.	02-05-2024	70.72	30.15	20.77	23.82	0.64	2.52	NOT DETECTED
11.	06-05-2024	73.14	32.10	22.49	25.37	0.69	2.67	NOT DETECTED
12.	09-05-2024	68.47	29.84	20.16	23.47	0.61	2.55	NOT DETECTED
13.	13-05-2024	65.48	27.46	21.73	23.91	0.60	2.46	NOT DETECTED
14.	16-05-2024	67.53	28.61	20.85	23.42	0.67	2.53	NOT DETECTED
15.	20-05-2024	64.29	26.83	19.27	22.11	0.63	2.42	NOT DETECTED

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Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>	HC µg/m <sup>3</sup>	Benzene µg/m <sup>3</sup>
16.	23-05-2024	68.42	28.23	21.44	23.40	0.70	2.79	NOT DETECTED
17.	27-05-2024	70.42	31.14	22.91	25.32	0.65	2.58	NOT DETECTED
18.	30-05-2024	72.34	31.93	20.82	23.84	0.68	2.63	NOT DETECTED
19.	03-06-2024	73.27	29.31	20.87	22.48	0.63	2.62	NOT DETECTED
20.	06-06-2024	68.53	27.15	19.74	22.02	0.59	2.55	NOT DETECTED
21.	10-06-2024	72.48	28.16	20.77	23.09	0.63	2.48	NOT DETECTED
22.	13-06-2024	70.12	25.74	19.35	21.28	0.60	2.53	NOT DETECTED
23.	17-06-2024	61.92	24.64	17.79	20.11	0.55	2.40	NOT DETECTED
24.	20-06-2024	63.78	26.13	18.53	20.85	0.63	2.49	NOT DETECTED
25.	24-06-2024	39.26	22.54	15.83	18.42	ND	1.87	NOT DETECTED
26.	27-06-2024	37.91	20.75	13.97	16.20	ND	1.64	NOT DETECTED
27.	01-07-2024	36.49	18.63	12.84	15.36	0.26	--	NOT DETECTED
28.	04-07-2024	40.28	19.87	14.11	17.63	0.29	1.57	NOT DETECTED
29.	08-07-2024	45.81	22.36	16.74	19.25	0.35	1.63	NOT DETECTED
30.	11-07-2024	48.73	24.15	17.59	20.74	0.41	1.82	NOT DETECTED
31.	15-07-2024	43.94	21.82	15.37	18.21	0.39	1.75	NOT DETECTED

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Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>	HC µg/m <sup>3</sup>	Benzene µg/m <sup>3</sup>
32.	18-07-2024	52.62	24.03	16.13	19.42	0.44	1.79	NOT DETECTED
33.	22-07-2024	47.49	23.13	14.59	17.84	0.40	1.68	NOT DETECTED
34.	25-07-2024	43.28	20.85	12.71	15.49	0.32	1.62	NOT DETECTED
35.	29-07-2024	39.51	16.94	10.87	13.66	0.24	1.55	NOT DETECTED
36.	01-08-2024	41.11	18.93	13.28	16.42	0.32	1.51	NOT DETECTED
37.	05-08-2024	43.29	19.35	13.74	16.49	0.34	1.58	NOT DETECTED
38.	08-08-2024	41.73	18.83	12.93	15.37	0.31	1.61	NOT DETECTED
39.	12-08-2024	47.52	21.37	14.16	17.10	0.34	1.68	NOT DETECTED
40.	15-08-2024	49.69	22.45	15.26	18.22	0.37	1.72	NOT DETECTED
41.	19-08-2024	47.14	21.43	14.32	17.25	0.35	1.63	NOT DETECTED
42.	22-08-2024	45.28	20.67	13.82	16.74	0.33	1.58	NOT DETECTED
43.	26-08-2024	43.74	20.11	13.32	16.14	0.32	1.49	NOT DETECTED
44.	29-08-2024	47.15	22.32	14.35	17.49	0.35	1.54	NOT DETECTED
45.	02-09-2024	44.39	19.74	14.10	17.35	0.36	1.6	NOT DETECTED
46.	05-09-2024	40.83	18.81	12.94	15.81	0.32	1.53	NOT DETECTED
47.	09-09-2024	42.91	19.46	13.32	16.26	0.33	1.57	NOT DETECTED

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Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>	HC µg/m <sup>3</sup>	Benzene µg/m <sup>3</sup>
48.	12-09-2024	44.48	20.31	13.84	16.52	0.36	1.63	NOT DETECTED
49.	16-09-2024	47.30	22.29	14.75	17.47	0.38	1.69	NOT DETECTED
50.	19-09-2024	44.10	21.16	13.68	16.42	0.35	1.75	NOT DETECTED
51.	23-09-2024	46.75	22.36	14.53	17.38	0.37	1.62	NOT DETECTED
52.	26-09-2024	43.47	21.73	12.64	15.16	0.32	1.67	NOT DETECTED
53.	30-09-2024	45.83	22.08	13.75	16.54	0.34	1.71	NOT DETECTED
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0	---	5.0
Test Method		IS - 5182, Part- 23	UERL/AIR/ SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10	Gas analyzer	IS – 5182, Part – 11



Nikunj D. Patel  
(Chemist)




Jaivik S. Tandel  
(Manager - Operations)

### Results of Ambient Air Quality Monitoring

Name of Location		Adani Guest House				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
1.	01-04-2024	80.11	29.53	12.83	16.52	NOT DETECTED
2.	04-04-2024	84.26	30.71	14.32	18.11	--
3.	08-04-2024	79.46	28.47	13.11	17.54	--
4.	11-04-2024	75.27	25.39	12.85	17.03	--
5.	15-04-2024	77.36	27.17	13.26	16.59	--
6.	18-04-2024	73.91	25.48	12.26	15.86	--
7.	22-04-2024	76.84	26.97	12.79	16.44	--
8.	25-04-2024	80.49	28.66	14.52	17.16	--
9.	29-04-2024	82.35	30.42	13.73	16.85	--
10.	02-05-2024	77.39	26.19	13.05	15.89	--
11.	06-05-2024	75.19	25.42	12.73	17.42	--
12.	09-05-2024	78.27	27.49	13.26	16.38	--
13.	13-05-2024	80.52	29.71	14.25	17.36	--
14.	16-05-2024	78.64	27.47	13.64	16.83	--
15.	20-05-2024	74.38	26.16	12.39	16.37	--

Continue...

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Name of Location		Adani Guest House				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
16.	23-05-2024	76.73	28.64	13.56	16.98	--
17.	27-05-2024	79.62	30.11	14.01	17.63	--
18.	30-05-2024	75.2	26.85	12.69	15.63	--
19.	03-06-2024	80.12	28.47	14.14	17.21	--
20.	06-06-2024	78.63	27.91	13.85	16.32	--
21.	10-06-2024	75.94	25.38	13.11	15.83	--
22.	13-06-2024	77.53	27.15	13.52	16.14	--
23.	17-06-2024	71.28	24.39	12.25	15.47	--
24.	20-06-2024	68.88	23.64	11.85	14.98	--
25.	24-06-2024	51.25	19.64	9.31	12.46	--
26.	27-06-2024	47.49	17.83	8.65	10.94	--
27.	01-07-2024	44.75	16.94	8.87	10.68	NOT DETECTED
28.	04-07-2024	50.13	18.52	10.12	13.25	--
29.	08-07-2024	54.76	20.47	11.73	13.41	--
30.	11-07-2024	57.39	23.42	13.11	15.87	--
31.	15-07-2024	52.49	19.37	12.36	14.62	--

Continue...

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Name of Location		Adani Guest House				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
32.	18-07-2024	55.85	21.52	12.96	15.19	--
33.	22-07-2024	49.72	19.15	11.64	13.29	--
34.	25-07-2024	45.23	16.74	10.21	13.45	--
35.	29-07-2024	51.42	18.31	9.28	11.63	--
36.	01-08-2024	52.37	17.72	10.65	13.28	--
37.	05-08-2024	48.94	16.98	10.11	13.92	--
38.	08-08-2024	55.13	18.42	11.24	14.75	--
39.	12-08-2024	53.49	17.36	10.62	13.46	--
40.	15-08-2024	57.82	19.06	12.11	15.34	--
41.	19-08-2024	54.59	17.71	11.31	13.64	--
42.	22-08-2024	56.1	18.17	11.85	14.42	--
43.	26-08-2024	52.25	16.91	10.73	13.65	--
44.	29-08-2024	54.81	17.42	11.26	13.41	--
45.	02-09-2024	50.93	15.86	11.12	14.07	--
46.	05-09-2024	53.27	16.42	11.48	14.65	--
47.	09-09-2024	55.36	16.83	12.24	15.41	--

Continue...



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GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
Certified Company

ISO 45001 : 2018  
Certified Company

Name of Location		Adani Guest House				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
48.	12-09-2024	58.91	17.48	12.52	15.29	--
49.	16-09-2024	55.71	15.47	11.79	14.36	--
50.	19-09-2024	57.28	16.63	12.18	15.36	--
51.	23-09-2024	59.13	18.15	12.86	15.17	--
52.	26-09-2024	53.28	15.93	11.16	14.38	--
53.	30-09-2024	56.16	16.42	11.53	14.31	--
<b>Permissible Value as per NAAQMS</b>		<b>100.0</b>	<b>60.0</b>	<b>80.0</b>	<b>80.0</b>	<b>2.0</b>
<b>Test Method</b>		<b>IS - 5182, Part- 23</b>	<b>UERL/AIR/ SOP/11</b>	<b>IS - 5182, Part - 2</b>	<b>IS - 5182, Part - 6</b>	<b>IS - 5182, Part - 10</b>



**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Ambient Air Quality Monitoring

Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
1.	01-04-2024	80.15	37.82	18.27	22.74	NOT DETECTED
2.	04-04-2024	83.74	40.13	20.74	25.49	--
3.	08-04-2024	78.4	35.68	19.13	23.96	--
4.	11-04-2024	83.57	39.71	18.93	23.66	--
5.	15-04-2024	79.91	36.48	21.26	25.73	--
6.	18-04-2024	77.48	33.62	18.94	22.91	--
7.	22-04-2024	80.64	35.48	19.52	23.16	--
8.	25-04-2024	83.45	39.11	21.53	25.38	--
9.	29-04-2024	78.81	35.34	19.79	24.25	--
10.	02-05-2024	81.73	37.12	19.35	24.1	--
11.	06-05-2024	79.35	34.86	18.11	22.95	--
12.	09-05-2024	83.48	36.37	20.34	25.37	--
13.	13-05-2024	81.83	34.91	20.59	24.86	--
14.	16-05-2024	84.15	38.12	22.01	26.53	--
15.	20-05-2024	80.94	35.63	21.03	25.91	--

Continue...

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Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
16.	23-05-2024	77.64	32.78	18.23	22.89	--
17.	27-05-2024	79.62	34.14	19.81	23.46	--
18.	30-05-2024	82.25	36.66	21.45	26.51	--
19.	03-06-2024	80.41	36.52	19.75	23.21	--
20.	06-06-2024	82.74	37.11	21.23	25.37	--
21.	10-06-2024	80.16	35.1	20.12	24.81	--
22.	13-06-2024	78.64	32.75	19.38	23.37	--
23.	17-06-2024	73.28	31.25	19.13	22.61	--
24.	20-06-2024	75.13	33.68	20.43	23.55	--
25.	24-06-2024	55.21	29.75	17.24	20.53	--
26.	27-06-2024	47.63	26.18	15.74	18.95	--
27.	01-07-2024	44.75	22.48	13.73	16.37	NOT DETECTED
28.	04-07-2024	53.47	27.53	15.76	18.15	--
29.	08-07-2024	61.28	31.57	17.24	20.82	--
30.	11-07-2024	57.49	29.62	15.79	18.42	--
31.	15-07-2024	54.68	24.37	14.05	17.64	--

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Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
32.	18-07-2024	63.15	27.21	17.51	20.38	--
33.	22-07-2024	56.63	25.86	15.13	18.65	--
34.	25-07-2024	49.84	20.84	13.27	16.86	--
35.	29-07-2024	43.77	17.65	12.83	16.14	--
36.	01-08-2024	51.38	20.73	12.65	15.48	--
37.	05-08-2024	56.29	23.64	13.11	16.83	--
38.	08-08-2024	50.94	22.48	12.85	15.93	--
39.	12-08-2024	54.18	21.85	13.37	16.45	--
40.	15-08-2024	60.31	25.02	14.71	17.32	--
41.	19-08-2024	58.62	24.38	14.24	16.98	--
42.	22-08-2024	53.29	22.43	13.11	16.27	--
43.	26-08-2024	51.48	21.14	12.83	15.38	--
44.	29-08-2024	59.19	23.1	14.15	17.11	--
45.	02-09-2024	52.73	21.24	12.92	15.38	--
46.	05-09-2024	50.91	19.89	11.67	14.58	--
47.	09-09-2024	53.17	21.63	12.57	15.44	--

Continue...

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Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
48.	12-09-2024	55.48	22.15	12.98	16.03	--
49.	16-09-2024	58.64	24.1	13.46	16.37	--
50.	19-09-2024	53.19	21.95	12.58	15.42	--
51.	23-09-2024	56.29	23.14	13.37	16.11	--
52.	26-09-2024	52.73	21.16	12.74	15.82	--
53.	30-09-2024	55.28	22.32	13.25	16.72	--
<b>Permissible Value as per NAAQMS</b>		<b>100.0</b>	<b>60.0</b>	<b>80.0</b>	<b>80.0</b>	<b>2.0</b>
<b>Test Method</b>		<b>IS - 5182, Part- 23</b>	<b>UERL/AIR/ SOP/11</b>	<b>IS - 5182, Part - 2</b>	<b>IS - 5182, Part - 6</b>	<b>IS - 5182, Part - 10</b>



**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Ambient Air Quality Monitoring

Name of Location		SAMUDRA TOWNSHIP – STP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
1.	01-04-2024	82.41	21.26	11.63	16.47	NOT DETECTED
2.	04-04-2024	80.25	18.37	10.56	15.11	--
3.	08-04-2024	83.75	21.96	12.11	17.62	--
4.	11-04-2024	78.89	19.47	10.95	15.31	--
5.	15-04-2024	85.13	22.29	12.23	17.39	--
6.	18-04-2024	81.37	18.92	10.84	15.46	--
7.	22-04-2024	84.72	20.47	11.65	16.24	--
8.	25-04-2024	79.15	18.36	10.28	15.77	--
9.	29-04-2024	83.52	22.10	12.42	17.13	--
10.	02-05-2024	80.13	20.52	10.83	15.48	--
11.	06-05-2024	82.64	21.89	12.64	16.49	--
12.	09-05-2024	79.28	20.16	11.42	15.63	--
13.	13-05-2024	77.83	18.35	10.74	15.12	--
14.	16-05-2024	83.26	21.74	12.69	15.97	--
15.	20-05-2024	80.81	19.79	12.18	17.02	--

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Name of Location		SAMUDRA TOWNSHIP – STP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
16.	23-05-2024	78.25	18.42	10.85	15.74	--
17.	27-05-2024	82.46	20.13	12.42	16.57	--
18.	30-05-2024	79.91	18.74	10.86	15.38	--
19.	03-06-2024	83.12	19.86	12.11	16.83	--
20.	06-06-2024	81.53	18.75	11.86	15.95	--
21.	10-06-2024	78.85	17.24	10.53	15.10	--
22.	13-06-2024	80.67	19.54	11.81	16.23	--
23.	17-06-2024	74.38	18.14	10.48	15.26	--
24.	20-06-2024	71.29	16.82	10.34	15.63	--
25.	24-06-2024	45.93	13.28	8.52	10.25	--
26.	27-06-2024	52.38	15.21	9.17	12.46	--
27.	01-07-2024	58.39	15.47	7.84	10.36	NOT DETECTED
28.	04-07-2024	68.15	15.39	9.74	12.35	--
29.	08-07-2024	73.29	19.12	12.45	15.86	--
30.	11-07-2024	65.13	17.56	10.37	13.89	--
31.	15-07-2024	69.35	19.05	11.36	15.58	--

Continue...

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Name of Location		SAMUDRA TOWNSHIP – STP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
32.	18-07-2024	57.11	15.34	9.75	11.47	--
33.	22-07-2024	52.58	15.83	8.16	11.21	--
34.	25-07-2024	64.15	16.31	10.64	14.10	--
35.	29-07-2024	56.73	15.35	9.72	12.24	--
36.	01-08-2024	61.42	15.87	9.26	11.94	--
37.	05-08-2024	58.86	15.12	8.83	11.48	--
38.	08-08-2024	63.72	16.49	9.54	12.13	--
39.	12-08-2024	68.53	17.15	10.73	13.62	--
40.	15-08-2024	64.28	16.73	9.92	12.58	--
41.	19-08-2024	70.12	17.68	10.59	12.37	--
42.	22-08-2024	66.23	16.13	10.27	13.21	--
43.	26-08-2024	59.82	15.25	8.95	11.83	--
44.	29-08-2024	62.46	15.82	9.81	12.64	--
45.	02-09-2024	57.16	14.62	8.82	10.95	--
46.	05-09-2024	59.63	14.96	9.16	11.16	--
47.	09-09-2024	61.92	15.38	9.89	11.63	--

Continue...



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Name of Location		SAMUDRA TOWNSHIP – STP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
48.	12-09-2024	64.53	16.25	10.32	12.47	--
49.	16-09-2024	62.47	15.72	9.61	11.42	--
50.	19-09-2024	65.18	16.23	10.47	13.11	--
51.	23-09-2024	68.31	16.79	10.72	13.18	--
52.	26-09-2024	63.48	15.42	9.81	12.57	--
53.	30-09-2024	59.63	14.91	8.94	11.62	--
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0
Test Method		IS - 5182, Part- 23	UERL/AIR/ SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10



**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Ambient Air Quality Monitoring

Name of Location		SAMUDRA TOWNSHIP CUSTOMER CARE				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
1.	01-04-2024	64.57	23.82	16.11	20.87	NOT DETECTED
2.	04-04-2024	67.19	26.48	15.83	20.36	--
3.	08-04-2024	71.54	28.12	18.75	23.47	--
4.	11-04-2024	69.86	25.74	17.42	21.55	--
5.	15-04-2024	64.86	24.75	15.79	20.38	--
6.	18-04-2024	70.36	26.48	18.26	23.51	--
7.	22-04-2024	68.95	25.85	16.37	20.95	--
8.	25-04-2024	71.24	28.74	18.47	23.24	--
9.	29-04-2024	70.42	27.54	17.61	22.42	--
10.	02-05-2024	68.26	25.85	16.38	21.19	--
11.	06-05-2024	70.61	27.94	18.52	23.64	--
12.	09-05-2024	67.3	24.75	16.13	21.48	--
13.	13-05-2024	68.91	25.17	17.51	21.97	--
14.	16-05-2024	71.27	28.1	18.14	23.31	--
15.	20-05-2024	67.53	25.13	17.42	21.83	--

Continue...

Name of Location		SAMUDRA TOWNSHIP CUSTOMER CARE				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
16.	23-05-2024	64.83	23.88	15.73	20.63	--
17.	27-05-2024	66.39	26.13	17.05	22.54	--
18.	30-05-2024	64.13	24.65	15.98	20.82	--
19.	03-06-2024	70.12	24.81	16.58	21.73	--
20.	06-06-2024	67.63	23.86	15.94	20.81	--
21.	10-06-2024	69.12	24.35	16.74	21.85	--
22.	13-06-2024	66.82	22.69	15.62	20.54	--
23.	17-06-2024	64.18	21.74	14.68	18.81	--
24.	20-06-2024	61.85	21.37	15.12	18.75	--
25.	24-06-2024	32.75	15.84	11.36	15.32	--
26.	27-06-2024	39.68	18.53	12.45	15.98	--
27.	01-07-2024	35.28	15.73	9.84	12.37	NOT DETECTED
28.	04-07-2024	43.57	18.21	11.62	14.54	--
29.	08-07-2024	41.48	16.74	10.57	13.61	--
30.	11-07-2024	47.52	17.38	13.25	17.43	--
31.	15-07-2024	54.28	18.74	14.17	18.42	--

Continue...

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Name of Location		SAMUDRA TOWNSHIP CUSTOMER CARE				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
32.	18-07-2024	57.13	20.62	16.31	19.86	--
33.	22-07-2024	48.42	17.48	14.85	17.42	--
34.	25-07-2024	45.39	15.68	12.35	15.59	--
35.	29-07-2024	41.93	15.57	10.21	14.13	--
36.	01-08-2024	42.46	14.91	10.89	13.43	--
37.	05-08-2024	45.28	15.63	11.42	13.97	--
38.	08-08-2024	47.15	15.89	12.18	15.21	--
39.	12-08-2024	43.85	14.81	11.63	13.47	--
40.	15-08-2024	50.13	16.35	13.07	15.99	--
41.	19-08-2024	47.63	15.42	12.1	15.31	--
42.	22-08-2024	50.34	16.79	13.28	16.12	--
43.	26-08-2024	42.16	14.85	11.41	13.85	--
44.	29-08-2024	47.39	16.12	12.74	15.31	--
45.	02-09-2024	40.81	13.47	10.52	13.49	--
46.	05-09-2024	43.27	14.83	11.32	13.14	--
47.	09-09-2024	41.59	13.78	10.85	12.99	--

Continue...

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Name of Location		SAMUDRA TOWNSHIP CUSTOMER CARE				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
48.	12-09-2024	43.26	14.57	11.05	13.25	--
49.	16-09-2024	46.19	15.73	12.47	15.21	--
50.	19-09-2024	44.47	14.38	11.54	13.27	--
51.	23-09-2024	48.61	16.11	12.73	15.27	--
52.	26-09-2024	46.38	15.42	12.13	15.02	--
53.	30-09-2024	44.26	13.52	11.62	13.49	--
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0
Test Method		IS - 5182, Part- 23	UERL/AIR/ SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10



**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Ambient Air Quality Monitoring

Name of Location		AIR STRIP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
1.	01-04-2024	83.35	33.41	19.64	23.15	0.12
2.	04-04-2024	80.12	29.75	18.89	21.97	0.11
3.	08-04-2024	82.57	31.94	19.37	22.69	0.12
4.	11-04-2024	85.14	35.25	21.43	26.04	0.11
5.	15-04-2024	80.47	33.32	20.11	25.42	0.11
6.	18-04-2024	76.05	30.74	18.68	21.47	0.12
7.	22-04-2024	82.37	32.46	19.51	22.94	0.12
8.	25-04-2024	85.42	35.17	21.31	26.12	0.11
9.	29-04-2024	81.31	31.47	20.24	24.37	0.12
10.	02-05-2024	79.63	29.19	17.84	21.91	0.11
11.	06-05-2024	81.35	31.48	19.36	23.42	0.12
12.	09-05-2024	80.11	30.29	20.14	24.57	0.11
13.	13-05-2024	78.52	28.64	18.28	22.16	0.11
14.	16-05-2024	75.49	27.1	17.21	21.91	0.11
15.	20-05-2024	81.15	29.89	19.34	23.42	0.12

Continue...

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
Certified Company

ISO 45001 : 2018  
Certified Company

Name of Location		AIR STRIP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
16.	23-05-2024	77.49	27.54	17.12	21.83	0.11
17.	27-05-2024	81.43	31.71	19.84	23.17	0.12
18.	30-05-2024	83.35	32.69	20.31	24.55	0.12
19.	03-06-2024	81.27	30.13	18.92	21.35	0.12
20.	06-06-2024	78.36	28.75	17.43	21.84	0.11
21.	10-06-2024	81.41	30.19	19.42	23.14	0.12
22.	13-06-2024	80.15	29.63	18.64	22.83	0.12
23.	17-06-2024	77.46	27.1	17.42	20.38	0.11
24.	20-06-2024	74.39	25.91	16.57	19.79	0.11
25.	24-06-2024	61.38	22.52	14.31	17.84	0.03
26.	27-06-2024	54.98	19.65	11.85	15.23	0.05
27.	01-07-2024	51.63	18.37	11.49	14.21	NOT DETECTED
28.	04-07-2024	58.71	20.86	12.86	16.45	0.04
29.	08-07-2024	63.75	21.64	15.42	19.76	0.06
30.	11-07-2024	72.39	23.48	17.35	20.88	0.04
31.	15-07-2024	73.95	26.22	18.51	22.24	0.07

Continue...

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GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
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ISO 45001 : 2018  
Certified Company

Name of Location		AIR STRIP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
32.	18-07-2024	69.87	23.75	15.48	19.73	0.05
33.	22-07-2024	72.36	25.94	16.59	19.11	0.03
34.	25-07-2024	66.48	22.36	14.37	18.63	NOT DETECTED
35.	29-07-2024	63.57	20.39	11.87	14.31	NOT DETECTED
36.	01-08-2024	58.14	20.05	12.63	15.82	NOT DETECTED
37.	05-08-2024	62.39	21.37	13.48	16.14	0.05
38.	08-08-2024	65.13	22.35	14.12	18.06	0.05
39.	12-08-2024	60.32	20.86	13.25	16.28	0.05
40.	15-08-2024	64.74	22.11	14.59	17.36	0.05
41.	19-08-2024	67.42	23.61	14.96	18.1	0.05
42.	22-08-2024	69.31	24.13	15.11	18.74	0.05
43.	26-08-2024	62.64	22.25	13.21	16.47	NOT DETECTED
44.	29-08-2024	65.38	23.56	14.28	17.42	NOT DETECTED
45.	02-09-2024	60.13	20.93	13.15	16.69	NOT DETECTED
46.	05-09-2024	64.38	21.63	13.75	16.91	NOT DETECTED
47.	09-09-2024	62.19	20.85	12.79	15.68	NOT DETECTED

Continue...



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GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
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ISO 45001 : 2018  
Certified Company

Name of Location		AIR STRIP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
48.	12-09-2024	65.11	23.19	13.88	16.13	0.05
49.	16-09-2024	68.38	24.83	14.57	17.42	0.05
50.	19-09-2024	64.59	22.38	13.71	16.54	0.05
51.	23-09-2024	66.72	24.15	14.24	17.8	0.05
52.	26-09-2024	63.5	22.12	13.72	16.36	NOT DETECTED
53.	30-09-2024	65.18	23.42	14.31	17.13	NOT DETECTED
<b>Permissible Value as per NAAQMS</b>		<b>100.0</b>	<b>60.0</b>	<b>80.0</b>	<b>80.0</b>	<b>2.0</b>
<b>Test Method</b>		<b>IS - 5182, Part- 23</b>	<b>UERL/AIR/ SOP/11</b>	<b>IS - 5182, Part - 2</b>	<b>IS - 5182, Part - 6</b>	<b>IS - 5182, Part - 10</b>



**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Ambient Air Quality Monitoring

Name of Location		SV2			
Sr. No.	Date of Monitoring	Parameter with Results			
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
1.	01-04-2024	71.28	21.63	10.16	15.92
2.	04-04-2024	68.84	19.57	10.73	15.69
3.	08-04-2024	65.38	20.13	11.53	17.36
4.	11-04-2024	69.26	18.74	10.11	15.89
5.	15-04-2024	72.47	20.83	11.24	16.48
6.	18-04-2024	74.11	21.37	10.95	16.52
7.	22-04-2024	68.41	20.47	11.29	15.23
8.	25-04-2024	63.85	18.77	10.85	15.12
9.	29-04-2024	66.31	19.76	10.12	16.32
10.	02-05-2024	68.52	19.73	11.21	15.05
11.	06-05-2024	71.31	20.88	11.93	15.12
12.	09-05-2024	69.42	19.26	11.04	16.31
13.	13-05-2024	66.37	18.87	10.86	15.16
14.	16-05-2024	64.92	17.65	10.52	15.88
15.	20-05-2024	65.28	18.11	10.79	16.01

Continue...

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Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
Certified Company

ISO 45001 : 2018  
Certified Company

Name of Location		SV2			
Sr. No.	Date of Monitoring	Parameter with Results			
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
16.	23-05-2024	67.53	20.10	11.25	15.31
17.	27-05-2024	64.39	17.84	10.86	15.78
18.	30-05-2024	67.54	19.86	11.12	16.44
19.	03-06-2024	66.39	18.10	10.87	14.29
20.	06-06-2024	69.73	18.65	11.87	15.38
21.	10-06-2024	65.49	18.15	11.64	15.10
22.	13-06-2024	63.40	17.32	10.42	14.38
23.	17-06-2024	58.93	15.85	9.85	13.25
24.	20-06-2024	60.38	16.52	10.63	14.57
25.	24-06-2024	34.83	13.29	7.84	10.62
26.	27-06-2024	30.61	12.84	7.13	9.79
27.	01-07-2024	35.86	15.29	7.25	9.63
28.	04-07-2024	38.41	16.92	8.10	11.38
29.	08-07-2024	43.59	18.14	8.58	10.72
30.	11-07-2024	41.20	15.48	7.14	9.91
31.	15-07-2024	45.68	16.27	9.52	11.44

Continue...

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Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
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ISO 45001 : 2018  
Certified Company

Name of Location		SV2			
Sr. No.	Date of Monitoring	Parameter with Results			
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
32.	18-07-2024	43.29	15.73	8.87	10.39
33.	22-07-2024	40.65	15.12	8.21	11.03
34.	25-07-2024	45.18	16.42	9.14	11.59
35.	29-07-2024	39.74	15.12	7.73	10.14
36.	01-08-2024	40.93	15.11	7.82	10.47
37.	05-08-2024	42.84	15.81	8.15	11.21
38.	08-08-2024	46.83	16.32	8.52	11.69
39.	12-08-2024	43.72	15.79	7.95	10.31
40.	15-08-2024	46.13	16.68	8.73	11.25
41.	19-08-2024	49.37	17.14	8.97	11.64
42.	22-08-2024	47.42	16.83	8.77	10.98
43.	26-08-2024	44.61	15.49	7.69	10.81
44.	29-08-2024	46.39	16.10	8.42	11.36
45.	02-09-2024	42.37	15.75	8.14	11.08
46.	05-09-2024	41.28	14.91	7.84	10.41
47.	09-09-2024	43.27	15.48	8.37	11.15

Continue...

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
Certified Company

ISO 45001 : 2018  
Certified Company

Name of Location		SV2			
Sr. No.	Date of Monitoring	Parameter with Results			
		PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
48.	12-09-2024	45.63	16.15	9.10	12.21
49.	16-09-2024	43.83	15.61	8.46	10.62
50.	19-09-2024	45.38	15.94	8.98	10.87
51.	23-09-2024	48.14	16.73	9.19	12.10
52.	26-09-2024	43.29	14.78	8.13	10.85
53.	30-09-2024	45.18	15.27	8.48	11.14
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0
Test Method		IS - 5182, Part- 23	UERL/AIR/ SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6



**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Noise Level Monitoring

Location Name		PUB / Adani House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		01-04-2024	02-05-2024	03-06-2024	01-07-2024	01-08-2024	02-09-2024
1	06:00 to 07:00	63.5	61.8	60.4	58.3	59.1	59.6
2	07:00 to 08:00	65.8	63.6	62.8	61.2	60.3	59.8
3	08:00 to 09:00	67.2	65.4	66.1	64.8	62.8	62.3
4	09:00 to 10:00	65.5	66.8	65.3	65.7	64.7	63.6
5	10:00 to 11:00	64.8	65.3	65.9	64.4	65.4	64.8
6	11:00 to 12:00	64.2	65.9	67.1	66.8	66.2	65.2
7	12:00 to 13:00	65.5	64.6	66.3	64.2	65.7	64.8
8	13:00 to 14:00	63.1	65.2	64.7	65.4	64.8	65.4
9	14:00 to 15:00	64.3	66.5	65.1	64.8	63.7	64.8
10	15:00 to 16:00	64.8	65.3	65.5	65.2	64.5	64.3
11	16:00 to 17:00	63.2	64.8	64.6	63.9	64.8	64.9
12	17:00 to 18:00	65.7	63.4	64.1	65.5	66.2	65.7
13	18:00 to 19:00	64.1	62.2	62.3	63.2	64.5	65.4
14	19:00 to 20:00	62.7	64.5	63.8	62.9	63.8	64.8
15	20:00 to 21:00	62.9	63.7	64.1	63.5	64.1	63.5
16	21:00 to 22:00	61.3	60.4	61.2	60.4	61.3	61.9
<b>Day Time</b>		<b>&lt;75 dB (A)</b>					

Continue...

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
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Certified Company

Location Name		PUB / Adani House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		02-10-2023	02-11-2023	04-12-2023	01-01-2024	01-02-2024	04-03-2024
1	22:00 to 23:00	57.4	60.5	59.7	58.6	59.2	60.7
2	23:00 to 24:00	55.8	63.2	61.3	61.7	60.3	58.4
3	24:00 to 01:00	53.9	61.4	62.3	63.3	62.9	60.7
4	01:00 to 02:00	58.6	64.8	61.9	61.9	60.3	62.1
5	02:00 to 03:00	59.3	60.1	59.7	59.5	57.8	60.5
6	03:00 to 04:00	53.8	58.2	57.6	57.4	56.3	61.3
7	04:00 to 05:00	56.3	57.5	56.3	56.3	56.8	58.6
8	05:00 to 06:00	55.6	59.3	57.5	58.1	57.3	58.1

Night Time	<70 dB (A)
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Test Method	IS: 9989 : 1981
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**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Noise Level Monitoring

Location Name		Adani Guest House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		17-04-2024	22-05-2024	18-06-2024	20-07-2024	17-08-2024	17-09-2024
1	06:00 to 07:00	57.6	58.7	58.9	57.6	58.2	59.4
2	07:00 to 08:00	59.4	60.3	61.3	59.7	60.3	61.5
3	08:00 to 09:00	60.3	59.8	60.3	61.4	60.9	63.4
4	09:00 to 10:00	64.6	62.4	63.2	60.8	62.4	64.7
5	10:00 to 11:00	66.4	65.4	64.6	62.2	63.6	64.2
6	11:00 to 12:00	65.7	66.8	65.2	64.6	63.1	65.7
7	12:00 to 13:00	64.2	65.3	64.3	65.3	64.5	67.1
8	13:00 to 14:00	65.2	64.2	65.8	64.9	65.4	66.4
9	14:00 to 15:00	66.6	65.4	64.3	63.6	66.7	65.6
10	15:00 to 16:00	63.2	64.6	65.8	65.6	65.4	64.8
11	16:00 to 17:00	65.6	65.1	64.2	63.8	64.5	65.7
12	17:00 to 18:00	64.3	63.8	62.9	63.5	64.3	65.1
13	18:00 to 19:00	65.5	63.4	62.5	64.1	65.2	64.3
14	19:00 to 20:00	64.4	65.1	64.3	66.2	65.6	64.7
15	20:00 to 21:00	63.1	62.8	63.8	63.5	62.5	62.3
16	21:00 to 22:00	60.1	60.3	59.8	60.3	61.5	60.7
<b>Day Time</b>		<b>&lt;75 dB (A)</b>					

Continue...



QCI-NABET Accredited EIA  
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Auditor (Schedule-11)

ISO 9001 : 2015  
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ISO 45001 : 2018  
Certified Company

Location Name		Adani Guest House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		17-04-2024	22-05-2024	18-06-2024	20-07-2024	17-08-2024	17-09-2024
1	22:00 to 23:00	60.5	60.6	59.9	58.4	57.9	58.1
2	23:00 to 24:00	62.4	61.7	60.4	59.4	59.1	58.8
3	24:00 to 01:00	61.4	63.3	62.4	61.8	59.6	60.4
4	01:00 to 02:00	63.8	62.8	63.1	63.5	60.5	62.6
5	02:00 to 03:00	62.3	62.4	61.4	62.3	61.9	62.4
6	03:00 to 04:00	60.1	61.8	60.8	61.7	62.2	61.3
7	04:00 to 05:00	61.3	60.2	58.7	59.3	60.3	59.7
8	05:00 to 06:00	61.4	59.8	58.3	59.5	59.3	57.6

Night Time	<70 dB (A)
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Test Method	IS: 9989 : 1981
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**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Noise Level Monitoring

Location Name		WTP- Nr. CETP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		03-04-2024	04-05-2024	05-06-2024	03-07-2024	03-08-2024	03-09-2024
1	06:00 to 07:00	63.1	62.8	61.5	60.8	60.2	59.5
2	07:00 to 08:00	65.6	64.9	63.7	64.1	63.5	59.9
3	08:00 to 09:00	67.1	67.3	64.8	66.1	64.8	61.7
4	09:00 to 10:00	65.8	66.7	63.4	64.7	66.5	62.4
5	10:00 to 11:00	65.7	64.9	66.2	67.4	65.2	64.6
6	11:00 to 12:00	67.4	65.7	65.4	64.3	66.7	66.1
7	12:00 to 13:00	65.2	66.3	67.2	65.9	66.3	65.4
8	13:00 to 14:00	64.5	65.4	64.9	63.6	64.8	64.7
9	14:00 to 15:00	67.1	66.8	65.2	64.6	63.7	65.6
10	15:00 to 16:00	65.9	64.2	67.8	65.8	64.7	65.2
11	16:00 to 17:00	65.4	66.1	65.4	65.1	65.4	63.6
12	17:00 to 18:00	65.8	65.8	67.1	67.3	66.3	65.1
13	18:00 to 19:00	65.1	63.2	65.3	64.5	64.3	65.7
14	19:00 to 20:00	63.8	62.3	64.3	65.2	62.8	64.4
15	20:00 to 21:00	60.3	60.6	61.8	63.4	62.7	63.5
16	21:00 to 22:00	60.5	62.4	61.7	61.9	61.3	60.8
<b>Day Time</b>		<b>&lt;75 dB (A)</b>					

Continue...

QCI-NABET Accredited EIA  
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Auditor (Schedule-11)

ISO 9001 : 2015  
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Location Name		WTP- Nr. CETP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		03-04-2024	04-05-2024	05-06-2024	03-07-2024	03-08-2024	03-09-2024
1	22:00 to 23:00	60.9	60.2	59.8	58.9	59.3	60.5
2	23:00 to 24:00	63.4	61.8	60.6	61.3	60.6	59.4
3	24:00 to 01:00	62.3	63.6	62.7	61.7	62.4	60.6
4	01:00 to 02:00	61.4	62.4	61.4	62.5	61.4	63.4
5	02:00 to 03:00	60.5	62.5	62.7	61.7	63.1	61.7
6	03:00 to 04:00	62.3	60.4	61.5	60.4	62.3	61.4
7	04:00 to 05:00	61.6	62.3	59.8	60.2	59.7	60.3
8	05:00 to 06:00	58.3	60.1	60.3	59.7	58.8	58.2

Night Time	<70 dB (A)
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Test Method	IS: 9989 : 1981
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**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Noise Level Monitoring

Location Name		SAMUDRA TOWNSHIP – STP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		06-04-2024	11-05-2024	08-06-2024	06-07-2024	07-08-2024	07-09-2024
1	06:00 to 07:00	62.5	61.7	63.1	63.5	61.9	60.3
2	07:00 to 08:00	63.8	63.4	60.8	65.2	63.2	62.4
3	08:00 to 09:00	64.5	65.8	62.3	64.7	64.3	65.4
4	09:00 to 10:00	67.4	65.6	65.8	66.4	65.2	64.3
5	10:00 to 11:00	66.3	67.2	64.6	65.2	67.5	66.3
6	11:00 to 12:00	65.4	66.5	67.3	66.8	64.5	65.8
7	12:00 to 13:00	66.6	65.4	65.4	64.5	65.9	64.3
8	13:00 to 14:00	65.4	64.3	66.7	65.4	66.3	66.1
9	14:00 to 15:00	65.9	64.3	63.4	66.2	65.2	64.8
10	15:00 to 16:00	65.3	65.9	66.3	63.4	64.5	63.2
11	16:00 to 17:00	66.7	64.3	65.2	64.7	63.7	65.5
12	17:00 to 18:00	65.7	65.2	63.2	65.1	64.5	64.7
13	18:00 to 19:00	68.3	64.3	65.8	63.3	65.8	66.5
14	19:00 to 20:00	64.6	66.7	65.9	64.8	63.2	65.3
15	20:00 to 21:00	64.6	65.3	64.3	62.6	63.7	64.2
16	21:00 to 22:00	61.8	61.7	62.3	60.1	60.4	62.3
<b>Day Time</b>		<b>&lt;75 dB (A)</b>					

Continue...

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Location Name		SAMUDRA TOWNSHIP – STP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		06-04-2024	11-05-2024	08-06-2024	06-07-2024	07-08-2024	07-09-2024
1	22:00 to 23:00	58.7	58.1	58.4	59.2	58.8	59.3
2	23:00 to 24:00	60.1	59.3	58.8	59.6	59.3	60.8
3	24:00 to 01:00	59.7	60.4	59.4	60.4	59.9	62.3
4	01:00 to 02:00	62.3	61.8	62.6	61.4	62.3	61.6
5	02:00 to 03:00	61.3	61.4	61.5	63.1	62.6	63.5
6	03:00 to 04:00	59.8	62.4	61.8	61.3	61.2	62.1
7	04:00 to 05:00	60.2	60.7	60.3	58.7	60.4	61.7
8	05:00 to 06:00	57.8	58.3	59.1	58.2	58.3	59.9

Night Time	<70 dB (A)
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Test Method	IS: 9989 : 1981
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**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Noise Level Monitoring

Location Name		SAMUDRA TOWNSHIP CUSTOMER CARE					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		09-04-2024	14-05-2024	12-06-2024	09-07-2024	10-08-2024	11-09-2024
1	06:00 to 07:00	58.3	60.1	60.8	61.7	60.7	61.6
2	07:00 to 08:00	59.5	61.5	62.3	63.9	61.6	63.7
3	08:00 to 09:00	61.8	63.4	64.7	66.4	63.5	64.2
4	09:00 to 10:00	64.2	64.8	64.3	63.8	64.8	66.8
5	10:00 to 11:00	64.8	66.8	66.1	64.7	65.4	64.3
6	11:00 to 12:00	64.2	65.3	64.8	67.0	65.8	63.5
7	12:00 to 13:00	65.9	66.7	67.3	65.4	66.2	67.1
8	13:00 to 14:00	67.2	65.8	66.2	65.7	65.3	65.7
9	14:00 to 15:00	63.7	65.1	64.8	65.9	64.8	65.3
10	15:00 to 16:00	64.6	63.7	64.6	65.3	65.7	64.7
11	16:00 to 17:00	65.2	65.4	66.5	66.8	65.3	64.8
12	17:00 to 18:00	63.4	64.5	65.2	64.2	65.1	65.8
13	18:00 to 19:00	64.1	63.6	63.2	61.9	64.3	65.3
14	19:00 to 20:00	66.4	64.3	64.7	62.4	63.8	64.4
15	20:00 to 21:00	62.8	62.9	63.1	64.3	65.1	65.5
16	21:00 to 22:00	58.5	59.2	59.8	62.3	61.5	61.9
<b>Day Time</b>		<b>&lt;75 dB (A)</b>					

Continue...

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Location Name		SAMUDRA TOWNSHIP CUSTOMER CARE					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		09-04-2024	14-05-2024	12-06-2024	09-07-2024	10-08-2024	11-09-2024
1	22:00 to 23:00	61.1	60.8	60.2	60.5	60.2	61.6
2	23:00 to 24:00	63.3	62.7	61.7	60.2	61.4	59.1
3	24:00 to 01:00	62.6	64.1	62.8	61.6	62.4	60.8
4	01:00 to 02:00	60.8	62.4	63.8	62.8	61.9	63.5
5	02:00 to 03:00	63.2	61.8	63.2	62.5	63.4	62.3
6	03:00 to 04:00	61.7	61.9	62.1	63.2	62.7	63.5
7	04:00 to 05:00	61.4	59.6	61.8	60.5	61.2	60.5
8	05:00 to 06:00	60.4	59.8	60.3	59.8	59.2	60.1

Night Time	<70 dB (A)
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Test Method	IS: 9989 : 1981
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**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Noise Level Monitoring

Location Name		AIR STRIP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		13-04-2024	18-05-2024	15-06-2024	13-07-2024	13-08-2024	14-09-2024
1	06:00 to 07:00	60.8	61.3	63.2	62.8	62.3	63.7
2	07:00 to 08:00	62.7	63.2	65.4	65.1	64.8	63.2
3	08:00 to 09:00	64.6	64.7	66.4	64.7	63.4	65.1
4	09:00 to 10:00	66.8	66.2	67.8	65.5	64.5	65.6
5	10:00 to 11:00	65.1	64.6	65.4	65.4	66.8	66.8
6	11:00 to 12:00	64.8	67.3	68.7	68.2	65.4	64.2
7	12:00 to 13:00	68.3	67.8	65.8	67.5	65.9	66.5
8	13:00 to 14:00	66.7	65.4	67.8	65.8	66.3	63.9
9	14:00 to 15:00	65.2	66.2	65.5	66.4	65.2	64.7
10	15:00 to 16:00	66.4	64.9	63.8	67.1	67.4	66.5
11	16:00 to 17:00	63.8	64.7	65.1	65.4	66.4	66.1
12	17:00 to 18:00	66.5	65.2	66.8	66.4	64.5	65.3
13	18:00 to 19:00	63.8	65.5	65.1	65.1	64.8	66.8
14	19:00 to 20:00	65.1	63.8	65.9	64.8	63.4	65.5
15	20:00 to 21:00	65.4	64.1	64.5	62.5	63.8	64.1
16	21:00 to 22:00	62.3	61.8	62.2	64.1	62.2	62.4
<b>Day Time</b>		<b>&lt;75 dB (A)</b>					

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Location Name		AIR STRIP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		13-04-2024	18-05-2024	15-06-2024	13-07-2024	13-08-2024	14-09-2024
1	22:00 to 23:00	58.8	58.2	58.5	59.7	59.5	58.7
2	23:00 to 24:00	59.8	60.4	58.8	58.5	59.8	60.4
3	24:00 to 01:00	60.3	62.9	61.5	59.4	60.3	61.7
4	01:00 to 02:00	62.5	61.3	61.8	62.1	62.2	63.8
5	02:00 to 03:00	60.7	63.2	62.5	60.5	61.7	61.2
6	03:00 to 04:00	62.3	62.4	61.4	60.2	60.4	62.6
7	04:00 to 05:00	60.7	61.4	60.5	58.7	59.6	61.2
8	05:00 to 06:00	59.6	60.2	59.6	58.1	57.8	59.7

Night Time	<70 dB (A)
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Test Method	IS: 9989 : 1981
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**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Noise Level Monitoring

Location Name		SV2					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		27-04-2024	31-05-2024	20-06-2024	31-07-2024	31-08-2024	28-09-2024
1	06:00 to 07:00	57.4	58.1	58.7	58.1	57.8	58.5
2	07:00 to 08:00	59.4	60.4	59.5	60.6	59.8	60.1
3	08:00 to 09:00	60.7	62.4	61.8	64.2	63.2	62.5
4	09:00 to 10:00	62.4	63.8	63.4	66.5	63.7	63.1
5	10:00 to 11:00	61.5	65.4	63.9	64.3	64.2	65.7
6	11:00 to 12:00	64.3	66.3	65.8	66.2	65.7	66.8
7	12:00 to 13:00	65.2	64.2	66.8	65.7	64.8	65.3
8	13:00 to 14:00	63.9	63.7	65.4	65.4	65.2	66.7
9	14:00 to 15:00	63.8	65.1	66.7	66.2	64.3	65.3
10	15:00 to 16:00	62.7	63.2	64.3	63.9	64.9	65.3
11	16:00 to 17:00	60.5	61.2	64.2	65.3	63.4	65.6
12	17:00 to 18:00	61.6	60.4	63.4	64.1	62.7	64.4
13	18:00 to 19:00	62.7	63.4	60.6	65.5	63.1	63.2
14	19:00 to 20:00	63.4	62.7	63.4	63.2	62.6	60.7
15	20:00 to 21:00	61.8	61.5	62.7	60.6	61.2	60.4
16	21:00 to 22:00	60.7	59.7	60.1	59.1	59.3	58.5
<b>Day Time</b>		<b>&lt;75 dB (A)</b>					

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Location Name		SV2					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		27-04-2024	31-05-2024	20-06-2024	31-07-2024	31-08-2024	28-09-2024
1	22:00 to 23:00	58.8	59.2	59.5	58.7	58.2	59.8
2	23:00 to 24:00	58.1	60.6	61.3	60.2	59.7	61.3
3	24:00 to 01:00	60.4	62.4	62.5	61.5	60.4	60.3
4	01:00 to 02:00	62.3	61.8	62.1	62.4	62.1	62.1
5	02:00 to 03:00	61.8	62.7	61.3	60.7	61.8	59.8
6	03:00 to 04:00	60.4	61.1	59.4	60.3	59.9	59.6
7	04:00 to 05:00	58.6	59.8	58.7	59.5	60.5	57.7
8	05:00 to 06:00	57.2	57.7	57.2	58.4	58.8	58.2

<b>Night Time</b>	<b>&lt;70 dB (A)</b>
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<b>Test Method</b>	<b>IS: 9989 : 1981</b>
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**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

Results of Stack Monitoring					
Monitoring Period: April - 2024 to September - 2024					
Sr. No.	Parameter	Unit	Adani Hospital DG Set	GPCB LIMIT	Method of Test
			Aug-24		
			13-08-2024		
1	Particulate Matter	mg/Nm <sup>3</sup>	19.13	150	IS 11255 (Part - 1)
2	Sulfur Dioxide as SO <sub>2</sub>	ppm	7.18	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO <sub>x</sub>	ppm	25.46	50	IS 11255 (Part - 7)

Sr. No.	Parameter	Unit	WTP Nr CETP D.G.Set No. S-1 (380 KVA )	GPCB LIMIT	Method of Test
			Sep-24		
			28-09-2024		
1	Particulate Matter	mg/Nm <sup>3</sup>	19.6	150	IS 11255 (Part - 1)
2	Sulfur Dioxide as SO <sub>2</sub>	ppm	5.8	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO <sub>x</sub>	ppm	25.47	50	IS 11255 (Part - 7)



**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### Results of Stack Monitoring

Monitoring Period: **April - 2024 to September - 2024**

Sr. No.	Parameter	Unit	Adani House D.G.Set No. S-1 (750 KVA )	GPCB LIMIT	Method of Test
			Sep-24		
			12-09-2024		
1	Particulate Matter	mg/Nm <sup>3</sup>	20.84	150	IS 11255 (Part - 1)
2	Sulfur Dioxide as SO <sub>2</sub>	ppm	9.1	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO <sub>x</sub>	ppm	25.42	50	IS 11255 (Part - 7)

Sr. No.	Parameter	Unit	D.G.Set No. S-2 (500 KVA –PUB)	GPCB LIMIT	Method of Test
			Sep-24		
			12-09-2024		
1	Particulate Matter	mg/Nm <sup>3</sup>	19.15	150	IS 11255 (Part - 1)
2	Sulfur Dioxide as SO <sub>2</sub>	ppm	8.1	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO <sub>x</sub>	ppm	32.26	50	IS 11255 (Part - 7)



**Nikunj D. Patel**  
(Chemist)




**Jaivik S. Tandel**  
(Manager - Operations)

### RESULTS OF CETP INLET WATER

SR.NO.	TEST PARAMETERS	UNIT	CETP INLET						GPCB Permissible Limit CETP Inlet	TEST METHOD
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24		
			04-04-2024	24-05-2024	27-06-2024	31-07-2024	06-08-2024	12-09-2024		
1.	pH @ 27 ° C	--	7.44	7.24	7.25	7.6	7.69	7.86	6.5 to 8.5	IS 3025(Part 11):2022
2.	Temperature	°C	30.5	31.5	31	30	30	30	--	IS 3025(Part 9):2023
3.	Colour	Pt. Co. Scale	80	70	70	60	60	50	100	IS 3025(Part 4):2021
4.	Total Suspended Solids	mg/L	58	48	86	44	70	74	800	APHA 24th Ed.2023,2540 –D
5.	Oil & Grease	mg/L	4	4.5	4	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	20	IS 3025(Part 39):2021
6.	Phenolic Compound	mg/L	0.56	0.62	0.55	BDL(MDL:2.0)	BDL(MDL:0.1)	BDL(MDL:0.1)	2	IS 3025(Part 43):2022
7.	Fluoride	mg/L	1.11	1.18	1.06	1.2	0.81	1.65	2	APHA 24th Ed.2023,4500 F, D
8.	Iron as Fe	mg/L	0.168	0.149	0.144	BDL(MDL:0.1)	0.39	0.145	3	IS 3025(Part 53):2003,
9.	Zinc as Zn	mg/L	0.111	0.122	0.134	0.06	0.079	BDL(MDL:0.05)	15	IS 3025(Part 49):1994
10.	Trivalent Chromium	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	3	By Calculation
11.	Sulphide	mg/L	0.68	0.58	0.62	0.61	BDL(MDL:0.05)	0.9	2	APHA 24th Ed.2023,4500 S <sup>2</sup> F

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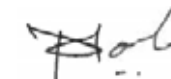
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SR.NO.	TEST PARAMETERS	UNIT	CETP INLET						GPCB Permissible Limit CETP Inlet	TEST METHOD
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24		
			04-04-2024	24-05-2024	27-06-2024	31-07-2024	06-08-2024	12-09-2024		
12.	Ammonical Nitrogen	mg/L	42.2	38.9	15.3	25.8	19.2	21.5	50	IS 3025(Part 34):1988,
13.	BOD (3 days at 27 °C)	mg/L	120	130	128	123	81	65	1000	IS 3025(Part 44):2023
14.	COD	mg/L	404.5	434.4	272	410	270.4	216.9	2000	IS 3025(Part 58):2023
15.	Chloride (as Cl) -	mg/L	814.6	846.2	490	813.1	822.9	684.8	1000	IS 3025(Part 32):1988
16.	Sulphate (as SO <sub>4</sub> )	mg/L	54	62	56	143.4	100.6	254.3	1000	IS 3025(Part 24):2022
17.	Total Dissolved Solids	mg/L	1648	1670	810	1904	1892	1860	2100	APHA 24th Ed.2023,2540- C
18.	Total Residual Chlorine	mg/L	0.68	0.74	BDL(MDL:0.1)	0.74	BDL(MDL:0.2)	0.84	2	IS 3025(Part 26):2021
19.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	0.0574	BDL(MDL:0.05)	BDL(MDL:0.05)	3	IS 3025(Part 42):1992



**Mr. Nilesh Patel**  
Sr. Chemist

**Mr. Nitin Tandel**  
Technical Manager

### RESULTS OF CETP OUTLET WATER

SR.NO.	TEST PARAMETERS	UNIT	CETP OUTLET						GPCB Permissible Limit CETP Outlet	TEST METHOD
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24		
			04-04-2024	24-05-2024	27-06-2024	31-07-2024	06-08-2024	12-09-2024		
1.	pH @ 27 ° C	--	7.42	7.22	7.24	7.56	7.75	8.03	6.0 – 9.0	IS 3025(Part 11):2022
2.	Temperature	°C	30	31.5	31	30	30	30	Shall not exceed more than 5 °C above received water temperature	IS 3025(Part 9):2023
3.	Colour	Pt. Co. Scale	40	40	40	50	50	50	100	IS 3025(Part 4):2021
4.	Total Suspended Solids	mg/L	22	26	9	10	14	10	100	APHA 24th Ed.2023,2540 –D
5.	Oil & Grease	mg/L	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	10	IS 3025(Part 39):2021
6.	Phenolic Compound	mg/L	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	1	IS 3025(Part 43):2022
7.	Fluoride	mg/L	1.05	1.14	1	1.15	1.24	1.2	2	APHA 24th Ed.2023,4500 F, D
8.	Iron as Fe	mg/L	0.124	0.133	0.118	BDL(MDL:0.1)	0.182	BDL(MDL:0.1)	3	IS 3025(Part 53):2003,
9.	Zinc as Zn	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	15	IS 3025(Part 49):1994
10.	Trivalent Chromium	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	2	By Calculation

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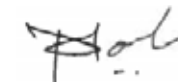
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SR.N O.	TEST PARAMETERS	UNIT	CETP OUTLET						GPCB Permissible Limit CETP Inlet	TEST METHOD
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24		
			10-10-2023	22-11-2023	26-12-2023	23-01-2024	02-02-2024	04-03-2024		
11.	Sulphide	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	<b>2</b>	APHA 24th Ed.2023,4500 S <sup>2</sup> F
12.	Ammonical Nitrogen	mg/L	26.6	28.3	2.5	4.5	3.4	1.2	<b>50</b>	IS 3025(Part 34):1988,
13.	BOD (3 days at 27 °C)	mg/L	26	29	31	39	40	28	<b>100</b>	IS 3025(Part 44):2023
14.	COD	mg/L	84.2	96.4	82	130	134.2	92.2	<b>250</b>	IS 3025(Part 58):2023
15.	Chloride (as Cl <sup>-</sup> )	mg/L	804	812.4	670.2	784	788.4	650.8	<b>1000</b>	IS 3025(Part 32):1988
16.	Sulphate (as SO <sub>4</sub> )	mg/L	52	56	50	129.2	116.7	246.2	<b>1000</b>	IS 3025(Part 24):2022
17.	Total Dissolved Solids	mg/L	1642	1662	1674	1780	1800	1852	<b>2100</b>	APHA 24th Ed.2023,2540- C
18.	Total Residual Chlorine	mg/L	0.66	0.74	0.52	0.74	0.72	0.92	<b>1</b>	IS 3025(Part 26):2021
19.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	<b>3</b>	IS 3025(Part 42):1992
20.	Bio Assay test (%)	%	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	<b>90 % survival of fish after 96 hrs. in 100% effluent</b>	IS:6582-1971



Mr. Nilesh Patel  
Sr. Chemist

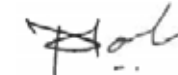
Mr. Nitin Tandel  
Technical Manager

### RESULTS OF BOREHOLE WATER SAMPLE

Sr. No	Parameters	Method	Unit	14-06-2024	14-06-2024	14-06-2024	14-06-2024
				Nr. PUB Building.	Nr. CETP	Nr.flyover bridge	Dhrub
1	pH @ 25 ° C	IS 3025(Part 11)1983	--	7.11	8.54	7.58	7.96
2	Salinity	APHA 24th Ed.,2023,2520 B	ppt	18.38	1.9	7.1	1.68
3	Oil & Grease	IS 3025(Part39)1991, Amd. 2	mg/L	BDL(MDL:5.0)	BDL(MDL:5.0)	BDL(MDL:5.0)	BDL(MDL:5.0)
4	Hydrocarbon	GC/GCMS	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
5	Lead as Pb	IS 3025 (PART 47) 1994	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	0.018	BDL(MDL:0.01)
6	Arsenic as As	APHA 24th Ed.,2023,3114-C	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
7	Nickel as Ni	IS 3025 (PART 54) 2003	mg/L	BDL(MDL:0.02)	0.115	0.192	BDL(MDL:0.02)
8	Total Chromium as Cr	IS 3025 (PART 52) 2003	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
9	Cadmium as Cd	IS 3025(PART 41) 1992	mg/L	0.111	0.06	0.123	BDL(MDL:0.003)
10	Mercury as Hg	APHA 24th Ed.,2023, 3112-B	mg/L	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
11	Zinc as Zn	IS 3025(PART 49) 1994	mg/L	0.065	BDL(MDL:0.05)	0.141	BDL(MDL:0.05)
12	Copper as Cu	IS 3025 (PART 42) 1992	mg/L	BDL(MDL:0.05)	0.114	0.13	BDL(MDL:0.05)
13	Iron as Fe	IS 3025(PART 53) 2003	mg/L	0.138	0.187	0.133	0.124
14	Insecticides/Pesticides	USEPA 8081 B	µg/L	Absent	Absent	Absent	Absent
15	Depth of Water Level from Ground Level	--	meter	2.1	2.15	2.15	2.15



Mr. Nilesh Patel  
Sr. Chemist

Mr. Nitin Tandel  
Technical Manager

### RESULTS OF SOIL SAMPLE

SR.NO.	TEST PARAMETERS	UNIT	14-06-2024	14-06-2024	14-06-2024	14-06-2024
			24/06/Soil/APL-0001	24/06/Soil/APL-0002	24/06/Soil/APL-0003	24/06/Soil/APL-0004
1	pH	--	8.56	8.56	8.42	9.14
2	Nitrogen as N	%	0.19	0.44	0.39	0.52
3	Phosphorus as P	mg/kg	1256.4	710.4	870.5	5090.6
4	Potassium as K	mg/kg	44.5	1258	232.5	160.8
5	Baron as B	mg/kg	1.82	1.96	2.18	3.11
6	Calcium as Ca	mg/kg	334.2	3260.8	1031.2	432
7	Magnesium as Mg	mg/kg	158.6	5584.2	502.6	102.3
8	Iron as Fe	%	0.74	1.42	0.88	1.12
9	Moisture	%	0.28	1.02	0.31	1.65
10	Organic Matter	%	0.84	1.59	1.28	1.48
11	Cation exchange capacity (CEC)	meq/100gm	10.1	14.9	10.55	10.36
12	TVC	CFU/gm	2.5x10 <sup>6</sup>	2.7 x 10 <sup>6</sup>	2.5 x 10 <sup>6</sup>	2.1 x 10 <sup>6</sup>
13	Cadmium as Cd	mg/kg	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)
14	Thorium as Th	mg/kg	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)
15	Antimony as Sb	mg/kg	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)
16	Arsenic as As	mg/kg	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)

Continue...

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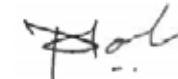
ISO 9001 : 2015  
Certified Company

ISO 45001 : 2018  
Certified Company

17	Lead as Pb	mg/kg	9.58	9.38	16.88	7.41
18	Chromium as Cr	mg/kg	3.11	9.18	3.46	4.31
19	Cobalt as Co	mg/kg	10.02	10.62	8.84	9.86
20	Copper as Cu	mg/kg	8.24	11.58	31.08	16.84
21	Nickel as Ni	mg/kg	12.4	15.11	13.34	14.65
22	Manganese and Mn	mg/kg	402.2	228.6	220.1	180.85
23	Vanadium as V	mg/kg	7.49	8.39	8.76	7.85



**Mr. Nilesh Patel**  
Sr. Chemist

**Mr. Nitin Tandel**  
Technical Manager

## Minimum Detection Limit

### Ambient Air Quality Monitoring

Sr. No.	Test Parameter	Unit	MDL
1	Particulate Matter (PM10)	µg/m <sup>3</sup>	5 µg/m <sup>3</sup>
2	Particulate Matter (PM10)	µg/m <sup>3</sup>	5 µg/m <sup>3</sup>
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	4 µg/m <sup>3</sup>
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	5 µg/m <sup>3</sup>
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	1-30 mg/m <sup>3</sup>
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	5 µg/m <sup>3</sup>
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	5 µg/m <sup>3</sup>
8	Lead (Pb)	µg/m <sup>3</sup>	0.5 µg/m <sup>3</sup>
9	Nickle (Ni)	ng/m <sup>3</sup>	1 ng/m <sup>3</sup>
10	Arsenic (As)	ng/m <sup>3</sup>	1 ng/m <sup>3</sup>
11	Benzene	µg/m <sup>3</sup>	1µg/m <sup>3</sup>
12	Benzo(o)Pyrene	ng/m <sup>3</sup>	0.1 ng/m <sup>3</sup>
14	Hydro Carbon	µg/m <sup>3</sup>	1 µg/m <sup>3</sup>

### Stack Emission Monitoring

Sr. No.	Test Parameter	Unit	MDL
1	Suspended particulate matter	mg/Nm <sup>3</sup>	2 mg/Nm <sup>3</sup>
2	Sulphur Dioxide SO <sub>2</sub>	mg/Nm <sup>3</sup>	4 mg/Nm <sup>3</sup>
3	Oxides of Nitrogen NO <sub>x</sub>	mg/Nm <sup>3</sup>	5 mg/Nm <sup>3</sup>

CETP water			
Sr. No.	Test Parameter	Unit	MDL
1	pH @ 27 ° C	--	2
2	Temperature	0C	5
3	Colour	Pt. Co. Scale	5
4	Total Suspended Solids	mg/L	4
5	Oil & Grease	mg/L	2
6	Phenolic Compound	mg/L	0.1
7	Fluoride	mg/L	0.2
8	Iron as Fe	mg/L	0.1
9	Zinc as Zn	mg/L	0.05
10	Trivalent Chromium	mg/L	0.05
11	Sulphide	mg/L	0.05
12	Ammonical Nitrogen	mg/L	2
13	BOD (3 days at 27 0C)	mg/L	1
14	COD	mg/L	2
15	Chloride (as Cl) <sup>-</sup>	mg/L	1
16	Sulphate (as SO <sub>4</sub> )	mg/L	1
17	Total Dissolved Solids	mg/L	4
18	Total Residual Chlorine	mg/L	0.1
19	Copper as Cu	mg/L	0.05
20	Bio Assay test (%)	%	--
STP OUTLET			

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ISO 45001 : 2018  
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Sr. No.	Test Parameter	Unit	MDL
1	pH @ 25 ° C	--	2
2	Total Suspended Solids	mg/L	4
3	Biochemical Oxygen Demand (BOD) (5 days at 20 ° C)	mg/L	1
4	Residual chlorine	mg/L	0.1
5	Fecal Coliform	MPN Index/100ml	

### Monthly Average Report

#### AMBIENT AIR MONITORING

Name and Address of Client

M/s. Adani Power Limited, Mundra

Village: Tunda & Siracha,

: Tal. Mundra, Dist.: Kutch.

GUJARAT – 370 435.

Month of Monitoring

: April - 2024

Name of Location

: Village - Siracha

ID No.

: URA/ID/A-24/04/001

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/04/2024	55.2	21.4	15.5	20.6		--
2.	05/04/2024	55.5	27.2	14.2	18.3		--
3.	09/04/2024	54.9	26.8	12.7	16.1	17.4	BDL
4.	12/04/2024	58.0	25.8	17.3	23.8		--
5.	16/04/2024	52.7	20.5	15.1	21.5		--
6.	19/04/2024	70.6	30.7	18.6	24.2		--
7.	23/04/2024	59.9	27.4	13.6	18.9		--
8.	30/04/2024	49.4	18.5	16.5	22.4		--
Average		57.0	24.8	15.4	20.7		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM – IS: 5182 (Part 4), 1999, PM<sub>10</sub> – IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> – IS: 5182 (Part 2), 2001, NO<sub>x</sub> – IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : April - 2024

**Name of Location** : Village – Kandagara

**ID No.** : URA/ID/A-24/04/002

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/04/2024	64.6	26.2	13.7	17.5		--
2.	05/04/2024	70.1	22.1	11.4	15.2		--
3.	09/04/2024	54.9	19.7	16.7	22.9	22.1	BDL
4.	12/04/2024	64.2	17.1	18.3	25.7		--
5.	16/04/2024	42.6	25.2	15.3	21.4		--
6.	19/04/2024	63.2	24.4	13.5	20.1		--
7.	23/04/2024	50.5	19.5	19.4	26.8		--
8.	30/04/2024	61.6	21.7	17.3	23.7		--
<b>Average</b>		<b>59.0</b>	<b>22.0</b>	<b>15.7</b>	<b>21.7</b>		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM– IS: 5182 (Part 4), 1999, PM<sub>10</sub>– IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub>– IS: 5182 (Part 2), 2001, NO<sub>x</sub>– IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : April - 2024

**Name of Location** : Village - Wandh

**ID No.** : URA/ID/A-24/04/003

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/04/2024	58.1	26.1	16.8	22.3		--
2.	05/04/2024	64.8	31.2	14.6	19.4		--
3.	09/04/2024	64.0	30.5	18.0	22.4	26.1	BDL
4.	12/04/2024	67.4	27.2	17.3	23.1		--
5.	16/04/2024	51.2	28.7	15.7	21.3		--
6.	19/04/2024	63.2	29.4	13.5	17.3		--
7.	23/04/2024	66.1	31.9	19.1	25.7		--
8.	30/04/2024	75.2	29.4	18.4	24.8		--
<b>Average</b>		<b>63.7</b>	<b>29.3</b>	<b>16.7</b>	<b>22.0</b>		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : April - 2024

**Name of Location** : Nr.20 MLD Plant

**ID No.** : URA/ID/A-24/04/004

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1	18/04/2024	70.2	32.4	19.5	24.2	32.6	BDL
<b>Average</b>		<b>70.2</b>	<b>32.4</b>	<b>19.5</b>	<b>24.2</b>	<b>32.6</b>	<b>BDL</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : April - 2024

**Name of Location** : Nr. Shantiniketan - 1

**ID No.** : URA/ID/A-24/04/005

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1	18/04/2024	64.3	26.7	15.6	19.7	29.6	BDL
<b>Average</b>		<b>64.3</b>	<b>26.7</b>	<b>15.6</b>	<b>19.7</b>	<b>29.6</b>	<b>BDL</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

Name and Address of Client

M/s. Adani Power Limited, Mundra

Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

Month of Monitoring

: August - 2024

Name of Location

: Village - Siracha

ID No.

: URA/ID/A-24/08/001

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/08/2024	Due to Rainfall Monitoring not Performed					
2.	06/08/2024	50.9	25.5	12.1	18.2	13.8	BDL
3.	09/08/2024	Due to Rainfall Monitoring not Performed					
4.	13/08/2024	59.1	27.3	9.2	12.4	--	--
5.	16/08/2024	Due to Rainfall Monitoring not Performed					
6.	20/08/2024	47.9	26.4	10.7	13.5	--	--
7.	23/08/2024	41.8	21.5	12.6	15.7	--	--
8.	27/08/2024	Due to Rainfall Monitoring not Performed					
9.	30/08/2024	Due to Rainfall Monitoring not Performed					
<b>Average</b>		<b>49.9</b>	<b>25.2</b>	<b>11.2</b>	<b>15.0</b>	<b>--</b>	<b>--</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM – IS: 5182 (Part 4), 1999, PM<sub>10</sub> – IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> – IS: 5182 (Part 2), 2001, NO<sub>x</sub> – IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : August - 2024

**Name of Location** : Village – Kandagara

**ID No.** : URA/ID/A-24/08/002

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/08/2024	Due to Rainfall Monitoring not Performed					
2.	06/08/2024	52.4	26.0	11.6	17.0	17.2	BDL
3.	09/08/2024	Due to Rainfall Monitoring not Performed					
4.	13/08/2024	61.6	29.6	10.2	12.4	--	--
5.	16/08/2024	Due to Rainfall Monitoring not Performed					
6.	20/08/2024	54.0	22.3	13.8	15.2	--	--
7.	23/08/2024	40.5	21.4	10.3	13.8	--	--
8.	27/08/2024	Due to Rainfall Monitoring not Performed					
9.	30/08/2024	Due to Rainfall Monitoring not Performed					
<b>Average</b>		<b>52.1</b>	<b>24.8</b>	<b>11.5</b>	<b>14.6</b>	--	--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM– IS: 5182 (Part 4), 1999, PM<sub>10</sub>– IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub>– IS: 5182 (Part 2), 2001, NO<sub>x</sub>– IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : August - 2024

**Name of Location** : Village - Wandh

**ID No.** : URA/ID/A-24/08/003

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/08/2024	Due to Rainfall Monitoring not Performed					
2.	06/08/2024	50.0	25.8	15.7	19.2	17.8	BDL
3.	09/08/2024	Due to Rainfall Monitoring not Performed					
4.	13/08/2024	67.5	29.3	11.4	17.6	--	--
5.	16/08/2024	Due to Rainfall Monitoring not Performed					
6.	20/08/2024	55.8	28.6	11.7	14.3	--	--
7.	23/08/2024	50.5	27.0	12.6	15.7	--	--
8.	27/08/2024	Due to Rainfall Monitoring not Performed					
9.	30/08/2024	Due to Rainfall Monitoring not Performed					
<b>Average</b>		<b>56.0</b>	<b>27.7</b>	<b>12.9</b>	<b>16.7</b>	--	--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : August - 2024

**Name of Location** : Nr.20 MLD Plant

**ID No.** : URA/ID/A-24/08/004

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1	12/08/2024	60.2	23.6	13.8	19.6	21.2	BDL
<b>Average</b>		<b>60.2</b>	<b>23.6</b>	<b>13.8</b>	<b>19.6</b>	<b>21.2</b>	<b>BDL</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : August - 2024

**Name of Location** : Nr. Shantiniketan - 1

**ID No.** : URA/ID/A-24/08/005

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1	12/08/2024	47.6	20.5	10.7	17.5	20.3	BDL
<b>Average</b>		<b>47.6</b>	<b>20.5</b>	<b>10.7</b>	<b>17.5</b>	<b>20.3</b>	<b>BDL</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

Name and Address of Client

M/s. Adani Power Limited, Mundra

Village: Tunda & Siracha,

Tal. Mundra, Dist.: Kutch.

GUJARAT – 370 435.

Month of Monitoring

: July - 2024

Name of Location

: Village - Siracha

ID No.

: URA/ID/A-24/07/001

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/07/2024	Due to Rainfall Monitoring not Performed					
2.	05/07/2024	55.7	24.4	14.3	19.4	12.3	BDL
3.	09/07/2024	Due to Rainfall Monitoring not Performed					
4.	12/07/2024	50.1	16.4	12.7	15.9		--
5.	16/07/2024	Due to Rainfall Monitoring not Performed					
6.	19/07/2024	Due to Rainfall Monitoring not Performed					
7.	23/07/2024	Due to Rainfall Monitoring not Performed					
8.	26/07/2024	Due to Rainfall Monitoring not Performed					
9.	30/07/2024	Due to Rainfall Monitoring not Performed					
Average		52.9	20.4	13.5	17.7		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM – IS: 5182 (Part 4), 1999, PM<sub>10</sub> – IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> – IS: 5182 (Part 2), 2001, NO<sub>x</sub> – IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : July - 2024

**Name of Location** : Village – Kandagara

**ID No.** : URA/ID/A-24/07/002

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/07/2024	Due to Rainfall Monitoring not Performed					
2.	05/07/2024	53.3	26.7	13.7	18.1	18.5	BDL
3.	09/07/2024	Due to Rainfall Monitoring not Performed					
4.	12/07/2024	55.4	20.8	15.0	17.5		--
5.	16/07/2024	Due to Rainfall Monitoring not Performed					
6.	19/07/2024	Due to Rainfall Monitoring not Performed					
7.	23/07/2024	Due to Rainfall Monitoring not Performed					
8.	26/07/2024	Due to Rainfall Monitoring not Performed					
9.	30/07/2024	Due to Rainfall Monitoring not Performed					
<b>Average</b>		<b>54.3</b>	<b>23.8</b>	<b>14.4</b>	<b>17.8</b>		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM– IS: 5182 (Part 4), 1999, PM<sub>10</sub>– IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub>– IS: 5182 (Part 2), 2001, NO<sub>x</sub>– IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : July - 2024

**Name of Location** : Village - Wandh

**ID No.** : URA/ID/A-24/07/003

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/07/2024	Due to Rainfall Monitoring not Performed					
2.	05/07/2024	60.7	26.2	15.6	19.5	19.7	BDL
3.	09/07/2024	Due to Rainfall Monitoring not Performed					
4.	12/07/2024	51.0	25.4	14.0	17.3		--
5.	16/07/2024	Due to Rainfall Monitoring not Performed					
6.	19/07/2024	Due to Rainfall Monitoring not Performed					
7.	23/07/2024	Due to Rainfall Monitoring not Performed					
8.	26/07/2024	Due to Rainfall Monitoring not Performed					
9.	30/07/2024	Due to Rainfall Monitoring not Performed					
<b>Average</b>		<b>55.9</b>	<b>25.8</b>	<b>14.8</b>	<b>18.4</b>		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : July - 2024

**Name of Location** : Nr.20 MLD Plant

**ID No.** : URA/ID/A-24/07/004

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1	15/07/2024	58.2	25.2	15.6	22.1	28.9	BDL
<b>Average</b>		<b>58.2</b>	<b>25.2</b>	<b>15.6</b>	<b>22.1</b>	<b>28.9</b>	<b>BDL</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : July - 2024

**Name of Location** : Nr. Shantiniketan - 1

**ID No.** : URA/ID/A-24/07/005

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1	15/07/2024	49.8	18.9	13.8	18.5	24.3	BDL
<b>Average</b>		<b>49.8</b>	<b>18.9</b>	<b>13.8</b>	<b>18.5</b>	<b>24.3</b>	<b>BDL</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub> - Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

Name and Address of Client

M/s. Adani Power Limited, Mundra

Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

Month of Monitoring

: June - 2024

Name of Location

: Village - Siracha

ID No.

: URA/ID/A-24/06/001

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	04/06/2024	61.7	29.4	13.2	18.5		--
2.	07/06/2024	60.9	28.1	17.9	24.2		--
3.	11/06/2024	53.4	27.3	15.8	21.1		--
4.	14/06/2024	59.4	28.2	16.3	23.7		--
5.	18/06/2024	45.9	23.0	12.8	16.5	15.1	BDL
6.	21/06/2024	54.8	21.4	15.2	19.7		--
7.	25/06/2024	Due to Rainfall Monitoring not Performed					
8.	28/06/2024	Due to Rainfall Monitoring not Performed					
Average		56.0	26.2	15.2	20.6		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM – IS: 5182 (Part 4), 1999, PM<sub>10</sub> – IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> – IS: 5182 (Part 2), 2001, NO<sub>x</sub> – IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : June - 2024

**Name of Location** : Village – Kandagara

**ID No.** : URA/ID/A-24/06/002

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	04/06/2024	50.6	22.0	16.5	21.8		--
2.	07/06/2024	60.5	26.5	15.6	17.2		--
3.	11/06/2024	71.5	31.5	18.9	26.3		--
4.	14/06/2024	54.2	22.1	16.4	22.5		--
5.	18/06/2024	48.8	25.5	15.9	20.7	20.6	BDL
6.	21/06/2024	56.9	24.7	14.7	16.5		--
7.	25/06/2024	Due to Rainfall Monitoring not Performed					
8.	28/06/2024	Due to Rainfall Monitoring not Performed					
<b>Average</b>		<b>57.1</b>	<b>25.4</b>	<b>16.3</b>	<b>20.8</b>		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM– IS: 5182 (Part 4), 1999, PM<sub>10</sub>– IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub>– IS: 5182 (Part 2), 2001, NO<sub>x</sub>– IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : June - 2024

**Name of Location** : Village - Wandh

**ID No.** : URA/ID/A-24/06/003

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	04/06/2024	62.5	27.0	17.9	20.4		--
2.	07/06/2024	54.1	28.8	19.5	23.6		--
3.	11/06/2024	54.9	32.0	16.2	19.7		--
4.	14/06/2024	68.5	35.5	17.2	22.9		--
5.	18/06/2024	52.5	23.6	12.7	16.7	21.3	BDL
6.	21/06/2024	62.0	26.9	15.8	21.3		--
7.	25/06/2024	Due to Rainfall Monitoring not Performed					
8.	28/06/2024	Due to Rainfall Monitoring not Performed					
<b>Average</b>		<b>59.1</b>	<b>29.0</b>	<b>16.6</b>	<b>20.8</b>		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.



(Authorized Signatory)

### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : June - 2024

**Name of Location** : Nr.20 MLD Plant

**ID No.** : URA/ID/A-24/06/004

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1	17/06/2024	61.3	27.1	15.6	24.1	32.1	BDL
<b>Average</b>		<b>61.3</b>	<b>27.1</b>	<b>15.6</b>	<b>24.1</b>	<b>32.1</b>	<b>BDL</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment & Research Labs Pvt. Ltd.



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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : June - 2024

**Name of Location** : Nr. Shantiniketan - 1

**ID No.** : URA/ID/A-24/06/005

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1	17/06/2024	55.7	22.6	13.8	19.4	26.7	BDL
<b>Average</b>		<b>55.7</b>	<b>22.6</b>	<b>13.8</b>	<b>19.4</b>	<b>26.7</b>	<b>BDL</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report

#### AMBIENT AIR MONITORING

Name and Address of Client

M/s. Adani Power Limited, Mundra

Village: Tunda & Siracha,

Tal. Mundra, Dist.: Kutch.

GUJARAT – 370 435.

Month of Monitoring

: May - 2024

Name of Location

: Village - Siracha

ID No.

: URA/ID/A-24/05/001

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	03/05/2024	56.9	28.3	14.3	19.8		--
2.	07/05/2024	53.1	17.7	16.2	21.6	17.6	BDL
3.	10/05/2024	65.1	24.1	18.2	25.3		--
4.	14/05/2024	58.3	26.7	15.9	22.6		--
5.	17/05/2024	51.5	16.1	14.5	19.2		--
6.	21/05/2024	60.9	24.0	17.3	23.5		--
7.	24/05/2024	68.4	31.9	13.7	17.2		--
8.	28/05/2024	56.8	28.0	19.5	26.8		--
9.	31/05/2024	50.1	31.6	16.5	24.1		--
Average		57.9	25.4	16.2	22.2		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM – IS: 5182 (Part 4), 1999, PM<sub>10</sub> – IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> – IS: 5182 (Part 2), 2001, NO<sub>x</sub> – IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.



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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : May - 2024

**Name of Location** : Village – Kandagara

**ID No.** : URA/ID/A-24/05/002

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	03/05/2024	68.5	34.4	16.1	22.6		--
2.	07/05/2024	50.0	29.6	14.4	18.3	22.6	BDL
3.	10/05/2024	66.7	32.4	12.1	16.5		--
4.	14/05/2024	52.9	29.8	17.4	23.8		--
5.	17/05/2024	70.8	38.2	20.6	28.1		--
6.	21/05/2024	55.0	33.5	18.2	24.9		--
7.	24/05/2024	53.6	27.8	14.3	21.1		--
8.	28/05/2024	50.2	25.0	19.2	26.5		--
9.	31/05/2024	67.7	33.0	17.5	24.3		--
<b>Average</b>		<b>59.5</b>	<b>31.5</b>	<b>16.6</b>	<b>22.9</b>		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM– IS: 5182 (Part 4), 1999, PM<sub>10</sub>– IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub>– IS: 5182 (Part 2), 2001, NO<sub>x</sub>– IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.



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### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : May - 2024

**Name of Location** : Village - Wandh

**ID No.** : URA/ID/A-24/05/003

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	03/05/2024	53.9	23.7	14.3	18.9		--
2.	07/05/2024	56.0	31.5	18.2	24.3	28.9	BDL
3.	10/05/2024	54.8	30.4	17.6	23.6		--
4.	14/05/2024	70.4	30.3	19.3	26.3		--
5.	17/05/2024	73.2	37.5	15.5	21.1		--
6.	21/05/2024	63.7	23.4	13.8	18.5		--
7.	24/05/2024	52.4	28.4	18.9	23.6		--
8.	28/05/2024	73.8	31.9	20.1	27.3		--
9.	31/05/2024	62.3	27.8	16.5	22.4		--
<b>Average</b>		<b>62.3</b>	<b>29.4</b>	<b>17.1</b>	<b>22.9</b>		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.



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QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
Certified Company

ISO 45001 : 2018  
Certified Company

### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client**

**M/s. Adani Power Limited, Mundra**

Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring**

: September - 2024

**Name of Location**

: Village - Siracha

**ID No.**

: **URA/ID/A-24/09/001**

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>N.A.</b>
1.	03/09/2024	56.0	29.9	14.2	16.7	--	--
2.	06/09/2024	40.4	20.7	11.7	14.2	--	--
3.	10/09/2024	54.4	25.6	15.2	19.5	--	--
4.	13/09/2024	47.1	24.4	13.0	16.9	15.2	BDL
5.	17/09/2024	55.4	21.1	12.8	15.4	--	--
6.	20/09/2024	64.5	29.0	10.5	13.9	--	--
7.	24/09/2024	60.2	27.0	13.7	16.2	--	--
8.	27/09/2024	56.3	26.3	15.6	17.8	--	--
<b>Average</b>		<b>54.3</b>	<b>25.5</b>	<b>13.3</b>	<b>16.3</b>	--	--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM – IS: 5182 (Part 4), 1999, PM<sub>10</sub> – IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> – IS: 5182 (Part 2), 2001, NO<sub>x</sub> – IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

**UniStar Environment &  
Research Labs Pvt. Ltd.**



**(Authorized Signatory)**

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
Certified Company

ISO 45001 : 2018  
Certified Company

### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : September - 2024

**Name of Location** : Village – Kandagara

**ID No.** : URA/ID/A-24/09/002

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>N.A.</b>
1.	03/09/2024	50.5	24.6	10.2	14.5	--	--
2.	06/09/2024	56.3	27.4	11.2	14.6	--	--
3.	10/09/2024	54.5	22.4	14.8	18.5	--	--
4.	13/09/2024	45.8	26.2	12.7	15.3	18.9	BDL
5.	17/09/2024	57.4	30.8	15.6	19.8	--	--
6.	20/09/2024	61.4	26.3	13.5	16.9	--	--
7.	24/09/2024	70.6	33.6	12.7	16.4	--	--
8.	27/09/2024	49.4	21.5	14.3	17.5	--	--
<b>Average</b>		<b>55.7</b>	<b>26.6</b>	<b>13.1</b>	<b>16.7</b>	--	--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM– IS: 5182 (Part 4), 1999, PM<sub>10</sub>– IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub>– IS: 5182 (Part 2), 2001, NO<sub>x</sub>– IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
Certified Company

ISO 45001 : 2018  
Certified Company

### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : September - 2024

**Name of Location** : Village - Wandh

**ID No.** : URA/ID/A-24/09/003

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	03/09/2024	54.2	30.5	13.3	18.5	--	--
2.	06/09/2024	52.6	28.1	16.2	19.6	--	--
3.	10/09/2024	60.1	30.4	15.4	17.1	--	--
4.	13/09/2024	57.1	30.3	13.0	15.7	19.8	BDL
5.	17/09/2024	71.3	34.1	14.9	20.6	--	--
6.	20/09/2024	64.3	29.0	12.7	15.2	--	--
7.	24/09/2024	55.9	24.7	17.6	19.8	--	--
8.	27/09/2024	58.5	26.3	14.9	18.5	--	--
<b>Average</b>		<b>59.2</b>	<b>29.2</b>	<b>14.8</b>	<b>18.1</b>	--	--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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**Name and Address of Client** : M/s. Adani Power Limited, Mundra

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
Certified Company

ISO 45001 : 2018  
Certified Company

### Monthly Average Report

#### AMBIENT AIR MONITORING

Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : September - 2024  
**Name of Location** : Nr.20 MLD Plant  
**ID No.** : **URA/ID/A-24/09/004**

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>N.A.</b>
1	16/09/2024	67.6	25.9	15.2	22.4	25.8	BDL
<b>Average</b>		<b>67.6</b>	<b>25.9</b>	<b>15.2</b>	<b>22.4</b>	<b>25.8</b>	<b>BDL</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.



(Authorized Signatory)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-11)

ISO 9001 : 2015  
Certified Company

ISO 45001 : 2018  
Certified Company

### Monthly Average Report

#### AMBIENT AIR MONITORING

**Name and Address of Client** : M/s. Adani Power Limited, Mundra  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : September - 2024

**Name of Location** : Nr. Shantiniketan - 1

**ID No.** : URA/ID/A-24/09/005

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g}/\text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1	16/09/2024	58.4	23.5	12.8	19.4	22.6	BDL
<b>Average</b>		<b>58.4</b>	<b>23.5</b>	<b>12.8</b>	<b>19.4</b>	<b>22.6</b>	<b>BDL</b>

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.



(Authorized Signatory)

# MARINE MONITORING REPORT

April 2024 - September 2024



**Submitted to**

**Adani Power Ltd. (APL), Mundra**

**Village Tunda & Sirach**

**Taluka Mundra**

**District Kutch- 370 435**

**Gujarat**

**Prepared By:**

**M/s. UniStar Environment and Research Labs. Pvt. Ltd.**

**215 -Royal Arcade, Near GIDC Office, Char Rasta, Vapi,**

**District Valsad - 396 195**

**Gujarat**

## PREFACE

**Adani Power Ltd., Mundra (APL, Mundra)** is coal-based Thermal Power plant located near village Tunda and Siracha, Taluka Mundra District Kutch, Gujarat. with capacity of 4620 MW in Phased manner. Currently, APL is a largest coal based Thermal power plant in private sector in INDIA. APL-Mundra has commissioned the first supercritical 660 MW unit (Phase III) in the country. This is also the World's First supercritical technology project to have received the 'Clean Development Mechanism (CDM) Project' certification from United Nations Framework Convention on Climate Change (UNFCCC). Currently, the total power production capacity of the APL-Mundra has increased to 4620 MW.

APL-Mundra has engaged **M/s. UniStar Environment and Research Labs Pvt. Ltd., Vapi** to **carry out the** seasonal Marine Monitoring Study along with the seawater intake and outfall (discharge) channels of Mundra power plant. This marine monitoring study involved the assessment of Physio-chemical parameters at the earlier prescribed locations. The distribution and diversity of marine flora and fauna were assessed through water sampling from sub-tidal regions. Furthermore, the distribution of the benthic community was evaluated from the sediment samples collected along the sub-tidal and inter-tidal regions. The overall objective of this study is to monitor the status of prevailing ecology along the intake and discharge (outfall) channels, in terms of water and sediment quality through assessment of physico-chemical parameters and marine biota. This marine monitoring report provides a comprehensive analysis of the Data obtained through a monitoring study undertaken during April 2024 and September 2024.

**Date: 29/10/2024**

**M/S. UniStar Environment and Research Labs Pvt. Ltd.**

White House, Char Rasta,

Vapi-396 191

**Approved by**



**Mr. Jaivik Tandel**  
**(Authorized By)**

## TABLE OF CONTENTS

NO.	Contents	Page no.
<b>1.0</b>	<b>Introduction</b>	1
1.1	Overview	1
1.2	Objectives	1
<b>2.0</b>	<b>Study program</b>	2
2.1	Study period	2
2.2	Sampling locations	2
2.3	Sampling strategy	4
2.3.1	Sampling frequency	4
2.3.2	Sampling methodology	4
2.4	Sample analysis method	4
2.4.1	Physicochemical parameter	4
2.4.2	Sediment quality parameter	5
2.4.3	Biological parameter	5
<b>3.0</b>	<b>Water quality monitoring</b>	6
3.1	Result of Physico-chemical water parameter analysis	6
<b>4.0</b>	<b>Sediment quality monitoring</b>	10
<b>5.0</b>	<b>Biological parameters (Biodiversity study)</b>	12
5.1	Planktonic forms	12
5.1.1	Phytoplankton	12
5.1.2	Zooplankton	12
5.2	Significance of (phyto- and zoo-) planktons	13
5.3	Phytoplankton diversity	13
5.4	Phytoplankton pigment (Chlorophyll <i>a</i> and Pheophytin)	15
5.4.a	Chlorophyll <i>a</i> and Pheophytin concentration	16
5.5	Zooplankton diversity	16
5.6	Microbenthic fauna	19
5.6.1	Significance of macrobenthic organisms	20
5.6.2	Benthic biodiversity (Subtidal and intertidal regions)	20
<b>6.0</b>	<b>Conclusion</b>	22
	Sampling photographs	23

Figure No.	Contents	Page No.
<b>Map / Photos / Images/Graph</b>		
1	Map of the study area illustrating the subtidal and intertidal sampling stations	3
2	Microphotographs of phytoplankton reported in the coastal waters of APL-Mundra, during April 2024 and September 2024	15
3	Percent composition of zooplankton groups reported from the marine waters of APL-Mundra during April 2024 and September 2024	18
4	Microphotographs of zooplankton reported along the APL-Mundra coast during April 2024 and September 2024	19
5	Microphotographs of macrobenthic organisms observed in the sediment samples collected in the vicinity of APL-Mundra during April 2024 and September 2024	21
<b>Table No. Contents Page No.</b>		
<b>Tables</b>		
1	Geographic coordinates, water, and sediment parameters at the subtidal sampling stations, APL-Mundra during April 2024 and September 2024	2
2	Geographic coordinates, water, and sediment parameters at the intertidal sampling stations, APL-Mundra during April 2024 and September 2024	3
3a	Water quality parameters reported during April 2024 and their test methods	8
3b	Water quality parameters reported during September 2024 and their test methods	9
4	Subtidal sediment quality parameters and their test methods	11
5	Test methods for phytoplankton and zooplankton analysis	13
6	Different marine biological parameters (phytoplankton abundance, Chlorophyll a, Pheophytin concentrations) reported from the marine waters of APL-Mundra, during April 2024 and September 2024	14
7	Density and biomass of various zooplankton and macrobenthos groups in the coastal waters at the APL-Mundra during April 2024 and September 2024	17
8	Names of the Marine Monitoring Team Members	22
<b>Annexure No. Contents Page No.</b>		
<b>Annexure</b>		
I	Phytoplankton abundance (cells $\times 10^2$ /L) at different sampling stations in the coastal waters of APL-Mundra during April 2024	24
II	Phytoplankton abundance (cells $\times 10^2$ /L) at different sampling stations in the coastal waters of APL-Mundra during September 2024	25
III	Density (nos. $\times 10^3$ /100 m <sup>3</sup> ) and biomass (ml/100 m <sup>3</sup> ) of various zooplankton groups in the coastal waters at the APL-Mundra during April 2024 and September 2024	26
IV	Faunal composition, density (no/m <sup>2</sup> ) and biomass (g/m <sup>2</sup> ) of the macrobenthos community in the subtidal region at APL-Mundra during April 2024 and September 2024	27
V	Faunal composition, density (no/m <sup>2</sup> ) of macrobenthos from the sediments collected at High tide water level (HW) and Low tide water level (LW) in the inter-tidal region at APL-Mundra during April 2024 and September 2024	28

## 1. INTRODUCTION

### 1.1 OVERVIEW

Adani Power Limited (APL-Mundra) is an imported coal-based thermal power plant located near village Tunda and Siracha, Taluka Mundra, District Kutch, Gujarat, India. APL-Mundra is the largest single location private coal-based power plant in India. Mundra plant capacity is 4620 MW, comprising of 9 units with 4 units of 330 MW (Phase I and II) and 5 units of 660MW (Phase III and IV). The 330 MW units are based on subcritical technology and the 660 MW units are based on supercritical technology. APL-Mundra has created history by synchronizing the first supercritical technology-based 660 MW generating unit. This is not only the first super-critical generating unit in the country but also the fastest project implementation ever by any power developer in the country. The Power plant is situated within “Adani Port Special Economic Zone LTD.” APSEZL, closed to the sea but out of CRZ area. The sea is perennial source of cooling water & other utility for the power plant.

**M/S. UniStar Environment and Research Labs Pvt. Ltd.**, Vapi, India have carried out the routine Marine Monitoring Study in the vicinity of the APL-Mundra Mundra plant during **16<sup>th</sup>-17<sup>th</sup> April 2024** and **20<sup>th</sup>-21<sup>st</sup> September 2024**. The sampling was carried out along the integrated sea intake channel (2 stations) and at vicinity of discharge/outfall channel water mixing region (2 stations). These integrated intake and outfall channels were developed and maintained by Adani Port and SEZ (APSEZ). One station was situated in between these two locations. This assessment involves the collection of Physico-chemical parameters from 5 subtidal locations (Table 1). The distribution and diversity of marine microflora (phytoplankton and pigments) and fauna (zooplankton) were assessed from water samples collected from 5 subtidal stations (Table 1). The assemblage of the macrobenthic community was studied from 5 sub-tidal and 3 inter-tidal stations. The present report presents a detailed account of the results observed during the Marine Monitoring Study at the vicinity of the APL-Mundra during April 2024 and September 2024.

### 1.2 OBJECTIVES

- a) To analyses the Physico-chemical seawater parameter for understanding the water quality in the study area.
- b) Evaluation of the prevailing status of marine biota through the quantitative and qualitative analysis of marine flora (phytoplankton and pigments) and fauna (zooplankton and macrobenthos).
- c) To recommend adequate marine environmental management measures.



## 2. STUDY PROGRAM

### 2.1 STUDY PERIOD

The field investigations were carried out on 16<sup>th</sup>-17<sup>th</sup> April 2024 (pre-monsoon season) and 20<sup>th</sup>-21<sup>st</sup> September 2024 (post-monsoon season). The sampling strategy was planned in such a manner as to get a detailed characteristic of the marine environment of the study area. Sampling and analysis for the marine environment have been carried out by **M/s. UniStar Environment and Research Labs Pvt. Ltd, Vapi, India.**

### 2.2 SAMPLING LOCATIONS

Sampling was carried out at 5 subtidal stations and 3 intertidal transects along with the sea intake and outfall channels. Out of 5 subtidal stations, 2 were in the sea intake channel, 2 along the discharge mixing (outfall channel) region and remaining 1 in between these two locations. One intertidal station was located along the sea intake channel and 2 were along the discharge region. The detailed geographic coordinates of sampling stations are given in Table 1 and Figure 1.1.

**Table 1: Geographic coordinates, water, and sediment parameters at the subtidal sampling stations, APL-Mundra during April 2024 and September 2024.**

Station	Station code	Locations	Coordinates		Water Depth (in m)	
1	St-1	Intake point	22°48'30.50"N	69°32'57.84"E	3.9	3.8
2	St-2	Mouth of intake point	22°47'07.20"N	69°32'06.50"E	4.6	4.2
3	St-3	West port area	22°45'27.70"N	69°34'50.63"E	5.2	4.8
4	St-4	Outfall area	22°44'40.56"N	69°36'26.61"E	4.0	3.9
5	St-5	Outfall area	22°45'12.60"N	69°36'44.54"E	3.8	3.6

**Table 2: Geographic coordinates, water, and sediment parameters at the intertidal sampling stations, APL-Mundra during April 2024 and September 2024.**

Station	Station code	Tide Level	Coordinates		April 2024		September 2024	
					Intertidal exposed area	Sediment texture	Intertidal exposed area	Sediment texture
I	IT-1 (HW)	High Tidewater level	22°47'07.55" N	69°32'16.91" E	4.8 m	Silty sand	3.9 m	Silty sand
	IT-1 (LW)	Low Tide water level	22°47'06.38" N	69°32'11.62" E		Silty sand		Silty sand
II	IT-2 (HW)	High Tidewater level	22°45'58.72" N	69°34'35.41" E	3.9 m	Silty Sandy	3.6 m	Silty Sandy
	IT-2 (LW)	Low Tidewater level	22°45'57.74" N	69°34'35.05" E		Silty sand		Silty sand
III	IT-3 (HW)	High Tidewater level	22°44'52.21" N	69°36'41.64" E	4.2 m	Sandy	4.0 m	Sandy
	IT-3 (LW)	Low Tidewater level	22°44'51.23" N	69°36'39.28" E		Sandy		Sandy



**Figure 1: Map of the study area illustrating the subtidal and intertidal sampling stations.**

## 2.3 SAMPLING STRATEGY

### 2.3.1 Sampling frequency

A sampling at the subtidal stations was carried out during the flood to ebb tides. Surface and bottom water samples were collected in duplicate for assessing water quality and marine biota. Intertidal samples were collected in duplicate during low tide at each transect.

### 2.3.2 Sampling methodology

For estimation of Physico-chemical parameters and marine flora (phytoplankton and pigments), subsurface samples were collected using the Niskin water sampler (5 L capacity) with a mechanism for closing at the desired depth. Surface water samples were collected using a clean polyethylene bucket. Phytoplankton samples were collected in clean polyethylene bottles (1 L) fitted with inert cap liners and preserved with 4% Lugol's iodine solution. For pigment analysis, water samples were stored in clean, dark polyethylene cans (5 L). Chemical parameters samples were collected in polyethylene or glass bottles. Samples for phenol were collected in polyethylene or glass bottles and Petroleum Hydrocarbon samples collected in glass bottles. Dissolve oxygen (DO) and Biological Oxygen Demand (BOD) samples were collected in glass BOD bottles. The temperature was measured on the field with a calibrated thermometer. Analysis of other parameters was carried out in the laboratory.

For zooplankton, oblique hauls were made using Heron Tranter net attached with calibrated flow meter. Samples were stored in clean polyethylene bottles (0.5 L) and fixed with 5% formaldehyde.

For the analysis of macrobenthos, subtidal sediment samples were collected using a Van Veen grab covering an area of 0.04 m<sup>2</sup>. Intertidal samples were collected using a metal quadrant. Samples were sieved with a 500 µ metal sieve and preserved with Rose Bengal-formalin solution and stored in plastic zip-lock bags.

## 2.4 SAMPLE ANALYSIS METHODS

### 2.4.1 Physico-chemical parameter:

Samples were analysed by using different analytical methods for estimations of Temperature, Turbidity, PH, Suspended Solid (SS), Salinity, DO, BOD, COD, Phosphate, Total nitrogen, Nitrite, Nitrate, Phenols and PHc. The samples collected during the field visit were brought to the laboratory for further analysis of physico-chemical parameters. The standard methods used for the analysis of water quality parameters are given in Table 3a, b.

#### **2.4.2 Sediment Quality parameters:**

Sediment texture, Petroleum Hydrocarbon (PHc), Phosphorus, Organic Carbon, Aluminium, Iron, Chromium, Nickel, Zinc, Lead, Copper, Cobalt, Cadmium, Mercury, Arsenic. The standard methods used for the analysis of each parameter.

#### **2.4.3 Biological parameters:**

##### **2.4.3a Phytoplankton:**

The Lugol's preserved samples were allowed to settle for 48-72 hrs. The identification and enumeration of phytoplankton cells were carried out under a compound microscope using the Sedgwick Rafter slide. Species were identified to the genus level.

##### **2.4.3b Phytoplankton pigments:**

For the estimation of Chlorophyll *a* (Chl *a*) and Pheophytin, a known volume of field-collected water sample was filtered through Whatman glass microfiber filters (GF/F). Then filter paper was macerated in 90% acetone and stored overnight in the dark at 4°C. For estimation of Chl *a* fluorescence of the extract was measured using Turner Fluorometer. For phaeophytin fluorescence was measured after acidification with 0.1 N HCl.

##### **2.4.3c Zooplankton:**

Formalin preserved sample was divided into 4 equal portions using the Folsom Plankton Splitter. One portion of the samples was used to determine biomass using the volume displacement method. Another portion was used for enumeration and identification of (25-50%) faunal composition.

For the quantification of zooplankton, 4-5 ml of the sample was taken in a zooplankton counting chamber. The identification was carried out under Stereomicroscope. The zooplankton were identified at the group level.

##### **2.4.3d Benthos:**

For enumeration and identification of the macrobenthos, the organisms were handpicked using forceps and a paintbrush. After sorting, organisms were preserved in 10% formalin. Identification of the organisms was done to the group level under a stereomicroscope.

### 3 WATER QUALITY MONITORING

#### 3.1 RESULT OF PHYSICO-CHEMICAL WATER PARAMETER ANALYSIS

The monsoonal influx plays an important role in controlling the variation in the physico-chemical characteristic. Surface and bottom water temperatures observed in the study area were in a range between 28.9°C to 30.2°C in April 2024 (Table 3a) and 29.0°C to 29.5°C during September 2024 (Table 3b). The water temperature generally varied in accordance with the prevailing air temperature, tidal activity, and seasonality. The pH of the water is generally buffering effect, influenced by the freshwater and anthropogenic discharge from land. The observed pH in the study area was in the range of 8.1 to 8.3 in April 2024 and 8.2 to 8.3 during September 2024. Seawater turbidity is the cloudiness caused by large numbers of individual particles such as very fine clay and minute marine organisms. This also varies seasonally due to intrusion of land runoff and/or sediment resuspension. The turbidity was in a range between 0.1 to 5 NTU in April and 1 NTU during September. The suspended solids generally constitute silt and clay eroded from the land or shore erosions and suspension of the benthic layers from the seabed. Anthropogenic discharges also contribute to suspended solids in the form of contaminants such as oil and solid waste in a polluted area. On a seasonal basis, high TSS in seawater could be observed during the active monsoon season. In the study area, TSS was 26.9 to 37.1 mg/L during April 2024 and 72.6 to 96.7 mg/ during September 2024. Salinity is an indicator of (saline or freshwater) water masses intrusion within the region. The salinity of seawater may vary with the riverine or inland influx, rains, or evaporation in the region. The salinity variation during the present sampling was 36.9 to 39.4 in April 2024 and 34.6 to 36.4 during September 2024.

High DO level is an indication of good oxidizing conditions in an aquatic environment. In unpolluted waters equilibrium is maintained through oxygen production during photosynthesis, dissolution from the atmosphere consumption by the respiration and decay of organic matter in a manner that DO levels are close to or above saturation value. The DO level of the study area was varied from 4.4 to 5.2 mg/L in April 2024 and 4.8 to 5.5 mg/L during September 2024. The average DO value was 5.2 mg/L (in April) and 5.1 (in September), which indicates the oxygenated conditions in the study region. BOD is generally indicating the effective consumption of oxidizable matter in that water body. The industrial effluents contain high BOD levels. Thus, high BOD is also an indication of the intrusion of industrial polluted effluent into natural waters. BOD levels in the study area were varied from 2.4 to 4.3 mg/L in April 2024 and 1.8 to 4.5 mg/L during September 2024. Dissolved phosphorus and nitrogen compounds serve as the nutrients for phytoplankton growth. The high nutrient concentrations in the seawater generally could be attributed to the

anthropogenic and industrial influx. This could lead to further eutrophication and further deterioration of the pristine ecosystem. In the present study, Phosphate concentration was range from 0.2 to 0.5  $\mu\text{mol/L}$  in April 2024 and 0.3 to 0.5  $\mu\text{mol/L}$  in September 2024. Nitrate concentration was range from 1.9 to 3.1  $\mu\text{mol/L}$  during April 2024 and 2.5 to 4.2  $\mu\text{mol/L}$  in September 2024. Nitrite concentration was range from 0.1 to 0.4  $\mu\text{mol/L}$  in April 2024 and 0.4 to 0.7  $\mu\text{mol/L}$  in September 2024. The Phenol compounds and PHc were not detected in the present investigation.

**Table 3a: Water quality parameters reported during April 2024 and their test methods.**

Sr. No.	Parameters	St-1		St-2		St-3		St- 4		St-5		Test Method Permissible
		S	B	S	B	S	B	S	B	S	B	
<b>PHYSICAL QUALITY</b>												
1	pH @ 25°C	8.3	8.3	8.1	8.3	8.1	8.2	8.2	8.2	8.2	8.1	IS 3025(Part 11)1983
2	Temperature (°C)	29.7	29.2	29.6	28.9	30.2	29.4	30.2	29.7	30	29.7	IS 3025(Part 9)1984
3	Turbidity (NTU)	1	1	1	1	0.1	1	0.1	1	5	1	IS 3025(Part 10)1984
<b>CHEMICAL QUALITY</b>												
1	Total Suspended Solids (mg/l)	26.9	32.9	27.2	37.1	26.9	33.2	27.3	34.1	26.9	33.1	APHA 24th Ed.,2023,2540- D
2	Salinity	38.6	38.6	36.9	37.8	38.6	37.9	37.1	38.2	39.2	39.4	By Calculation
3	Dissolved Oxygen (mg/l)	5.0	4.7	5.2	4.8	4.8	4.4	4.5	4.4	4.6	4.5	APHA 24th Ed.,2023,4500-O, B
4	Biochemical Oxygen Demand (BOD) (mg/l)	4.3	2.4	2.8	2.6	3	2.6	3.2	3	2.7	3.5	IS 3025(Part 44)1993Amd.01
5	Sulphate as SO <sub>4</sub> (mg/l)	2354	2084	2412	2840	2140	2094	2460	2176	2230	2318	APHA 24th Ed.,2023,4500- SO <sub>4</sub> E
6	Ammonical Nitrogen (µmol/l)	0.8	0.8	0.4	0.5	0.7	0.8	0.7	0.7	0.8	0.9	APHA 24th Ed.,2023,4500- NH <sub>3</sub> B
7	Total Nitrogen (µmol/l)	6.2	7.4	5.8	7.0	6.8	8.1	5.6	7.0	7.4	8.9	By Calculation
8	PO <sub>4</sub> <sup>3-</sup> -P (µmol/l)	0.4	0.2	0.3	0.4	0.3	0.2	0.2	0.4	0.4	0.5	APHA 24th Ed.,2023,4500 -P,D
9	(NO <sub>3</sub> <sup>-</sup> -N) (µmol/l)	2.0	1.9	1.9	2.1	2.4	2.4	2.3	3.1	1.9	2.1	APHA 24th Ed.,2023,4500 NO <sub>3</sub> -B
10	(NO <sub>2</sub> <sup>-</sup> -N) Nitrite (µmol/l)	0.1	0.3	0.1	0.2	0.3	0.4	0.1	0.2	0.2	0.3	APHA 24th Ed.,2023,4500 NO <sub>2</sub> B
11	Phenol (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part 43):2020
12	PHc (ppb)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 24th ED,2023,5520 F

Note: St= Station  
 S=Surface; B=Bottom  
 BDL = Below Detection Limit and N.D. = Not detectable  
 BDL(MDL:0.01)  
 Turbidity= 0.1=1 to 10 NTU; 1=10 to 40 NTU; 5=40-100 NTU

**Table 3b: Water quality parameters reported during September 2024 and their test methods.**

Sr. No.	Parameters	St-1		St-2		St-3		St- 4		St-5		Test Method Permissible
		S	B	S	B	S	B	S	B	S	B	
<b>PHYSICAL QUALITY</b>												
1	pH @ 25°C	8.2	8.3	8.2	8.2	8.2	8.2	8.2	8.3	8.2	8.3	IS 3025(Part 11)1983
2	Temperature (°C)	29.5	29.0	29.5	29.0	29.0	29.5	29.0	29.5	29.5	29.5	IS 3025(Part 9)1984
3	Turbidity (NTU)	1	1	1	1	0.1	1	1	1	1	1	IS 3025(Part 10)1984
<b>CHEMICAL QUALITY</b>												
1	Total Suspended Solids (mg/l)	84.3	93.2	86.9	96.7	76.6	90.8	72.6	80.7	76.4	91.3	APHA 24th Ed.,2023,2540- D
2	Salinity	35.5	35.5	35.5	34.6	35.5	35.5	36.4	36.4	35.2	35.7	By Calculation
3	Dissolved Oxygen (mg/l)	5.4	4.9	5.5	5.0	5.1	5.0	4.8	5.2	5.2	5.1	APHA 24th Ed.,2023,4500-O, B
4	Biochemical Oxygen Demand (BOD) (mg/l)	4.4	2.8	3.6	1.8	2.6	4.5	3.8	4.0	3.3	3.2	IS 3025(Part 44)1993Amd.01
5	Sulphate as SO <sub>4</sub> (mg/l)	1917	2036	1762	1832	1843	1980	1762	1892	1612	2072	APHA 24th Ed.,2023,4500- SO <sub>4</sub> E
6	Ammonical Nitrogen (µmol/l)	0.54	0.64	0.44	0.78	0.54	0.74	0.44	0.54	0.48	0.68	APHA 24th Ed.,2023,4500- NH <sub>3</sub> B
7	Total Nitrogen (µmol/l)	7.7	8.3	7.3	7.7	8.2	9.4	9.5	8.2	7.4	9.8	By Calculation
8	PO <sub>4</sub> <sup>3-</sup> -P (µmol/l)	0.4	0.5	0.4	0.5	0.3	0.3	0.4	0.4	0.4	0.4	APHA 24th Ed.,2023,4500 -P,D
9	(NO <sub>3</sub> <sup>-</sup> -N) (µmol/l)	2.7	4.2	2.9	3.8	2.8	3.7	2.8	3.6	2.5	3.8	APHA 24th Ed.,2023,4500 NO <sub>3</sub> -B
10	(NO <sub>2</sub> <sup>-</sup> -N) Nitrite (µmol/l)	0.5	0.7	0.4	0.6	0.5	0.7	0.4	0.6	0.4	0.7	APHA 24th Ed.,2023,4500 NO <sub>2</sub> B
11	Phenol (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part 43):2020
12	PHc (ppb)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 24th Ed.,2023,5520 F

Note: St= Station  
 S=Surface; B=Bottom  
 BDL = Below Detection Limit and N.D. = Not detectable  
 BDL (MDL:0.01)  
 Turbidity= 0.1=1 to 10 NTU; 1=10 to 40 NTU; 5=40-100 NTU



The sediment quality at different sampling stations was analysed only during April 2024 sampling. The results are presented in Table 4. The sediment in the subtidal region was mainly composed of silty sand to loamy sand. The Aluminium was not detected on the surface sediments of subtidal stations. The highest Cobalt content was recorded within range from 7.2  $\mu\text{g/g}$  (at St-1) to 7.0  $\mu\text{g/g}$  (St-5). At St-5, the highest Copper content (9.9  $\mu\text{g/g}$ ) was recorded, whereas the lowest was detected at St-4 (8.1  $\mu\text{g/g}$ ). The Zinc content was ranged from 8.6  $\mu\text{g/g}$  (St-1) to 16.1  $\mu\text{g/g}$  (St-3). In the subtidal stations, the phosphorus content was ranged from 376.1  $\mu\text{g/g}$  to 462.3  $\mu\text{g/g}$ . Organic carbon content was ranged within 0.4 % to 0.8 %. The Chromium content of marine sediment was ranged from 6.8  $\mu\text{g/g}$  to 17.7  $\mu\text{g/g}$ . The highest chromium content was recorded as 17.7  $\mu\text{g/g}$  at St-1. The highest Nickel content (21.6  $\mu\text{g/g}$ ) was recorded at St-5 and lowest (4.3  $\mu\text{g/g}$ ) at St-4. In the subtidal region, the highest Manganese content was recorded at St-1 (83.3  $\mu\text{g/g}$ ). The Iron content was higher at St-4 (1.6 %) and lower at St-3 (0.8%). The PHc, Arsenic & Mercury was not detected in the sediments during this study.

**Table 4: Subtidal sediment quality parameters and their test methods.**

No.	Parameters	SUBTIDAL SEDIMENT QUALITY( $\mu\text{gm/gm}$ )					Test Method Permissible
		St-1	St-2	St-3	St- 4	St-5	
1	Texture	Silty clay	Silty sand	Silty sand	Silty clay	Silty clay	--
2	Aluminium as Al%	2.7	1.9	N.D.	N.D.	N.D.	Spectrophometric Method
3	Cobalt as Co( $\mu\text{g/g}$ )	7.2	3.7	6.3	4.2	7.0	EPA 3050B :1996/7000B :2007
4	Copper as Cu( $\mu\text{g/g}$ )	9.7	8.5	9.1	8.1	9.9	EPA 3050B :1996/7000B :2007
5	Zinc as Zn	8.6	11.8	16.14	9.3	11.9	EPA 3050B :1996/7000B :2007
6	Mercury( $\mu\text{g/g}$ )	BDL	BDL	BDL	BDL	BDL	EPA 7471A Method
7	Phosphorous (Total)( $\mu\text{g/g}$ )	408	386	462.3	376.1	421.6	IS 10158B (Stannous Chloride Method)
8	C(Org.) %	0.8	0.6	0.6	0.4	0.5	IS: 2720 (Part 22):1972
9	Chromium( $\mu\text{g/g}$ )	17.7	14.0	8.7	6.8	8.4	EPA 3050B :1996/7000B :2007
10	Nickel( $\mu\text{g/g}$ )	9.3	15.8	21.6	4.3	21.1	EPA 3050B :1996/7000B :2007
11	Manganese	83.2	44.3	61.3	72.4	49.4	EPA 3050B :1996/7000B :2007
12	Iron%	1.1	0.9	0.8	1.6	1.0	EPA 3050B :1996/7000B :2007
13	PHc( $\mu\text{g/g}$ )	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 24th ED,2023,5520 F
14	Arsenic( $\mu\text{g/g}$ )	BDL	BDL	BDL	BDL	BDL	EPA 1998, SW-846, Method 7061A 1992

Note: St= Station

BDL= Below Detectable Limit and N.D. = Not detectable

BDL (MDL: 0.05)

## 5 BIOLOGICAL PARAMETERS (BIODIVERSITY STUDY)

Marine ecosystems are subject to a multitude of direct human pressures, such as overexploitation, eutrophication, pollution, and species introductions. These stressors can have synergistic effects on marine ecosystems, altering its functioning. Anthropogenic involvements constantly compromise the health of the marine ecosystem by disturbing the ecological balance. Hence the assessment of the biotic components along with abiotic factors is an integral part of environmental assessment and monitoring study. During the present investigation at APL-Mundra, the abundance and distribution of marine organisms (Plankton and benthos) were studied as part of routine environmental monitoring.

### 5.1 PLANKTONIC FORMS

The name plankton is derived from the Greek word “planktons”, meaning “wanderer” or “drifter”. While some forms of plankton are capable of independent movement and can swim up to several hundred meters in a single day, their position is primarily determined by currents in the body of water they inhabit. As per definition, organisms classified as "plankton" are unable to resist ocean currents. Plankton is primarily divided into two broad functional groups i.e., Phytoplankton and Zooplankton.

#### 5.1.1 Phytoplankton

Phytoplankton are microscopic, single-celled photosynthetic organisms that live suspended in all water niches, including oceans, freshwater, and marine niche. Like the terrestrial ecosystem where plants are an integral part of the ecosystem, phytoplankton play key role in the biogeochemistry of the oceans. As they are dependent on sunlight for energy, they mostly inhabit the euphotic zone. Therefore, they are responsible for production of half of the atmosphere’s oxygen and more than half of the primary production in the oceans. There are many species of phytoplankton, each of which has a characteristic shape, size, and function. Marine species of phytoplankton grow abundantly in oceans around the world and are the foundation of the marine food chain. Marine phytoplankton are the producing (autotrophic) component in the ocean. There are fourteen classes of phytoplankton. Each class of phytoplankton contains unique attributes in size, cell structure, nutrients, and function.

#### 5.1.2 Zooplankton:

Zooplankton occupies second position in the food web of the marine niche. They are the primary consumer’s organisms and generally feed on phytoplankton or small, microscopic group of organisms for they are nutritional needs. They are incapable of making their own food from sun-

light or inorganic compounds, and feed on organisms or the remains of other organisms to get the energy necessary for survival.

## 5.2 SIGNIFICANCE OF PHYTO- AND ZOOPLANKTONS

Phytoplankton are vital to marine ecosystems. They are producers, or autotrophs, that form the foundation of most marine food webs. As photosynthetic organisms, they can convert solar energy into chemical energy and store it in form of sugars. They are responsible for half of the photosynthetic activity on the planet. The significance of zooplanktons is found in their role of transferring biological production from phytoplankton to large organisms in the marine food web and the seafloor. The microscopic protozoan, tunicates, copepods, and other crustaceans graze upon many phytoplankton species. These in turn become food for other animals further linking the food web. Therefore, variability in reproduction of copepods would affect the survival of young fish that feeds on them.

**Table 5: Test methods for phytoplankton and zooplankton analysis.**

Sr. no.	Test performed	Method
1	Phytoplankton	APHA, Edition 24 <sup>th</sup> , Part 10000, 10200 F
2	Chlorophyll <i>a</i> and Pheophytin	APHA, Edition 24 <sup>th</sup> , Part 10000, 10200 H (with some modification)
3	Zooplankton	APHA, Edition 24 <sup>th</sup> , Part 10000, 10200 G
4	Macro benthos	APHA, Edition 24 <sup>th</sup> , Part 10000,10500 A-10500 D

## 5.3 PHYTOPLANKTON DIVERSITY:

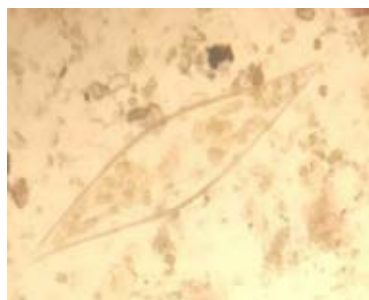
Phytoplankton sampling was carried out at 5 stations. At each station, water samples were collected from surface and bottom waters. During the sampling period the phytoplankton population in the coastal waters of APL-Mundra, was more diverse during the Pre-monsoon season (April 2024) than Post-monsoon (September 2024) (Table 6). However, the overall phytoplankton abundance was more during post-monsoon than the pre-monsoon season. The detailed species composition reported during both sampling period is given in Annexure I and II. In April 2024, the phytoplankton community was represented with a total of 31 phytoplankton genera belonging to diatoms (26 genera) and dinoflagellates (5 genera). Overall, 31 phytoplankton genera representing diatoms (28 genera) and dinoflagellate (3 genera) reported during September 2024 sampling.

Diatoms Species belonged to *Amphorprora* sp., *Asterionella* sp., *Bacillaria* sp., *Chaetoceros* sp., *Corethron* sp., *Coscinodiscus* sp., *Cyclotella* sp., *Cylindrotheca* sp., *Cymbella* sp., *Diploneis* sp., *Guinardia* sp., *Lauderia* sp., *Leptocylindrus* sp., *Licmophora* sp., *Lithodesmium* sp., *Navicula* sp., *Nitzschia* sp., *Odontella* sp., *Pinnularia* sp., *Pleurosigma* sp., *Pseudo-nitzschia* sp., *Rhizosolenia* sp., *Thalassiosira* sp. and *Thalassionema* sp. were common during both sampling period. Only 3 dinoflagellate genera i.e., *Ceratium*, *Prorocentrum* and *Protooperidinium* were reported during September 2024 as compared to April 2024 (5 genera).

The phytoplankton abundance in the study region was higher during the 134 to 218 cells x 10<sup>2</sup> L<sup>-1</sup> during September 2024 as compared to April 2024 (ranged from 87 to 161 cells x 10<sup>2</sup> L<sup>-1</sup>). In April 2024, the highest phytoplankton abundance was observed at St-5 in the surface (161 cells x 10<sup>2</sup> L<sup>-1</sup>). The lowest phytoplankton abundance (87 cells x 10<sup>2</sup> L<sup>-1</sup>) was observed at St-3 in surface water. During September 2024, phytoplankton abundance was higher at St-5 in surface water (218 cells x 10<sup>2</sup> L<sup>-1</sup>) and lowest at St-3 bottom water (134 cells x 10<sup>2</sup> L<sup>-1</sup>). The diatom genera, *Coscinodiscus* (up to 42 cells x 10<sup>2</sup> L<sup>-1</sup>) during September 2024 (Annexure I), whereas in April 2024, *Thalassiosira* (up to 22 cells x 10<sup>2</sup> L<sup>-1</sup>) was also predominant along with *Coscinodiscus* (up to 22 cells x 10<sup>2</sup> L<sup>-1</sup>) (Annexure II). The study shows that the marine water around was enriched with the diverse phytoplankton population during the same period.

**Table 6: Different marine biological parameters (phytoplankton abundance, Chlorophyll a, Pheophytin concentrations) reported from the marine waters of APL-Mundra, during April 2024 and September 2024.**

Parameter	Sampling period	Sampling Stations									
		St-1	St-1	St-2	St-2	St-3	St-3	St-4	St-4	St-5	St-5
		S	B	S	B	S	B	S	B	S	B
Phytoplankton (cells x 10 <sup>2</sup> L <sup>-1</sup> )	April 2024	140	102	151	99	87	122	135	112	161	126
	September 2024	175	165	218	150	168	134	175	143	217	179
Chlorophyll a (µg/L)	April 2024	1.9	1.8	2.2	1.8	2	1.8	2.6	1.7	1.8	1.6
	September 2024	3.1	3.3	2.9	3.4	2.63	2.8	2.4	3	2.9	3.2
Phaeophytin (µg/L)	April 2024	1.2	0.9	1.1	0.9	1.3	0.9	1.3	0.9	0.9	0.8
	September 2024	1.6	1.4	1	1.2	0.9	1.2	0.9	1.02	1.1	1.2



*Navicula* sp.



*Ceratium* sp.



*Coscinodiscus* sp.



*Chaetoceros* sp.



*Odontella* sp.



*Pleurosigma* sp.

**Figure 2: Microphotographs of phytoplankton reported in the coastal waters of APL-Mundra, during April 2024 and September 2024.**

#### **5.4 PHYTOPLANKTON PIGMENTS (CHLOROPHYLL *a* AND PHEOPHYTIN):**

Marine phytoplankton contains essential as well as accessory pigments like that of terrestrial plants. Phytoplankton pigments capture sunlight. The resulting photosynthesis and its products, especially the oxygen and organic compounds, all rely on the light energy captured by the different phytoplankton pigments. Chlorophyll *a* is the major pigment for light harvesting, and plays a significant role in photosynthesis and photoprotection, by extending the light collection window and protecting the cell from the damage of high irradiance levels or high ultraviolet light exposure.

Algal chlorophyll forms a series of degradation products upon degradation. In addition to Chlorophyll the naturally occurring pigments in algal cells. The nature of these degradation products depends on which part of the chlorophyll molecule is affected. As chlorophyll degrades, the initial step is either the loss of the magnesium from the centre of the molecule or the loss of the phytol tail. This results in the formation of the molecule, phaeophytin. Depending on the parent molecule several distinct molecules like phaeophytins, chlorophyllides, and pheophorbides can be

produced. Thus, in addition to Chlorophyll *a* filtered seawater contains colour degradation products of phytoplankton pigments.

#### 5.4a CHLOROPHYLL *a* AND PHAEOPHYTIN CONCENTRATIONS

The phytoplankton biomass distribution expressed in terms of Chlorophyll *a* (Chl-*a*) and Pheophytin at selected stations in the coastal region of APL-Mundra, is presented in Table 6. Overall, Chl-*a* and pheophytin concentration was more during the September 2024 (2.4 to 3.4 µg/L and 0.9 to 1.6 µg/L respectively) than the April 2024. The highest Chl-*a* and Pheophytin concentrations were observed at bottom waters of all stations and highest Chl-*a* (3.4 µg/L) was observed at bottom waters of ST-2. In April 2024, the Chl-*a* concentrations in the study region were ranged from 1.6 µg/L to 2.6 µg/L. The Pheophytin content was ranged from 0.8 µg/L to 1.3 µg/L.

The Chl-*a* and Pheophytin concentrations were more in the bottom water as compared to the bottom water during September 2024, whereas not trend was observed in April 2024. The variations observed between the surface and bottom waters could be due to several natural biological variability.

The concentration of Pheophytin is a measure of the dead cells and is an indirect indicator of biotic and abiotic stress conditions of the algae leading to a deterioration of Chl-*a*. The ratio from concentrations of Chl-*a* and Pheophytin in an aquatic ecosystem suggests a balance between the growth and mortality of phytoplankton life. In healthy environments, ratios of Chl-*a* to Pheophytin generally exceed 1.1. In the present study, this ratio was ranged from 1.9 to 2.9. The Chl-*a* and Pheophytin ratio showed marginally elevated levels in the surface waters as compared to the bottom waters. Overall, the ratios of Chl-*a* and Pheophytin concentration in the study region were generally high (>1), indicating that the appropriate conditions prevailed for the phytoplankton growth.

#### 5.5 ZOOPLANKTON DIVERSITY:

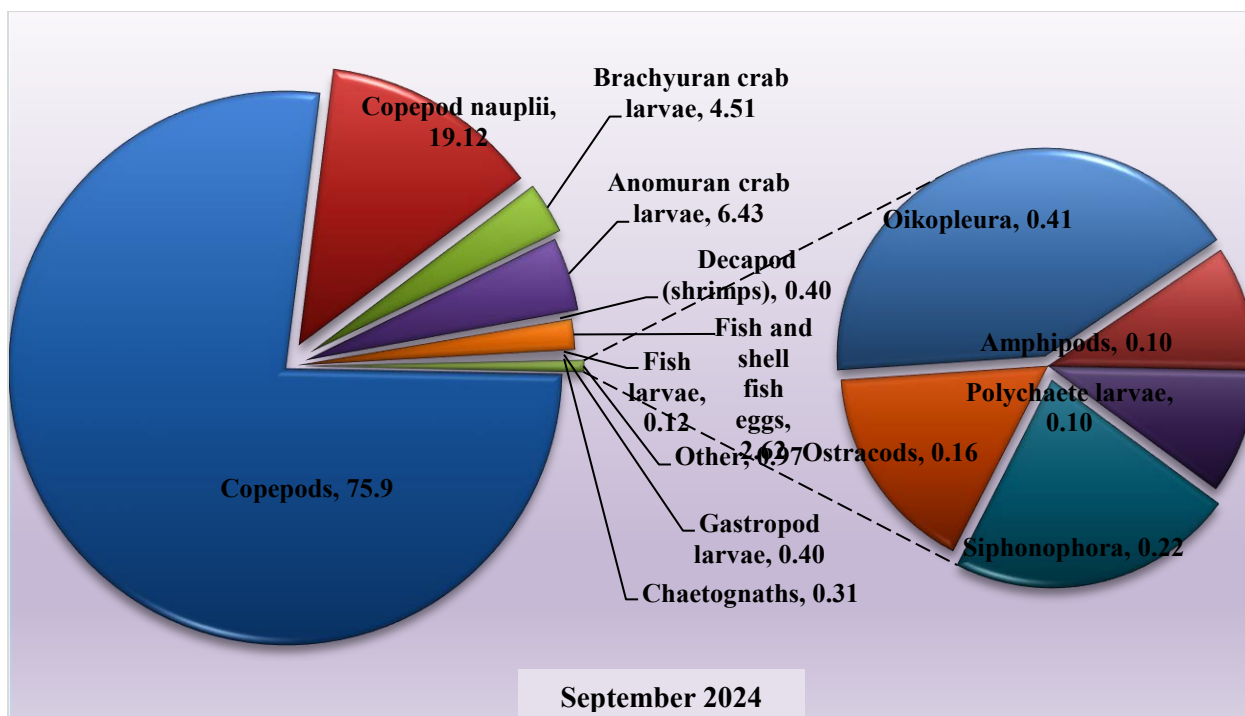
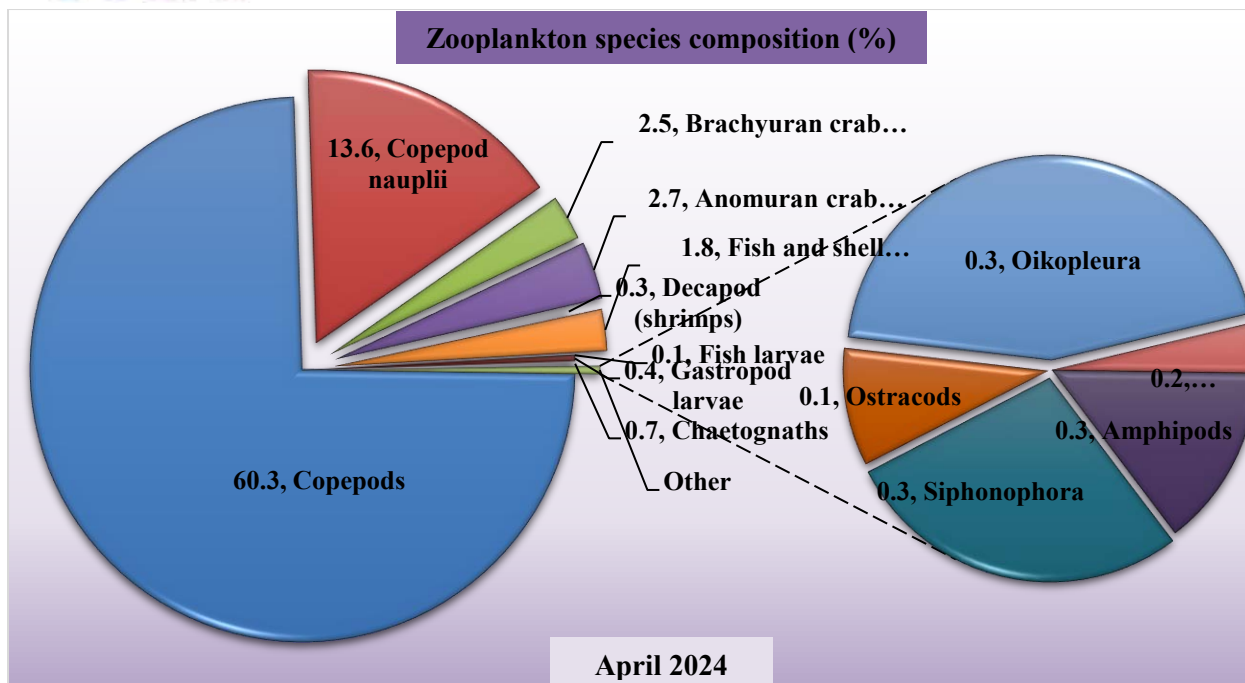
Zooplankton standing stock in terms of population and biomass revealed substantial spatial and temporal variation (Table 7). Zooplankton population was more abundant during September 2024 (12.7 to 18.1 nos. ×10<sup>3</sup>/100 m<sup>3</sup>) to than April 2024 (8.0 to 14.3 nos. ×10<sup>3</sup>/100 m<sup>3</sup>). In April 2024, the maximum zooplankton population (14.3 nos. ×10<sup>3</sup>/100 m<sup>3</sup>) and biomass (2.0 ml/ 100 m<sup>3</sup>) were recorded at St-4. The lowest zooplankton population (8.0 nos.×10<sup>3</sup>/100 m<sup>3</sup>) and biomass (1.2 ml/100 m<sup>3</sup>) (Figure 4) were observed at St-3. During September 2024, the maximum zooplankton population and biomass were observed at Station 5 (18.1 nos. ×10<sup>3</sup>/100 m<sup>3</sup> and 2.7 ml/ 100 m<sup>3</sup>, respectively).

Overall, Copepods (60.0 to 75.9%) and copepod nauplii (13.0 to 13.6%) dominated the zooplankton assemblage during both sampling periods (Figure 3). Other zooplankton groups such as brachyuran crab larvae, anomuran crab larvae, decapod (shrimps), fish and shellfish eggs, fish larvae, gastropod larvae, chaetognaths, polychaete larvae, siphonophore, ostracods, Oikopleura, Amphipods and Lucifer were also reported at various concentrations. Different groups of identified zooplankton groups are represented in Annexure III.

**Table 7: Density and biomass of various zooplankton and macrobenthos groups in the coastal waters at the APL-Mundra during April 2024 and September 2024.**

Parameter	Sampling period	Sampling Stations				
		St-1	St-2	St-3	St-4	St-5
<b>Zooplankton</b>						
Population (nos.× 10 <sup>3</sup> /100 m <sup>3</sup> )	April 2024	9.3	11.5	8.0	14.3	13.0
	September 2024	15.9	12.8	12.7	15.2	18.1
Biomass (ml./100 m <sup>3</sup> )	April 2024	1.3	1.5	1.2	2.0	1.7
	September 2024	2.0	1.8	1.9	1.9	2.7
<b>Macrobenthos</b>						
Total abundance (nos./m <sup>2</sup> )	April 2024	595	575	680	860	665
	September 2024	770	990	770	1210	910
Biomass (g/m <sup>2</sup> )	April 2024	1.6	1.5	1.9	2.1	1.8
	September 2024	1.3	1.5	1.4	1.7	1.9





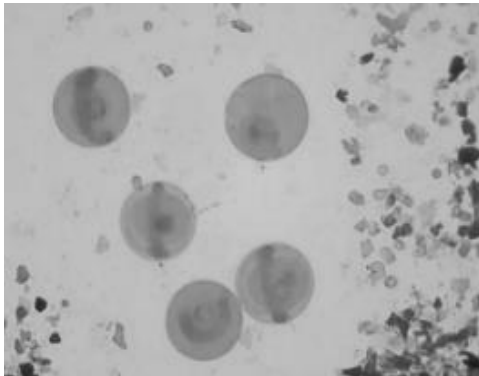
**Figure 3: Percent composition of zooplankton groups reported from the marine waters of APL-Mundra during April 2024 and September 2024.**



**Fish Larvae**



**Copepods**



**Fish eggs**



**Crab larvae**

**Figure 4: Microphotographs of zooplankton reported along the APL-Mundra coast during April 2024 and September 2024.**

### 5.6 Macrobenthic fauna

The benthic zone is the lowest ecological zone of a water body which usually involves the sediments at the seafloor. The benthic environment is divided into distinctive ecological zones based on depth, seafloor topography, and vertical gradients of physical parameters. These are the supralittoral, littoral, sublittoral, bathyal, abyssal, and hadal zones. The number of phyla and species of benthic animals exceeds those of pelagic species, at least partly because of the greater physical variety of benthic habitats. Benthic animals are separated into infaunal and epifaunal species, depending upon whether they live within sediments or on the surface of the seafloor, respectively. Size categories of the zoobenthos consist of the larger macrofauna (>1.0 mm), the small meiofauna which is characteristically found in sand and mud, and the microfauna which is made up mostly of protozoans.

Benthic organisms are morphologically different from those planktonic organisms. Many are adapted to live on the substrate (bottom). In benthic habitats, they can be considered dominant creatures. These organisms adapted to deep-water pressure so cannot survive in the upper parts of

the water column. Since light does not penetrate very deep ocean water, the benthic organisms often depend on the organic matter falling from the upper water column as their main energy source. This dead and decaying matter sustains the benthic food chain. The most benthic organisms are scavengers or detritivores. These organisms under being relatively stationary, are constantly exposed to changes undergoing in overlying water, and hence, respond very well to aquatic pollution. The macro benthos population is very sensitive to environmental perturbation and is highly influenced by the physicochemical characteristics of water, the nature of the substratum, food, predation, and other factors. The density of benthic invertebrates also fluctuates widely with the changes in the season.

### **5.6.1 Significance of macrobenthic organisms**

The biomass of macrobenthic organisms in estuaries and coastal embayment is often high. It declines if communities affected by prolonged periods of poor water quality especially when anoxia and hypoxia are common. Burrowing and tube-building by deposit-feeding benthic organisms (bioturbation) help to mix the sediment and enhance the decomposition of organic matter. Nitrification and denitrification are also enhanced because a range of oxygenated and anoxic microhabitats are created. For example, the area of oxic-anoxic boundaries and the surface area available for diffusive exchange are increased by tube-building macrobenthos. The loss of benthic suspension-feeders can further enhance turbidity levels because these organisms filter suspended particles including planktonic algae, and they enhance sedimentation rates through bio deposition (i.e., voiding of their wastes and unwanted food). Changes in the macro fauna (and flora) cause changes in nutrient storage pools. Macro fauna is also important constituents of fish diets and thus are an important link for transferring energy and nutrients between trophic levels, also driving pelagic fish and crustacean production. For these reasons, the benthic organisms are extremely important indicators of environmental change.

### **5.6.2 Benthic Diversity**

#### **5.6.2a Subtidal region:**

The macrobenthic population study revealed large spatiotemporal variation with the benthic population during the study period. Overall, more macrobenthos abundance and biomass were reported at subtidal stations than at intertidal stations. The macrobenthic abundance and biomass were more during the September 2024 than the April 2024 sampling. In April 2024, the macrobenthos density ranged from 575 no./m<sup>2</sup> to 860 nos./m<sup>2</sup> at sampling stations (Table 7). The biomass of the macrobenthic community in the study region was ranged from 0.7 g/ m<sup>2</sup> to 1.0 g/ m<sup>2</sup>

in the study region. The maximum abundance and biomass of benthic microorganisms was reported at St-4 (860 nos./m<sup>2</sup> and 2.1 g/m<sup>2</sup>). During September 2024, the macrobenthos density was ranged from 770 to 1260 nos./m<sup>2</sup>. The macrobenthic biomass was ranged from 0.7 to 1.9 g/ m<sup>2</sup>.

In species composition, Polychaete species (Phylum Annelida) belonging to the family Paraonidae, Pilargidae, Capitillidae, Cossuridae, Glyceridae, Ciratullidae, Nephthyida, Nereidae, Lumbriconeridae, Spionidae were abundant contributing ~75% to macrobenthic population during April 2024 (Annexure IV). In September 2024, species belongs to family Spionidae were not reported, whereas polychaete species contributed ~82% to macrobenthic population (Annexure IV).

Overall, the presence of Polychaete, Amphipods, and Nemerteans suggest the availability of food organisms for benthic predators in the area. The macrobenthic population reported during both studies reveals that the large spatial-temporal variation with the benthic population could be due to the change in bottom substratum.

### 5.6.2b Intertidal region

The sandy substratum with low organic matter affects the occurrence of the macrobenthic community in the intertidal region. In September 2024, the highest biomass was measured (0.05 g/m<sup>2</sup> to 0.2 g/m<sup>2</sup>) in the intertidal region (Annexure V). The highest density of macrobenthic organisms was reported at station IT-1 (LW) (224 nos./m<sup>2</sup>), whereas the lowest density was reported at Station IT-2 (HW) (124 nos./m<sup>2</sup>). During April 2024, the macrobenthic biomass was ranged from (0.08 to 0.4 g/m<sup>2</sup>). At St-1 (LW) the higher macrobenthic population (140 nos./m<sup>2</sup>) and biomass (0.4 g/m<sup>2</sup>) was reported. No macrobenthic community was observed at St-3 (HW and LW) may be due to sandy sediment during both sampling periods.



**Polychaete sp.**



**Amphipod sp.**

**Figure 5: Microphotographs of macrobenthic organisms observed in the sediment samples collected in the vicinity of APL-Mundra during April 2024 and September 2024.**

## 6 CONCLUSIONS

During this study, a diverse population of planktonic and benthic organisms was observed along the (APSEZ developed) integrated seawater intake and outfall channels. The diversified phytoplankton and zooplankton population during the pre-monsoon (April 2024) and post-monsoon season (September 2024) emphasises that the water conditions along the channels are favourable for their survival and growth.

The enriched planktonic flora and subtidal benthic fauna could support the fish population in this region, especially along the outfall channel region. Our recent fish bioassay study showed that the fish species *Mugil cephalus* had a 90% survival rate in absolute outfall water, which is consistent with these findings. These fishes for the bioassay study were collected from Kotdi Creek. The (90%) survival of the fish population in bioassay study and the diverse marine biota near outfall channel in the present study indicate that the abiotic characteristics, mainly temperature, of discharge water does not have the adverse biological impact. The scientifically designed 11 km-long outfall channel enables cooling of outfall water. Similarly, an aqueduct constructed over the Kotdi Creek avoids the mixing with outfall water and facilitates the natural flow of creek water as per the compliance condition. The overall physico-chemical and biological characteristics of the marine environment observed in the present seasonal study not significantly varied from the previous baseline marine monitoring study.

**Table 8: Names of the Marine Monitoring Team Members**

Sr. No.	Name of Person
1.	Mr. Vijay Thanki (Env. Chemist)
2.	Mr. Pravin Singh (Env. Chemist)
3.	Ms. Shweta A. Rana (Env. Microbiologist)
4.	Mr. Bhavin Patel (Env. Engineer)
5.	Dr. Sushant Sanaye (Marine Biologist)



**PHOTOGRAPHS OF DIFFERENT TYPES OF SAMPLING**

**Annexures I: Phytoplankton abundance (cells×10<sup>2</sup>/L) at different sampling stations in the coastal waters of APL-Mundra during April 2024.**

Phytoplankton Genera	Sampling Stations									
	St-1	St-1	St-2	St-2	St-3	St-3	St-4	St-4	St-5	St-5
	S	B	S	B	S	B	S	B	S	B
<b>Diatoms</b>										
<i>Amphiphora</i> sp.	2	2	3	0	2	2	2	1	4	4
<i>Asterionella</i> sp.	6	3	5	4	0	2	5	4	6	7
<i>Bacillaria</i> sp.	2	2	7	3	1	2	4	2	12	8
<i>Chaetoceros</i> sp.	3	5	8	3	3	7	4	2	11	6
<i>Corethron</i> sp.	2	1	2	1	1	1	2	0	1	1
<i>Coscinodiscus</i> sp.	18	14	22	9	13	12	21	18	20	16
<i>Cyclotella</i> sp.	3	2	2	1	1	1	2	1	8	4
<i>Cylindrotheca</i> sp.	3	2	1	1	1	3	1	1	3	2
<i>Cymbella</i> sp.	1	1	1	1	1	0	0	1	0	2
<i>Diplonis</i> sp.	1	1	1	1	1	2	1	1	2	1
<i>Ditylum</i> sp.	3	1	4	2	1	3	4	2	5	3
<i>Gunardia</i> sp.	3	1	5	5	2	3	2	3	1	2
<i>Lauderia</i> sp.	4	1	4	0	2	2	1	1	3	2
<i>Leptocylindrus</i> sp.	1	1	5	4	2	2	1	3	4	5
<i>Licmophora</i> sp.	4	2	3	1	1	0	1	2	5	1
<i>Lithodesmium</i> sp.	3	1	4	0	1	3	2	5	4	4
<i>Navicula</i> spp.	5	2	8	7	8	4	3	5	4	2
<i>Nitzschia</i> spp.	6	9	7	8	2	3	4	8	7	2
<i>Melosira</i> sp.	5	4	3	2	2	1	6	5	4	2
<i>Odontella</i> sp.	3	3	2	1	2	3	7	5	5	3
<i>Pinnularia</i> sp.	2	0	2	1	2	4	6	0	6	1
<i>Plurosigma</i> spp	9	8	11	5	11	12	4	5	4	4
<i>Pseudo-nitzschia</i> sp.	3	0	4	2	3	4	4	5	5	3
<i>Rhizosolenia</i> sp.	12	8	12	7	6	16	12	8	9	10
<i>Thalassionema</i> sp.	10	7	10	9	7	8	9	8	3	9
<i>Thalassiosira</i> sp.	22	17	8	11	6	16	20	10	18	15
<b>Dinoflagellates</b>										
<i>Scrippsiella</i> sp.	0	1	1	2	1	1	1	1	2	1
<i>Ceratium</i> sp.	1	0	1	3	1	1	2	2	1	2
<i>Gonyaulax</i> sp.	1	1	1	1	1	1	1	1	1	1
<i>Prorocentrum</i> sp.	1	2	1	2	1	1	1	1	1	1
<i>Protoperidinium</i> sp.	1	0	3	2	1	2	2	1	2	2
<b>Total Phytoplankton (cells x 10<sup>2</sup> L<sup>-1</sup>)</b>	<b>140</b>	<b>102</b>	<b>151</b>	<b>99</b>	<b>87</b>	<b>122</b>	<b>135</b>	<b>112</b>	<b>161</b>	<b>126</b>

Note: S=surface; B=bottom; St=station

**Annexures II: Phytoplankton abundance (cells×10<sup>2</sup>/L) at different sampling stations in the coastal waters of APL-Mundra during September 2024.**

Phytoplankton Genera	Sampling Stations									
	St-1	St-1	St-2	St-2	St-3	St-3	St-4	St-4	St-5	St-5
	S	B	S	B	S	B	S	B	S	B
<b>Diatoms</b>										
Amphora sp.	1	2	1	3	6	1	0	1	5	4
Amphoprora sp.	0	1	1	1	2	3	2	2	1	0
Asterionella sp.	18	22	32	21	18	7	21	3	12	32
Bacillaria sp.	5	3	2	3	6	1	1	1	4	3
Chaetoceros sp.	3	1	0	0	3	4	0	1	2	7
Corethron sp.	0	1	1	1	2	1	2	2	2	1
Coscinodiscus sp.	20	33	42	21	22	15	24	18	37	23
Cyclotella sp.	1	3	7	1	1	3	1	2	4	3
Cylindrotheca sp.	2	0	3	1	4	0	2	5	1	3
Cymbella sp.	1	1	2	0	2	1	1	1	2	1
Diplonis sp.	1	2	1	2	1	2	1	2	2	4
Ditylum sp.	3	5	2	2	1	1	12	9	4	1
Gunardia sp.	14	12	18	15	9	7	2	10	18	0
Gyrosigma sp.	2	1	0	2	3	2	3	1	3	1
Lauderia sp.	0	2	1	1	1	1	2	2	1	0
Leptocylindrus sp.	6	2	2	3	1	2	0	0	2	3
Licmophora sp.	1	3	2	1	1	1	1	0	4	1
Lithodesmium sp.	1	1	0	2	1	5	3	9	5	4
Navicula spp.	23	13	11	6	11	3	16	11	13	16
Nitzschia spp.	5	12	26	17	22	11	12	8	23	20
Odontella sp.	22	20	21	9	10	6	17	11	21	15
Pinnularia sp.	6	1	0	2	1	6	8	1	3	2
Pleurosigma spp	2	9	0	3	6	3	15	9	13	2
Pseudo-nitzschia sp.	1	1	2	0	2	3	4	4	2	0
Rhizosolenia sp.	2	2	8	12	4	8	3	10	3	7
Synedra sp.	3	1	1	0	1	5	2	0	2	1
Thalassionema sp.	14	6	9	6	19	14	11	15	9	18
Thalassiosira sp.	13	2	21	12	2	10	4	0	11	1
<b>Dinoflagellates</b>										
Ceratium sp.	3	2	1	2	3	1	2	3	3	2
Prorocentrum sp.	1	1	1	0	2	4	2	1	2	3
Protoperidinium sp.	1	0	0	1	1	3	1	1	3	1
<b>Total Phytoplankton (cells x 10<sup>2</sup>L<sup>-1</sup>)</b>	<b>175</b>	<b>165</b>	<b>218</b>	<b>150</b>	<b>168</b>	<b>134</b>	<b>175</b>	<b>143</b>	<b>217</b>	<b>179</b>

Note: S=surface; B=bottom; St=station



**Annexures III: Density (nos.  $\times 10^3/100 \text{ m}^3$ ) and biomass (ml/100  $\text{m}^3$ ) of various zooplankton groups in the coastal waters at the APL-Mundra during April 2024 and September 2024.**

Zooplankton Groups	Sampling period									
	April 2024					September 2024				
	St-1	St-2	St-3	St-4	St-5	St-1	St-2	St-3	St-4	St-5
Copepods	6.6	8.3	5.4	11.1	9.1	12.6	10.2	7.7	11.7	15.0
Copepod nauplii	1.6	1.9	1.4	1.7	2.4	1.8	1.5	2.4	2.0	1.9
Brachyuran crab larvae	0.4	0.3	0.2	0.4	0.3	0.4	0.5	0.7	0.4	0.3
Anomuran crab larvae	0.2	0.3	0.3	0.5	0.4	0.5	0.3	1.3	0.6	0.5
Decapod (shrimps)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Fish and shellfish eggs	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0.4	0.2	0.3
Fish larvae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gastropod larvae	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Chaetognaths	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Polychaete larvae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Siphonophora	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ostracods	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oikopleura	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amphipods	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lucifers	6.6	8.3	5.4	11.1	9.1	12.6	10.2	7.7	11.7	15.0
<b>Population (nos. <math>\times 10^3/100 \text{ m}^3</math>)</b>	<b>9.3</b>	<b>11.5</b>	<b>8.0</b>	<b>14.3</b>	<b>13.0</b>	<b>15.9</b>	<b>12.8</b>	<b>12.7</b>	<b>15.2</b>	<b>18.1</b>
<b>Biomass (ml./100 <math>\text{m}^3</math>)</b>	<b>1.3</b>	<b>1.5</b>	<b>1.2</b>	<b>2.0</b>	<b>1.7</b>	<b>2.0</b>	<b>1.8</b>	<b>1.9</b>	<b>1.9</b>	<b>2.7</b>

**Annexures IV: Faunal composition, density (no/m<sup>2</sup>) and biomass (g/m<sup>2</sup>) of the macrobenthos community in the subtidal region at APL-Mundra during April 2024 and September 2024.**

Taxa	Sampling period									
	April 2024					September 2024				
	St-1	St-2	St-3	St-4	St-5	St-1	St-2	St-3	St-4	St-5
<b>Phylum Polychaeta</b>										
Paraonidae	185	175	280	210	165	260	310	290	460	270
Pilargidae	40	10	30	30	30	80	20	40	40	40
Capitillidae	40	40	90	140	40	40	140	60	120	40
Cossuridae	30	50	50	30	50	60	60	40	30	30
Glyceridae	30	40	30	60	40	30	70	50	40	40
Ciratullidae	50	10	20	20	30	40	40	50	50	50
Nephthyidae	40	0	10	80	70	40	30	20	70	120
Nereidae	30	40	40	50	80	60	70	60	50	80
Lumbriconeridae	10	20	0	70	50	10	30	40	150	60
Spionidae	30	50	30	40	20					
<b>Phylum Nemertea</b>										
Nemertea	10	10	10	30	10	10	10	10	30	10
<b>Phylum Mollusca</b>										
Bivalvia	20	50	10	20	30	40	50	10	40	40
Gastropoda	40	40	30	40	20	40	80	10	50	60
<b>Phylum Arthropoda</b>										
Amphipoda	20	30	30	30	20	40	50	60	30	40
Isopoda	20	10	20	10	10	20	30	30	50	30
<b>Total abundance (nos./m<sup>2</sup>)</b>	<b>595</b>	<b>575</b>	<b>680</b>	<b>860</b>	<b>665</b>	<b>770</b>	<b>990</b>	<b>770</b>	<b>1210</b>	<b>910</b>
<b>Biomass (g/m<sup>2</sup>)</b>	<b>0.9</b>	<b>0.7</b>	<b>0.4</b>	<b>1.0</b>	<b>0.8</b>	<b>0.8</b>	<b>0.9</b>	<b>0.7</b>	<b>1.9</b>	<b>1.2</b>

**Annexures V: Faunal composition, density (no/m<sup>2</sup>) of macrobenthos from the sediments collected at High tide water level (HW) and Low tide water level (LW) in the inter-tidal region at APL-Mundra during April 2024 and September 2024.**

Faunal groups	Sampling period											
	April 2024						September 2024					
	IT-1 (HW)	IT-1 (LW)	IT-2 (HW)	IT-2 (LW)	IT-3 (HW)	IT-3 (LW)	IT-1 (HW)	IT-1 (LW)	IT-2 (HW)	IT-2 (LW)	IT-3 (HW)	IT-3 (LW)
<b>Phylum Annelida</b>												
Polychaetes	56	52	44	36	-	-	56	128	68	124	-	-
<b>Phylum Nemertea</b>												
Nemertea	0	8	0	4	-	-	4	4	8	12	-	-
<b>Phylum Mollusca</b>												
Bivalve	16	8	8	12	-	-	4	20	0	16	-	-
Gastropoda	4	4	4	4	-	-	4	16	4	12	-	-
<b>Phylum Arthropoda</b>												
Amphipoda	12	24	24	20	-	-	32	24	20	24	-	-
Isopoda	28	44	28	20	-	-	32	32	24	16	-	-
<b>Total density (no/m<sup>2</sup>)</b>	<b>116</b>	<b>140</b>	<b>108</b>	<b>96</b>	-	-	<b>132</b>	<b>224</b>	<b>124</b>	<b>204</b>	-	-
<b>Biomass (g/m<sup>2</sup>)</b>	<b>0.08</b>	<b>0.4</b>	<b>0.05</b>	<b>0.1</b>	-	-	<b>0.2</b>	<b>0.1</b>	<b>0.05</b>	<b>0.08</b>	-	-

(Note: LW=low water during low tide; HW=high water during high tide; St=Station)



TC-10779

**Royal**

Environment Auditing &amp; Consultancy Service

Plot No. 19 & 20, B/s. The North Star Nest School, Masoom School Road, Mota Mava, RAJKOT - 360 005.  
Ph.: +91 9099919954 ■ E-mail : royalsenvironment@live.com ■ admin@royalconsultancy.com**TEST REPORT  
(AMBIENT AIR)**Test Report No. : TR/2024-25/04/21  
Work Order No : 4504260887Date : 12/04/2024  
Job Card No: Ahls/24-25/02Name & Address of Customer : Ahlstrom Fibercomposites India Pvt. Ltd.  
Mundra SEZ Integrated Textile & Apparle Park,  
(MITAP), Plot No. - 07, Survey No. -141, Mundra,  
Kutch-370421

Attention : Mr. Dipsinh Manek

Date of Sample Receipt : 08/04/2024

Date of Testing : 08th to 11th April 2024

**Sampling Flow Rate :**PM 10 : 1.15 m<sup>3</sup>/min  
PM 2.5: 17.0 LPM  
Gaseous Sampling Flow Rate : 0.2 LPM

Lab id : A/2024-25/04/06

Sample Collected by : Royal Environment

**Location of Sampling :**

Nr. Security Main gate

Date of sampling : 06/04/2024

Time of sampling : 09.30

Duration of sampling : 24 Hrs

**Environmental Conditions**

Humidity : 46%

Weather : Clear

Barometric Pressure : 745 mmHg

Dominant Wind Direction (From) : NE

Sr.No.	Measured Concentration	Unit	Permissible Limits	Results	Test Method
01.	PM 2.5	µg/m <sup>3</sup>	60	34.0	IS : 5182 (Part-24)-2019
02.	PM 10	µg/m <sup>3</sup>	100	58.0	IS : 5182 (Part-23)-2006
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	14.3	IS : 5182 (Part-2)-2001
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	23.6	IS : 5182 (Part-6)-2006

Instrument used : RDS, Gaseous Sampler, PM 2.5 Sampler

Calibration date : 13/01/2024

Authorized Signatory  
Parth Godhani, QM/TMReviewed by:  
Shweta Dhanani

\* End of Report \*

1. The results relate only to the item tested/Sampling.  
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Page 1 of 1



TC-10779

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Ph.: +91 9099919954 ■ E-mail : royalsenvironment@live.com ■ admin@royalconsultancy.com**TEST REPORT  
(AMBIENT AIR)**Test Report No. : TR/2024-25/04/22  
Work Order No. : 4504260887Date : 12/04/2024  
Job Card No: Ahls/24-25/02Name & Address of Customer : Ahlstrom Fibercomposites India Pvt. Ltd.  
Mundra SEZ Integrated Textile & Apparrle Park,  
(MITAP), Plot No. - 07, Survey No. -141, Mundra,  
Kutch-370421

Attention : Mr. Dipsinh Manek

Date of Sample Receipt : 08/04/2024

Date of Testing : 08th to 11th April 2024

Type of Sampling : Gravimetric &amp; Wet- Chemical Methods

Sampling Flow Rate :

PM 10 : 1.29 m<sup>3</sup>/min

PM 2.5: 17.0 LPM

Gasious Sampling Flow Rate : 0.2 LPM

Lab id : A/2024-25/04/07

Sample Collected by : Royal Environment

Location of Sampling :

Nr. Old Security Gate

Date of sampling : 06/04/2024

Time of sampling : 10:00

Duration of sampling : 24 Hrs

Environmental Conditions

Humidity : 46%

Weather : Clear

Barometric Pressure : 745 mmHg

Dominant Wind Direction (From) : NE

Sr.No.	Measured Concentration	Unit	Permissible Limits	Results	Test Method
01.	PM 2.5	µg/m <sup>3</sup>	60	35	IS : 5182 (Part-24)-2019
02.	PM 10	µg/m <sup>3</sup>	100	55.0	IS : 5182 (Part-23)-2006
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	12.1	IS : 5182 (Part-2)-2001
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	23.5	IS : 5182 (Part-6)-2006

Instrument used : RDS, Gasious Sampler, PM 2.5 Sampler

Calibration date : 13/01/2024

  
 Authorized Signatory  
 Parth Godhani, QM/TM

  
 Reviewed by:  
 Shweta Dhanani

\* End of Report \*

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TC-10779

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Environment Auditing &amp; Consultancy Service

Plot No. 19 & 20, B/s. The North Star Nest School, Masoom School Road, Mota Mava, RAJKOT - 360 005.  
Ph.: +91 9099919954 ■ E-mail : royalenvironment@live.com ■ admin@royalconsultancy.com**TEST REPORT  
(Ambient Noise)**Test Report No. : TR/2024-25/04/28  
Work Order No : 4504260887Date : 12/04/2024  
Job Card No: Ahls/23-24/02Name & Address of Customer : Ahlstrom Fibercomposites India Pvt. Ltd.  
Mundra SEZ Integrated Textile & Apparrle Park,  
(MITAP), Plot No. - 07, Survey No. -141, Mundra,  
Kutch-370421

Attention : Mr. Dipsinh Manek

**Noise Level Meter**Make : Lutron  
Model : SC-942  
Serial No. : Q682203  
Calibration : Done on : 18/01/2024**Calibration Results of Noise Level Meter**Calibration : 94 dB at 1000 Hz      114 dB at 1000 Hz  
Initial : 93.34      113.85  
Final : 94      114

Sampling Rate : 1 Sec.      Method : IS 9989 : 1981

S.No.	Date & Time	Location	Sound Parameters - dB(A)						
			<b>Night Time Noise Level</b>						
			Noise Level	Leq	L <sub>10</sub>	L <sub>50</sub>	L <sub>90</sub>	L <sub>max</sub>	L <sub>min</sub>
01.	06/04/2024 22:00 pm to 06:00 am	Nr. Security Main Gate	50.1	67.2	71.4	64.4	54.5	78.8	49.4
02.		Nr. FO Storage Area	55.4	55.3	59.9	55.1	52.7	62.4	51.8

  
 Authorized Signatory  
 Parth Godhani, QM/TM

  
 Reviewed by:  
 Shweta Dhanani

**Note:** (1) The method for calculation of average Leq: To convert average of dB(A), each value is to be divided by 10, followed by antilog and finally calculate arithmetic mean. The final value is converted in logarithm followed by multiplication with 10. (2) monitoring must be carried for 75% of the prescribed day time and night time for legal compliance, (3) L<sub>max</sub> and L<sub>min</sub> are to be reported hourly basis and (4) L<sub>50</sub> & L<sub>90</sub> also recorded to understand the intensity of the noise for further course of action.

\* End of Report \*

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Doc. No. F/7.8/08, Issue No. 01, Issue Date : 01-07-23, Ammd No.--, Ammd Date.--



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# Royal

## Environment Auditing & Consultancy Service

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Ph.: +91 9099919954 ■ E-mail : royalservice@live.com ■ admin@royalconsultancy.com

### TEST REPORT (Ambient Noise)

Test Report No. : TR/2024-25/04/27  
Work Order No. : 4504260887

Date : 12/04/2024  
Job Card No: Ahls/24-25/02

Name & Address of Customer : Ahlstrom Fibercomposites India Pvt. Ltd.  
Mundra SEZ Integrated Textile & Apparell Park,  
(MITAP), Plot No. - 07, Survey No. -141, Mundra,  
Kutch-370421

Attention : Mr. Dipsinh Manek

#### Noise Level Meter

Make : Lutron  
Model : SC-942  
Serial No. : Q682203  
Calibration : Done on : 18/01/2024

#### Calibration Results of Noise Level Meter

Calibration	:	94 dB at 1000 Hz	114 dB at 1000 Hz
Initial	:	93.34	113.85
Final	:	94	114

Sampling Rate : 1 Sec. Method : IS 9989 : 1981

S.No.	Date & Time	Location	Sound Parameters - dB(A)						
			Noise Level	Leq	L <sub>10</sub>	L <sub>50</sub>	L <sub>90</sub>	L <sub>max</sub>	L <sub>min</sub>
01.	06/04/2024	Nr. Security Main Gate	66.8	63.1	66.8	58.1	53.7	75.2	52.5
02.	6:00 am to 22:00 pm	Nr. FO Storage Area	68.2	68.2	71.9	65.7	62.2	76.3	57.4

  
Authorized Signatory  
Parth Godhani, QM/TM



  
Reviewed by:  
Shweta Dhanani

**Note:** (1) The method for calculation of average Leq: To convert average of dB(A), each value is to be divided by 10, followed by antilog and finally calculate arithmetic mean. The final value is converted in logarithm followed by multiplication with 10. (2) monitoring must be carried for 75% of the prescribed day time and night time for legal compliance. (3) L<sub>max</sub> and L<sub>min</sub> are to be reported hourly basis and (4) L<sub>50</sub> & L<sub>90</sub> also recorded to understand the intensity of the noise for further course of action.

\* End of Report \*

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Doc. No. F/7.8/08, Issue No. 01, Issue Date : 01-07-23, Ammnd No.--, Ammnd Date.--



# Royal

## Environment Auditing & Consultancy Service

Plot No. 19 & 20, B/s. The North Star Nest School, Masoom School Road, Mota Mava, RAJKOT - 360 005.  
Ph.: +91 9099919954 ■ E-mail : royaleenvironment@live.com ■ admin@royalconsultancy.com

### TEST REPORT (AMBIENT AIR)

Test Report No. : TR/2024-25/07/20  
Work Order No : 4504260887

Date : 20/07/2024  
Job Card No: Ahls/24-25/02

Name & Address of Customer : Ahlstrom Fibercomposites India Pvt. Ltd.  
Mundra SEZ Integrated Textile & Apparrle Park,  
(MITAP), Plot No. - 07, Survey No. -141, Mundra,  
Kutch-370421

Attention : Mr. Dipsinh Manek

Date of Sample Receipt : 15/07/2024

Date of Testing : 15th to 19th July 2024

**Sampling Flow Rate :**

PM 10 : 1.1 m<sup>3</sup>/min  
PM 2.5: 16.5.0 LPM  
Gaseous Sampling Flow Rate : 0.2 LPM

Lab id : A/2024-25/07/06

Sample Collected by : Royal Environment (Prashant Chavda)

**Location of Sampling :**

Nr. Security Main gate

Date of sampling : 13/07/2024

Time of sampling : 09.30

Duration of sampling : 24 Hrs

**Environmental Conditions**

Humidity : 72%

Weather : Clear

Barometric Pressure : 713 mmHg

Dominant Wind Direction (From) : NE

Sr.No.	Measured Concentration	Unit	Permissible Limits	Results	Test Method
01.	PM 2.5	µg/m <sup>3</sup>	60	33.4	IS : 5182 (Part-24)-2019
02.	PM 10	µg/m <sup>3</sup>	100	55.8	IS : 5182 (Part-23)-2006
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	14.5	IS : 5182 (Part-2)-2001
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	23.7	IS : 5182 (Part-6)-2006

Instrument used : RDS, Gaseous Sampler, PM 2.5 Sampler

Calibration date : 13/01/2024

  
Authorized Signatory  
Parth Godhani, QM/TM



  
Reviewed by:  
Shweta Dhanani

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Doc. No. F/7.8/02, Issue No. 01, Issue Date : 01-01-22, Ammd No. 01, Ammd Date : 23-05-2022





# Royal

## Environment Auditing & Consultancy Service

Plot No. 19 & 20, B/s. The North Star Nest School, Masoom School Road, Mota Mava, RAJKOT - 360 005.  
Ph.: +91 9099919954 ■ E-mail : royalservice@live.com ■ admin@royalconsultancy.com

### TEST REPORT (AMBIENT AIR)

Test Report No. : TR/2024-25/07/21  
Work Order No. : 4504260887

Date : 20/07/2024  
Job Card No: Ahls/24-25/02

Name & Address of Customer : Ahlstrom Fibercomposites India Pvt. Ltd.  
Mundra SEZ Integrated Textile & Apparell Park,  
(MITAP), Plot No. - 07, Survey No. -141, Mundra,  
Kutch-370421

Attention : Mr. Dipsinh Manek

Date of Sample Receipt : 15/07/2024

Date of Testing : 15th to 19th July 2024

Type of Sampling : Gravimetric & Wet- Chemical Methods

Sampling Flow Rate :

Lab id : A/2024-25/07/07

PM 10 : 1.2 m<sup>3</sup>/min

Sample Collected by : Royal Environment (Prashant Chavda)

PM 2.5: 16.5 LPM

Gaseous Sampling Flow Rate : 0.2 LPM

Location of Sampling :

Environmental Conditions

Nr. Old Security Gate

Humidity : 72%

Date of sampling : 13/07/2024

Weather : Clear

Time of sampling : 09:45

Barometric Pressure : 713 mmHg

Duration of sampling : 24 Hrs

Dominant Wind Direction (From) : NE

Sr.No.	Measured Concentration	Unit	Permissible Limits	Results	Test Method
01.	PM 2.5	µg/m <sup>3</sup>	60	31.6	IS : 5182 (Part-24)-2019
02.	PM 10	µg/m <sup>3</sup>	100	50.4	IS : 5182 (Part-23)-2006
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	12.3	IS : 5182 (Part-2)-2001
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	22.7	IS : 5182 (Part-6)-2006

Instrument used : RDS, Gaseous Sampler, PM 2.5 Sampler

Calibration date : 13/01/2024

  
Authorized Signatory  
Parth Godhani, QM/TM



  
Reviewed by:  
Shweta Dhanani

\* End of Report \*

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Doc. No. F/7.8/02, Issue No. 01, Issue Date : 01-01-22, Ammnd No. 01, Ammnd Date : 23-05-2022

Page 1 of 1



# Royal

## Environment Auditing & Consultancy Service

Plot No. 19 & 20, B/s. The North Star Nest School, Masoom School Road, Mota Mava, RAJKOT - 360 005.  
Ph.: +91 9099919954 ■ E-mail : royalsenvironment@live.com ■ admin@royalconsultancy.com

### TEST REPORT (Ambient Noise)

Test Report No. : TR/2023-24/07/03  
Work Order No : 4504260887

Date : 20/07/2024  
Job Card No: Ahis/24-25/02

Name & Address of Customer : Ahlstrom Fibercomposites India Pvt. Ltd.  
Mundra SEZ Integrated Textile & Apparrle Park,  
(MITAP), Plot No. - 07, Survey No. -141, Mundra,  
Kutch-370421

Attention : Mr. Dipsinh Manek

#### Noise Level Meter

Make : Vaibhav  
Model : VSLM-932  
Serial No. : K3V3  
Calibration : Done on : 18/01/2024

#### Calibration Results of Noise Level Meter

Calibration	94 dB at 1000 Hz	114 dB at 1000 Hz
Initial	93.4	114.1
Final	93.6	113.9

Sampling Rate : 1 Sec. Method : IS 9989 : 1981

S.No.	Date & Time	Location	Sound Parameters - dB(A)						
			Day Time Noise Level						
			Noise Level	Leq	L <sub>10</sub>	L <sub>50</sub>	L <sub>90</sub>	L <sub>max</sub>	L <sub>min</sub>
01.	13/07/2024	Nr. Security Main Gate	68.1	63.7	67.5	58.3	54.4	76.3	53.6
02.	6:00 am to 22:00 pm	Nr. FO Storage Area	69.2	68.4	72.5	67.3	62.5	75.9	59.5

Authorized Signatory  
Parth Godhani, QM/TM



Reviewed by:  
Shweeta Dhanani

**Note:** (1) The method for calculation of average Leq: To convert average of dB(A), each value is to be divided by 10, followed by antilog and finally calculate arithmetic mean. The final value is converted in logarithm followed by multiplication with 10. (2) monitoring must be carried for 75% of the prescribed day time and night time for legal compliance. (3) Lmax and Lmin are toe reported hourly basis and (4) L50 & L90 also recorded to understand the intensity of the noise for further course of action.

\* End of Report \*

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Ph.: +91 9099919954 ■ E-mail : royalsenvironment@live.com ■ admin@royalconsultancy.com

### TEST REPORT (Ambient Noise)

Test Report No. : TR/2023-24/07/04

Date : 20/07/2024

Work Order No : 4504260887

Job Card No: Ahls/23-24/02

Name & Address of Customer : Ahlstrom Fibercomposites India Pvt. Ltd.

Mundra SEZ Integrated Textile & Apparrle Park,  
(MITAP), Plot No. - 07, Survey No. -141, Mundra,  
Kutch-370421

Attention : Mr. Dipsinh Manek

#### Noise Level Meter

Make : Vaibhav  
Model : VSLM-932  
Serial No. : K3V3  
Calibration : Done on : 18/01/2024

#### Calibration Results of Noise Level Meter

Calibration	94 dB at 1000 Hz	114 dB at 1000 Hz
Initial	93.4	114.1
Final	93.6	113.9

Sampling Rate : 1 Sec. Method : IS 9989 : 1981

S.No.	Date & Time	Location	Sound Parameters - dB(A)						
			Night Time Noise Level						
			Noise Level	Leq	L <sub>10</sub>	L <sub>50</sub>	L <sub>90</sub>	L <sub>max</sub>	L <sub>min</sub>
01.	13/07/2024 22:00 pm to 06:00 am	Nr. Security Main Gate	50.1	67.2	72.4	64.4	55.1	80.1	51.4
02.		Nr. FO Storage Area	55.8	55.3	61.8	55.2	54.2	63.8	53.5

  
Authorized Signatory  
Parth Godhani, QM/TM



  
Reviewed by:  
Shweta Dhanani

**Note:** (1) The method for calculation of average Leq: To convert average of dB(A), each value is to be divided by 10, followed by antilog and finally calculate arithmetic mean. The final value is converted in logarithm followed by multiplication with 10. (2) monitoring must be carried for 75% of the prescribed day time and night time for legal compliance, (3) Lmax and Lmin are to be reported hourly basis and (4) L50 & L90 also recorded to understand the intensity of the noise for further course of action.

\* End of Report \*

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Doc. No. F/7.8/08, Issue No. 01, Issue Date : 01-07-23, Ammd No.--, Ammd Date.--

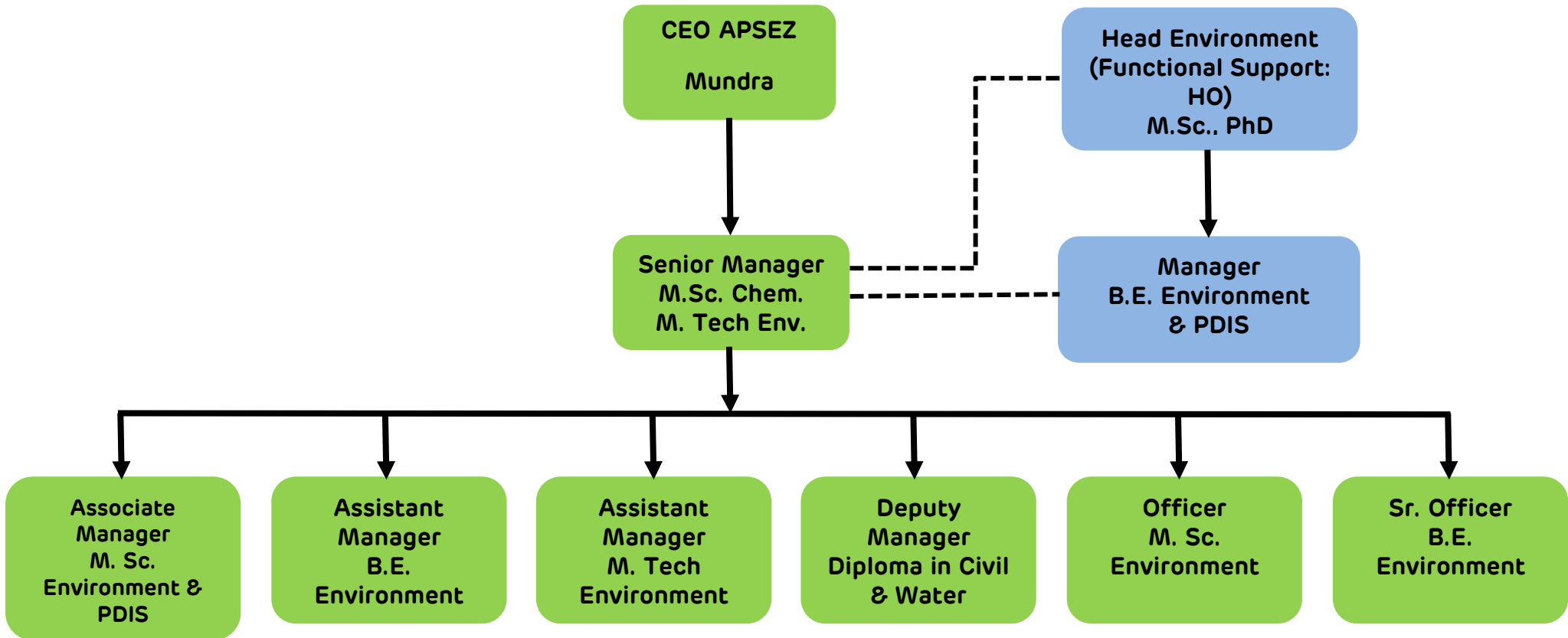
# **Annexure – 6**

### Cost of Environmental Protection Measures

Sr. No.	Activity	Cost incurred (INR in Lacs)			Budgeted Cost (INR in Lacs)
		2022 - 23	2023 - 24	2024 - 25 (till Sep'24)	2024 - 25
1.	Environmental Study / Audit and Consultancy	7.32	22.67	1.88	27
2.	Legal & Statutory Expenses	12.32	8.60	5.00	13
3.	Environmental Monitoring Services	15.32	13.37	6.11	19.20
4.	Hazardous / Non-Hazardous Waste Management & Disposal	104.035	130.11	19.10	172.40
5.	Environment Days Celebration and Advertisement / Business development	2.53	3.42	2.80	4.00
6.	Treatment and Disposal of Bio-Medical Waste	2.29	2.28	1.20	2.28
7.	Mangrove Plantation, Monitoring & Conservation	35.0	15	0	0
8.	Other Horticulture Expenses	956	904	253	831
9.	O&M of Sewage Treatment Plant and Effluent Treatment Plant (including STP, ETP of Port & SEZ & Common Effluent Treatment Plant)	141.33	186.94	74.69	195.41
10.	Expenditure of Environment Dept. (Apart from above head)	90.136	80.39	2.19	75.92
<b>Total</b>		<b>1366.28</b>	<b>1366.78</b>	<b>365.97</b>	<b>1340.21</b>

# **Annexure – 7**

**Updated Organogram of Environment Management Cell, APSEZ, Mundra**



# **Annexure – 8**



APSEZL/EnvCell/2024-25/056

Date: 02.09.2024

To,

**Member Secretary**

Gujarat Pollution Control Board  
Paryavaran Bhavan,  
Sector-10-A, Gandhinagar-382010

Dear Sir,

**Sub:** Environmental Statement for the financial year ending 31<sup>st</sup> March, 2024 for **Adani Ports and SEZ Limited (Multi Product SEZ)**.

**Ref:** 1. AWH – 122250 Date of issue 20.10.2022 Valid till 21.08.2027

With reference to the above-mentioned subject and reference, please find enclosed Environmental Statement in Form V prescribed under Rule 14 of the Environment (Protection) Rules 1986, for **M/s Adani Ports and SEZ Limited (Multi Product SEZ), Village & Taluka: Mundra, Dist. Kutch - 370421** for the financial year ending 31<sup>st</sup> March 2024.

Thanking you,

For **Adani Ports and Special Economic Zone Ltd. (Multi Product SEZ)**



**Authorized Signatory**

Encl: As above.

5/9/24  
Gujarat Pollution Control Board  
Head Office  
Sector No.-10-A,  
Gandhinagar-382010

Copy to: **The Regional Officer, Gujarat Pollution Control Board, Gandhidham.**

# **Annexure – 9**

Expense Details for Fisherfolk Amenities work in different core areas												
Sr. No.	Details	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Sep-2024-25	TOTAL	AMT IN LACS
Expenditure Details (Amount in Rs.)												
1	Vidya Deep Yojana	2,069,300	193,000	2,087,000	1,771,000	110,225	580,103	969,660	-	-	7,780,288	77.80
2	Vidya Sahay Yojana	552,580	495,000	691,000	708,000	504,336	659,709	847,013	563,000	476,000	5,496,638	54.97
3	Adani Vidya Mandir – Shaping Lives	4,200,000	4,030,000	3,472,000	6,434,020	1,593,805	3,737,700	5,950,854	7,452,390	2,783,545	39,654,314	396.54
4	Senio Citizen Health Card	--	8,430,000	1,750,000	2,975,000	1,750,000	-	-	-	-	14,905,000	149.05
5	Financial Support to Poor Patients	4,439,507	1,275,000	813,000	1,296,063	763,800	1,255,000	1,691,410	1,620,000	833,000	13,986,780	139.87
6	Machhimar Kaushalya Vardhan Yojana	188,708	200,000	397,000	73,000	--	226,000	134,070	-	-	1,218,778	12.19
7	Machhimar Sadhan Sahay Yojana	--	--	315,000	522,000	--	-	-	-	-	837,000	8.37
8	Machhimar Awas Yojana	4,592,106	1,165,000	--	2,311,000	2,424,016	2,480,000	712,000	1,227,000	-	14,911,122	149.11
9	Machhimar Shudhh Jal Yojana	2,236,050	2,700,000	2,038,000	1,773,000	2,348,300	1,936,575	2,096,050	1,370,000	382,000	16,879,975	168.80
10	Sughad Yojana	1,367,300	170,000	--	192,000	30,000	-	-	-	-	1,759,300	17.59
11	Machhimar Akshay kiran Yojana	860,850	100,000	68,000	--	--	-	-	-	-	1,028,850	10.29
12	Machhimar Ajivika Uparjan Yojana-Mangroves plantation	1,558,800	500,000	1,382,000	1,400,000	1,900,272	2,069,432	1,914,432	-	137,000	10,861,936	108.62
13	Bandar Svachhata Yojana	106,400	50,000	--	--	367,000	145,000	25,000	-	-	693,400	6.93
14	Cricket league and Cycle Marathon	432,000	657,119	638,000	610,800	--	-	-	-	-	2,337,919	23.38
15	Sports Material For Children & Youth at Vasahats	197,797	--	--	--	--	-	-	-	-	197,797	1.98
16	New Pilot Initiative for Polyculture	398,240	160,000	--	--	--	-	-	-	-	558,240	5.58
17	New Pilot Initiative for Cage farming Asian Seabass & Lobster	864,000	660,000	--	--	--	-	-	-	-	1,524,000	15.24
18	Sea Weed Culture Project	--	--	--	200,000	--	-	-	-	-	200,000	2.00
19	Mangrove Biodiversity Project	--	--	1,890,000	684,000	499,210	997,642	1,135,000	-	-	5,205,852	52.06
20	Approach Road restoration at 9 vasahat	--	--	--	--	599,000	942,780	1,011,000	-	-	2,552,780	25.53
21	Community trening Centor & Maintenance work	--	--	--	--	--	6,022,000	2,051,000	-	-	8,073,000	80.73
	<b>TOTAL</b>	<b>24,063,638</b>	<b>20,785,119</b>	<b>15,541,000</b>	<b>20,949,883</b>	<b>12,889,964</b>	<b>21,051,941</b>	<b>18,537,489</b>	<b>12,232,390</b>	<b>4,611,545</b>	<b>150,662,969</b>	<b>1,506.63</b>

# **Annexure – 10**

## GRASSLAND DEVELOPMENT PROJECT VILLAGE: ZARPARA, MUNDRA (KUTCH)

### ICAR-INDIAN GRASSLAND AND FODDER RESEARCH INSTITUTE, RECOMMENDATION COMPLIANCE

**Site Visit Date by IGfRI:** 8-10 May, 2023

**Places visited:** Zarapara Village, Mundra, Gujarat

**Purpose:** To assess the physical status of site, assess the palatable grass and legume diversity and develop location specific plan for development of grasslands.

**Initiated By:** Adani Foundation, Mundra

**Period of Compliance Report:** Apr'24 to Sep'24

Sr. No.	IFgRI Recommendation	Compliance as on 30.09.2024
1.	<p><b>Area cleaning work:</b> For the removal of <i>Prosopis juliflora</i> (Gando baval), cleaning of bushes should be done at least two consecutive years so that small regenerating bushes should also get removed.</p>	<p>Partially Complied.</p> <p>Phase wise removal of <i>Prosopis juliflora</i> (Gando Baval) and bushes has been done from 10 acre area for grass land development. Project progress report of 10 ha area was submitted during the Compliance report for the period Apr'23 to Sep'23.</p> <p>Balance project area will be clean phase wise &amp; need basis.</p>
2.	<p><b>Site protection:</b> Fencing either using barbed wire, trenches or bio-fence species (bamboo, bushes and thorny shrubs, etc.) should be carried out to ensure proper establishment of the site. Initial protection from grasslands and pastures ensure better establishment and higher biomass production.</p> <ul style="list-style-type: none"> <li>• Cattle-proof trench should be of 2 m width and 1.5-meter depth.</li> <li>• Bio fence options like bamboo species may also be tried for the long term as it takes 5-6 years for complete protection of the site.</li> </ul>	<p>Partially Complied.</p> <p>Project site has been fenced by barbed wire in 10-acre area as well as Cattle proof trench (1.5 m width &amp; 1.0 m depth) has been provided around 40 acre grass land development project area. Project progress report of 10 ha area was submitted during the Compliance report for the period Apr'23 to Sep'23.</p> <p>Balance project area will be clean phase wise &amp; need basis.</p> <p>And Bio fence work with bamboo or other relevant species will be done phase wise.</p>
3.	<p><b>Choice of species:</b> Selected species should be suitable for climatic and edaphic conditions. Moreover, they should be fast-</p>	<p>Partially Complied.</p>

## GRASSLAND DEVELOPMENT PROJECT VILLAGE: ZARPARA, MUNDRA (KUTCH)

	<p>growing, easy to establish, nutritious, and easy to manage. List of suitable grasses and legumes species for the establishment of grassland and pasture at the site under this region have been provided below:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th colspan="3" style="text-align: center;">Suitable Grass Species</th> </tr> <tr> <th style="width: 5%;">Sr. No.</th> <th style="width: 35%;">Botanical Name</th> <th style="width: 60%;">Common Name</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td><i>Cenchrus ciliaris</i></td> <td>Anjan (H) Buffel Grass (E)</td> </tr> <tr> <td>2.</td> <td><i>Cenchrus setigerus</i></td> <td>Dhaman (H) Bird Wood Grass (E)</td> </tr> <tr> <td>3.</td> <td><i>Dichanthium annulatum</i></td> <td>Chhijhavo (G) Marvel Grass (E)</td> </tr> <tr> <td>4.</td> <td><i>Lasiurus indicus</i></td> <td>Sewan Grass (H)</td> </tr> <tr> <td>5.</td> <td><i>Brachiaria mutica</i></td> <td>Para Grass (E) Buffalo Grass (E)</td> </tr> <tr> <td>6.</td> <td><i>Megathyrus maximus</i></td> <td>Guinea Grass (E)</td> </tr> <tr> <td>7.</td> <td><i>Chloris guyana</i></td> <td>Rhodes Grass (E)</td> </tr> <tr> <td>8.</td> <td><i>Bothriochloa pertusa</i></td> <td>Fulkara (H) Forest blue Grass (E)</td> </tr> <tr> <th colspan="3" style="text-align: center;">Suitable legume Species</th> </tr> <tr> <td>9.</td> <td><i>Desmanthus virgatus</i></td> <td>Dashrath Ghas (H) Hedge lucerne</td> </tr> <tr> <td>10.</td> <td><i>Atylosia scarabaeoides</i></td> <td>Bankulthi (H)</td> </tr> <tr> <td>11.</td> <td><i>Lablab purpureus</i></td> <td>Dolichos (E) Lablab Bean (E) Sem (H)</td> </tr> <tr> <td>12.</td> <td><i>Macroptilium atropurpureum</i></td> <td>Siratro (E)</td> </tr> </tbody> </table>	Suitable Grass Species			Sr. No.	Botanical Name	Common Name	1.	<i>Cenchrus ciliaris</i>	Anjan (H) Buffel Grass (E)	2.	<i>Cenchrus setigerus</i>	Dhaman (H) Bird Wood Grass (E)	3.	<i>Dichanthium annulatum</i>	Chhijhavo (G) Marvel Grass (E)	4.	<i>Lasiurus indicus</i>	Sewan Grass (H)	5.	<i>Brachiaria mutica</i>	Para Grass (E) Buffalo Grass (E)	6.	<i>Megathyrus maximus</i>	Guinea Grass (E)	7.	<i>Chloris guyana</i>	Rhodes Grass (E)	8.	<i>Bothriochloa pertusa</i>	Fulkara (H) Forest blue Grass (E)	Suitable legume Species			9.	<i>Desmanthus virgatus</i>	Dashrath Ghas (H) Hedge lucerne	10.	<i>Atylosia scarabaeoides</i>	Bankulthi (H)	11.	<i>Lablab purpureus</i>	Dolichos (E) Lablab Bean (E) Sem (H)	12.	<i>Macroptilium atropurpureum</i>	Siratro (E)	<p>Land leveling &amp; plowing work has been done 10 Acre land and Zinzwa &amp; Dharaman grass species is being growing with using Organic Manure/Bio-fertilizer with coordination with Adani foundation &amp; Sarpanch of PRI- Zarapara with PRI-Member.</p> <ul style="list-style-type: none"> <li>Per acre 3 to 4 tons organic manure in fodder development plot.</li> <li>Liquid fertilizer – Jivamrut &amp; Gaukrupa Amrutam</li> <li>Per acre 200 to 300 liters</li> </ul>
Suitable Grass Species																																															
Sr. No.	Botanical Name	Common Name																																													
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4.	<i>Lasiurus indicus</i>	Sewan Grass (H)																																													
5.	<i>Brachiaria mutica</i>	Para Grass (E) Buffalo Grass (E)																																													
6.	<i>Megathyrus maximus</i>	Guinea Grass (E)																																													
7.	<i>Chloris guyana</i>	Rhodes Grass (E)																																													
8.	<i>Bothriochloa pertusa</i>	Fulkara (H) Forest blue Grass (E)																																													
Suitable legume Species																																															
9.	<i>Desmanthus virgatus</i>	Dashrath Ghas (H) Hedge lucerne																																													
10.	<i>Atylosia scarabaeoides</i>	Bankulthi (H)																																													
11.	<i>Lablab purpureus</i>	Dolichos (E) Lablab Bean (E) Sem (H)																																													
12.	<i>Macroptilium atropurpureum</i>	Siratro (E)																																													
4.	<p><b>Sowing:</b> In the case of legumes, direct sowing is carried out and in case of grasses either rooted slips/nursery raised plants are planted in the field or direct sowing is carried out. If grass legume mixture is to be grown then it is preferred in the ratio 2:1. Grasses should be sown at 50 × 50 cm spacing and when grown as a mixture with legumes spacing should be 100 × 100 cm and in the interspace of two rows of grass; one line of legume is to be sown. Sowing depth is very essential for proper seed germination. Depth of sowing for grasses should be between 0.5- 1.0 cm; for legumes sowing depth should be 2-4 cm. For grasses with light seeds, seed rate is 4-6 kg/ha and for grasses with heavy seeds seed rate is kept as 8-10</p>	<p>For fodder support to village cattle's the Sorgham (Jwar) is being showing in 5 acre area out of 10 acre area (1<sup>st</sup> phase developing area). Project progress report of 10 ha area was submitted during the Compliance report for the period Apr'23 to Sep'23.</p> <p>Balance project area will be clean phase wise &amp; need basis.</p>																																													

**GRASSLAND DEVELOPMENT PROJECT VILLAGE: ZARPARA, MUNDRA (KUTCH)**

<p>kg/ha. Sowing of grasses and legumes is carried out during the month of July.</p> <p><b>Techniques for Grass Nursery Raising:</b>          The seed is the primary material for establishing the grasslands (pastures in forage species particularly grasses, and the seed production varies from species to species. When the seed becomes a ting faster seedlings/rooted slips are the only alternate source for establishing the pasture these seeding are raised in nursery.</p> <p><b>Establishment of Nursery:</b></p> <ul style="list-style-type: none"> <li>• Nursery beds should carefully be prepared and cleaned from all rank growth including weeds by pulling out and burning. Generally, the nursery is raised during May (5-6 week old seedlings are required) and for this 6m x 6m beds are common.</li> <li>• The bed should be thoroughly ploughed and 30 kg Farm Yard Manure, 0.25 kg urea, 0.5 kg Single Super Phosphate and 50g BHC may be mixed thoroughly as a basal dose in each bed.</li> <li>• The bed is watered for 4 to 6 days, so weeds would come up which are to be removed. About 2g Bavistin is mixed with sun-dried seeds.</li> <li>• For proper sowing sand is mixed with seeds and then the seeds are sown 5-6 mm deep in line. The distance from the line to the line should be 10 cm.</li> <li>• After sowing it may be covered with a thin layer of soil immediately and the bed may be mulched with straw/wet gunny bags or any locally available material for a period of 4-6 days continuously to allow the seed germination.</li> <li>• Watering may be done twice a day in the morning and evening with a rose can.</li> <li>• The germination starts from 3rd day and get completed within a week. After full germination mulch/gunny bags are removed. In places where the day temperature is very high, it may be necessary to provide shade to seed beds in order to protect delicate seedlings The shade may be removed after 30 days of sowing but the beds are watered every alternate day with necessary weeding.</li> <li>• Germination of dehusked seeds is recorded as 94-98 percent as compared to husked seeds, which is 35-42 percent. The stored seeds show better</li> </ul>	<p>The nursery &amp; seed collection work is being under progress by Adani foundation with coordination of Sarpanch of PRI-Zarapara &amp; PRI-Member.</p>
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## GRASSLAND DEVELOPMENT PROJECT VILLAGE: ZARPARA, MUNDRA (KUTCH)

	<p>germination as compared to freshly collected ones. About 40-50 g of grass seeds are used for each bed. Such 12 beds are required to provide seedlings for one hectare land.</p> <ul style="list-style-type: none"> <li>For better growth of seedlings the crop should be top dressed with Calcium Ammonium Nitrate (10 kg N/ha) Grass seedlings will be ready for transplanting after 4 to 6 weeks when they attain 15 to 25 cm height.</li> </ul> <p><b>Planting Technique:</b> Seedlings/rooted slips are transplanted in a well-prepared field immediately after the onset of monsoon. Land preparation is done through desi plough, two to three ploughings are sufficient Farm Yard manure @ 10-12 cartloads per hectare and BHC (10%) are mixed at the time of land ploughing.</p>	
5.	<p><b>Combining grasses and legumes:</b> mixed sowing of grasses and legumes ensures enhanced production per hectare basis and the quality of the feed increases by 4-5 times which is prerequisite for gaining higher livestock production. These legumes in degraded grasslands, pastures, waste and barren lands also increase the duration of availability of green forage biomass from 3-4 to 7-8 months owing to longer growing period of legumes.</p>	<p>Point noted &amp; being complied.</p> <p>Under this activity Jinjawa / Marvel grass is being growing to enhance production of fodder by Adani foundation with coordination of Sarpanch of PRI-Zarapara &amp; PRI-Member. The Fodder Development Report attached as <b>Annexure – a</b>.</p>
6.	<p><b>Fertilizer application:</b> Initially for grasses and legumes, fertilizers like nitrogen, phosphorus and potassium are applied for ensuring high biomass production. Pelleting of 2-3 grass seeds together with cow dung, tank silt or clay and sand (1:1:3:1) to form a ball of 4-5 mm diameter should be done to facilitate sowing and germination of light seeds of the grasses.</p>	<p>In first phase 10-acre area has been developed for grass land. The Sorghgam (Jwar) is being growing in 10-acre area (1<sup>st</sup> phase developing area) for fodder support and bio fertilizer (Cow Dung) &amp; Jivamrut Amrutam is being using for growing the fodder.</p>
7.	<p><b>Weeding:</b> Initial weeding to remove undesired species should be carried out especially just after the germination of grasses and legumes to ensure their proper establishment.</p>	<p>Point noted and is being complied.</p> <p>Presently weeding activity is being done in 1<sup>st</sup> phase developing area (10 acre).</p> <p>Same activity will be adopted for balance developing area as per phase wise/need basis.</p>
8.	<p><b>Harvesting and management:</b> Application of recommended doses of N P K Fertilizer for grasses and legumes species is essential. Potassium and phosphorus should be applied as basal dose and nitrogen in two/three split doses. In case of legumes nitrogen can also be applied as a basal dose. Harvesting/Cutting of grasses and</p>	<p>Point noted &amp; will be complied.</p> <p>Presently 10-acre area is being developing for grass land. The Sorghgam (Jwar) is being growing in 5 acre area out of 10</p>



**GRASSLAND DEVELOPMENT PROJECT VILLAGE: ZARPARA, MUNDRA (KUTCH)**

	<p>legumes should be carried out based on their maturity stage and growth. Harvesting of forage biomass should be carried out before dormancy so that there is sufficient reserve available for ensuring successful re-growth in next 11 season. The frequency of cutting should be species-specific and should be decided based upon species growth, regeneration capacity.</p> <p>If grazing is to be allowed, then rotation grazing should be followed and over stocking should be avoided. During the first year, legume crops should be allowed to set and shed seeds so that a high population of legumes can be ensured in the coming year. After 4-5 years, reseedling of forage legumes should be done as its population declines with age. In case of grasses, reseedling is to be carried out after 7-8 years due to decline in their production.</p>	<p>acre area (1<sup>st</sup> phase developing area) for fodder support and with using Organic Manure/Bio-fertilizer &amp; Jivamrut Amrutam is being using for growing the fodder.</p> <ul style="list-style-type: none"> <li>• Per acre 3 to 4 tons organic manure in fodder development plot.</li> <li>• Liquid fertilizer – Jivamrut &amp; Gaukrupa Amrutam</li> <li>• Per acre 200 to 300 liters</li> </ul>																
<p>9.</p>	<p><b>Incorporation of fodder trees on grasslands and pastures:</b>                  During winter and summer seasons, grasses enter the dormancy phase and there is no green fodder available for livestock. In such a situation, fodder trees owing to their protein, mineral, macro and micronutrient-rich leaves can ensure supply of green fodder. Local fodder tree species can be planted 5-7 meters apart on grasslands during the monsoon season. The fodder from the trees is available after 5-6 years depending on species and location.</p> <p><b>Suitable Fodder Tree Species</b></p> <table border="1" data-bbox="321 1113 1015 1428"> <thead> <tr> <th>Botanical Name</th> <th>Common Name</th> </tr> </thead> <tbody> <tr> <td><i>Acacia nilotica</i></td> <td><i>Desi Babul</i></td> </tr> <tr> <td><i>Ailanthus excelsa</i></td> <td><i>Ardu</i></td> </tr> <tr> <td><i>Azadirachta indica</i></td> <td><i>Neem</i></td> </tr> <tr> <td><i>Leucaena leucocephala</i></td> <td>Subabul</td> </tr> <tr> <td><i>Harwickia binata</i></td> <td>Anjan</td> </tr> <tr> <td><i>Prosopis cineraria</i></td> <td>Khejri</td> </tr> <tr> <td><i>Zizyphus numularia</i></td> <td>Indian jujube</td> </tr> </tbody> </table>	Botanical Name	Common Name	<i>Acacia nilotica</i>	<i>Desi Babul</i>	<i>Ailanthus excelsa</i>	<i>Ardu</i>	<i>Azadirachta indica</i>	<i>Neem</i>	<i>Leucaena leucocephala</i>	Subabul	<i>Harwickia binata</i>	Anjan	<i>Prosopis cineraria</i>	Khejri	<i>Zizyphus numularia</i>	Indian jujube	<p>Point noted &amp; will be complied.</p> <p>Under this activity Various types of fodder trees was planted for supporting of fodder availability during the winter &amp; summer season by Adani foundation with corporation of Sarpanch of PRI-Zarapara &amp; PRI-Member.</p>
Botanical Name	Common Name																	
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<i>Zizyphus numularia</i>	Indian jujube																	

ANNEXURE - a

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# ZARPARA FODDER LAND DEVELOPMENT REPORT

APRIL TO SEPTEMBER 2024





## Objectives:

1. Develop fertile land for high-quality fodder production.
2. Provide nutritious grass for cattle, improving their health and productivity.
3. Enhance milk yield and quality for financial benefits to cattle owners.
4. Promote natural fertilizers from improved cattle dung for better soil fertility and organic farming.

## OUR VISION

- To enhance the livelihoods of cattle owners in Zarpara village by ensuring sustainable fodder production that supports better cattle health, boosts agricultural productivity, and strengthens rural economies.
- Through the Adani Foundation's CSR initiative, support cattle owners by cultivating nutritious fodder; improving cattle health.



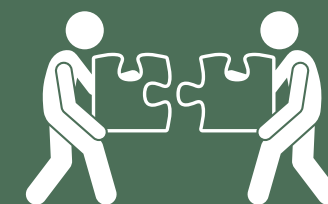
## Fodder Cultivation:

Sorghum and Super Napier grass were planted and cultivated in Zarpara village.



## Regular Monitoring:

Adani Foundation staff conducted regular visits to oversee fodder growth and ensure best practices.





# Land Utilization & Fodder Produce in one Cycle:



Area:  
5 acres



Fodder:  
15,200 Kg



723 Cattle  
benefited

# Highlights of work done:



Sorghum and Super Napier grass plantation  
in Zarpara village.



Cattle graze on the available fodder, ensuring  
efficient use of resources.



Once grazing is complete, the land is thoroughly  
cleaned and prepared for future use.

# Second Cycle:



Super Napier grass plantation in Zarpara village in 5 acer area.



## Tree Plantation:

Additionally, 500+ trees are planted along the entire 10-acre boundary fencing, improving the ecological balance of the area.



# SDG Achieved:

Goal 2: Zero Hunger

Goal 3: Good Health and Well-being

Goal 12: Responsible Consumption and Production

Goal 15: Life on Land





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Metals

Thank You!



# **Annexure – 11**

## Compliance Report of CIA Study Environment Management Plan

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude <sup>1</sup>	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
<b>1</b>	<b>Land Use Change</b>						
1.1	<p>It is predicted that the built up land in the rural areas would increase by an order 50% from the baseline 2015.</p> <p>New settlements near the SEZ area might create slums.</p> <p>Unorganized urban development leading to poor sanitation and proliferation</p>	Level - 1	<p>APSEZ has developed two townships (Shantivan and Samudra) presently accommodating 1668 households. Necessary permissions from concerned authorities were already obtained for the development of townships and Associated infrastructure facilities.</p>	<p>The existing townships will be expanded to accommodate about 4 lakh people when the APSEZ is fully developed.</p>	APSEZ	As and when Required	<p>APSEZ has developed two townships (Shantivan and Samudra) accommodating 2302 households and associated infrastructure facilities. Accommodation is made available for all interested employees working within Adani group &amp; SEZ industries. Out of which 87.14 % Occupancies are accommodated within the townships and rest are available for employees working within APSEZ.</p> <p>At present 61 nos. of industries (processing &amp; non-processing) are present within the SEZ (46 nos. are in operation). Township facilities are also made by some of SEZ industries within Mundra town for their employees with basic infrastructure facilities and requirements.</p> <p>Most of the employees working in SEZ industries are residing in Mundra township having all basic requirements and associated facilities.</p> <p>The existing social infrastructure facilities are adequate for present development at APSEZ. The existing townships with associated facilities will be</p>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
	of vectors and disease.						<p>expanded as per requirement.</p> <p>APSEZ has also been granted permission for receiving domestic sewage @ 2.5 MLD from Mundra village (which was earlier discharged into open area within Mundra region) into wastewater treatment plant for treatment and disposal. APSEZ has already started receiving of domestic sewage from Mundra, which abates the poor sanitation and unhygienic condition within Mundra region. Total project cost for laying domestic sewage underground pipeline with other associated facilities from Mundra to APSEZ is 362 Lacs.</p>
1.2	Once the project is fully developed, due to increase in built up land in the APSEZ area, there will be an increase in the storm water runoff from the facility.	Level-1	The study area experiences scanty rainfall less than 400 mm/year. Considering the natural gradient, APSEZ have designed and implemented storm water	Technical feasibility study can be carried out to explore the possibility of developing storm water collection ponds to utilize maximum possible storm water runoff for dust suppression in the coal yard areas during non-rainy days.	APSEZ	Technical Study - one time, Implementation - Continual process	<p>Presently, ~ 51.7 % of the total SEZ is developed. Based on technical studies,</p> <p>At present all existing coal yards are designed with drain, for collection of water during water sprinkling and rainfall, which is carried away to dump pond. Supernatant water from dump pond is being collected and used for dust suppression activities or after sedimentation, discharged to sea. Details of drain and dump pond has been submitted in along with EC compliance report (Oct 19 to March 20). Analysis of said water discharging into sea during monsoon season is being carried out (twice in a year during monsoon) through NABL / MoEF&amp;CC accredited laboratory. Analysis report of the same shows there is</p>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
			drains in the existing facility to meet the peak daily rainfall of 440 mm/hr. Hence flooding of water in the neighboring areas is not envisaged.				no any contamination. The report of the same is attached as <b>Annexure - i</b> .  During compliance period FY 2024-25 till Sep'24 total recorded rain fall was <b>1349 mm</b> observed, which was much less than the design capacity of existing storm water drainage system. So our existing storm water management facility is adequate to handle the storm water runoff from the area. Hence flooding of water in the neighboring areas is not envisaged.
			As per the directions given in the environmental clearance issued for the proposed Multi-Product SEZ and CRZ clearance for Desalination, sea water intake, outfall	The channel depth in all the natural streams shall be maintained to accommodate peak flood flow during the monsoon and periodical desilting activities in the natural streams passing through the APSEZ area	APSEZ, District Administration* and Irrigation department	As and When Required	Presently there is no Desalination plant, sea water intake and outfall facility developed as part of EC & CRZ clearance of Multiproduct SEZ. The project will be designed and implemented as per requirement without disturbing the natural flow of rainwater in all the seasonal streams.

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
			facility and pipeline project, the master plan of the project was designed and being implemented without disturbing the natural flow of rainwater in all the seasonal streams.				
1.3	Due to conservation and protection of mangroves in the designated conservation area, it has been predicted	Positive Impact with ecological benefits	In addition to conservation of the identified 1254 ha mangrove areas around Mundra port and SEZ, APSEZ has taken up large scale	APSEZ will continue mangrove afforestation as per the commitment made with concerned regulatory authority	APSEZ	Short Term	<p>APSEZ has carried out mangrove afforestation in 4140 ha. area across the coast of Gujarat till date. Total expenditure for the same till date is INR 1592.8 lakh. No further mangrove afforestation is pending w.r.t. commitment made with concerned regulatory authority for APSEZ, Mundra project.</p> <p>1. NCSCM (MoEF&amp;CC promoted Government Agency) study on comprehensive and integrated plan for preservation and conservation of mangroves and associated creeks in and around</p>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
	that the current mangrove footprint area would marginally increase in next 15 years due to natural growth. This will enhance the overall biodiversity in the local coastal ecosystem.		mangrove afforestation activities in an area of more than 2800 ha at various locations across the coast of Gujarat state in consultation with various organizations				<p>APSEZ in year 2016-17. The cost of said study was 3.15 Cr, which was incurred by APSEZ.</p> <p>As a part of mangrove conservation plan, APSEZ has done following activities.</p> <ol style="list-style-type: none"> <li>a. Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island through NCSCM, Chennai. The cost of the said study was INR 23.56 Lacs incurred by APSEZ.</li> <li>b. Tidal observation in creeks in and around APSEZ – The cost of the said activity was INR 1.0 Lacs incurred by APSEZ.</li> <li>c. Algal &amp; Prosopis removal from Mangrove area - The cost of the said activity was Rs. 80000 during FY 2023-24. The algal removal report was submitted during the last compliance report submission Oct'23 to Mar'24.</li> <li>d. Awareness of mangroves importance in surrounding communities &amp; Fodder support - The expenditure for fodder supporting activities was approx. 132.0 Lacs during FY 2024-25 till Sep'24 which was incurred by APSEZ. This activity is being done on continuous basis as a part of CSR activity.</li> </ol> <p><b><u>Summary of Conservation of mangroves:</u></b></p>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance				
							Mangrove mapping Year	Monitoring Agency	Mangrove cover total Area (Ha.)	Mangrove cover area Increased	
									Hac.	%	
							2011	NCSCM	2094	-	-
						2011 to 2016-17	2340		246	11.75%	
						2017 to 2019 till March	NCSCM	2596	256	10.94%	
						2019 to 2021 till March	GUIDE	2723	127	4.89%	
						<b>Total</b>		<b>2723</b>	<b>629</b>	<b>--</b>	
<p>Hence, overall increase in mangrove cover area in creek system in and around APSEZ from 2011 (2094 Ha) to 2021 (2723 Ha) is <b>629 Ha (30%)</b>.</p> <p>As a part of GCZMA recommendations and NCSCM mangrove conservation action plan, APSEZ has undertaken following activities.</p>											
							<b>Sr</b>	<b>Recommendations</b>	<b>Compliance</b>		



S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance		
							No.		
							1.	Mangrove mapping and monitoring in and around APSEZ	<ul style="list-style-type: none"> <li>• APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island.</li> <li>• As a part of this study, overall growth of mangroves in the creeks in and around APSEZ was assessed comparing Google earth images of 2017 &amp; 2019 and it is observed that there was increase in mangrove cover between March 2017 and September 2019 to the extent of 256 Ha, which is about 10.94%.</li> <li>• This suggests that the mangroves and the tidal system in the creeks remain undisturbed over this period. Analysis of data between categories indicated that there was an increase in dense mangroves and also conversion of scattered to sparse which also shows that the growth of mangroves in a progressive direction.</li> <li>• Hence, there is an overall growth of mangroves in creeks in and</li> </ul>

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									<p>around APSEZ, Mundra is 502 Ha between 2011 and 2019.</p> <ul style="list-style-type: none"> <li>• The cost of the said study was INR 23.56 Lacs incurred by APSEZ.</li> <li>• According to GUIDE Mangrove monitoring study report November 2023 (the report was submitted during the last compliance report submission Apr'23 to Sep'23), the distribution of mangroves in Kotadi, Baradi mata, Navinal, Bocha and Khari creeks as well as in the Bocha island was studied using LISS IV satellite images for the duration of March 2019 to March 2021. The mangrove cover in the creeks in and around APSEZ showed a positive trend from March 2019 to March 2021, with an overall increase of 52.79 ha (1.9%) compared to the cover during the year 2019. The total mangrove cover during 2019 was 2670 ha which has increased to 2723 ha during the year 2021.</li> <li>• Hence, overall increase in mangrove cover area in creek system in and around APSEZ from 2011 (2094 Ha) to 2021 (2723 Ha) is 629 Ha (30%).</li> <li>• The cost of the said study was INR 23.60 Lacs incurred by APSEZ.</li> </ul>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance																									
									<p>Summary of Mangrove mapping and monitoring (from 2011 to 2021):</p> <table border="1" data-bbox="1633 719 1997 1409"> <thead> <tr> <th data-bbox="1633 719 1740 906" rowspan="2">Mangrove mapping Year</th> <th data-bbox="1740 719 1845 906" rowspan="2">Mangrove cover total Area (Ha.)</th> <th colspan="2" data-bbox="1845 719 1997 808">Mangrove cover area Increased</th> </tr> <tr> <th data-bbox="1845 808 1908 906">Ha. c.</th> <th data-bbox="1908 808 1997 906">%</th> </tr> </thead> <tbody> <tr> <td data-bbox="1633 906 1740 959">2011</td> <td data-bbox="1740 906 1845 959">2094</td> <td data-bbox="1845 906 1908 959">-</td> <td data-bbox="1908 906 1997 959">-</td> </tr> <tr> <td data-bbox="1633 959 1740 1092">2011 to 2016-17</td> <td data-bbox="1740 959 1845 1092">2340</td> <td data-bbox="1845 959 1908 1092">246</td> <td data-bbox="1908 959 1997 1092">11.75%</td> </tr> <tr> <td data-bbox="1633 1092 1740 1252">2017 to 2019 till March</td> <td data-bbox="1740 1092 1845 1252">2596</td> <td data-bbox="1845 1092 1908 1252">256</td> <td data-bbox="1908 1092 1997 1252">10.94%</td> </tr> <tr> <td data-bbox="1633 1252 1740 1409">2019 to 2021 till March</td> <td data-bbox="1740 1252 1845 1409">2723</td> <td data-bbox="1845 1252 1908 1409">127</td> <td data-bbox="1908 1252 1997 1409">4.89%</td> </tr> </tbody> </table>		Mangrove mapping Year	Mangrove cover total Area (Ha.)	Mangrove cover area Increased		Ha. c.	%	2011	2094	-	-	2011 to 2016-17	2340	246	11.75%	2017 to 2019 till March	2596	256	10.94%	2019 to 2021 till March	2723	127	4.89%
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									Total	2723	629	--									
							2.	Tidal observation in creeks in and around APSEZ	<ul style="list-style-type: none"> <li>APSEZ carried out the tidal observations at locations similar to 2017 in Kotdi, Baradimata, Navinal, Bocha and Khari creeks under the guidance of NCSCM.</li> <li>The observed tidal ranges indicate that the creeks experience normal tidal ranges, adequate for the growth of mangroves.</li> <li>The cost of the said activity was INR 1.0 Lacs.</li> </ul>												
							3.	Removal of Algal and Prosopis growth from mangrove areas	<ul style="list-style-type: none"> <li>Algal and Prosopis growth monitoring was done in and around mangrove area and algal encrustation was found in some of the mangrove areas, which has been removed manually.</li> <li>The cost of the said activity was Rs. 80000 during FY 2023-24. The algal removal report was submitted during the last compliance report submission Oct'23 to Mar'24.</li> </ul>												
							4.	Awareness of mangroves importance in surrounding communities	<ul style="list-style-type: none"> <li>Adani Foundation – CSR Arm of Adani group has done awareness camps/activities created in the community regarding importance of mangroves. Adani Foundation provides Good Quality dry and</li> </ul>												

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								<p>green fodder to 25 Villages. Project is covering total 15005 Cattels and hence enhancing cattle productivity. Dry Fodder 10,90,875 Kg Green – 27,64,920 Kg.</p> <ul style="list-style-type: none"> <li>• Awareness of mangroves importance in surrounding communities &amp; Fodder support - The expenditure for fodder supporting activities was approx. 132.0 Lacs during FY 2024-25 till Sep'24, which was incurred by APSEZ.</li> <li>• <b>Grass Land development:</b> 213 acres of gauchar land has been cleaned and allocated for Grass land development with strong Community Contribution and Mobilization.</li> <li>• Other than this dedicated security guard with gate system deployed by APSEZ across the coastal area and no any unauthorized persons allowed within coastal as well as mangrove areas.</li> <li>• APSEZ has celebrated the International Day for the Conservation of the Mangrove Ecosystem on 24th to 26th July 2024 to raise awareness of the importance of mangrove ecosystems as "a unique, special</li> </ul>

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							<table border="1"> <tr> <td></td> <td></td> <td>and vulnerable ecosystem". The report for the same is attached as <b>Annexure - 1.</b></td> </tr> <tr> <td></td> <td></td> <td>• Refer CSR report attached as <b>Annexure - 2.</b></td> </tr> </table> <p>To comply with the GCZMA recommendations regarding mangrove monitoring at every 2 years, presently APSEZ has awarded the work order to NCSCM, Chennai vide order no. 4802055905, dated 24/09/2024 with cost 45.87 Lacs for mangrove mapping in and around APSEZ March 2021 to March 2023. The said work will be undertaken by NCSCM shortly.</p>			and vulnerable ecosystem". The report for the same is attached as <b>Annexure - 1.</b>			• Refer CSR report attached as <b>Annexure - 2.</b>
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		• Refer CSR report attached as <b>Annexure - 2.</b>											
1.4	Development activities along the coast might cause certain changes in hydro-dynamic characteristics along the		Detailed hydro-dynamic modelling and shoreline change prediction for a fully developed APSEZ facility has	It is recommended to map the coastal morphology (Shoreline) at least once in three years	APSEZ	Continual Process	<p>Shore line change aspect has been studied in detail as part of following two studies;</p> <ul style="list-style-type: none"> <li>Bathymetry &amp; Topography study, preparation of plan for protection of creeks/ mangrove area including buffer zone, mapping of co-ordinates, running length, HTL, CRZ boundary.</li> <li>A Regional Impact Assessment study to identify impacts of all the existing as well as proposed project activities in Mundra region.</li> </ul> <p>As per the outcome of these studies, no erosion is observed on the coast of the project area. As part of</p>						

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	<p>shoreline. Shoreline of any area also can be influenced by storm surges and other natural processes.</p>		<p>been studied. The study reveals that the erosion and accretion in the study area at the end of 15th year will be within the designated criteria of <math>\pm 0.5</math> m/year. which reconfirms that the waterfront development activities of APSEZ would pose insignificant impact on the Mundra shoreline.</p>				<p>the Regional Impact Assessment study, the possible changes in shoreline that may occur due to the proposed developments in 10 km area on either side of the waterfront development project have been predicted. It has been inferred from the modelling study that the shift in the shoreline will be less than 0.5 m/year, which reconfirms that the APSEZ facility would pose insignificant impact on the Mundra shoreline. Accretion is observed at South port and at West port due to approved reclamation activities.</p> <p>Based on the study outcome, it is recommended to map the coastal morphology (shoreline change) at least once in three years.</p> <p>Shoreline change study was carried out by M/s. Gujarat Institute of Desert Ecology, Bhuj in 2022 as a part of the Environmental Management Plan (EMP) compliance with the CIA study. The cost of said study was INR 17.39 Lacs.</p> <p>As per GUIDE study, the rate of shoreline changes statistics on a time series of multiple shoreline positions of a totally 43 km coastline stretches (16 km on the west side and 27 km on the east side of Adani main port) on either side of Adani Ports and Special Economic Zone Ltd (APSEZL) has been taken into account for the calculation by using satellite images.</p>

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							<p>As a part of the NGT direction, the shoreline change analysis has been carried out for the years 2015-2022 to study the immediate changes after the commissioning of the port and initiation of the activities (September 2015) for short-term variation for the year 2015-2022 using EPR method has been carried out.</p> <p>The details of the rate of shoreline changes (Short interval time) recorded from 2015 to 2022 are summarized in below table.</p> <table border="1" data-bbox="1398 906 2011 1182"> <thead> <tr> <th rowspan="2">Period</th> <th rowspan="2">Name of the block</th> <th rowspan="2">Average Shoreline Change(M/Year)</th> <th colspan="2">Shoreline Change(M)</th> </tr> <tr> <th>Maximum Accretion</th> <th>Maximum Erosion</th> </tr> </thead> <tbody> <tr> <td rowspan="2">2015-2022</td> <td>West Port</td> <td>-11.43</td> <td>39.86</td> <td>-78.68</td> </tr> <tr> <td>Eastern side</td> <td>-26.60</td> <td>191.32</td> <td>-165.19</td> </tr> </tbody> </table> <p>The Shoreline Change Assessment Study report of GUIDE was submitted along with six monthly compliance report for the period Oct'22 to Mar'23.</p> <p>Shoreline change study was carried out by M/s. Chola MS, Chennai (NABET accredited consultant) also as a</p>	Period	Name of the block	Average Shoreline Change(M/Year)	Shoreline Change(M)		Maximum Accretion	Maximum Erosion	2015-2022	West Port	-11.43	39.86	-78.68	Eastern side	-26.60	191.32	-165.19
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							<p>part of Waterfront Development Project – Expansion EIA study. The summary of the said study are as below.</p> <p>To estimate the shoreline change due to the earlier approved waterfront development plan, a historical shoreline change assessment has been undertaken using the satellite imagery for a period of 2008 to 2018. In order to avoid any major errors in estimating the shoreline, the satellite data for similar tidal condition was considered for 2008, 2013 and 2018. AMBUR Methodology was used to study the historical analysis.</p> <p>10 km radius stretch of shoreline on either side of the APSEZ project boundary has been considered for assessing the historical shoreline change scenario. The baseline shoreline change assessment depicts the influence of both natural causes and also possible changes in the shore due to various development activities in the study area during the designated period. For the purpose of this study, shoreline on left side of APSEZ is termed as West Side Shoreline and that of the right side as East Side Shoreline for ease of recognition.</p> <p>The maximum accretion and erosion rate of the west side shoreline over a period of 10 years during the year 2008 – 2018 are observed to be 4.78 m/yr and 1.93 m/yr respectively.</p>

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							The maximum accretion and erosion rate of the east side shoreline over a period of 10 years during the year 2008 – 2018 are observed to be 05 m/yr and 0.82 m/yr respectively.
<b>2</b>	<b>Regional Traffic Management Plan</b>						
2.1	The projected traffic data as per the EIA Report of Multi-Product Special Economic Zone, the peak vehicular traffic from the port and SEZ operations (including supporting facilities and colony) could be in the order of	Level-1	As per the master plan of APSEZ, eight artillery roads will be connected to either state highway or national highway for evacuating the goods from APSEZ. None of these roads are passing through settlements, thereby avoiding traffic Congestions	Additional road as per master plan will be built in future based on the overall progress of the project. Currently about 25% of cargo from APSEZ is transported by Rail and the same will be enhanced to 40% when the facility is fully developed in future. This will further reduce the traffic volumes on the regional road	APSEZ	As and When Required	Presently, ~ 51.7 % of the total SEZ is developed. Based on technical studies,  Existing road/rail/conveyer infrastructure facilities are adequate to evacuate the existing cargo. Further, APSEZ's cargo evacuation through rail / conveyer / pipeline has ~59.01 %. Additional Road facilities will be built as per master plan considering future development.  The facilities for transportation of cargo other than road will be enhanced considering future development, which will reduce the traffic volumes on the regional road Network.

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	<p>18,300 and 10,400 vehicles per day respectively .</p> <p>There could be a possible increase in traffic congestions on village-highway intersections and road accidents.</p>		<p>in the respective villages. The carrying capacity of the eight artillery roads connecting APSEZ is estimated to be about 16,000 PCU/hr as against the envisaged peak traffic volume of 4,500 PCU/hr.</p> <p>Out of eight artillery roads considered in APSEZ master plan, seven roads</p>	network.			

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			<p>were already developed and functional.</p>				
			<p>APSEZ has been imparting Driver Training Programs to all their contractors to enhance awareness on road safety.</p>	<p>APSEZ can undertake technical feasibility of implementing Intelligent Transport System (ITS) for the freight carriers associated with their development activities.</p>	<p>APSEZ &amp; GSRDC*</p>	<p>Long Term</p>	<p>APSEZ is being imparting the regular in-house training awareness program in different mode i.e., classroom, on-job training, virtual platform &amp; Assessment by internal &amp; external trainer to all drivers and employees on below topics:</p> <ul style="list-style-type: none"> <li>✓ Basic induction Training for drivers</li> <li>✓ ITV Driver Training</li> <li>✓ ITV Driver Induction for Supervisor</li> <li>✓ Defensive Driving for LMV &amp; HMV</li> <li>✓ Defensive Driving &amp; BBS</li> <li>✓ Driver Assessment</li> <li>✓ Road accident &amp; rescue</li> <li>✓ Traffic Management &amp; Road Signage</li> <li>✓ Driving safety training</li> <li>✓ RORO Driver training</li> <li>✓ Road Safety</li> <li>✓ Defensive Driving &amp; Emergency Action Plan</li> <li>✓ Drivers Responsibilities &amp; Safe driving</li> <li>✓ Emergency Rescue (Vehicle) Training</li> </ul> <p>Approx. 1865 Participants (On roll and contractual manpower) were benefitted from above trainings in compliance period Apr'24 to Sep'24. The same will be continued in future also.</p>

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							<p>APSEZ has also implemented the Remote traffic management system (RTMS) to manage the traffic movements and capturing the violations to further improve the system.</p> <p>Following steps were taken by APSEZ to reduce the accidents.</p> <ul style="list-style-type: none"> <li>✓ Handling and escorting of the ODC for ensuring the smooth movement on the roads.</li> <li>✓ Traffic Awareness programs for the drivers and regular briefing of the drivers in the parking areas.</li> <li>✓ Incident handling and root cause analysis for taking necessary action in order to avoid such incidents.</li> <li>✓ BAC checks for the drivers in order to identify the intoxicated drivers and necessary action is being taken against them.</li> <li>✓ Water spray drive at gates are being conducted on regular basis during night hours to avoid dozing by the driver while driving.</li> <li>✓ RTMS devices are being installed at 08 critical locations in order to capture speed violations and enforcing road safety regulations.</li> <li>✓ Display of traffic signages and lane markings on road in coordination with the Civil team for ensuring road safety rules are being followed by the road users.</li> </ul>

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							<ul style="list-style-type: none"> <li>✓ We have approx. 100+ cameras which are being utilized for monitoring of traffic movement through CCTV and timely response in order to avoid any congestion and during traffic incidents.</li> <li>✓ Regular traffic checks by Traffic Marshalls in order to ensure road safety rules (Wearing seat belt/Wearing helmet/Carrying driving license/Speed checks/Documents) is being followed by the drivers.</li> <li>✓ Installation of Road furniture's (Cones/Water filled barriers/Cats eye/Spring Posts/Jersey Barriers) for lane segregation, Channelizing the traffic, at Junctions and indicating Caution for the road users.</li> <li>✓ In case on any Vehicle found breakdown in main roads, we arrange the security crane / lifting machines to remove /relocated the vehicle. Which help for smooth passage to other vehicles.</li> <li>✓ Ensuring Drivers must wear near necessary PPEs, for that we have arranged a PPE's Stall at APMS parking area (issued on chargeable basis).</li> <li>✓ Night Patrolling and PA announcement by Traffic DSO to manage traffic condition.</li> <li>✓ Safety briefing via PA system at Security Gate.</li> </ul>
<b>3</b>	<b>Water resources Management and sewage treatment &amp; disposal Plan</b>						
3.1	For a fully developed APSEZ facility,	No-Impact	APSEZ is meeting the current water	As per the master plan and permissions granted under	APSEZ	As and When Required	Presently there are two fresh water sources available with APSEZ.  <b>Desalination Plant – 47 MLD</b>

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	water demand will be in the order of 4,30,000 m <sup>3</sup> /day (430 MLD). APSEZ will be sourcing majority of the water from the captive desalination plants, which will be developed in progressive manner.		demand through Narmada water supply scheme and 47 MLD captive desalination plant at site. Necessary water allocation from concerned authorities was obtained and the same will be renewed from time to time as per the directions of state government.	EC, APSEZ will be developing progressively 4,50,000 m <sup>3</sup> /day (450 MLD) of desalination plants to meet the future demand. Hence stress on regional water resources due to these developmental projects will be less significant.			<p><b>Gujarat Water Infrastructure Limited (GWIL) – 9 MLD</b> (sanctioned capacity).</p> <p>Current water demand for APSEZ along with SEZ industries including Adani Power Plant is an avg. of 28.78 MLD.</p> <p>So presently, these sources are adequate to fulfill the current freshwater requirement of entire APSEZ including member units.</p> <p>The desalination plant of additional capacities will be installed on modular basis considering future requirement of APSEZ.</p>
3.2	Existing water demand in	Level-2	Adani Foundation has been	Adani Foundation is planning to	APSEZ and CGWB*	Long Term	Water needs of APSEZ is being met through existing Desalination Plant of APSEZ and GWIL which may be further enhanced on modular basis. At present Ground

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	<p>the Mundra taluk is estimated as 8500 m<sup>3</sup>/day (@55 lpcd) and the potable and sanitation water needs would increase to 37,000 m<sup>3</sup>/day (@125 lpcd) in future when the area is fully grown into larger municipality due to induced economic growth. Water demand of the local</p>		<p>contributing to various watershed development projects in the Mundra region to enhance ground water resources in the area. Adani Foundation has contributed about Rs. 300 Lakhs so far for the development of 18 check dams.</p>	<p>implement the various water resource conservation programs in next ten years under various schemes.</p>			<p>water is not utilized for any activities within APSEZ.</p> <p>However various works are being carried out by Adani Foundation continuously under Water Conservation Work to achieve water security in Mundra region by Adani Foundation. Following works are carried out as a part of water conservation work since April – 2018. Water conservation Projects i.e. Roof Top Rainwater 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.</p> <p>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.</p> <p>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.</p> <p><b><u>WORK COMPLETED:</u></b></p> <p>Water Conservation Projects completed during last Compliance period:</p>



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	<p>communities is met through Narmada water supply system to some extent, but largely depending on the groundwater in the study area. Mundra block is reported to be a safe ground block as on date. Due to influx of people and rapid urbanization due to the economic</p>						<p><b>Water Conservation Projects:</b></p> <p><b>Swajal Project:</b></p> <ul style="list-style-type: none"> <li>&gt; <b>Aim:</b> The Foundation's Water Conservation program, SWAJAL, is aimed at addressing the alarming depletion of groundwater levels and reduction in water sources in various parts of Kutch district.</li> <li>&gt; <b>Water Security Plan:</b> Due to arid climatic characters of the Kutch region, it is essential to plan for water security drinking and livelihood purposes. Considering weather condition, rainfall characters, geohydrological condition and water demand, water security plan has been prepared for the Seven villages.</li> </ul> <table border="1" data-bbox="1398 922 2011 1203"> <thead> <tr> <th>Block Name</th> <th>Water conservation structure</th> <th>Total no. of Structure</th> <th>Total Capacity Created (CUM)</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Mundra</td> <td>Check Dam</td> <td>23</td> <td>6,07,332.80</td> </tr> <tr> <td>Pond Deepening</td> <td>66</td> <td>1,89,121.08</td> </tr> <tr> <td>RRWHS</td> <td>275</td> <td>2750</td> </tr> <tr> <td>Recharge Borewell</td> <td>209</td> <td>-</td> </tr> <tr> <td>Percolation Well</td> <td>24</td> <td>-</td> </tr> </tbody> </table> <p><b>Earlier Completed Activities/Projects:</b></p> <table border="1" data-bbox="1398 1260 2011 1369"> <thead> <tr> <th>Sr. No.</th> <th>Project</th> <th>Unit</th> <th>Outcome</th> <th>Impact</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Block Name	Water conservation structure	Total no. of Structure	Total Capacity Created (CUM)	Mundra	Check Dam	23	6,07,332.80	Pond Deepening	66	1,89,121.08	RRWHS	275	2750	Recharge Borewell	209	-	Percolation Well	24	-	Sr. No.	Project	Unit	Outcome	Impact					
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	development, there could be some stress on the ground water resources in future.						<table border="1"> <tr> <td data-bbox="1390 565 1444 760">1</td> <td data-bbox="1444 565 1654 760">Check dam Restrengthening-Nana Kapaya</td> <td data-bbox="1654 565 1709 760">1</td> <td data-bbox="1709 565 1829 760">Water Storage Capacity increased by 48000 Cum</td> <td data-bbox="1829 565 2018 760">60 + farmer's 120+Acre Area of Agri land can be Irrigated</td> </tr> <tr> <td data-bbox="1390 760 1444 979">2</td> <td data-bbox="1444 760 1654 979">Recharge Borewell</td> <td data-bbox="1654 760 1709 979">21</td> <td data-bbox="1709 760 1829 979">Reduce Salinity ingress, and preventing water run</td> <td data-bbox="1829 760 2018 979">150+ farmer's 260+ Acre Area of Agri land for Irrigated</td> </tr> <tr> <td data-bbox="1390 979 1444 1141">3</td> <td data-bbox="1444 979 1654 1141">Pipe Culvert at Checkdamat Bhujpur</td> <td data-bbox="1654 979 1709 1141">1</td> <td data-bbox="1709 979 1829 1141">prevent water runoff into seaside.</td> <td data-bbox="1829 979 2018 1141">35 farmers' 120+Acre Area of Agri land can be Irrigated</td> </tr> </table> <ul style="list-style-type: none"> <li>• Large number of water harvesting structure (18 Nos. of check dams in coordination with salinity department) and Augmentation of 3 check dams.</li> <li>• Ground recharge activities (pond deepening work for 66 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.</li> </ul>	1	Check dam Restrengthening-Nana Kapaya	1	Water Storage Capacity increased by 48000 Cum	60 + farmer's 120+Acre Area of Agri land can be Irrigated	2	Recharge Borewell	21	Reduce Salinity ingress, and preventing water run	150+ farmer's 260+ Acre Area of Agri land for Irrigated	3	Pipe Culvert at Checkdamat Bhujpur	1	prevent water runoff into seaside.	35 farmers' 120+Acre Area of Agri land can be Irrigated
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							<ul style="list-style-type: none"> <li>• New Pond Deepening Under Ajadi ka Amrut Mahotsav done in Goyarsama village Approx Deepening Capacity is 12000 Cum.</li> <li>• Roof Top Rainwater Harvesting 145 Nos. (40 Nos. current FY 2022-23) which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family.</li> <li>• Recharge Borewell 208 Nos (19 Nos. current FY 2022-23) which is best ever option to direct recharge the soil.</li> <li>• Drip Irrigation approx. 1505 Farmers benefitted in coordination with Gujrat Green Revolution Company till date.</li> <li>• 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.</li> <li>• Pond Pipeline work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area.</li> <li>• Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year.</li> </ul> <p>With the objective of to preserve the rainwater 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.</p> <p>Adani foundation has spent approx. INR 8824.17 lakhs from April – 2018 to September– 2024 for CSR</p>

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							activities which also includes water conservation projects as mentioned above.
3.3	It is estimated that about 60,000 m <sup>3</sup> /day (60 MLD) of sewage will be generated from the APSEZ facility when the project is fully developed.	No Impact	Seven sewage treatment plants with an aggregate capacity of 3.1 MLD have already built at APSEZ. Treated sewage is utilized for greenbelt development and sewage is not discharged into either seasonal natural streams or marine environment.	APSEZ is permitted to develop decentralized sewage treatment plants of total 62 MLD capacities. Existing sewage treatment facilities will be augmented progressively based on the development at APSEZ in future. Similar to existing practices, treated sewage will be utilized for greenbelt development.	APSEZ	As and When Required	<p>Current installed capacity of wastewater treatment plants is 6.255 MLD (ETP, STPs &amp; CETP) for treatment of effluent &amp; sewage generated at various locations of APSEZ excluding wastewater treatment plants installed within individual member units.</p> <p>Out of 46 only 4 operational industries within the SEZ are sending their partially treated industrial as well as domestic effluent to the CETP conforming to CETP inlet norms for further treatment and final disposal. Other SEZ industries have their own STPs / ETPs for treatment of wastewater generated from their industrial operation and discharging the treated water on land for horticulture purpose within their premises as per specific permission granted by SPCB.</p> <p>APSEZ also granted permission to treat 2.5 MLD of sewage generated from Mundra village through CETP and STP.</p> <p>Presently avg. 2.52 MLD of wastewater (into ETP, STPs &amp; CETP) is treated and being utilized on land for horticulture purpose within APSEZ premises during Apr'24 to Sep'24. Existing wastewater treatment plants are adequate to treat and handle the total effluent / sewage load considering current</p>

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							development.  Existing wastewater treatment facilities will be augmented, or new plants will be developed on modular basis considering future requirement.
<b>4</b>	<b>Air quality management Plan</b>						
4.1	Although all the regulated activities in the study area will be adopting promulgated emission norms, total air emission mass discharge from the study area would increase.	Level-2	APSEZ and other thermal power plants have obtained valid consent to operate and have been operating the facilities as per the emission norms stipulated in respective consent orders. APSEZ and other two power plants	All existing and new industrial establishments will obtain requisite consents from GPCB and adhere to the stipulated emission norms regulations and guidelines issued by authorities from time to time.	APSEZ And Other Industries	Continual Process	<p>APSEZ has been granted requisite permissions from the concerned authorities with stipulated norms for air emission (flue gas as well as ambient air).</p> <p>Ambient Air Quality monitoring is being carried out by NABL accredited and MoEF&amp;CC authorized agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi for APL as per NAAQ standards, 2009. Stack emission monitoring is also being carried out on regular basis. Reports of the same are being submitted to the concerned authorities on regular basis.</p> <p>Adani power plant has installed continuous emission and air quality monitoring instruments as per CPCB Directive and submitting the reports also. Another power plant of CGPL is outside APSEZ area.</p> <p>The AAQM summary for last six months (Apr'24 to Sep'24) are as below.</p> <p>Locations: 18 Nos. (APSEZ – 15 + APL – 3 including 4 villages)</p>

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			are monitoring the ambient air quality on regular intervals as per GPCB/CPCB guidelines and the data is analyzed and presented to GPCB on monthly basis. Both the thermal power plants located within the study area have installed continuous emission and air quality monitoring instruments				<p>Frequency: Twice in a week</p> <table border="1" data-bbox="1396 597 2011 932"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>Min</th> <th>Max</th> <th>Average</th> <th>Per m. Limit<sup>s</sup></th> </tr> </thead> <tbody> <tr> <td>PM<sub>10</sub></td> <td>µg/m<sup>3</sup></td> <td>30.61</td> <td>87.52</td> <td>64.53</td> <td>100</td> </tr> <tr> <td>PM<sub>2.5</sub></td> <td>µg/m<sup>3</sup></td> <td>12.84</td> <td>44.72</td> <td>26.20</td> <td>60</td> </tr> <tr> <td>SO<sub>2</sub></td> <td>µg/m<sup>3</sup></td> <td>7.13</td> <td>40.42</td> <td>19.17</td> <td>80</td> </tr> <tr> <td>NO<sub>2</sub></td> <td>µg/m<sup>3</sup></td> <td>9.63</td> <td>44.27</td> <td>22.82</td> <td>80</td> </tr> </tbody> </table> <p><sup>s</sup> as per NAAQ standards, 2009 Values recorded confirms to the stipulated standards.</p> <p>Approx. INR 6.11 Lakhs is spent by APSEZ for environmental monitoring activities during the FY 2024-25 till Sep'24, which also includes ambient air quality monitoring for overall APSEZ, Mundra.</p> <p>Other industries located within the SEZ have obtained requisite permissions from the competent authorities for their respective plant and they also carried out environmental monitoring within their premises to comply with the permission granted. The same has been ensured by APSEZ as well as SPCB during their regular visits. APSEZ carries out regular visits/inspections of member industries within SEZ and</p>	Parameter	Unit	Min	Max	Average	Per m. Limit <sup>s</sup>	PM <sub>10</sub>	µg/m <sup>3</sup>	30.61	87.52	64.53	100	PM <sub>2.5</sub>	µg/m <sup>3</sup>	12.84	44.72	26.20	60	SO <sub>2</sub>	µg/m <sup>3</sup>	7.13	40.42	19.17	80	NO <sub>2</sub>	µg/m <sup>3</sup>	9.63	44.27	22.82	80
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			as per CPCB directive.				<p>last visit was conducted during September, 2024 for EMS &amp; compliance verification. During compliance verification, it was verified that monitoring of air emission was well within the permissible standards based on analysis reports. Same will be continued in future also.</p> <p>The monitoring reports of industries within SEZ are also being submitted to the regulatory authorities as a part of half yearly Compliance report of EC for Multi-Product SEZ.</p>
				A common air quality management committee may be framed under the guidance of the State Pollution Control Board and district administration to manage regional level emission inventory data that can help to manage regional level air	APSEZ and Other Industries, Stakeholders, District Administration and GPCB*	Long Term And Continual	<p>APSEZ will co-operate and comply with the directions from concerned regulatory authorities for air quality management within APSEZ area. However, at present, APSEZ has formed Internal Environment Monitoring Committee, involving officials from APSEZ, Adani Power Limited and other SEZ member units with following role and responsibilities:</p> <ul style="list-style-type: none"> <li>• Identification of sources of air &amp; noise emission and its dispersion in surrounding villages</li> <li>• Remedial measures to eliminate, control, reduce or capture air &amp; noise emission.</li> <li>• Identify available resource to abate the air and noise emission.</li> <li>• Required additional resources for control of air and noise emission.</li> <li>• Drinking water and its testing of all the available fresh water sources in surrounding villages</li> </ul>

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				quality management goals.			<ul style="list-style-type: none"> <li>• Identify any surrounding villages affected by organization's improper waste disposal mechanism.</li> </ul> <p>Last committee meeting was conducted on dated 20.11.2024 and below was the point of discussion for way forward.</p> <ul style="list-style-type: none"> <li>• Brief introduction about the Environment Management Plan (EMP)</li> <li>• All members conveyed his environment management practices, issue &amp; suggestions.</li> <li>• Discussed about the various ways to improve existing practice to control the emission in terms of Air, Water and Noise.</li> <li>• Discussed about the proper management of the canteen waste.</li> <li>• Discussed about the cleaning of outside of the SEZ units.</li> <li>• Discussed about the management of rain water &amp; proper cleaning of the common storm water drainage system.</li> <li>• Discussed about proper segregation &amp; disposal of solid waste material.</li> <li>• Discussed about to increase more green belt area inside plant premises of SEZ units.</li> <li>• Discussed about disposal of minor qty. of generated hazardous waste &amp; E-waste materials at authorized recycler/vendor.</li> </ul>



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							APSEZ and all the industries within SEZ are complying to NAAQS and same is being ensured by APSEZ. The monitoring reports of industries within SEZ are being submitted to the regulatory authorities as part of half yearly Compliance report of EC for Multi-Product SEZ.
4.2	Release of particulate emissions from handling and storage of coal at the port and power plants would influence PM10 and PM2.5 concentration in the background air. This could pose some health impacts such as	Health Impact	APSEZ has been implementing the following management plan to control emissions as per the applicable regulations and similar practices will be adopted in future: Entire bulk material handling facilities are mechanized. Regular	All industries located in the APSEZ shall adhere to the emissions norms and minimum stack height guidelines issued by CPCB and consent to operate issued by Gujarat Pollution Control Board from time to time.	APSEZ and Other Industries	Continual Process	Following safeguard measures are taken by APSEZ for abatement of dust emissions. <ul style="list-style-type: none"> <li>• Adequate stack heights to the Boilers, D.G. Sets, TFHs &amp; HWGs for proper dispersion of pollutants within APSEZ</li> <li>• Using of liquid &amp; Gaseous fuels instead of solid fuels in Boilers, Thermic fluid heaters and hot water generators.</li> <li>• Regular sprinkling on road and other open area</li> <li>• Regular cleaning of roads</li> <li>• Dry fog Dust Suppression System (DSS) in hopper, transfer towers and conveyor belts</li> <li>• Use of water mist canon</li> <li>• Closed type conveyor belts</li> <li>• Regular sprinkling on coal heaps</li> <li>• Covering other types of dry bulk cargo heaps</li> <li>• Installation of wind breaking wall</li> <li>• Development of greenbelt along the periphery of the storage yards/back up area</li> <li>• Mechanized handling system for coal and other dry bulk cargo</li> </ul>

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	asthma and COPD etc. among the local communities.		water sprinkling on road and other open areas, regular cleaning of roads, dry fog dust suppression systems (DSS) in hoppers, transfer towers and conveyor belts, use of water mist canon, covered conveyor belts, regular sprinkling on coal heaps,				<ul style="list-style-type: none"> <li>Wagon loading and truck loading through closed silo</li> <li>Optimized the weigh bridge location to reduce the movement of trucks.</li> </ul> <p>Adequate air pollution control measures like ESPs, FGDs, Bag Filters, etc. and adequate stack heights provisions are implemented within the thermal power plant.</p> <p>The stack monitoring summary for last six months (Apr'24 to Sep'24) are as below.</p> <p>Total Nos. of Stacks: 23 Nos. Frequency: Monthly / Half Yearly</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>GPC B Limit</th> <th>Min</th> <th>Max</th> <th>Avrg.</th> </tr> </thead> <tbody> <tr> <td>PM</td> <td>mg/N m<sup>3</sup></td> <td>150</td> <td>16.11</td> <td>28.19</td> <td>20.61</td> </tr> <tr> <td>SO<sub>2</sub></td> <td>Ppm</td> <td>100</td> <td>5.80</td> <td>16.24</td> <td>8.55</td> </tr> <tr> <td>NO<sub>x</sub></td> <td>ppm</td> <td>50</td> <td>17.31</td> <td>32.26</td> <td>21.65</td> </tr> </tbody> </table> <p>Values recorded confirms to the stipulated standards.</p> <p>Approx. INR 6.11 Lakhs is spent by APSEZ for environmental monitoring activities during the FY 2024-25 till Sep'24, which also includes ambient air quality monitoring for overall APSEZ, Mundra.</p>	Parameter	Unit	GPC B Limit	Min	Max	Avrg.	PM	mg/N m <sup>3</sup>	150	16.11	28.19	20.61	SO <sub>2</sub>	Ppm	100	5.80	16.24	8.55	NO <sub>x</sub>	ppm	50	17.31	32.26	21.65
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							All other industries located within SEZ are adhere to provide adequate stack height and pollution control measures for proper dispersion of pollutants as per respective permissions granted by the board. The same is being inspected and ensured by APSEZ as well as SPCB officials on regular basis.
			covering of other types of dry bulk cargo heaps by protective materials, installation of wind breaking wall, development of greenbelt along the periphery of the storage yards/back up area and mechanized handling system for	An internal Coal Dust Management Working Group shall be formed by APSEZ to effectively coordinate the approach to coal dust management and monitoring	APSEZ and Other Industries, Concerned Stake holders, District Administration*	Long Term	<p>As mentioned above, earlier APSEZ has formed Internal Environment Monitoring Committee, involving Officials of APSEZ, Adani Power Limited &amp; other member units, with specific role and responsibilities as defined above.</p> <p>The dry cargo is being handled by mechanized system and transported by covered conveyer system, trucks and rail wagons. Wind breaking wall is provided around the coal storage yards of APSEZ as well as Adani Power Plant.</p> <p>Adequate air pollution control measures like ESPs, FGDs, Bag Filters, etc. and adequate stack heights provisions within the thermal power plant for proper dispersion of pollutants.</p> <p>Green belt / plantation is provided around the periphery of dry cargo storage area and regular water sprinkling is also being done to abate the dust emission from coal hips.</p>

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			<p>coal and other dry bulk cargo and Wagon loading and truck loading through closed silo. Both thermal power plants in the study area have installed electrostatic precipitators on the boilers and are meeting the emission norms as per the respective ECs granted. Due to installation of tall stacks as per CPCB guidelines</p>				<p>Last committee meeting was conducted on dated 20.11.2024 and below were the points of discussion for way forward.</p> <ul style="list-style-type: none"> <li>• Brief introduction about the Environment Management Plan (EMP)</li> <li>• All members conveyed his environment management practices, issue &amp; suggestions.</li> <li>• Discussed about the various ways to improve existing practice to control the emission in terms of Air, Water and Noise.</li> <li>• Discussed about the proper management of the canteen waste.</li> <li>• Discussed about the cleaning of outside of the SEZ units.</li> <li>• Discussed about the management of rain water &amp; proper cleaning of the common storm water drainage system.</li> <li>• Discussed about proper segregation &amp; disposal of solid waste material.</li> <li>• Discussed about to increase more green belt area inside plant premises of SEZ units.</li> <li>• Discussed about disposal of minor qty. of generated hazardous waste &amp; E-Waste materials at authorized recycler/vendor.</li> </ul>

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			and EC conditions, the relative air pollution impacts due to release of emissions from two power plants is insignificant.				
4.3	Ships are one of the significant sources of SO <sub>2</sub> and NO <sub>x</sub> emissions in the study area. Marine diesel engines on the ships often utilize fuel oils that might contain higher	Level-2	A Standard Operating Procedure (SOP) has been developed to be included as a part of APSEZ environment management plan to verify that all ships	The current global limit for Sulphur content of ships fuel oil is 3.5 % m/m (mass by mass). According to MARPOL, the new global cap on sulphur in the marine vessel fuels will be 0.50% m/m by the 1st January 2025. APSEZ should	APSEZ and Ship Owners	Long Term	The ships coming to the APSEZ is complying with MARPOL and other shipping rules and regulations.  APSEZ has already started providing shore power supply to the tugs (11 Nos.), dredgers (2 Nos.) and barges (1 No.). The feasibility of shore power will be explored and implemented on large scale for the visiting vessels to reduce idling stage ship emissions.

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	sulphur content. As per the international best practices, these marine diesel engines are designed to meet MARPOL regulations with NOX emissions less than 14.4 gram/Kwhr of engine. Due to lower stack heights of the marine diesel engine, ship emissions often gets		anchored at the port are adopting the MARPOL4 regulations.	explore the possibility of providing shore power to the ships at the port to reduce idling stage ship emissions.			

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	dispersed in the local environment and might pose risk of fumigation during the early morning and evening hours due to atmospheric inversion break-up periods.						
4.4	Road vehicle emissions will be other major contributors to the air pollution in the region	Level-2	Not Applicable	Due to implementation of Bharat VI fuels (MoEF&CC) in near future the vehicular and diesel engine emissions will be reduced by about 50% from the current national levels. APSEZ should develop a	APSEZ and All Industries	Short Term	Presently, cargo evacuation through rail / conveyer / pipeline is ~59.01 % of overall cargo evacuation.  Vehicles having valid PUC certificate are only being allowed to enter within APSEZ area.  APSEZ, has procured 217 nos. of Electrical Vehicle for internal cargo movement and 183 nos. E-ITV's are in operation.  As well as procured 10 nos. LMV E-Vehicles for manpower movement and all are in operation.

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	when the facility is fully developed.			robust contractor environmental policy to ensure that Bharat Stage VI emission norms are adopted by all their contractors and sub-contractors.			Electrification of Rail Corridor from Dhrub Railway Station to Adipur Railway Station has completed and movement started by electric locomotive. It will lead to reduce the gaseous emission and increase efficiency of transportation by rail.
<b>5</b>	<b>Noise emissions</b>						
5.1	Noise emissions are envisaged from port operations, industrial operations and power plants in the study area. Any increase in	Level-1	Due to adoption of various mechanized operations at the waterfront development, the noise emissions from the port cargo handling will be minimal. An adequate	APSEZ, all the tenant industries and facilities within APSEZ are required to undertake noise monitoring at their facilities to demonstrate the compliance with the Noise level standards. Continuous noise recording units can be installed	APSEZ	Continual Process	Below Safeguard measures are already taken for abatement of noise emissions. <ul style="list-style-type: none"> <li>• Development of greenbelt along the periphery of the operational area.</li> <li>• D.G. Sets having Acoustic enclosures.</li> <li>• Maintenance of plant machineries and equipment's on regular frequency.</li> </ul> Noise monitoring is being carried out by NABL accredited and MoEF&CC authorized agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi as per permission granted and reports are being submitted to the concerned authorities on regular basis.



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	noise levels beyond three decibels from the background levels would be perceived as noise nuisance (USEPA) <sup>7</sup> .		greenbelt is being developed by APSEZ to further reduce any residual impacts due to noise emissions from the facility. Periodic noise level monitoring programs were adopted by APSEZ. Predicted noise levels were found to be well within the designated noise standards for Industrial	by APSEZ at facility boundary to address the community grievances, when ever required. To assess the overall site wide compliance and also to address any community grievances related to noise issues due to operation of APSEZ facilities.			<p>The noise monitoring summary for last six months (Apr'24 to Sep'24) are as below.</p> <p>Locations: 15 Nos. Frequency: Once in a month (24 hourly)</p> <table border="1" data-bbox="1396 719 2011 998"> <thead> <tr> <th>Noise</th> <th>Unit</th> <th>Leq Min</th> <th>Leq Maxn</th> <th>Leq Avr.</th> <th>Leq Perm. Limit<sup>5</sup></th> </tr> </thead> <tbody> <tr> <td>Day Time</td> <td>dB(A)</td> <td>57.90</td> <td>69.60</td> <td>64.42</td> <td>75</td> </tr> <tr> <td>Night Time</td> <td>dB(A)</td> <td>52.60</td> <td>64.80</td> <td>61.21</td> <td>70</td> </tr> </tbody> </table> <p><sup>5</sup> as per GPCB standards</p> <p>Approx. INR 6.11 Lakhs is spent by APSEZ for environmental monitoring activities during the FY 2024-25 till Sep'24, which also includes ambient air quality monitoring for overall APSEZ, Mundra.</p> <p>All the results are well within the standards. From this it can be inferred that there no impacts on the surrounding community.</p> <p>All other industries located in the APSEZ are adhere to monitor and control the ambient noise level as per permission granted by SPCB and same is being</p>	Noise	Unit	Leq Min	Leq Maxn	Leq Avr.	Leq Perm. Limit <sup>5</sup>	Day Time	dB(A)	57.90	69.60	64.42	75	Night Time	dB(A)	52.60	64.80	61.21	70
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			facilities.				confirmed by APSEZ as well as SPCB on regular basis.  Further, till date APSEZ has not received any grievances/notice for noise issues from any of the stakeholders.
				In order to address the public grievances related to noise from the facility, an internal Noise Management Committee can be formed by APSEZ to investigate the root cause and to develop and implement noise mitigation plans in the specific zones.	APSEZ	Continual Process	As mentioned above, earlier APSEZ has formed Internal Environment Monitoring Committee, involving Officials of APSEZ, Adani Power Limited & other member units, having role and responsibilities as defined above.  Last committee meeting was conducted on dated 20.11.2024 and below were the point of discussion for way forward. <ul style="list-style-type: none"> <li>• Brief introduction about the Environment Management Plan (EMP)</li> <li>• All members conveyed his environment management practices, issue &amp; suggestions.</li> <li>• Discussed about the various ways to improve existing practice to control the emission in terms of Air, Water and Noise.</li> <li>• Discussed about the proper management of the canteen waste.</li> <li>• Discussed about the cleaning of outside of the SEZ units.</li> <li>• Discussed about the management of rain water &amp; proper cleaning of the common storm water drainage system.</li> </ul>

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							<ul style="list-style-type: none"> <li>Discussed about proper segregation &amp; disposal of solid waste material.</li> <li>Discussed about to increase more green belt area inside plant premises of SEZ units.</li> <li>Discussed about disposal of minor qty. of generated hazardous waste &amp; E-Waste materials at authorized recycler/vendor.</li> </ul> <p>No grievance received for noise related issues, and it is observed that ambient noise level are well within the permissible standards.</p>
<b>6</b>	<b>Surface water quality (Terrestrial and Marine )</b>						
6.1	In general, release of untreated wastewater from industrial facilities would pose threat to water quality of streams, estuaries and marine water	Level -1	As per the master plan of APSEZ, 67 MLD of wastewater is expected to be generated from the fully developed project scenario, for which necessary permissions to set up	As per the master plan of APSEZ, the existing CETP shall be augmented to 67 MLD in progressive manner based on the future demand. The facility should limit the marine discharge of treated industrial wastewater to 16 MLD as per the	APSEZ	As and When Required	<p>APSEZ has installed Common Effluent Treatment Plant (CETP) having 2.5 MLD capacities for treatment of partially treated effluent and sewage generated from industries within SEZ.</p> <p>Currently, CETP receives 963.72 KLD (Avg.) during this compliance period hydraulic load and considering the current development scenario, existing CETP is adequate to treat and handle the total effluent load coming from industries within SEZ.</p> <p>Out of 46 operational units only 4 industries within SEZ are sending their partially treated industrial as well as domestic effluent to the CETP confirming CETP inlet norms for further treatment and final disposal. Other industries within SEZ have their own STPs / ETPs for</p>

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	bodies.		decentralized CETPs of various capacities are already obtained. Presently a CETP capacity of 2.5 MLD is in place. Presently member units treat their effluents to meet the CETP inlet norms and then send it to CETP. Treated wastewater from CETP meets the stipulated discharge norms for	permits. Remaining treated wastewater shall be utilized for horticulture purpose.			<p>treatment of wastewater generated from their industrial operation and discharging the treated water on land for horticulture purpose within their premises as per permission granted by SPCB.</p> <p>The capacities of CETP will be enhanced on modular basis as per future requirement.</p> <p>Presently avg. 2.52 MLD (from CETP, ETP &amp; STPs) of treated water is being utilized on land for horticulture purpose within APSEZ premises during period Apr'24 to Sep'24 and no discharge is made to any other source.</p>

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			utilization for greenbelt development within the APSEZ areas.				
			Online wastewater quality monitoring systems are installed at CETP to ensure quality of treated effluent meets the requisite discharge norms. No wastewater from CETP is discharged into natural bodies as on date..	Efforts shall be made to recycle complete treated wastewater for port operations and industrial operations of APSEZ in future based on a detailed techno-economic feasibility study.	APSEZ	Based on outcome Techno-feasibility Study	Online continuous effluent monitoring system (CEQMS) installed at the discharge point of CETP to track any deviation from discharge norms. CEQMS is connected with CPCB/GPCB server & data is continuous transferring in both servers.  Presently entire quantity of treated water from CETP is used for gardening / horticulture purpose within APSEZ premises.
			Runoff during	Storm water runoff from the			There are provision of drains around coal stack yard to carry to runoff water to dump ponds. This water is

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			monsoon from coal storage yards is collected in sedimentation ponds (dump pond) to remove any residual dust particulates for further disposal into sea	facility during the first rain shall be sampled and analyzed for the presence of heavy metals or other criteria pollutants to adopt corrective and preventive actions to protect the marine water quality. All red and hazard category industry within APSEZ shall adopt spill prevention and control program and no effluents shall be discharged into storm water-drains.	APSEZ	Continual	<p>either used for dust suppression or after sedimentation (to remove residual dust), is allowed disposal to sea.</p> <p>Presently Marine monitoring is being carried out once in a month by NABL and MoEF&amp;CC accredited agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi for APSEZ &amp; APL both. The analysis reports of the same are being submitted to the concerned authorities on regular basis.</p> <p>The marine water quality monitoring summary for last six months (Apr'24 to Sep'24) is as per below.</p> <p>Locations: 14 Nos. (APSEZ – 9 + APL – 5) Frequency: Once in a Month / Half Yearly</p> <table border="1" data-bbox="1396 1019 2011 1427"> <thead> <tr> <th rowspan="2">TEST PARAMETERS</th> <th rowspan="2">UNIT</th> <th colspan="3">Cumulative Surface</th> <th colspan="3">Cumulative Bottom</th> </tr> <tr> <th>Min</th> <th>Max</th> <th>Average</th> <th>Min</th> <th>Max</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>--</td> <td>7.91</td> <td>8.30</td> <td>8.16</td> <td>7.74</td> <td>8.30</td> <td>8.11</td> </tr> <tr> <td>BOD</td> <td>mg/L</td> <td>2.20</td> <td>4.40</td> <td>3.13</td> <td>BDL(MDL:1.0)</td> <td>4.50</td> <td>3.04</td> </tr> <tr> <td>TSS</td> <td>mg/L</td> <td>26.90</td> <td>144.00</td> <td>90.12</td> <td>32.90</td> <td>132.00</td> <td>84.64</td> </tr> <tr> <td>DO</td> <td>mg/L</td> <td>4.50</td> <td>6.69</td> <td>5.62</td> <td>4.40</td> <td>6.49</td> <td>5.42</td> </tr> </tbody> </table>	TEST PARAMETERS	UNIT	Cumulative Surface			Cumulative Bottom			Min	Max	Average	Min	Max	Average	pH	--	7.91	8.30	8.16	7.74	8.30	8.11	BOD	mg/L	2.20	4.40	3.13	BDL(MDL:1.0)	4.50	3.04	TSS	mg/L	26.90	144.00	90.12	32.90	132.00	84.64	DO	mg/L	4.50	6.69	5.62	4.40	6.49	5.42
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			Detailed marine hydrodynamic modelling studies revealed that the current and proposed dredged soil disposal practices, sea water intake and outfall facilities and	Good dredging practices shall be adopted by APSEZ: (i).Improving the dredging accuracy (ii).Improving onboard automation and monitoring, (iii). Reduce spill and loss, (iv). evaluating the need for installing silt	APSEZ	Long Term	<p>No capital dredging has been done, since Apr 2015. Dredged material generated during maintenance dredging is being disposed at designated locations within deep sea as identified by NIO.</p> <p>Dredging Management plan is adopted for carrying out dredging and management of dredge material. Presently there are 3 nos. (2 Nos. Cutter suction + 1 No. Trailer suction) of dredgers are in operation for dredging.</p> <p>Marine monitoring is being carried out once in a month by NABL and MoEF&amp;CC accredited agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. The analysis reports of the same are being submitted to the concerned authorities on regular basis.</p>																								

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			desalination plant outfall etc have shown insignificant impact on the marine eco-system. As part of the comprehensive environmental monitoring program, APSEZ has been adopting marine water and sediment quality monitoring on monthly basis.	screens near mangrove areas during the dredging phase operations, (v). Environment friendly dredging activities can be undertaken in such a way that the overall turbidity levels near the mangrove and ecologically sensitive zones shall not exceed 100 NTU or 200 mg/l of TSS (10% lethal level of fish) Existing marine monitoring program shall be continued as per the directions of MoEF&CC and GPCB.			<p>Summary of marine water for the last six months is as mentioned above.</p> <p>The same practice will be continued in future also as per direction by MoEF&amp;CC as well as GPCB.</p> <p>Monitoring will be focused near ecological sensitive area in case of need to carryout capital dragging near such areas.</p>
7	<b>Groundwater quality and salinity ingress</b>						



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7.1	While Mundra block is enjoying safe ground water status as on date (based on the data published by CGWB), due to induced economic and population growth, use of ground water resources by the local people might increase in Mundra region. This might increase the	Level-2	APSEZ is not utilizing ground water for any type of use. APSEZ is meeting the current water demand through Narmada water supply scheme and 47 MLD captive desalination plant at site.	A dedicated desalination plant of capacity 4,50,000 m <sup>3</sup> /day (450 MLD) will be developed in progressive manner to meet the APSEZ requirements.	APSEZ	As and When Required	<p>Present source of water for various project activities is desalination plant of APSEZ and/or through Gujarat Water Infrastructure Limited (GWIL) and same is sufficient to meet the present water demand.</p> <p>APSEZ does not draw any ground water.</p> <p>The desalination plant of additional capacities will be installed on modular basis considering future development and requirement.</p>

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	TDS and chloride levels in the ground water in future.						
7.2	Due to induced growth in the region, pressure on the available ground water source would increase and this could pose some threat to salinity ingress.	Level-2	Ground water is not drawn by APSEZ for its operations. Natural streams (seasonal rivers) passing through the APSEZ area will not be disturbed, the micro-watershed in the area will not be disturbed. Due to the above reasons, the	The Govt. of Gujarat, Narmada, Water Resources, Water Supply & Kalpsar Dept.,(WRD)12 has been implementing various salinity ingress prevention projects	District Administration*	Long Term	<p>APSEZ will co-operate and comply with the directions from concerned regulatory authorities.</p> <p>APSEZ does not draw any ground water for the fresh water requirement.</p> <p>However, Adani Foundation – CSR arm of Adani Group has carried out rainwater harvesting activities in the nearby villages for benefit of the locals.</p> <p>Water conservation Projects i.e. Roof Top Rainwater 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.</p> <p>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.</p> <p>Since, 10 years considerable Water Conservation Work carried out in Mundra Taluka. Due to satisfactory rain</p>

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			possibility of salinity ingress due to APSEZ development is not envisaged. Mundra and Anjar blocks fall under fresh water to medium salinity zones. It can be observed that little variation was observed in the ground water salinity levels from year 2013 to 2016 across the Mundra and Anjar blocks. This aspect confirms				<p>in current year 1.11 mtr ground water table increased as per increased in coastal belt of Mundra as per Government Figures.</p> <p><b>WORK COMPLETED:</b></p> <p>Water Conservation Projects completed during last Compliance period:</p> <p><b>Water Conservation Projects:</b></p> <p><b>Swajal Project:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Aim:</b> The Foundation's Water Conservation program, SWAJAL, is aimed at addressing the alarming depletion of groundwater levels and reduction in water sources in various parts of Kutch district.</li> <li>➤ <b>Water Security Plan:</b> Due to arid climatic characters of the Kutch region, it is essential to plan for water security drinking and livelihood purposes. Considering weather condition, rainfall characters, geohydrological condition and water demand, water security plan has been prepared for the Seven villages.</li> </ul> <table border="1"> <thead> <tr> <th>Block Name</th> <th>Water conservation structure</th> <th>Total no. of Structure</th> <th>Total Capacity Created (CUM)</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Mundra</td> <td>Check Dam</td> <td>23</td> <td>6,07,332.80</td> </tr> <tr> <td>Pond Deepening</td> <td>66</td> <td>1,89,121.08</td> </tr> <tr> <td>RRWHS</td> <td>275</td> <td>2750</td> </tr> <tr> <td>Recharge Borewell</td> <td>209</td> <td>-</td> </tr> <tr> <td>Percolation Well</td> <td>24</td> <td>-</td> </tr> </tbody> </table>	Block Name	Water conservation structure	Total no. of Structure	Total Capacity Created (CUM)	Mundra	Check Dam	23	6,07,332.80	Pond Deepening	66	1,89,121.08	RRWHS	275	2750	Recharge Borewell	209	-	Percolation Well	24	-
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			that the overall salinity ingress from the shore into the land due to existing APSEZ facilities and power plant outfalls are less significant.				<p><b>Earlier Completed Activities/Projects:</b></p> <table border="1"> <thead> <tr> <th data-bbox="1423 646 1470 751">Sr. No.</th> <th data-bbox="1470 646 1669 751">Project</th> <th data-bbox="1669 646 1724 751">Unit</th> <th data-bbox="1724 646 1839 751">Outcome</th> <th data-bbox="1839 646 2011 751">Impact</th> </tr> </thead> <tbody> <tr> <td data-bbox="1423 751 1470 943">1</td> <td data-bbox="1470 751 1669 943">Check dam Restrengthening-Nana Kapaya</td> <td data-bbox="1669 751 1724 943">1</td> <td data-bbox="1724 751 1839 943">Water Storage Capacity increased by 48000 Cum</td> <td data-bbox="1839 751 2011 943">60 + farmer's 120+Acre Area of Agri land can be Irrigated</td> </tr> <tr> <td data-bbox="1423 943 1470 1161">2</td> <td data-bbox="1470 943 1669 1161">Recharge Borewell</td> <td data-bbox="1669 943 1724 1161">21</td> <td data-bbox="1724 943 1839 1161">Reduce Salinity ingress, and preventing water run</td> <td data-bbox="1839 943 2011 1161">150+ farmer's 260+ Acre Area of Agri land for Irrigated</td> </tr> <tr> <td data-bbox="1423 1161 1470 1323">3</td> <td data-bbox="1470 1161 1669 1323">Pipe Culvert at Checkdamat Bhujpur</td> <td data-bbox="1669 1161 1724 1323">1</td> <td data-bbox="1724 1161 1839 1323">prevent water runoff into seaside.</td> <td data-bbox="1839 1161 2011 1323">35 farmers' 120+Acre Area of Agri land can be Irrigated</td> </tr> </tbody> </table>	Sr. No.	Project	Unit	Outcome	Impact	1	Check dam Restrengthening-Nana Kapaya	1	Water Storage Capacity increased by 48000 Cum	60 + farmer's 120+Acre Area of Agri land can be Irrigated	2	Recharge Borewell	21	Reduce Salinity ingress, and preventing water run	150+ farmer's 260+ Acre Area of Agri land for Irrigated	3	Pipe Culvert at Checkdamat Bhujpur	1	prevent water runoff into seaside.	35 farmers' 120+Acre Area of Agri land can be Irrigated
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							<ul style="list-style-type: none"> <li>• Large number of water harvesting structure (18 Nos. of check dams in coordination with salinity department) and Augmentation of 3 check dams.</li> <li>• Ground recharge activities (pond deepening work for 61 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.</li> <li>• New Pond Deepening Under Ajadi ka Amrut Mahotsav done in Goyarsama village Approx Deepening Capacity is 12000 Cum.</li> <li>• Roof Top Rainwater Harvesting 145 Nos. (40 Nos. current FY 2022-23) which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family.</li> <li>• Recharge Borewell 208 Nos (19 Nos. current FY 2022-23) which is best ever option to direct recharge the soil.</li> <li>• Drip Irrigation approx. 1505 Farmers benefitted in coordination with Gujrat Green Revolution Company till date.</li> <li>• 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.</li> <li>• Pond Pipeline work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area.</li> <li>• Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year.</li> </ul> <p>With the objective of to preserve the rainwater to</p>

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							<p>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.</p> <p>Narmada Water Resources, Water Supply &amp; Kalpsar Dept., (WRD)1 has been implementing various salinity ingress prevention projects. Under Sardar Sarovar canal project, Govt. of Gujarat has proposed to implement about 8200 Km stretch of water canal and the project is at various stages of implementation. Under this project about 112,000 ha of land in about 180 villages will be benefitted with irrigation needs. This will significantly reduce the pressure on the ground water resources in the region.</p>
				While the individual industries in the study area will continue to undertake ground water quality monitoring as per the	All Concerned Stakeholders, District Administration and CGWB*	Continual Process	<p>APSEZ (9 Locations – half yearly) &amp; Adani Power Ltd. (5 Locations – quarterly) is carrying out ground water sampling and reports of the same are being submitted to the regulatory authorities on regular basis.</p> <p>The summary of APSEZ ground water quality monitoring for last six months (Apr'24 to Sep'24) are as below. Nos. of Location: 09</p>



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							Zinc as Zn	m g/L	0.07	0.14	0.10
							Copper as Cu	m g/L	0.08	0.13	0.10
							Iron as Fe	m g/L	0.12	0.61	0.26
							Insecticides/Pesticides	µ g/L	Absent	Absent	Absent
							Depth of Water Level from Ground Level	meter	1.95	2.25	2.12
<p style="text-align: right;">BDL – Below Detection Limit MDL – Minimum Detection Limit</p> <p>Approx. INR 6.11 Lakhs is spent by APSEZ for environmental monitoring activities during the FY 2024-25 till Sep'24, which also includes ambient air quality monitoring for overall APSEZ, Mundra.</p> <p>The freshwater requirement of all the industries within SEZ is being satisfied through APSEZ. All the industries are encouraged to monitor ground water quality as per the permissions granted by competent authorities.</p>											



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							As mentioned above, presently, APSEZ has formed Internal Environment Monitoring Committee, involving Officials of APSEZ, Adani Power Limited and other member units, having role and responsibilities as defined above.  APSEZ will co-operate and comply with the directions from concerned regulatory authorities for ground water management.
<b>8</b>	<b>Waste Management</b>						
8.1	Solid waste will be generated from industrial activities of APSEZ and other permitted facilities in the study area including Mundra town. These wastes would contain recyclable	Level-2	APSEZ has been adopting Zero waste Initiatives and the entire waste generated from existing operations is segregated and disposed to recycling vendors, thereby APSEZ has achieved zero landfill status as on	APSEZ will continue to adopt Zero Waste Initiative and wastes will be segregated at source and disposed to various recycling vendors, co-processing in cement plants. This initiative helps not only to reduce the waste to landfill significantly, but also to recycle the materials	APSEZ	Continual Process	Presently APSEZ has implemented Zero waste Initiatives as per 5R (Reduce, Reuse, Recycle, Recover & Reprocess) principles of waste management. At present, APSEZ has developed material recovery facility for 6.0 TPD capacities. A well-established system for segregation of dry & wet waste is in place. All wet waste (Organic waste) is being segregated & utilized for compost manufacturing and/or biogas generation for cooking purpose. The compost is further used by in house horticulture team for greenbelt development. Whereas dry recyclable waste is being sorted in various categories. Presently manual sorting is being done for sorting of different types of solid waste. Segregated recyclable materials such as Paper, Plastic, Cardboard, PET Bottles, Glass etc. are then sent to respective recycling units, whereas remaining non-recyclable waste is bailed and sent to cement plants for Co-processing as RDF (Refused Derived Fuel). The same practice will be continued in future also. APSEZ

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	material, construction debris, organic waste, inert material and e-waste etc. In the absence of any organized source segregation programs and material recycling strategies and infrastructure facilities, these wastes will enter into environment and would pose long term health impacts.		date.	there by avoiding ecological impacts.			<p>has also been recognized for Zero Waste to Landfill certification from reputed organization.</p> <p>APSEZ, Mundra is certified for Zero Waste to Landfill management system (ZWTL MS 2020) by TUV Rheinland India Pvt. Ltd.</p> <p>APSEZ is being done proper solid waste management in his operational area with 5R principle as per Waste Management Plan.</p> <p>Industries located within the SEZ area are also complying with the waste management rules</p>

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8.2	Considering an average solid waste generation of 0.25 Kg/person/day, the estimated solid waste from facilities within APSEZ will be in the order of 100 TPD (36,500 TPA).	Level-2	APSEZ has made a provision for central waste management facilities within the existing site based on the future needs. As part of the Zero Waste Initiatives, no landfill facilities will be installed at APSEZ.	The existing waste segregation and material recycling facilities will be augmented to dispose safely the wastes generated from APSEZ areas. Solid Waste Management Program shall be adopted and implemented as per Municipal Solid Waste Management Rules 2016 and Construction Waste Management Rules 2016	APSEZ	Continual Process	stipulated by statutory authorities and same is also being confirmed by APSEZ as well SPCB on regular basis.
8.3	About 35 TPD (13,000 TPA) of solid	Level-2	As per the MSW Rules 2016 all the	Solid Waste Management Program shall be adopted and	All Industries	Continual Process	

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	waste would be generated from the proposed industrial areas located outside the APSEZ area.		industrial facilities and SEZs are required to adopt waste segregation facilities at the respective properties and non-recyclable waste shall be disposed to landfill sites.	implemented as per Municipal Solid Waste Management Rules 2016 and Construction Waste Management Rules 2016			
<b>9</b>	<b>Ecological aspects (terrestrial and marine)</b>						
9.1	About 1576 ha of shrub forest land contiguous to APSEZ	Level -1	It is noted that the designated forest land is free from any native vegetation	APSEZ has approached concerned authorities for diversion of designated forest land. Suitable compensatory	APSEZ/State Forest Department*	Long Term	Stage – 1 Forest clearance granted for diversion of 1576.81 Ha Forest land. Compliance of stage-1 forest clearance is process. After getting EC & CRZ Clearance, Stage-2 Forest clearance will be obtained.  APSEZ has applied for getting EC & CRZ clearance for SEZ / Industrial Park in 1576.81 Ha Forest land.  ToR accorded by MoEF&CC on 30.11.2021 and draft EIA

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	area is applied for land diversion for various developmental activities. This might have certain level of changes in the biodiversity in the study area.		and comprises of Prosopis juliflora. It is also noted that no endangered species are present at the shrub forests that are applied for land diversion. It is also noted that no forest produce is reported from this designated forest land parcel due to lack of economic importance of plant	afforestation plan shall be adopted based on the recommendations and directions of the concerned authorities. Due to adoption of compensatory afforestation program through a scientific manner, the overall ecological footprint in the district will be increased. Due to plantation of native tree species as part of greenbelt development, the overall biodiversity of the region will increase considerably			is being carried out through NABET accredited consultant.

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			species reported in the shrub forest. It is also noted that no tribal lands are located in the designated forest land parcel. Hence there will not be any change in biodiversity due to the proposed diversion.	when the project is fully developed.			
9.2	Mangrove conservation areas are located adjacent to	Level -1	No development activities will be undertaken within mangrove	Mangrove footprint and health status shall be	APSEZ	Continual Process	As per study conducted by NCSCM in 2017, mangrove cover in and around APSEZ, Mundra has increased from 2094 Ha to 2340 ha (as compared between 2011 to 2017). The analysis has shown an overall growth of 246 ha. The cost for said study was INR 3.15 Cr.  1. NCSCM (MoEF&CC promoted Government Agency)

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	the APSEZ area. Accidental discharges of industrial effluents into the marine environment would pose certain ecological risk.		conservation areas. APSEZ has taken up large scale mangrove afforestation activities in an area of more than 2800 ha at various locations across the coast of Gujarat state in consultation with various organizations. The Adani Foundation introduced 'Mangrove Nursery Development and	monitored annually			<p>study on comprehensive and integrated plan for preservation and conservation of mangroves and associated creeks in and around APSEZ in year 2016-17. The cost of said study was 3.15 Cr, which was incurred by APSEZ.</p> <p>As a part of mangrove conservation plan, APSEZ has done following activities.</p> <ol style="list-style-type: none"> <li>Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island through NCSCM, Chennai. The cost of the said study was INR 23.56 Lacs incurred by APSEZ.</li> <li>Tidal observation in creeks in and around APSEZ – The cost of the said activity was INR 1.0 Lacs incurred by APSEZ.</li> <li>Algal &amp; Prosopis removal from Mangrove area - The cost of the said activity was Rs. 80000 during FY 2023-24. The algal removal report was submitted during the last compliance report submission Oct'23 to Mar'24.</li> <li>Awareness of mangroves importance in surrounding communities &amp; Fodder support - The expenditure for fodder supporting activities was approx. 132.0 Lacs during FY 2024-25 till Sep'24 which was incurred by APSEZ. This activity is being done on continuous basis as a part of CSR activity.</li> </ol>

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			Plantation scheme in the area as an alternative income generating activity for the people of the region.				<p><b>Summary of Conservation of mangroves:</b></p> <table border="1" data-bbox="1396 626 2011 1138"> <thead> <tr> <th rowspan="2">Mangrove mapping Year</th> <th rowspan="2">Monitoring Agency</th> <th rowspan="2">Mangrove cover total Area (Ha.)</th> <th colspan="2">Mangrove cover area Increased</th> </tr> <tr> <th>Ha.</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td rowspan="2">NCSCM</td> <td>2094</td> <td>-</td> <td>-</td> </tr> <tr> <td>2011 to 2016-17</td> <td>2340</td> <td>246</td> <td>11.75%</td> </tr> <tr> <td>2017 to 2019 till March</td> <td>NCSCM</td> <td>2596</td> <td>256</td> <td>10.94%</td> </tr> <tr> <td>2019 to 2021 till March</td> <td>GUIDE</td> <td>2723</td> <td>127</td> <td>4.89%</td> </tr> <tr> <td><b>Total</b></td> <td></td> <td><b>2723</b></td> <td><b>629</b></td> <td><b>--</b></td> </tr> </tbody> </table> <p>Hence, overall increase in mangrove cover area in creek system in and around APSEZ from 2011 (2094 Ha) to 2021 (2723 Ha) is <b>629 Ha (30%)</b>.</p> <p>As a part of GCZMA recommendations and NCSCM mangrove conservation action plan, APSEZ has undertaken following activities.</p>	Mangrove mapping Year	Monitoring Agency	Mangrove cover total Area (Ha.)	Mangrove cover area Increased		Ha.	%	2011	NCSCM	2094	-	-	2011 to 2016-17	2340	246	11.75%	2017 to 2019 till March	NCSCM	2596	256	10.94%	2019 to 2021 till March	GUIDE	2723	127	4.89%	<b>Total</b>		<b>2723</b>	<b>629</b>	<b>--</b>
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							Sr. No.	Recommendations	Compliance
							1.	Mangrove mapping and monitoring in and around APSEZ	<ul style="list-style-type: none"> <li>APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island.</li> <li>As a part of this study, overall growth of mangroves in the creeks in and around APSEZ was assessed comparing Google earth images of 2017 &amp; 2019 and it is observed that there was increase in mangrove cover between March 2017 and September 2019 to the extent of 256 Ha, which is about 10.94%.</li> <li>This suggests that the mangroves and the tidal system in the creeks remain undisturbed over this period. Analysis of data between categories indicated that</li> </ul>

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									<p>there was an increase in dense mangroves and also conversion of scattered to sparse which also shows that the growth of mangroves in a progressive direction.</p> <ul style="list-style-type: none"> <li>Hence, there is an overall growth of mangroves in creeks in and around APSEZ, Mundra is 502 Ha between 2011 and 2019.</li> <li>The cost of the said study was INR 23.56 Lacs incurred by APSEZ.</li> <li>According to GUIDE Mangrove monitoring study report November 2023 (the report was submitted during the last compliance report submission Apr'23 to Sep'23), the distribution of mangroves in Kotadi, Baradi mata, Navinal, Bocha and Khari creeks as well as in the Bocha island was studied using LISS IV satellite images for the duration of March 2019 to March 2021. The mangrove cover in</li> </ul>

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									<p>the creeks in and around APSEZ showed a positive trend from March 2019 to March 2021, with an overall increase of 52.79 ha (1.9%) compared to the cover during the year 2019. The total mangrove cover during 2019 was 2670 ha which has increased to 2723 ha during the year 2021.</p> <ul style="list-style-type: none"> <li>Hence, overall increase in mangrove cover area in creek system in and around APSEZ from 2011 (2094 Ha) to 2021 (2723 Ha) is 629 Ha (30%).</li> <li>The cost of the said study was INR 23.60 Lacs incurred by APSEZ.</li> </ul> <p><b>Summary of Mangrove mapping and monitoring (from 2011 to 2021):</b></p> <table border="1" data-bbox="1654 1304 1995 1401"> <tr> <td data-bbox="1654 1304 1753 1401">Mangrove</td> <td data-bbox="1753 1304 1852 1401">Mangrove cover</td> <td data-bbox="1852 1304 1995 1401">Mangrove cover area Increased</td> </tr> </table>	Mangrove	Mangrove cover	Mangrove cover area Increased
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									<ul style="list-style-type: none"> <li>The observed tidal ranges indicate that the creeks experience normal tidal ranges, adequate for the growth of mangroves.</li> <li>The cost of the said activity was INR 1.0 Lacs.</li> </ul>
							3.	Removal of Algal and Prosopis growth from mangrove areas	<ul style="list-style-type: none"> <li>Algal and Prosopis growth monitoring was done in and around mangrove area and algal encrustation was found in some of the mangrove areas, which has been removed manually.</li> <li>The cost of the said activity was Rs. 80000 during FY 2023-24. The algal removal report was submitted during the last compliance report submission Oct'23 to Mar'24.</li> </ul>
							4.	Awareness of mangroves importance in surrounding communities	<ul style="list-style-type: none"> <li>Adani Foundation – CSR Arm of Adani group has done awareness camps/activities created in the community regarding importance of mangroves. Adani Foundation provides Good Quality dry and green fodder</li> </ul>

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									<p>to 25 Villages. Project is covering total 15005 Cattles and hence enhancing cattle productivity. Dry Fodder 10,90,875 Kg Green – 27,64,920 Kg.</p> <ul style="list-style-type: none"> <li>• Awareness of mangroves importance in surrounding communities &amp; Fodder support - The expenditure for fodder supporting activities was approx. 132.0 Lacs during FY 2024-25 till Sep'24, which was incurred by APSEZ.</li> <li>• <b>Grass Land development:</b> 213 acres of gauchar land has been cleaned and allocated for Grass land development with strong Community Contribution and Mobilization.</li> <li>• Other than this dedicated security guard with gate system deployed by APSEZ across the coastal area and no any unauthorized persons allowed within coastal as well as mangrove areas.</li> </ul>

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9.3	Outfall from the thermal	Level-1	A detailed marine hydro-dynamic and dispersion	All approved marine outfalls shall be monitored for salinity,	APSEZ and	Continual Process	Presently marine monitoring is being carried out by the Adani power plant at the marine outfall locations and reports are being submitted to the concerned authorities on regular basis.			

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	power plants desalination and CETP would pose certain level of impact on the marine environment.		modelling of the study area indicates that the background temperature and salinity at mangrove conservation area will not increase from the prevailing background levels as the outfalls are located far away. APSEZ and respective power plants in the study area have been monitoring the marine water quality	temperature and other designated parameters as per consent to establish issued by GPCB. Existing marine environmental monitoring program shall be continued.	Concerned Industry		<p>APSEZ is carrying out Marine monitoring once in a month at 9 locations in deep sea by NABL and MoEF&amp;CC accredited agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. The analysis reports of the same are being submitted to the concerned authorities on regular basis.</p> <p>Adani power plant is also doing marine water quality at 5 locations (2 locations at outfall location) in deep sea by NABL and MoEF&amp;CC accredited agency namely M/s. Unistar Environment &amp; Research Labs Pvt. Ltd. The analysis reports of the same are being submitted to the concerned authorities on regular basis. The summary of marine water quality is shown above.</p> <p>The comparison of marine water results between CIA and current monitoring data are as below.</p> <table border="1"> <thead> <tr> <th rowspan="2">Parameter</th> <th rowspan="2">Unit</th> <th colspan="2">Max</th> <th colspan="2">Min</th> </tr> <tr> <th>CIA</th> <th>Present</th> <th>CIA</th> <th>Present</th> </tr> </thead> <tbody> <tr> <td>Temp.</td> <td>°C</td> <td>36.4</td> <td>36.6</td> <td>35.2</td> <td>35.2</td> </tr> <tr> <td>Salinity</td> <td>ppt</td> <td>29.5</td> <td>30</td> <td>29</td> <td>29</td> </tr> </tbody> </table> <p>As per above results, it can be seen that there is no deviation in the concentration of parameters and thus indicates that impacts are insignificant.</p>	Parameter	Unit	Max		Min		CIA	Present	CIA	Present	Temp.	°C	36.4	36.6	35.2	35.2	Salinity	ppt	29.5	30	29	29
Parameter	Unit	Max		Min																									
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			status on monthly basis for the stipulated environmental and ecological parameters.				
9.4	<b>Terrestrial Ecology:</b> Study area doesn't have any notified national parks or ecological sanctuaries. Since the area falls under dry deciduous shrubs. Due to scanty rains in the area, the overall natural	Level-1	APSEZ has developed greenbelt in an area of 550ha as against the committed area of 430ha. A dedicated nursery is set up to promote plantation. APSEZ have undertaken a plantation with about 9.6 Lakh fully grown trees.	The compensatory afforestation area to be monitored annually to check the survival rate of the plantation.	APSEZ	Continual Process	<p>APSEZ has developed its own "Dept. of Horticulture" which is taking measures/ steps for terrestrial plantation/greenbelt development. APSEZ, Individual SEZ Industries and Adani Power Plant has developed approx. 700 Ha. area as greenbelt within the APSEZ area including SEZ industries &amp; Adani Power Plant.</p> <p>Dedicated horticulture department is maintaining and monitoring the terrestrial green belt development on regular basis to check the survival rate of plantation.</p> <p>Total expenditures of the horticulture dept. of APSEZ during the FY 2024-25 within APSEZ is INR 831 lakhs. and out of which, Approx. INR 253 lakh are spent during the financial year 2024-25 till Sep'24.</p>

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	green-cover/vegetation in the area is very small.						
<b>10</b>	<b>Socio-economic aspects</b>						
10.1	Population growth in the Mundra region was reported to be in the order of 85% during the past decade (2001-2011). Further expansion of the urban area could be possible due to induced economic growth in the region. Increase in population will have a	Level-1	Dedicated townships are developed within APSEZ area with necessary community infrastructure such as hospital, school, recreational facilities, sewage treatment and waste collection facilities. Adani Foundation has been undertaking	The existing townships will be expanded to accommodate about 4lakh people when the project activity is fully developed.	APSEZ	As and When Required	<p>APSEZ has developed two townships (Shantivan and Samudra) accommodating 2302 households and associated infrastructure facilities. Accommodation is made available for all interested employees working within Adani group &amp; SEZ industries. Out of which 87.14 % Occupancies are accommodated within the townships and rest are available for employees working within APSEZ.</p> <p>At present 46 nos. of industries (processing &amp; non-processing) are operating within the SEZ. Township facilities are also made by SEZ industries within Mundra town for their employees having basic infrastructure facilities and requirements. Most of the employees working in SEZ industries are residing in Mundra township having all basic requirements and associated facilities.</p> <p>The existing social infrastructure facilities are adequate to accommodate the people considering present APSEZ development. The existing townships with associated facilities will be expanded as per</p>

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	additional need for public infrastructure in the region.		various CSR programs under the principal themes such as education, community health, sustainable livelihood and rural infrastructure. About Rs. 97 Cr has been spent on various CSR activities in the Mundra region since 2010. Similar community development programs (based on need based assessment) will be continued in future as well with				<p>requirement. Other infrastructure facilities have been developed for people are as follows.</p> <ul style="list-style-type: none"> <li>• Multi-Specialty Hospital</li> <li>• School</li> <li>• Commercial complex</li> <li>• Religious place</li> </ul> <p>APSEZ is actively working with local community (including fishermen community) around the project area and provides required support for their livelihood and other concerns through the CSR arm – Adani Foundation in the main five persuasions is mentioned below.</p> <ul style="list-style-type: none"> <li>• Community Health</li> <li>• Sustainability Livelihood – Fisher Folk</li> <li>• Education</li> <li>• Rural Infrastructures</li> <li>• Skill Development</li> </ul> <p>Adani foundation has spent approx. INR 8824.17 lakhs from April – 2018 to September – 2024 for CSR activities which also includes cost of rural infrastructure projects.</p> <p>Major works carried out since April 2018 as a part of CSR activities are as below.</p>

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			allocation of appropriate budget.				<p><b><u>Last FY 2023-24 infrastructure development activities:</u></b></p> <ul style="list-style-type: none"> <li>• 377 - AC Roof sheet support to Fisherfolk Vasaha 1700+ Benefited.</li> <li>• 2 Development of Common Gathering flooring work – 4000+ Benefited.</li> <li>• 195 Stall – Vegetable market– 900+ Benefited.</li> <li>• Solar Panel System at Mundra – 600+ Benefited.</li> <li>• Maintenance, Fencing &amp; Material Support - 30+ Benefited. Renovation of Shed at Shekranpir Bhopavandh - 2000+ Benefited.</li> <li>• Renovation Check dam and CC road work at Nani Khakhar – 200+ Benefited.</li> <li>• Renovation of High School at Zaarapa – 2200+ Benefited.</li> <li>• Construction of Pipe Culvert – 400+ Benefited.</li> <li>• Construction of chain-link fencing at Mangra village – 300 people benefited.</li> <li>• Gaushala Shed at Zarapara village – 400 cattle benefited.</li> <li>• Renovation of approach road, Zarpara – benefiting 400 villagers.</li> <li>• Renovation of Civil and Electrical Work at ITI, Mundra - 500 students benefited.</li> <li>• Construction of 21 Borewell Recharge in Nagmati River - 150+ farmer benefited.</li> </ul>

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							<ul style="list-style-type: none"> <li>• Check dam Desilting and restoration at Nana Bhadiya – 100+ farmers benefited.</li> <li>• Renovation of Check dam at Pavadiyara village - 300 people benefited.</li> <li>• Renovation of Balwadi at Juna bandar &amp; Luni bandar.</li> <li>• 185 RRWHS construction is ongoing in various villages - will benefit 1300+ residents.</li> <li>• Supply &amp; installation of Solar panel (3.25 KV) at CGP, Mundra – benefiting 1200 people.</li> <li>• Development of Model Farm in Zarpara, Siracha &amp; Mangra – Benefiting 300 people.</li> <li>• Renovation of approach road at various fisherfolk vasahat.</li> </ul> <p><b><u>Previous FY 2022-23 infrastructure development activities:</u></b></p> <ul style="list-style-type: none"> <li>• 40 RRWHS structure have been completed</li> <li>• 208 Bore-well recharging activity is completed.</li> <li>• Percolation well Recharging work at Bhadiya &amp; Mota Kandgra village.</li> <li>• Sluice gate Construction to Control Flood during Flooding at Khoydivadi Vistar Bhujpur.</li> <li>• Pond Beatification and Bund Strengthening at Bhujpur village.</li> <li>• Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year.</li> </ul>

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							<ul style="list-style-type: none"> <li>• commissioning of Community Training Centre at Shekhadiya.</li> <li>• Two Pond Deepening at Zarpara under Amrut Sarovar Yojna.</li> <li>• Ground recharge activities (pond deepening work for 61 ponds) individually and 26 ponds under Sujlam Suflam Jal Abhiyan.</li> <li>• Pond Pipeline work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area.</li> <li>• JCB &amp; Hitachi Machine Support for Pre-Monsoon activities. Repairing and Maintenance work of Approach at Luni, Bavdi and Navinal Fishermen Bandar.</li> <li>• 3 Re-strengthening of Approach Road.</li> <li>• Renovate Blood storage Lab CHC Mundra</li> <li>• Renovation Blood storage Lab CHC Mundra.</li> <li>• Constructed 2 nos. of CC Road of 700 mtr.</li> <li>• Constructed Community Training center Shekadiya.</li> <li>• Constructed 2 nos. Disable Widow Toilet Block</li> <li>• Installed R.O. Plant at Mokha with capacity 1000ltr /HR.</li> <li>• Constructed 4 nos. Common gathering Open Shed</li> <li>• Constructed 03 nos. of Water Tank at Luni Bandar.</li> <li>• Developed of Cricket Ground at Hatdi Village</li> <li>• Pond Deepening work at Vadala &amp; Mota Bhadiya</li> <li>• Artificial recharge borewell in Borana, Mangara &amp; Dhruh village.</li> </ul>

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							<ul style="list-style-type: none"> <li>Under Dignity of Drivers Project, Adani Foundation has constructed Resting Shed for Drivers entering in SEZ Premises. Total 50 beds are constructed, drinking water and sanitation plus recreational – TV Facilities.</li> </ul> <p>Similar community development programs (based on need based assessment) will be continued in future as well with allocation of appropriate budget.</p>								
10.2	The overall sex ratio was found to reduce by 28% in the Mundra taluk (study area) during the period 2001 - 2011. This could be attributed to increase in influx of working men in the region due to rapid economic development. Similar trend might	Level-2	Adani foundation is taking up several girl child education programs as part of CSR activities to create awareness about girl child protection.	Suitable regional level awareness programs on the girl child protection and encouragement programs in line with state and national policies shall be adopted under Corporate Social Responsibility programs in association with district authorities.	APSEZ, Other development projects and District Administration*	Long Term	<p>Major works carried out since April 2018 as a part of CSR activities to create awareness about girl child protection are as below.</p> <ul style="list-style-type: none"> <li>The Adani Foundation provided scholarship support to motivation and encouragement of fishermen boys and girls for higher education under this program. We extend 100% fee support to female candidates and 80% to male candidates."</li> <li><b>Student Benefitted Under Uthhan Project:</b></li> </ul> <table border="1"> <thead> <tr> <th>Utthan Initiatives</th> <th>Benefitted</th> </tr> </thead> <tbody> <tr> <td>Strengthening government Primary &amp; High schools</td> <td>31 Villages, 77 Schools, 12000+ Students, Efforts for Increase Gunotsav result &amp; Board result.</td> </tr> <tr> <td>Appointing an Utthan sahayak</td> <td>70+ Utthan sahayak works as catalyst. Students: Teacher ration decrease.</td> </tr> <tr> <td>Mainstreamed Progressive learner</td> <td>Assessment: 6982, Progressive learners: 2541, Mainstreamed: 1278.</td> </tr> </tbody> </table>	Utthan Initiatives	Benefitted	Strengthening government Primary & High schools	31 Villages, 77 Schools, 12000+ Students, Efforts for Increase Gunotsav result & Board result.	Appointing an Utthan sahayak	70+ Utthan sahayak works as catalyst. Students: Teacher ration decrease.	Mainstreamed Progressive learner	Assessment: 6982, Progressive learners: 2541, Mainstreamed: 1278.
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	continue in future due to induced economic growth in the region.						Providing required resources and facilities Enabling joyful learning spaces Adani Students Development Center (ASDC) Introducing English as a Third Language Enhancing Reading Habits IT on Wheels Promote sports Teachers' & Sahayak Capacity Building Formation of Eco Club Day Celebrations & Collaboration with GoG	Sports Kit, Music Kit, TLM Kit, Science Kit provided in schools. Smart Class with Navneet software+ Bala painting + Activity base learning. 2 Adani Evening Education Center, 5 Adani Competitive Coaching Center, 5 Adani English Coaching Center Students: 5000+ Classes 1-4, Curriculum, Every Friday morning assembly in English Redding corner, 1000+ Oasis workshop, 162780 Books CICO, 100+ Schools partner from 10+ Country in International school library month (ISLM) 2 dedicative van, 2 IT instructors, 55 laptops, 34 schools, Empowering 4170 students, 200+ High schools' students 6 Students selected in District level sports school, Inspiring more 100 Students. Khel Maha Kumbh: 2000+ 3500+ Hours Capacity building program + Webinar + Diksha + 10 full days training. Plastic free village workshop: 1250+ Students, Environment Awareness program & Tree plantation in schools. Summer Camp: 6000+ Students Diwali Mela: 5500+ Students. 1400+ Parents participated.



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							<table border="1" data-bbox="1398 570 2011 711"> <tr> <td data-bbox="1398 570 1608 639">Mothers as catalyst in transformation</td> <td data-bbox="1608 570 2011 639">Mothers meet: 700+ Mothers Joined: 15000+ this year. (Meetings + Home Visit)</td> </tr> <tr> <td data-bbox="1398 639 1608 711">Strengthening Stakeholders</td> <td data-bbox="1608 639 2011 711">Support in Taluka, District &amp; state level various initiative with DIRT, BRC, Strengthening SMC Committee.</td> </tr> </table> <ul data-bbox="1398 748 2011 1414" style="list-style-type: none"> <li>• 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.</li> <li>• AVMB School Bhadreswar where Free of Cost education is provide to Poor and Needy Family Child up 10 standards More than 500 Students are benefiting every year.</li> <li>• Separate sanitation facilities for girl child in schools.</li> <li>• Menstrual Hygiene Awareness: To educate and empower rural girls and women about menstrual health, break down negative social views on menstruation, supply to enhance their overall health, education, and empowerment."</li> <li>• Till date 36% women had never used sanitary Napking single time now they started using due to our intervention. This will reduce UTI @ 22%. As our sample survey. 1587 Women and 494 School girls from 18 nos. of villages.</li> <li>• Beti Vadhavo Programme was organized in 32 Villages in the presence of Village Sarpanch and</li> </ul>	Mothers as catalyst in transformation	Mothers meet: 700+ Mothers Joined: 15000+ this year. (Meetings + Home Visit)	Strengthening Stakeholders	Support in Taluka, District & state level various initiative with DIRT, BRC, Strengthening SMC Committee.
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							<p>other leaders in year 2017-18. We explained people about the various topics i.e. importance of girl child, Sex Ratio, Gender Equality and laws regarding Child abortion. This initiative was well accepted by community and we have observed a visible change in their mindset.</p> <ul style="list-style-type: none"> <li>• During the year various activity like, Covid-19 awareness in village &amp; Slum Area, Menstrual Hygiene Day, Breastfeeding Week, National Deworming Day, National Nutrition Month had been celebrated.</li> <li>• Project Suposhan is initiated with the Motive to focus on adolescent and Reproductive age women nutrition part. Till date covered more than 12500 women and 8700 adolescents under this Project and brought them to considerable status. Curb malnutrition amongst Children, Adolescent girls and Women in our CSR villages. <ul style="list-style-type: none"> <li>✓ 204 beneficiaries covered in Breastfeeding Week</li> <li>✓ 320 beneficiaries covered in National Deworming Day</li> <li>✓ 20 villages covered in celebration of NATIONAL NUTRITION MONTH</li> <li>✓ 42 FAMILY COUNSELLING</li> <li>✓ 2059 Women participated in celebration of Women's Day week.</li> </ul> </li> </ul>

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							<ul style="list-style-type: none"> <li>• To reduce malnutrition and anemia amongst Children 95 % &amp; adolescent girls and pregnant &amp; lactating women by 70 % in three years</li> <li>• Reduction IMR and MMR</li> <li>• Support Awareness &amp; Cover 100 % Vaccination taken by Child &amp; women.</li> <li>• SuPoshan Thanksgiving program was organized. In this webinar DDO, CDPO Mundra and other dignitaries remained present and appreciated the efforts to overcome malnourishment in Mundra and Bitta.</li> <li>• The National girl child day was celebrated with ICDC Department with Vahli Dikri Yojna form filling, paediatric health camp and Baby health kit distribution at Mundra. Mrs. Ashaben-CDPO Mundra was remain present in this event. Total 61 forms has received approval letter from GOG and 15 forms filled upon the same day.</li> <li>• 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.</li> </ul> <p>About INR 8824.17 lakhs has been spent on various CSR activities in the Mundra region since April 2018 to till September 2024 including cost of community health and education for woman and girl child.</p>

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10.4	Due to economic growth leading to rapid urbanization, which prompts the need for healthcare facilities in the region. For an influx of 6 lakh people from APSEZ operations and additional 3 Lakh from induced growth by the year by 2030 (fully developed scenario), total hospitals facilities with	Level-2	Adani hospitals, Mundra is setup by Adani group near Samudra township with a goal to provide primary and secondary health care services to Adani group employees and the local populace of Mundra. The existing 100 bed Adani hospital at Mundra has been catering the services ranging from wellness and preventative care.	APSEZ will explore other possibilities to augment the primary and secondary healthcare facilities in future depending on the growth scenario at APSEZ development.	APSEZ	Long Term	<p>Adani hospitals (Multi-specialty), Mundra is having 110 bed facility and same is setup by Adani group near Samudra township.</p> <p>Primary health center and community health center are in place within the Mundra taluka.</p> <p>Other than this Adani foundation is doing various activities as part of community health. The details of last year are as below.</p> <ul style="list-style-type: none"> <li>• Mobile Health Care Units and Rural Clinics</li> <li>• 07 Rural Clinics</li> <li>• 05 villages of Mundra &amp; 02 village Mandvi block has benefited by rural clinic service.</li> <li>• Total 5519 Patients Benefitted FY 24-25 till Sep'24 (direct &amp; indirect) by Mobile van and rural clinic.</li> <li>• 2 financially challenged patients has been supported with Dialysis treatment at 22 Times which added day in their Life.</li> <li>• Provided 27,355 medical health services Burn &amp; Intensive Care Unit</li> <li>• On August 11 (Adani Foundation Day), the foundation stone for the Burn Ward at GK General Hospital, Bhuj, was laid.</li> <li>• This center will provide comprehensive care for burn victims, from emergency treatment to long-term rehabilitation. It will benefit 22 lakh population of Kutch.</li> </ul>

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	about 540 beds would be required.						<p><b>Eye Vision Care:</b></p> <ul style="list-style-type: none"> <li>To address these challenges, the Adani Foundation, in collaboration with Vision Spring, is launching a holistic eye care initiative for the community.</li> </ul> <p><b>This initiative focuses on:</b></p> <ul style="list-style-type: none"> <li>Student: See to Learn, SHG Women: See to Earn, Driver of APSEZ: See to be Safe</li> <li>Total Screening 7476 (Students) + 3958 (Drivers) = 11434</li> <li><b>Vision Aids:</b> 621 (Students) + 1110 ( Drivers) = 1731</li> <li><b>Cataract Screening:</b> 366 nos. of peoples</li> <li><b>Cataract Surgery:</b> 18 nos. of peoples</li> </ul> <p><b>Medical Services Data April to Sep - 2024:</b></p> <ul style="list-style-type: none"> <li>Ayushman Card: 243 beneficiaries</li> <li>Eye Vision Care; 7740 beneficiaries</li> <li>Driver Health Check-up: 2423 beneficiary</li> <li>Blood Donation Camp: 2902 beneficiary</li> <li>Specialty Health Camp: 2578 beneficiary</li> <li>General Health Camp: 1074 beneficiary</li> <li>Rural Clinic: 5519 beneficiaries</li> <li>Mobile Health Care Unit: 4348 beneficiaries</li> <li>Medical Supports: 1071 beneficiary</li> </ul> <ul style="list-style-type: none"> <li><b>Dialysis Support:</b> During this year, 2 patients were supported for regular dialysis with 22 Times which added day in their Life.</li> </ul>

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							<ul style="list-style-type: none"> <li>• 1094 –Economically Challenged patients have been supported for operation, OPD, IPD, Medicines and lab-test.</li> </ul> <p><b>Animal Husbandry:</b></p> <ul style="list-style-type: none"> <li>• Fodder support to 25 villages, benefiting 15005 cattle, Dry Fodder Support - 10,90,875 Kg &amp; Green Fodder Support - 27,64,920 Kg</li> <li>• Launched a vaccination camp for 20,000 cattle, in collaboration with the Animal Health Department of Bhuj, 6,200+ cattle have been successfully vaccinated,</li> </ul> <p><b><u>Previously Conducted Community Health Details:</u></b></p> <ul style="list-style-type: none"> <li>• Total Patients Benefitted FY 23-24: - 23327 (direct &amp; indirect) by Mobile van and rural clinic</li> <li>• 2 financially challenged patients has been supported with Dialysis treatment at 124 Times which added day in their Life.</li> <li>• Provided 41,546 medical health services and conducted health awareness camps for 763 High school students.</li> <li>• <b><u>Cataract-Free Mundra:</u></b> The initiative is a dedicated effort to eradicate cataract-related vision impairments specially focused on Senior citizen through Meticulous planning as below.</li> </ul>

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							<p><b>Lives Impacted: - 1131</b></p> <ul style="list-style-type: none"> <li>➤ Comprehensive Eye Screenings at Village level</li> <li>➤ Cataract Surgeries to GKGH, Bhuj</li> <li>➤ Post-Operative Care and Follow-up</li> <li>➤ 5 successful Operation</li> </ul> <p><b>Health camp:</b></p> <ul style="list-style-type: none"> <li>• Specialty camps, Eye checkup camps, Blood donation camp, Anti-tobacco awareness camp, TB screening, and other are conducted in core villages as well as in labour colonies.</li> <li>• Specialty health (Gynec, ophthalmic, specialty health camp): - 5795 Patients Benefited.</li> <li>• General health camp: - 1618 Patients benefited.</li> <li>• Blood Donation Camp: 1715 people have donated blood.</li> <li>• Conducted health programs for students, engaging 763 participants, and held sessions on Personal Health &amp; Hygiene Awareness, addressing critical health issues and promoting overall well-being.</li> <li>• Women's Health: Provided health services to more than 2610 women benefitted through Menstrual &amp; Mental Health Awareness Drive.</li> <li>• Dialysis Support: During this year, 2 patients were supported for regular dialysis with 124Times which added day in their Life.</li> <li>• Medical Supports: 1007 beneficiary in 35 village.</li> </ul>

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							<ul style="list-style-type: none"> <li>• <b>International year of Millets – 2023:</b> To promote millet culture and raise awareness about its benefits in Mundra, we organized a Millet Competition across nine villages. Over 715 women took part in the competition, while 2200 benefited from awareness sessions. Through this initiative, 300 indigenous millet recipes were showcased, highlighting the potential for sustainable and nutritious dishes in our daily diets.</li> <li>• <b>Ayushman card facilitation:</b> Ayushman card issued to 5584 for 25 village of 686.50 Cr. health insurance.</li> <li>• Preventive health Campaign the Adani Foundation is focusing on providing preventive healthcare to women and adolescent girls, raising awareness of Physical and Mental health issues, promoting healthy behaviors, implementing Menstrual hygiene initiatives and Millet consumption for healthy body.</li> <li>• <b>Sample Survey Report 2023-24</b> <ul style="list-style-type: none"> <li>○ 55% Never heard about Menstrual hygiene.</li> <li>○ 60% Are using cloths on regular basis.</li> <li>○ 36% Had never used sanitary pads.</li> <li>○ 68% Had no information about UTI.</li> <li>○ 30% Never used millets in their diet.</li> <li>○ 60% Never heard about millets or it's benefits.</li> </ul> </li> </ul>



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							<ul style="list-style-type: none"> <li>• 2222 –Economically Challenged patients have been supported for operation, OPD, IPD, Medicines and lab-test.</li> <li>• For Preventive health care General and multispecialty camps Pediatric camp, General Health camps in 7 villages and Super specialist camp which benefitted more than 4690 patients of Mundra &amp; Mandvi Taluka.</li> <li>• <b>Cattle Health Camp:</b> Adani Foundation and Animal Husbandry department Veterinary Jointly organizing cattle health Awareness and vaccination programs in 24 Villages of our periphery villages with total 18903 cattle benefitted, and 18870 cattle vaccinated. Total 982 cattle owners benefited for Preventive Health Care &amp; Fodder Support Program</li> <li>• Present Hospital facilities are adequate to avail the medical treatment for Mundra region considering present development. Other Occupational Health centres, primary health centres and community health centres are also in place in Mundra to take care the people residing in Mundra. Adani group is also operating high quality health care services to the people of Kutch at G. K. General Hospital, Bhuj having 750 beds facilities on public private partnership (PPP) model, which is 60 km far from Mundra.</li> </ul>

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							APSEZ will explore other possibilities to augment the primary and secondary healthcare facilities in future depending on the future development at APSEZ.
10.5	<p>Due to rapid economic development in the region, several employment opportunities can be generated to the local people.</p> <p>When the area is fully developed by the end of 2030, the working population of the Mundra taluk would increase from current level of 55,000 to as high as 4,00,000, which will be</p>		<p>APSEZ has been giving preferences to people from Gujarat for providing employment opportunities based on eligibility and skills. In Mundra, special programmes have been conducted by Adani Foundation to enhance the employability of youth from fisherfolk communities. Based on the need assessment results, several</p>	<p>APSEZ is committed to provide support for fishermen livelihood activities and has submitted a detailed 5 years plan to MoEF&amp;CC with a total budget of Rs.13.5 Cr.</p>	APSEZ	Short Term	<p><b><u>Last FY 2023-24 fishermen livelihood activities development activities:</u></b></p> <p><b><u>Overall Persistent efforts for Fisherman development:</u></b></p> <ul style="list-style-type: none"> <li>• 598 Education Kit Support</li> <li>• 273 Fisherman Shelter Support</li> <li>• 1,247 Vehicle transportation support of Mundra and Mandvi taluka</li> <li>• 106 Cycle Support to high school going students.</li> <li>• 613 Scholarship Support</li> <li>• 419 Youth Employment</li> <li>• 195 Linkages with Fisheries Scheme</li> <li>• 3,534 Ramatotsav Community Engagement</li> <li>• 56,523 Man days Mangroves Plantation</li> </ul> <ul style="list-style-type: none"> <li>• <b>Vehicle Transportation Facilities:</b> 146 Students supported Mundra Taluka and 58 Students supported at Mandvi Taluka during the compliance period.</li> <li>• <b>Education Kits Support:</b> Education Kits including notebooks, guides, and bags, to fisherfolk students studying in 9th to 12th standard to enhance their learning experience (57 nos. students benefitted).</li> </ul>

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	45% of the total envisaged population in Mundra Taluk by the end of 2030.		livelihood options have been introduced by the Adani Skill Development Centre, Mundra. In these centres, youth can join and get vocational training for a number of technical and non-technical skills. An industrial Training Institute is set up at APSEZ, Mundra, to enhance the skill levels of the local youth to maximum possible extent.				<ul style="list-style-type: none"> <li>• <b>Educational Awareness Sessions:</b> Through targeted awareness sessions in Fisherfolk Vasahats, we promote the transformative power of education, with a particular focus on advancing girl-child education. (487 Students motivated for high school Education).</li> <li>• <b>Scholarship Support:</b> Provide scholarship support to 31 deserving students, covering their higher secondary school fees. Emphasizing gender equality, we offer 100% fee support to female candidates and 80% to male candidates.</li> <li>• <b>Cycle Support:</b> Overcoming transportation obstacles, our cycle support initiative enables six 9<sup>th</sup> standard fisherfolk students from Juna Bandar to continue their education with ease.</li> <li>• <b>Assisting During Emergencies:</b> Fisherfolk Home were significantly damaged by the Biporjoy Cyclone. In response to that we provided 2696 cement sheets to 336 fisherfolk households of Juna Bandar, Luni, and Randh Bandar to support their recovery. (336 Fisherfolk house benefited)</li> <li>• <b>Fostering Youth Employment:</b> At APSEZ Mundra, our mission revolves around providing sustainable employment opportunities for the local fishing community. We serve as a bridge between industries and Fisherfolk youth, facilitating job placements to enhance livelihoods. This year, we have successfully engaged 115+ Fisherfolk youth, paving the way for a brighter future. (115+ Fisherfolk youth employed)</li> </ul>

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							<ul style="list-style-type: none"> <li>• <b>Strengthening Fisherfolk women:</b> Through comprehensive health and hygiene initiatives, we empower Fisherfolk women. Our programs include family planning resources, menstrual hygiene workshops, nutrition advocacy, and health awareness sessions covering vaccinations, clean water access, and mental health support. (449 Women benefited)</li> <li>• <b>Potable Water Distribution:</b> Providing potable water facilities to 9 Fisherfolk Vasahats daily, either through water tankers or by establishing linkages with the nearest Gram Panchayat. This initiative benefits over 5000 Fisherfolk, significantly improving their health and productivity. (5000+ Population benefited).</li> <li>• <b>Cement Roof Sheet Support:</b> fisherfolk Home were significantly damaged by the <b>Bipor Cyclone</b>. In response to that we provided 2696 cement sheets to 336 fisherfolk households of Juna Bandar, Luni, and Randh Bandar to support their recovery."</li> <li>• <b>Potable water Distribution:</b> Providing access of potable Drinking water Facilities to Nine fisherfolk vasahat on Daily bases, either By Water tanker or Linkage with Nearest Gram panchayat.</li> <li>• More than 5000 Fisherfolk Population are getting benefit which impact on their health and efficiency.</li> </ul>

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							<ul style="list-style-type: none"> <li>• Water distribution to Luni &amp; Bavadi Bandar Fishfolk Vasahat: 35000 KL water for 936 people.</li> <li>• <b>Sagar Mitra Card:</b> Introduced the 'Sagar Mitra Card' to simplify access for Fisherfolk to specific fishing routes within APSEZ. This digital card is connected to a digital punching machine located at designated entry points. Initially, we have implemented this system for Navinal Fisherfolk, and so far, we have issued a total of 57 Sagar Mitra Cards."</li> <li>• Government scheme Awareness session was held in association with Fisheries department Bhuj to facilitate pagadiya fishermen by providing fishing kits to seven Fishermen. The coordination was made by Adani Foundation to process application.</li> <li>• More than 35% of enrolled students in AVMB come from the Fisherfolk community.</li> <li>• <b>Youth Employment:</b> Our main objective is to offer sustainable employment opportunities to the local fishing community in APSEZ Mundra. We bridge the gap between industries and Fisherfolk youth by facilitating job placements. Currently, we have successfully engaged a total of 12 Fisherfolk youth in this endeavor.</li> <li>• <b>Vidya Sahay Yojana – Scholarship Support:</b> All basic education supportive facilities have been created to promote education in fisher folk community.</li> </ul>

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							<p>We are deeply committed to empowering the future of fisherfolk communities through education. To this end, we provide scholarship support to 30 deserving students, covering their actual school fees. In our unwavering commitment to promoting gender equality and advancing girl child education, we extend 100% fee support to female candidates and 80% to male candidates."</p> <ul style="list-style-type: none"> <li>• During FY2023-24 Approx. INR 122.32 lakh were spent for Fisherfolk Amenities work in different core areas</li> <li>• Till FY 2023-24, Adani Foundation has done total expenditure of INR 1460.51 lakh for Fisherfolk Amenities work in different core areas.</li> </ul> <p>APSEZ is carrying out various initiatives specific to the Fisherfolk community which includes:</p> <ul style="list-style-type: none"> <li>• Vidya Deep Yojana</li> <li>• Vidya Sahay Yojana – Scholarship Support</li> <li>• Adani Vidya Mandir</li> <li>• Fisherman Approach in SEZ</li> <li>• Machhimar Arogya Yojana</li> <li>• Machhimar Kaushalya Vardhan Yojana</li> <li>• Machhimar Sadhan Sahay Yojana</li> <li>• Machhimar Awas Yojana</li> <li>• Machhimar Shudhh Jal Yojana</li> <li>• Sughad Yojana</li> <li>• Machhimar Akshay kiran Yojana</li> </ul>

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							<ul style="list-style-type: none"> <li>• Machhimar Suraksha Yojana</li> <li>• Machhimar Ajivika Uparjan Yojana</li> <li>• Bandar Svachhata Yojana</li> </ul> <p>These initiatives are planned for the period 2016 – 2021 with a committed expense of INR 13.5 Cr as submitted earlier in detail in the report namely "Silent Transformation of Fisher folk at Mundra",</p> <p>Till, FY 2024-25 approx. 15.06 Cr. INR, has already been spent in support for fishermen livelihood activities. Further, details regarding the expenditure incurred against the commitment are attached as <b>Annexure – 9</b>.</p>

# Annexure - i



### TEST REPORT

Report No.	<b>URC /24/07/Water/APL-0001</b>		
Name & Address of Customer	<b>M/S. ADANI PORTS &amp; SPECIAL ECONOMIC ZONE LTD. (WFDP-West Port)</b> PLOT NO: - NAVINAL ISLAND, Village - MUNDRA, Tal. – Bhuj, DIST. - KUTCH - 370421.	Date of Report	<b>17/07/2024</b>
		Customer's Ref.	<b>As Per W.O.</b>
Sample Details	<b>Pond Water</b>	Location	<b>WB/b/h ATT-19</b>
Sample Qty.	<b>5 Lit.</b>	Appearance	<b>Colorless</b>
Sampling Date	<b>10/07/2024</b>	Sample Received Date	<b>11/07/2024</b>
Test Started Date	<b>11/07/2024</b>	Test Completion Date	<b>16/07/2024</b>
Sampled By	<b>UERL Lab</b>	Sampling Method	<b>UERL/CHM/SOP/116</b>
UERL Lab ID. No.	<b>24/07/Water/APL-0001</b>		

#### TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Unit of Measurement	Results
1.	Colour	IS 3025(Part 4):2021	Pt. Co. Scale	20
2.	Odour	IS 3025(Part 5):1983	--	Agreeable
3.	Total Suspended Solids	APHA 24th Ed.,2023,2540 –D	mg/L	60
4.	pH @ 25 ° C	APHA 24th Ed.,2023,4500-H+B	--	7.34
5.	Temperature	IS 3025(Part 9):1984	°C	30
6.	Oil & Grease	IS 3025(Part 39):1991	mg/L	BDL(MDL:2.0)
7.	Total Residual Chlorine	IS 3025(Part 26):2021	mg/L	BDL(MDL:0.1)
8.	Ammonical Nitrogen	IS 3025(Part 34):1988,	mg/L	BDL(MDL:2.0)
9.	BOD (3 days at 27 °C)	IS 3025(Part 44):1993	mg/L	24
10.	COD	IS 3025(Part 58):2006	mg/L	84.5
11.	Arsenic (as As)	APHA 24th Ed.,2023,3114-C	mg/L	BDL(MDL:0.01)
12.	Mercury (as Hg)	APHA 24th Ed.,2023, 3112-B	mg/L	BDL(MDL:0.001)
13.	Lead (as Pb)	IS 3025 (Part 47):1994	mg/L	BDL(MDL:0.01)
14.	Cadmium (as Cd)	IS 3025(Part 41):1992	mg/L	BDL(MDL:0.003)
15.	Hexavalent Chromium	APHA 24th Ed.,2023,3500CrB	mg/L	BDL(MDL:0.05)
16.	Total Chromium (as Cr)	IS 3025 (Part 52):2003	mg/L	BDL(MDL:0.05)
17.	Copper (as Cu)	IS 3025 (Part 42):1992	mg/L	BDL(MDL:0.05)
18.	Zinc (as Zn)	IS 3025(Part 49):1994	mg/L	0.064

Page 1 of 2

UERL/CHM/F-2/05

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

### TEST REPORT

Report No.	URC /24/07/Water/APL-0001		
Name & Address of Customer	M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD. (WFDP-West Port) PLOT NO: - NAVINAL ISLAND, Village - MUNDRA, Tal. – Bhuj, DIST. - KUTCH - 370421.	Date of Report	17/07/2024
		Customer's Ref.	As Per W.O.
Sample Details	Pond Water	Location	WB/b/h ATT-19
Sample Qty.	5 Lit.	Appearance	Colorless
Sampling Date	10/07/2024	Sample Received Date	11/07/2024
Test Started Date	11/07/2024	Test Completion Date	16/07/2024
Sampled By	UERL Lab	Sampling Method	UERL/CHM/SOP/116
UERL Lab ID. No.	24/07/Water/APL-0001		

#### TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Unit of Measurement	Results
19.	Selenium (as Se)	IS 3025(Part 56):2003	mg/L	BDL(MDL:0.01)
20.	Nickel (as Ni)	APHA 24th Ed.,2023,3111-B	mg/L	BDL(MDL:0.02)
21.	Cyanide (as CN)	IS 3025(Part 27):1986	mg/L	BDL(MDL:0.05)
22.	Fluoride (as F)	IS 3025(Part 60):2008	mg/L	0.48
23.	Dissolved Phosphate (as P)	APHA 24th Ed.,2023,4500-P, D	mg/L	0.46
24.	Sulphide as S	APHA 24th Ed.,2023,4500 S <sup>2</sup> F	mg/L	1.2
25.	Phenolic Compound	IS 3025(Part 43):2020	mg/L	BDL(MDL:0.01)
26.	Bio Assay test (%)	IS:6582-1971	%	90 % survival of fish after 96 hrs. in 100% effluent
27.	Manganese (as Mn)	APHA 24th Ed.,2023, 3500 Mn B	mg/L	BDL(MDL:0.1)
28.	Iron (as Fe)	IS 3025(Part 53):2003	mg/L	0.144
29.	Vanadium (as V)	APHA 24th Ed.,2023-3500 – V	mg/L	N.D.
30.	Nitrate (as NO <sub>3</sub> -N)	APHA 24th Ed.,2023,4500 NO <sub>3</sub> -B	mg/L	0.3

Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit

Opinion & Interpretation (If required):

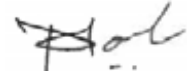
\*\*\*\*\*End of Report \*\*\*\*\*

Checked By



(Nilesh C. Patel)  
(Sr. Chemist)

Authorized By



(Nitin B. Tandel)  
(Technical Manager)

Page 2 of 2

UERL/CHM/F-2/05

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

### TEST REPORT

Report No.	<b>URC /24/07/Water/APL-0002</b>		
Name & Address of Customer	<b>M/S. ADANI PORTS &amp; SPECIAL ECONOMIC ZONE LTD. (WFDP-West Port)</b> PLOT NO: - NAVINAL ISLAND, Village - MUNDRA, Tal. – Bhuj, DIST. - KUTCH - 370421.	Date of Report	<b>17/07/2024</b>
		Customer's Ref.	<b>As Per W.O.</b>
Sample Details	<b>Pond Water</b>	Location	<b>WB/b/h ATT-8</b>
Sample Qty.	<b>5 Lit.</b>	Appearance	<b>Colorless</b>
Sampling Date	<b>10/07/2024</b>	Sample Received Date	<b>11/07/2024</b>
Test Started Date	<b>11/07/2024</b>	Test Completion Date	<b>16/07/2024</b>
Sampled By	<b>UERL Lab</b>	Sampling Method	<b>UERL/CHM/SOP/116</b>
UERL Lab ID. No.	<b>24/07/Water/APL-0002</b>		

#### TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Unit of Measurement	Results
1.	Colour	IS 3025(Part 4):2021	Pt. Co. Scale	50
2.	Odour	IS 3025(Part 5):1983	--	Agreeable
3.	Total Suspended Solids	APHA 24th Ed.,2023,2540 –D	mg/L	38
4.	pH @ 25 ° C	APHA 24th Ed.,2023,4500-H+B	--	7.19
5.	Temperature	IS 3025(Part 9):1984	°C	30
6.	Oil & Grease	IS 3025(Part 39):1991	mg/L	BDL(MDL:2.0)
7.	Total Residual Chlorine	IS 3025(Part 26):2021	mg/L	BDL(MDL:0.1)
8.	Ammonical Nitrogen	IS 3025(Part 34):1988,	mg/L	BDL(MDL:2.0)
9.	BOD (3 days at 27 °C)	IS 3025(Part 44):1993	mg/L	55
10.	COD	IS 3025(Part 58):2006	mg/L	184.7
11.	Arsenic (as As)	APHA 24th Ed.,2023,3114-C	mg/L	BDL(MDL:0.01)
12.	Mercury (as Hg)	APHA 24th Ed.,2023, 3112-B	mg/L	BDL(MDL:0.001)
13.	Lead (as Pb)	IS 3025 (Part 47):1994	mg/L	BDL(MDL:0.01)
14.	Cadmium (as Cd)	IS 3025(Part 41):1992	mg/L	BDL(MDL:0.003)
15.	Hexavalent Chromium	APHA 24th Ed.,2023,3500CrB	mg/L	BDL(MDL:0.05)
16.	Total Chromium (as Cr)	IS 3025 (Part 52):2003	mg/L	BDL(MDL:0.05)
17.	Copper (as Cu)	IS 3025 (Part 42):1992	mg/L	BDL(MDL:0.05)
18.	Zinc (as Zn)	IS 3025(Part 49):1994	mg/L	0.087

Page 1 of 2

UERL/CHM/F-2/05

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

### TEST REPORT

Report No.	URC /24/07/Water/APL-0002		
Name & Address of Customer	M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD. (WFDP-West Port) PLOT NO: - NAVINAL ISLAND, Village - MUNDRA, Tal. – Bhuj, DIST. - KUTCH - 370421.	Date of Report	17/07/2024
		Customer's Ref.	As Per W.O.
Sample Details	Pond Water	Location	WB/b/h ATT-8
Sample Qty.	5 Lit.	Appearance	Colorless
Sampling Date	10/07/2024	Sample Received Date	11/07/2024
Test Started Date	11/07/2024	Test Completion Date	16/07/2024
Sampled By	UERL Lab	Sampling Method	UERL/CHM/SOP/116
UERL Lab ID. No.	24/07/Water/APL-0002		

#### TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Unit of Measurement	Results
19.	Selenium (as Se)	IS 3025(Part 56):2003	mg/L	BDL(MDL:0.01)
20.	Nickel (as Ni)	APHA 24th Ed.,2023,3111-B	mg/L	BDL(MDL:0.02)
21.	Cyanide (as CN)	IS 3025(Part 27):1986	mg/L	BDL(MDL:0.05)
22.	Fluoride (as F)	IS 3025(Part 60):2008	mg/L	0.36
23.	Dissolved Phosphate (as P)	APHA 24th Ed.,2023,4500-P, D	mg/L	0.4
24.	Sulphide as S	APHA 24th Ed.,2023,4500 S <sup>2</sup> F	mg/L	0.5
25.	Phenolic Compound	IS 3025(Part 43):2020	mg/L	BDL(MDL:0.01)
26.	Bio Assay test (%)	IS:6582-1971	%	90 % survival of fish after 96 hrs. in 100% effluent
27.	Manganese (as Mn)	APHA 24th Ed.,2023, 3500 Mn B	mg/L	BDL(MDL:0.1)
28.	Iron (as Fe)	IS 3025(Part 53):2003	mg/L	0.587
29.	Vanadium (as V)	APHA 24th Ed.,2023-3500 – V	mg/L	N.D.
30.	Nitrate (as NO <sub>3</sub> -N)	APHA 24th Ed.,2023,4500 NO <sub>3</sub> -B	mg/L	0.6

Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit

Opinion & Interpretation (If required):

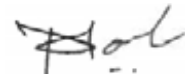
\*\*\*\*\*End of Report \*\*\*\*\*

Checked By



(Nilesh C. Patel)  
(Sr. Chemist)

Authorized By



(Nitin B. Tandel)  
(Technical Manager)

Page 2 of 2

UERL/CHM/F-2/05

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

### TEST REPORT

Report No.	<b>URC /24/07/Water/APL-0003</b>		
Name & Address of Customer	<b>M/S. ADANI PORTS &amp; SPECIAL ECONOMIC ZONE LTD. (WFDP-West Port)</b> PLOT NO: - NAVINAL ISLAND, Village - MUNDRA, Tal. – Bhuj, DIST. - KUTCH - 370421.	Date of Report	<b>17/07/2024</b>
		Customer's Ref.	<b>As Per W.O.</b>
Sample Details	<b>Pond Water</b>	Location	<b>WB/b/h ATT-7</b>
Sample Qty.	<b>5 Lit.</b>	Appearance	<b>Colorless</b>
Sampling Date	<b>10/07/2024</b>	Sample Received Date	<b>11/07/2024</b>
Test Started Date	<b>11/07/2024</b>	Test Completion Date	<b>16/07/2024</b>
Sampled By	<b>UERL Lab</b>	Sampling Method	<b>UERL/CHM/SOP/116</b>
UERL Lab ID. No.	<b>24/07/Water/APL-0003</b>		

#### TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Unit of Measurement	Results
1.	Colour	IS 3025(Part 4):2021	Pt. Co. Scale	60
2.	Odour	IS 3025(Part 5):1983	--	Agreeable
3.	Total Suspended Solids	APHA 24th Ed.,2023,2540 –D	mg/L	24
4.	pH @ 25 ° C	APHA 24th Ed.,2023,4500-H+B	--	7.18
5.	Temperature	IS 3025(Part 9):1984	°C	30
6.	Oil & Grease	IS 3025(Part 39):1991	mg/L	BDL(MDL:2.0)
7.	Total Residual Chlorine	IS 3025(Part 26):2021	mg/L	BDL(MDL:0.1)
8.	Ammonical Nitrogen	IS 3025(Part 34):1988,	mg/L	BDL(MDL:2.0)
9.	BOD (3 days at 27 °C)	IS 3025(Part 44):1993	mg/L	70
10.	COD	IS 3025(Part 58):2006	mg/L	232.9
11.	Arsenic (as As)	APHA 24th Ed.,2023,3114-C	mg/L	BDL(MDL:0.01)
12.	Mercury (as Hg)	APHA 24th Ed.,2023, 3112-B	mg/L	BDL(MDL:0.001)
13.	Lead (as Pb)	IS 3025 (Part 47):1994	mg/L	BDL(MDL:0.01)
14.	Cadmium (as Cd)	IS 3025(Part 41):1992	mg/L	BDL(MDL:0.003)
15.	Hexavalent Chromium	APHA 24th Ed.,2023,3500CrB	mg/L	BDL(MDL:0.05)
16.	Total Chromium (as Cr)	IS 3025 (Part 52):2003	mg/L	BDL(MDL:0.05)
17.	Copper (as Cu)	IS 3025 (Part 42):1992	mg/L	BDL(MDL:0.05)
18.	Zinc (as Zn)	IS 3025(Part 49):1994	mg/L	0.086

Page 1 of 2

UERL/CHM/F-2/05

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

### TEST REPORT

Report No.	URC /24/07/Water/APL-0003		
Name & Address of Customer	M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD. (WFDP-West Port) PLOT NO: - NAVINAL ISLAND, Village - MUNDRA, Tal. – Bhuj, DIST. - KUTCH - 370421.	Date of Report	17/07/2024
		Customer's Ref.	As Per W.O.
Sample Details	Pond Water	Location	WB/b/h ATT-7
Sample Qty.	5 Lit.	Appearance	Colorless
Sampling Date	10/07/2024	Sample Received Date	11/07/2024
Test Started Date	11/07/2024	Test Completion Date	16/07/2024
Sampled By	UERL Lab	Sampling Method	UERL/CHM/SOP/116
UERL Lab ID. No.	24/07/Water/APL-0003		

#### TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Unit of Measurement	Results
19.	Selenium (as Se)	IS 3025(Part 56):2003	mg/L	BDL(MDL:0.01)
20.	Nickel (as Ni)	APHA 24th Ed.,2023,3111-B	mg/L	BDL(MDL:0.02)
21.	Cyanide (as CN)	IS 3025(Part 27):1986	mg/L	BDL(MDL:0.05)
22.	Fluoride (as F)	IS 3025(Part 60):2008	mg/L	0.37
23.	Dissolved Phosphate (as P)	APHA 24th Ed.,2023,4500-P, D	mg/L	0.43
24.	Sulphide as S	APHA 24th Ed.,2023,4500 S <sup>2</sup> F	mg/L	1.7
25.	Phenolic Compound	IS 3025(Part 43):2020	mg/L	BDL(MDL:0.01)
26.	Bio Assay test (%)	IS:6582-1971	%	90 % survival of fish after 96 hrs. in 100% effluent
27.	Manganese (as Mn)	APHA 24th Ed.,2023, 3500 Mn B	mg/L	BDL(MDL:0.1)
28.	Iron (as Fe)	IS 3025(Part 53):2003	mg/L	0.858
29.	Vanadium (as V)	APHA 24th Ed.,2023-3500 – V	mg/L	N.D.
30.	Nitrate (as NO <sub>3</sub> -N)	APHA 24th Ed.,2023,4500 NO <sub>3</sub> -B	mg/L	0.5

Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit

Opinion & Interpretation (If required):

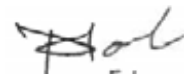
\*\*\*\*\*End of Report \*\*\*\*\*

Checked By



(Nilesh C. Patel)  
(Sr. Chemist)

Authorized By



(Nitin B. Tandel)  
(Technical Manager)

Page 2 of 2

UERL/CHM/F-2/05

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

### TEST REPORT

Report No.	URC /24/07/Water/APL-0004		
Name & Address of Customer	M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD. (WFDP-West Port) PLOT NO: - NAVINAL ISLAND, Village - MUNDRA, Tal. – Bhuj, DIST. - KUTCH - 370421.	Date of Report	17/07/2024
		Customer's Ref.	As Per W.O.
Sample Details	Pond Water	Location	Nr,yard H
Sample Qty.	5 Lit.	Appearance	Colorless
Sampling Date	10/07/2024	Sample Received Date	11/07/2024
Test Started Date	11/07/2024	Test Completion Date	16/07/2024
Sampled By	UERL Lab	Sampling Method	UERL/CHM/SOP/116
UERL Lab ID. No.	24/07/Water/APL-0004		

#### TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Unit of Measurement	Results
1.	Colour	IS 3025(Part 4):2021	Pt. Co. Scale	10
2.	Odour	IS 3025(Part 5):1983	--	Agreeable
3.	Total Suspended Solids	APHA 24th Ed.,2023,2540 –D	mg/L	44
4.	pH @ 25 ° C	APHA 24th Ed.,2023,4500-H+B	--	7.24
5.	Temperature	IS 3025(Part 9):1984	°C	30
6.	Oil & Grease	IS 3025(Part 39):1991	mg/L	BDL(MDL:2.0)
7.	Total Residual Chlorine	IS 3025(Part 26):2021	mg/L	BDL(MDL:0.1)
8.	Ammonical Nitrogen	IS 3025(Part 34):1988,	mg/L	BDL(MDL:2.0)
9.	BOD (3 days at 27 °C)	IS 3025(Part 44):1993	mg/L	11
10.	COD	IS 3025(Part 58):2006	mg/L	38.8
11.	Arsenic (as As)	APHA 24th Ed.,2023,3114-C	mg/L	BDL(MDL:0.01)
12.	Mercury (as Hg)	APHA 24th Ed.,2023, 3112-B	mg/L	BDL(MDL:0.001)
13.	Lead (as Pb)	IS 3025 (Part 47):1994	mg/L	BDL(MDL:0.01)
14.	Cadmium (as Cd)	IS 3025(Part 41):1992	mg/L	BDL(MDL:0.003)
15.	Hexavalent Chromium	APHA 24th Ed.,2023,3500CrB	mg/L	BDL(MDL:0.05)
16.	Total Chromium (as Cr)	IS 3025 (Part 52):2003	mg/L	BDL(MDL:0.05)
17.	Copper (as Cu)	IS 3025 (Part 42):1992	mg/L	BDL(MDL:0.05)
18.	Zinc (as Zn)	IS 3025(Part 49):1994	mg/L	0.092

Page 1 of 2

UERL/CHM/F-2/05

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### TEST REPORT

Report No.	URC /24/07/Water/APL-0004		
Name & Address of Customer	M/S. ADANI PORTS & SPECIAL ECONOMIC ZONE LTD. (WFDP-West Port) PLOT NO: - NAVINAL ISLAND, Village - MUNDRA, Tal. – Bhuj, DIST. - KUTCH - 370421.	Date of Report	17/07/2024
		Customer's Ref.	As Per W.O.
Sample Details	Pond Water	Location	Nr,yard H
Sample Qty.	5 Lit.	Appearance	Colorless
Sampling Date	10/07/2024	Sample Received Date	11/07/2024
Test Started Date	11/07/2024	Test Completion Date	16/07/2024
Sampled By	UERL Lab	Sampling Method	UERL/CHM/SOP/116
UERL Lab ID. No.	24/07/Water/APL-0004		

#### TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Unit of Measurement	Results
19.	Selenium (as Se)	IS 3025(Part 56):2003	mg/L	BDL(MDL:0.01)
20.	Nickel (as Ni)	APHA 24th Ed.,2023,3111-B	mg/L	BDL(MDL:0.02)
21.	Cyanide (as CN)	IS 3025(Part 27):1986	mg/L	BDL(MDL:0.05)
22.	Fluoride (as F)	IS 3025(Part 60):2008	mg/L	0.58
23.	Dissolved Phosphate (as P)	APHA 24th Ed.,2023,4500-P, D	mg/L	0.52
24.	Sulphide as S	APHA 24th Ed.,2023,4500 S <sup>2</sup> F	mg/L	0.86
25.	Phenolic Compound	IS 3025(Part 43):2020	mg/L	BDL(MDL:0.01)
26.	Bio Assay test (%)	IS:6582-1971	%	90 % survival of fish after 96 hrs. in 100% effluent
27.	Manganese (as Mn)	APHA 24th Ed.,2023, 3500 Mn B	mg/L	BDL(MDL:0.1)
28.	Iron (as Fe)	IS 3025(Part 53):2003	mg/L	0.222
29.	Vanadium (as V)	APHA 24th Ed.,2023-3500 – V	mg/L	N.D.
30.	Nitrate (as NO <sub>3</sub> -N)	APHA 24th Ed.,2023,4500 NO <sub>3</sub> -B	mg/L	0.6

Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit

Opinion & Interpretation (If required):

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

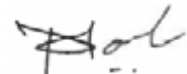
Checked By



(Nilesh C. Patel)  
(Sr. Chemist)

Page 2 of 2

Authorized By



(Nitin B. Tandel)  
(Technical Manager)

UERL/CHM/F-2/05

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