APSEZL/EnvCell/2024-25/070 **Date:** 28.11.2024

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

Sub : Half yearly Compliance report of Environment Clearance for the project namely "Development of Multipurpose berth (Terminal- 2) at Mundra Port, Dist. Kutch"

Ref : Environment clearance under CRZ notification granted to M/s Adani Ports & SEZ Limited vide letter dated 5th February, 2007 bearing no. 11-84/2006- 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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adani
Ports and Logistics

Environmental Clearance Compliance Report

of

Multipurpose Berth (Terminal -2) at Mundra Port, Dist. Kutch, Gujarat

of

Adani Ports and SEZ Limited

Period:

April – 2024 to September – 2024

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

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

adani Ports and Logistics	**Adani Ports and Special Economic Zone Limited, Mundra.**	**From : Apr'24** **To : Sep'24**

Status of the conditions stipulated in Environment Clearance

Half yearly Compliance report of Environment and CRZ Clearance for the project namely "Development of Multipurpose berth (Terminal – 2) at Mundra Port, Dist. Kutch" issued vide MoEF letter no. 11-84/2006-IA.III dated 5th February 2007.

<table>
<tr><th>Sr. No.</th><th>Conditions as per clearance letter</th><th>Compliance Status as on 30-09-2024</th></tr>
<tr><td colspan="3">A. Specific Condition</td></tr>
<tr><td>(i)</td><td>All the conditions stipulated by Forests Environment Department, Government of Gujarat vide their letter no. ENV-10-2005-222-P dated 12/10/2006 should be strictly implemented.</td><td>Complied.

Point wise compliance report of CRZ recommendations issued vide letter No. ENV-10-2005-222-P dated 12/10/2006 is enclosed as Annexure – A.</td></tr>
<tr><td>(ii)</td><td>No Objection Certificate from Gujarat State Pollution Control Board should be obtained before initiating the project.</td><td>Complied.

APSEZL had obtained No Objection Certificate vide GPCB letter No. GPCB/Unit-1/FT-139/11944 dated 27th April 2005.

Consent to operate (CC&A) has been renewed from GPCB vide consent no. AWH-117045 valid till 20th November 2026. The copy of renewed Consent to operate (CC&A) were submitted along with previous EC Compliance report for the period Oct'21 to Mar'22.

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

<table>
<tr><th>Sr. No.</th><th>Permission</th><th>Project</th><th>Ref. No. / Order No.</th><th>Valid till</th></tr>
<tr><td>1</td><td>CtO – Renewal</td><td>Mundra Port Terminal</td><td>AWH-117045</td><td>20.11.2026</td></tr>
<tr><td>2</td><td>CtE – Amendment</td><td>WFDP</td><td>17739 / 15618</td><td>18.05.2027</td></tr>
<tr><td>3</td><td>CC&A Correction</td><td>Mundra Port Terminal</td><td>PC/CCA-KUTCH-39(8)/GPCB ID 17739/748148</td><td>20.11.2026</td></tr>
</table>

The CtE – Amendment (Sr. No. 2) was submitted along with earlier compliance report submission. The copy of renewed Consent to operate (CC&A) (Sr. No. 1) were submitted along with previous EC Compliance report for the period Oct'21 to Mar'22. A copy of CCA correction letter was submitted</td></tr>
</table>

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		along with half yearly compliance report for the period of Apr'23 to Sept'23.
(iii)	The proposed project should not handle any hazardous goods and cargo.	Complied. Only containers and dry cargo is being handled on Multi-Purpose Berth (Terminal – 2). During the compliance period, no hazardous cargo / goods are handled at the Multi-Purpose Berth (Terminal – 2).
(iv)	Quarantine condition should be provided for keeping the hazardous containers if they are accidentally received.	Complied. Only containers and dry cargo is being handled on Multi-Purpose Berth (Terminal – 2). During the compliance period, no hazardous cargo / goods are handled at the Multi-Purpose Berth (Terminal – 2).
(v)	Green belt area should be developed along the project and budget earmarked.	Complied. Green belt was developed 72.67 ha. Total 149959 trees were planted with the density of 2063 Nos. per hectare within the port area. So, far APSEZ has developed 458 ha. area as greenbelt with plantation of more than 9.06 Lacs Lacs saplings within the APSEZ area. To enhance the marine biodiversity, till Sep'24 APSEZ has carried out mangrove afforestation in 4140 ha. area across the coast of Gujarat. Total expenditure for the same till date is INR 1592.8 lakh. Details on Mangroves afforestation & Green belt development carried out by APSEZ till date is annexed as **Annexure – 1**. Other than this Adani Foundation – CSR Arm of Adani Group at Mundra-Kutch has initiated multi-species plantation of mangroves in Luni village in association with GUIDE, Gujarat. During 2018-2019 (Phase-I) multi-species mangrove plantation was carried out in 10 ha, during Phase-II (2019-2020) it was 02 ha and during Phase III (2020-2021) it is 01 ha. During FY 2021-22, 03 ha area

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		coastal stretches have been planted with species. During current FY 2022-23, 04 Hector plantation has been planted with various species. Total 20 Ha. Multi-species mangrove plantation has been carried out till March-23 association with M/s. GUIDE, Gujarat. These plantations are diligently maintained and continually monitored. Notably, these forests have evolved into a thriving habitat for various marine and migratory bird species, enriching the local ecosystem. Please refer attached **Annexure – 2** for CSR activity report carried out by Adani Foundation.
(vi)	A disaster management plan covering emergency evacuation mechanism etc. to deal with natural disaster event should be prepared and furnished to the ministry.	Complied. Disaster Management plan is in place and implemented to deal with natural disasters such as cyclone, earthquake, flood/heavy rain and tsunami. Updated DMP was submitted to the MoEF & CC along with half yearly compliance report for the period from Apr – 2016 to Sep – 2016 and there is no further change in that. On Site Emergency Response Plan and Crisis Management Plan is in place and implemented. The updated (Aug'23) Onsite emergency plan was submitted during the compliance period Apr'23 to Sep'23.
(vii)	The company must take up and earmark adequate funds for the socio-economic development and for welfare measures in the area including drinking water supply, vocational training, fishery related development programmes (like cold storages)	Complied. RO Plants are provided at Samaghogha, Siracha village & Vallabh Vidyalaya at Mundra village. To reduce water born disease and women drudgery to get water, Potable water is provided to the fishermen communities at different vasahat through water tanker since 10 years. 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. ❖ Education ❖ Community Health

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024

❖ Rural Infrastructure
❖ Sustainability Livelihood
❖ Skill Development

Brief information about activities in the main five persuasions is mentioned below. Activities carried out for the same are summarized as below.

Area	Activity
Community Health	• Mobile Heath Care Units and Rural Clinics • 07 Rural Clinics • 05 villages of Mundra & 02 village Mandvi block has benefited by rural clinic service. • Total 5519 Patients Benefitted FY 24-25 till Sep'24 (direct & indirect) by Mobile van and rural clinic. • 2 financially challenged patients has been supported with Dialysis treatment at 22 Times which added day in their Life. • Provided 27,355 medical health services ❖ **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 nos. of peoples

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024	
			❖ **Cataract Surgery:** 18 nos. of peoples **Medical Services Data April to Sep - 2024:** • Ayushman Card : 243 beneficiary • Eye Vision Care ; 7740 beneficiary • Driver Health Check-up : 2423 beneficiary • Blood Donation Camp : 2902 beneficiary • Specialty Health Camp : 2578 beneficiary • General Health Camp : 1074 beneficiary • Rural Clinic: 5519 beneficiary • Mobile Health Care Unit : 4348 beneficiary • Medical Supports: 1071 beneficiary • **Dialysis Support:** During this year, 2 patients were supported for regular dialysis with 22 Times which added day in their Life. • 1094 –Economically Challenged patients have been supported for operation, OPD, IPD, Medicines and lab-test. **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,
		Sustainable Livelihood – Fisher folk, Agriculture & Women	❖ **"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

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		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 Dori work, achieving an impressive turnover of Rs.1,30,000/- **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, **Last Year conducted activities:** **Overall Persistent efforts for Fisherman development:** • 598 Education Kit Support • 273 Fisherman Shelter Support • 1,247 Vehicle transportation support of Mundra and Mandvi taluka • 106 Cycle Support to high school going students • 613 Scholarship Support • 419 Youth Employment

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		• 195 Linkages with Fisheries Scheme • 3,534 Ramaotsav Community Engagement • 56,523 Man days Mangroves Plantation **<u>Empowering Fisherfolk Communities through Education:</u>** • **Vehicle Transportation Facilities:** 146 Students supported Mundra Taluka and 58 Students supported at Mandvi Taluka during the compliance period • **Education Kits Support:** 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). • **Educational Awareness Sessions:** Through targeted awareness sessions in Fisherfolk Vasahat, we promote the transformative power of education, with a particular focus on advancing girl-child education. (487 Students motivated for high school o Education). • **Scholarship Support:** 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. • **Cycle Support:** Overcoming transportation obstacles, our cycle support initiative enables six 9th standard fisherfolk students from Juna Bandar to continue their education with ease. • **Assisting During Emergencie**s: 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) • **Fostering Youth Employment:** At APSEZ Mundra, our mission revolves around providing sustainable employment

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		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) • **Strengthening Fisherfolk women:** 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) • **Potable Water Distribution:** Providing potable water facilities to 9 Fisherfolk Vasahat 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). **<u>Sustainable Livelihood - Agriculture:</u>** 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. • 2200+ Farmers educated in natural farming • 800+ Farmers embracing natural farming methods • 200 Farmers got financial assistance of Rs. 10,000 • 3 District level exposure visit • ₹ 36.7 lakh Business done by our benefited Farmers

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024	
			Promoting Natural Farming: • **Training:** 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. • **Kitchen Garden Kit**: 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-reliance. • **Empowering Farmers**: 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. • **Financial Assistance:** 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. **Raj Shakti Prakrutik Kheti Sahkari Mandali:** • **Appreciation by Governor:** Governor of Gujarat, Shree Acharya Devvratji, encouraged 25 of our farmers practicing natural farming at the Krushi and Dairy Expo event in Bhuj.

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024	
			• **Exposure Visits Certification by GOPCA:** Our farmers embarked on three eye-opening exposure visits to Gautech-2023, • **Certification by GOPCA:** We have successfully certified 28 farmers under the Gujarat Organic Products and Certification Agency (GOPCA). **<u>Kutch Kalptaru FPO (KKPC) and Prakrutik Mandli</u>** • 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) • 19 nos. of Market Linkage for supporting to Green carnival at Samudra Township & 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 consumers, they've seen a remarkable 35% increase in their income. • 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. • 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.

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		• **Grass Land development:** 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. **Women Empowerment:** • **Self Help Groups (SHGs):** 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. ❖ **Making SHG Self Reliant:** • 16 SHG are on pathways of self-reliance. • Various handicraft, dry and fresh food making, stitching, tie and die etc. • 175+ women - Monthly average income @ 7000 of each member over Month. ❖ **Job Sourcing – Govt:** • 11 Women supported for application and process of Gram Rakshak Dal, Bank Sakhi, Bima Sakhi and Professional Resource Person. • Average income 4200 Per Month. ❖ **Job Sourcing – Private:** • Coordination for Job by Unnati Portal with Adani Group company companies, Britania, B Medical and Emphazer company. • 398 Women supported till date for job sourcing of more than 18 villages. • Average income 10200 Per Month. ❖ **Social Empowerment:**

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024	
			• 2 Livelihood Enhancement Training through RSETI. • Financial support for business set up. • Legal rights and domestic violence workshops. • Family counselling for Job sourcing. • During FY2023-24 Approx. INR 122.32 lakh were spent for Fisherfolk Amenities work in different core areas. • Till FY 2023-24 Adani Foundation has done total expenditure of INR 1460.50 lakh for Fisherfolk Amenities work in different core areas. • 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.
		Education	**Key programmatic accomplishments:** • 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
		Rural Infrastructure & Environmental Sustainability	Adani foundation designed and build various structure and provide service in the Health, Education, agriculture and sustainable livelihood area. ❖ Renovation of Zarpara High School - benefit 450+ students/annually

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		❖ Construction of Madhav seva trust School at Zarpara - benefit 250+ students/annually ❖ Renovation of AVMB school - benefit 640+ students/annually ❖ **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 Dhrub 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.** ❖ **Coastal Cleanup 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. **Last Year Completed Activities/Projects:** **Water Conservation Projects:** **Swajal Project:** ➢ **Aim:** 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. ➢ **Water Security Plan:** Due to arid climatic characters of the Kutch region, it is essential to plan for water

<table>
<tr><th>Sr. No.</th><th>Conditions as per clearance letter</th><th colspan="2">Compliance Status as on 30-09-2024</th></tr>
<tr><td></td><td></td><td></td><td>
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.
<table>
<tr><th>Block Name</th><th>Water conservation structure</th><th>Total no. of Structure</th><th>Total Capacity Created (CUM)</th></tr>
<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>
</table>
<u>Soil Conservation:</u>

1250 Farmers Awareness Sessions at Village Level: Spreading awareness on natural farming benefits and address their concerns.
7 exposure of Hands-On Training & Exposures: Arranged Workshop and training to emphasizing on real-world techniques.
857 Farmers link with Government Scheme: facilitation of govt. Cow Nurturing scheme to promote eco-friendly farming practices.
258 Gobardhan Bio-gas Support: Link with Gov Gobar Dhan Biogas Unit Nutrient-rich slurry serves as an essential organic fertilizer for natural farming.
35 Farmers Natural Farming Certification Process to obtain natural farming certification through the GOPCA for the 35 Farmers who are Members of Raj shakti Sahakrai Mandali.

</td></tr>
</table>

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024	
			• **Rs.9.88 Lacs RG Marketing Assistance**: Provide platforms and resources ensuring fair prices and broader consumer reach.
		Skill Development	**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. **ASDC Mundra Center Activities & Achievements:** • **Women Empowerment through Skill Training**: Provided Mud work training to 180 women in Mundra taluka villages supported by MPL. • **RTG Crane Operator Training**: Collaborated with APSEZ HR Team to train 79 students. • **Dori Work and Hand Embroidery Training**: Benefited 90 women in various Mundra villages supported by MPL. • **Health Awareness and Career Sessions**: 108 Ambulance Department enlightened GDA trainees at Adani Institute of Medical Sciences. Guest session on career advancement led by Mr. Kapil Goswami. • **Exposure Visit for Women**: Women trained in Mud Work, Dori Work, and Hand Embroidery showcased their skills during a visit by foreign delegates to the Solar Plant. • **Women's Related Training Seminar**: Held at Matruvandana College, Bidada, Mandvi. **ASDC Bhuj Center Activities & Achievements:** • **Commendation from Shree Jeet Adani**: Received appreciation for supporting the Divyang job fair. • **Employee Development Initiatives**: Conducted Advanced Excel training for 18 Sumitomo India Ltd employees

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		• **Entrepreneurship Development Program**: Organized a comprehensive 12- day program with 60 diverse candidates. • **New Trainee Orientation**: Conducted sessions about SAKSHAM center and LMS registration at the Bhuj Centre. • **Civil Defense Training (5 days)**: Covered essential topics including Disaster Management, First Aid, 181 Mahila Helpline, 108 Emergency Services, and Fire Safety. • **F&B & Housekeeping Batch Inauguration**: 92 students trained to enhance employability. • **Indo-Euro Project Seminar**: Arranged at various Nursing Colleges in Kutch District. Focused on German Language training and job placements. • **Crucial Meeting with ISAR & UNICEF**: Discussed future skill development challenges and transgender equality on 9th December 2023. Please refer **Annexure – 2** for full details of CSR activities carried out by Adani Foundation in the Mundra region. Budget for CSR Activity for the FY 2024-25 is to the tune of INR 823.58 lakh. Out of which, Approx. INR 309.11 lakh is spent during the FY 2024-25 (till Sep'24). Till Sep'24, Adani Foundation has done total expenditure of INR 175.85 Cr. for CSR activities in Kutch region since its inception
(viii)	The fishing activities by the fishermen living in the settlement along the creek should not be hindered and a mechanism may be evolved for the movement of fishing boats vis-a-vis shipping activities.	Complied. No commercial fisheries are prevailing in this area except Pagadia and fishermen with small boats. Unhindered access is provided to the fishing boats. During project proposal, APSEZ proposed to provide four (4) dedicated accesses at Juna Bandar, Luni, Bavdi Bandar and Zarpara for the fishermen to approach the sea for fishing activity. However, during construction as well as operation, through fishermen consultative process, APSEZ has provided seven (7) access roads. Total length of all the approach roads is approx. 23 Kms and expenditure involved is Rs. 637 Lacs. There is no hindrance to the movement of fisherman boats. Details of the same were submitted along

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		with EC Compliance report for the period Apr'18 to Sep'18. Communication mechanisms have been developed for the smooth movement of fishing boats vis-à-vis shipping activities. Please refer point no. vii above for further details regarding CSR activities being carried out by Adani Foundation.
(ix)	The relocation of the fishermen and local community if any, in the area should be done strictly in accordance with the norms prescribed by the State Government. The relocated communities should be provided with all facilities including health care, education, sanitation and livelihood.	Complied. The project was conceptualized in such a way that there are no fishermen or local community settlements in the project proposal. APSEZ performs a large-scale socio-economic upliftment program in consultation with FOKIA (Federation of Kutch Industries Association) chaired by District Collector quarterly. APSEZL have provided necessary facilities including health care, education, sanitation, livelihood, drinking water & other infrastructural support to fisher folk community in the region. Please refer point no. vii above for further details regarding CSR activities being carried out by Adani Foundation.
(x)	The project proponent should not undertake any destruction of mangroves during construction and operation of the project.	Complied. Construction phase is already completed and the project is in operation phase. All developments are carried out as per permissions granted. As a part of mangrove conservation plan, APSEZ has done following activities. 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. b. Tidal observation in creeks in and around APSEZ – The cost of the said activity was INR 1.0 Lacs incurred by APSEZ. c. Algal & 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

<table>
<tr><th>Sr. No.</th><th>Conditions as per clearance letter</th><th>Compliance Status as on 30-09-2024</th></tr>
<tr><td></td><td></td><td>
compliance report submission Oct'23 to Mar'24.
d. Awareness of mangroves importance in surrounding communities & 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 is activity is being done on continuous basis as a part of CSR activity.

<u>Summary of Conservation of mangroves:</u>

<table>
<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>
<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>Total</td><td></td><td>2723</td><td>629</td><td>--</td></tr>
</table>

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%).

As a part of GCZMA recommendations and NCSCM mangrove conservation action plan, APSEZ has undertaken following activities.

<table>
<tr><th>Sr. No.</th><th>Recommendations</th><th>Compliance</th></tr>
</table>
</td></tr>
</table>

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024			
			1.	Mangrove mapping and monitoring in and around APSEZ	• APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island. • 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 & 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%. • 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. • Hence, there is an overall growth of mangroves in creeks in and around APSEZ, Mundra is 502 Ha between 2011 and 2019. • The cost of the said study was INR 23.56 Lacs incurred by APSEZ. • 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

<table>
<tr><th>Sr. No.</th><th>Conditions as per clearance letter</th><th colspan="3">Compliance Status as on 30-09-2024</th></tr>
<tr><td></td><td></td><td></td><td></td><td>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.
• 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%).
• The cost of the said study was INR 23.60 Lacs incurred by APSEZ.

Summary of Mangrove mapping and monitoring (from 2011 to 2021):
<table>
<tr><th rowspan="2">Mangrove mapping Year</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>
<tr><td>2011</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>2596</td><td>256</td><td>10.94%</td></tr>
<tr><td>2019 to 2021 till March</td><td>2723</td><td>127</td><td>4.89</td></tr>
<tr><td>Total</td><td>2723</td><td>629</td><td>--</td></tr>
</table></td></tr>
<tr><td></td><td></td><td>2.</td><td>Tidal observation in creeks in and around APSEZ</td><td>• APSEZ carried out the tidal observations at locations similar to 2017 in Kotdi, Baradimata, Navinal, Bocha and Khari creeks under the guidance of NCSCM.
• The observed tidal ranges indicate that the creeks experience normal tidal ranges, adequate for the growth of mangroves.
• The cost of the said activity was INR 1.0 Lacs.</td></tr>
<tr><td></td><td></td><td>3.</td><td>Removal of Algal and Prosopis growth from mangrove areas</td><td>• 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.</td></tr>
</table>

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024		
				• 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.
		4.	Awareness of mangroves importance in surrounding communities	• 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. • Awareness of mangroves importance in surrounding communities & 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. • **Grass Land development:** 213 acres of gauchar land has been cleaned and allocated for Grass land development with strong Community Contribution and Mobilization. • 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. • APSEZ has celebrated the International Day for the Conservation of the Mangrove Ecosystem with coordination of Adani Foundation from 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 **Annexure - 3**.

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		• Refer CSR report attached as **Annexure – 2.** 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.
(xi)	Sewage arising in the port area should be disposed off through septic tank – soak pit system or should be treated along with the industrial effluent to conform to the standards stipulated by Gujarat Pollution Control Board and should be utilized / recycled for gardening, plantation and irrigation.	Complied. Sewage generated from port is being treated in designated ETP and treated sewage is used for horticulture purposes.

Location	Capacity	Quantity of Treated Water (Avg. from Oct'23 to Mar'24)	Type of ETP / STP
LT	265 KLD	71.13 KLD	Activated Sludge

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

Frequency of Analysis: Once in a month

Parameter	Unit	Min	Max	Average	Perm. Limit[$]
pH	--	6.87	7.51	7.13	6.5 – 8.5
SS	mg/L	22	46	31.00	100
TDS	mg/L	629	1318	914.17	2100
COD	mg/L	82.1	92	87.58	100
BOD	mg/L	24	27	25.37	30
Ammonical Nitrogen as NH_3-N	mg/L	15.8	34.4	28.60	50

[$] as per CC&A granted by GPCB

The quality of marine water, treated effluents, air emissions and noise levels are being regularly analyzed by NABL accredited and MoEF&CC approved agency.

Monitoring and analysis of ETP treated waste is also carried out regularly through in-house laboratory for the parameters such as pH, TDS, TSS, COD, Chlorides, and residual chlorine.

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		Please refer **Annexure–4** for detailed analysis reports. Approx. INR 6.11 Lakh is spent for all environmental monitoring activities during the FY 2024-25 (till Sep'24) for overall APSEZ. It is also noted that GPCB is doing regular site inspection along with wastewater sampling and analysis. The last GPCB sample analysis report was submitted as part of compliance report submission for the duration of Apr'21 to Sep'21 which shows all the parameters are well within the permissible limit.
(xii)	Project proponent should prepare and regularly update the disaster management plan from time to time.	Complied. Disaster Management plan to deal with natural disasters such as cyclone, earthquake, flood/heavy rain and tsunami is in place and implemented. Copy of the same was submitted to MoEF & CC along with half yearly compliance report for the period from Apr – 2016 to Sep – 2016.
(xiii)	There should be no withdrawal of ground water in CRZ area, for this project. The proponent should ensure that as a result of the proposed constructions, ingress of saline water into ground water does not take place. Piezometers should be installed for regular monitoring for this purpose at appropriate locations on the project site.	Complied. There is no withdrawal of ground water in CRZ area as well as Non-CRZ area for this project. Entire water requirement is sourced from GWIL and desalination plant of APSEZ. Average water consumption for entire APSEZ area is 5.34 MLD during compliance period i.e. Apr'24 to Sep'24. To monitor the ground water quality, bore wells are provided at various location in the port and SEZ areas. Third party analysis of the ground water is being carried out twice a year by NABL and MoEF&CC accredited 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. Monitoring Reports are attached as **Annexure – 4** for the same. **Number of Sampling Locations: 5**

Parameters	Unit	Min	Max	Average
pH @ 25 ° C	--	7.13	8.17	7.87
Salinity	ppt	0.90	3.30	1.54
Oil & Grease	mg/L	*BDL (MDL:5.0)	*BDL (MDL:5.0)	*BDL (MDL:5.0)

<table>
<tr><th>Sr. No.</th><th>Conditions as per clearance letter</th><th>Compliance Status as on 30-09-2024</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Hydrocarbon</td><td>mg/L</td><td>ND*</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Lead as Pb</td><td>mg/L</td><td>*BDL (MDL:0.01)</td><td>*BDL (MDL:0.01)</td><td>*BDL (MDL:0.01)</td></tr>
<tr><td>Arsenic as As</td><td>mg/L</td><td>*BDL (MDL:0.01)</td><td>*BDL (MDL:0.01)</td><td>*BDL (MDL:0.01)</td></tr>
<tr><td>Nickel as Ni</td><td>mg/L</td><td>0.09</td><td>0.10</td><td>0.10</td></tr>
<tr><td>Total Chromium as Cr</td><td>mg/L</td><td>*BDL (MDL:0.05)</td><td>*BDL (MDL:0.05)</td><td>*BDL (MDL:0.05)</td></tr>
<tr><td>Cadmium as Cd</td><td>mg/L</td><td>0.03</td><td>0.05</td><td>0.04</td></tr>
<tr><td>Mercury as Hg</td><td>mg/L</td><td>*BDL (MDL:0.001)</td><td>*BDL (MDL:0.001)</td><td>*BDL (MDL:0.001)</td></tr>
<tr><td>Zinc as Zn</td><td>mg/L</td><td>*BDL (MDL:0.05)</td><td>*BDL (MDL:0.05)</td><td>*BDL (MDL:0.05)</td></tr>
<tr><td>Copper as Cu</td><td>mg/L</td><td>0.08</td><td>0.10</td><td>0.09</td></tr>
<tr><td>Iron as Fe</td><td>mg/L</td><td>0.12</td><td>0.61</td><td>0.30</td></tr>
<tr><td>Insecticides/Pesticides</td><td>µg/L</td><td>ND*</td><td>ND*</td><td>ND*</td></tr>
<tr><td>Depth of Water Level from Ground Level</td><td>meter</td><td>1.95</td><td>2.25</td><td>2.10</td></tr>
</table>
ND*= Not Detectable
*BDL – Below Detection Limit
*MDL – Minimum Detection Limit

Please refer Annexure – 4 for detailed analysis reports. Approx. INR 6.11 Lakh is spent for all environmental monitoring activities during the period FY 2024-25 (till Sep'24) for overall APSEZ, Mundra.
</td></tr>
<tr><td>(xiv)</td><td>The project should not be commissioned till the requisite water supply and electricity to the project are provided by PWD/ Electricity Department.</td><td>Complied.

Construction activity is already completed and the project is in operation phase. Necessary agreement for supply of electricity is done through MPSEZ Utilities Ltd. (MUL). Copies of agreements were submitted to MoEF&CC along with half yearly compliance report for the period from Apr – 2016 to Sep – 2016.</td></tr>
<tr><td>(xv)</td><td>Specific arrangements for rainwater harvesting should be made in the project design and the rain water so harvested should be optimally utilized. Details in this regard should be furnished to this Ministry's Regional Office at Bhopal within 3 months.</td><td>Complied.

Groundwater recharge cannot be done at the project site since the entire project is in the intertidal / sub tidal areas. Rainwater within project area is managed through storm water drainage.

We have installed Rainwater 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</td></tr>
</table>

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		FY 2024-25 till Sept'24 Approx. 7.31 ML of rainwater has been recharged to increase the ground water table. We have also connected roof top rainwater duct of operational building (Tug berth building within MPT) with u/g water tank for utilization of collected rain water for gardening / horticulture purpose. Details of the same were submitted along with EC Compliance report for the period Oct'18 to Mar'19. However, Adani Foundation – CSR arm of Adani Group has carried out rainwater harvesting activities in the nearby villages for benefit of the locals. Water conservation Projects i.e. Roof Top Rain Water Harvesting, Desilting of Check dams, Bore Well Recharge and Pond deepening were taken up in past years, review and monitoring of all water harvesting structures had been taken up. To make connections between human actions and the level of biological diversity found within a habitat and/or ecosystem, this year Adani Foundation launch project "Sanrakshan" in coordination with GUIDE and Sahjeevan. Since 10 years considerable Water Conservation Work carried out in Mundra Taluka. Due to satisfactory rain in current year 1.11 mtr ground water table increased as per increased in coastal belt of Mundra as per Government Figures. **Our water conservation work is as below.** **Water Conservation Projects** – Water Conservation Projects completed during Past Compliance period: **<u>Swajal Project:</u>** ➢ **Aim:** The Foundation's Water Conservation program, SWAJAL, is aimed at addressing the alarming depletion of groundwater levels and

<table>
<tr><th>Sr. No.</th><th>Conditions as per clearance letter</th><th>Compliance Status as on 30-09-2024</th></tr>
<tr><td></td><td></td><td>
reduction in water sources in various parts of Kutch district.
➢ Water Security Plan: 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.
<table>
<tr><th>Block Name</th><th>Water conservation structure</th><th>Total no. of Structure</th><th>Total Capacity Created (CUM)</th></tr>
<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>
</table>
Earlier Completed Activities/Projects:
<table>
<tr><th>Sr. No.</th><th>Project</th><th>Unit</th><th>Outcome</th><th>Impact</th></tr>
<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>
<tr><td>3</td><td>Pipe Culvert at Checkdam at Bhujpur</td><td>1</td><td>prevent water runoff into seaside.</td><td>35 farmers' 120+Acre Area of Agri land can be Irrigated</td></tr>
</table>
• Large number of water harvesting structure (18 Nos. of check dams in coordination with salinity department) and Augmentation of 3 check dams.
• Ground recharge activities (pond deepening work for 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.
• New Pond Deepening Under Ajadi ka Amrut Mahotsav done in Goyarsama village Approx Deepening Capacity is 12000 Cum.
• Roof Top Rainwater Harvesting 145 Nos. (40 Nos. current FY 2022-23) which is having 10,000 litre storage which is
</td></tr>
</table>

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		sufficient for one year drinking water purpose for 5 people family. • Recharge Borewell 208 Nos (19 Nos. current FY 2022-23) which is best ever option to direct recharge the soil. • Drip Irrigation approx. 1505 Farmers benefitted in coordination with Gujrat Green Revolution Company till date. • Bund construction on way of Nagmati River could save more than 575 MCFT water quantity which recharged in ground due to which borewell depth decreased by 50-100 Ft in Zarpara, Bhujpur and Navinal Vadi Vistar. • Pond Pipeline work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area. • Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year. 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. Please refer **Annexure – 2** for full details of CSR activities carried out by Adani Foundation in the Kutch region. Budget for CSR Activity for the FY 2024-25 is to the tune of INR 823.58 lakh. Out of which, Approx. INR 309.11 lakh is spent during the FY 2024-25 till Sep'24.
(xvi)	The facilities to be constructed in the CRZ area as part of this project should be strictly in conformity with the provisions of the CRZ Notification, 1991 as amended subsequently.	Complied. Construction activities are completed in accordance with the prevailing laws.
(xvii)	No product other than those permissible in the coastal Regulation Zone Notification, 1991 should be stored in the Coastal Regulation Zone area.	Complied. APSEZ store only those product / cargo within CRZ area, which are permissible as per Coastal Regulation Zone Notification, 1991 & its amendments.
B. General Condition		
(i)	Construction of the proposed structures should be undertaken meticulously	Complied.

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
	confirming to the existing Central / local rules and regulations including Coastal Regulation Zone Notification 1991 and its amendments. All the construction designs / drawings relating to the proposed construction activities must have approvals of the concerned State Government Department / Agencies.	All construction activities are carried out confirming to the existing rules and regulation and as per the CRZ notification. Required details on No Objection Certificate from Gujarat State Pollution Control Board and applicable consent are as provided in Specific Condition No. 2 above.
(ii)	Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation, etc. should be ensured for construction workers during the construction phase of the project so as to avoid felling of trees / mangroves and pollution of water and the surroundings.	Complied. Construction activity is completed and the project is in operation phase. No construction camps were located in CRZ area. Most workers came from nearby villages however, for others; construction camps were located outside CRZ area. All necessary infrastructure and facilities like mobile toilets, safe drinking water, medical health care etc. were provided.

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
(iii)	The project authorities must make necessary arrangements for disposal of solid wastes and for the treatment of effluents by providing a proper waste water treatment plant outside the CRZ area. The quality of treated effluents, solid wastes and noise levels etc. must conform to the standards laid down by the competent authorities including the Central / State Pollution Control Board and the Union Ministry of Environment and Forest under The Environment Protection Act, 1986, whichever are more stringent.	Complied. **Liquid Effluent & Sewage** - It is being treated at ETP/STP plants outside the CRZ area, treated water from ETP/STP is being used for horticultural purposes. Please refer point no xi of the specific conditions above for further details. All attributes of environment viz. air; water; soil and noise are being regularly analyzed by NABL and MoEF&CC accredited agency M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Please refer **Annexure – 4** for detailed analysis report. **Waste Management** – APSEZ has adopted 5R concept for environmentally sound management of different types of solid & liquid wastes. Please refer below details about management of each type of waste. **Non-Hazardous Solid Waste**: A well-established system for segregation of dry & wet waste is in place. All wet waste (Organic waste) is being segregated & utilized for compost manufacturing and/or biogas generation for cooking purpose. The compost is further used by in house horticulture team for greenbelt development. Whereas dry recyclable waste is being sorted in various categories. Presently manual sorting is being done for sorting of different types of solid waste. Segregated recyclable materials such as Paper, Plastic, Cardboard, PET Bottles, and Glasses, etc. are then sent to respective recycling units, whereas remaining non-recyclable waste is bailed and sent to cement plant (M/s. Ambuja Cement Ltd., Kodinar) for Co-processing as RDF (Refused Derived Fuel). APSEZ, Mundra is certified for Zero Waste to Landfill management system (ZWTL MS 2020) by TUVRheinland India Pvt. Ltd. **Hazardous & Other Waste:** • Bio medical waste generated from OHCs and Adani Hospital is being disposed at Common Bio Medical Waste Treatment Facility namely M/s. Distromed Kutch Services Pvt. Ltd., Bhuj.
(iv)	The proponents should provide for a regular monitoring mechanism so as to ensure that the treated effluents conform to the prescribed standards. The records of analysis reports must be properly maintained and made available for inspection to the concerned state /central officials during their visits.	

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		• E – Waste is being sold to GPCB registered recyclers namely M/s. Galaxy Recycling, Rajkot. • Used Batteries are being sold to GPCB registered recyclers namely M/s. Sabnam Enterprise, Kutch • 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. The 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. It is also being reused within organization for lubrication purpose. • ETP Sludge, Oily Cotton Waste, Pig Waste are being disposed through co-processing in cement industries of Ambuja Cement Ltd., Kodinar. • Discarded drums / barrels were being sold to authorized decontamination facility i.e. M/s. Jawrawala Petroleum, Ahmedabad. It is also being reused within organization for filling hazardous waste. • Solid hazardous waste i.e. Tank bottom sludge was being sold to authorized recycler namely M/s. Mundra Oil Pvt. Ltd., Mundra for recycling. • Expired paint materials was being disposed by incineration through common facility i.e. M/s. Saurashtra Enviro Projects Pvt. Ltd., Bhachau. • Downgrade chemicals generated from cleaning of storage tanks / pipelines were being sold to authorized solvent recovery facilities namely M/s. Acquire Chemicals, Ankleshwar. • Slop Oil received from vessels is treated to separate water and oil particles in Oil Water Separator system. Separated oil from the same was being sold to authorized recycler / reprocessor namely M/s. Western India Petro Chem Ind - Bhavnagar, Aviation Corporation - Kutch & Aroma Petrochem - Bhavnagar and water is sent to ETP for further treatment. • However, during the compliance period, there was no generation and disposal of Sludge & Filters contaminated with oil, Tank Bottom sludge, Asbestoses

<table>
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<tr><td></td><td></td><td>
Waste, Glass wool Waste (Thermal Insulation Material), Downgrade Chemicals, Waste Oil and Expired Paint Material.
• Horticulture waste is collected from various green belt areas and it is using for making of manure and manure is being utilizing in horticulture purpose within plant premises.

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

The following table summarizes the waste management practice (from Apr'24 to Sep'24) for different types of wastes at APSEZ:
<table>
<tr><th>Type of Waste</th><th>Name of Waste</th><th>Quantity (MT)</th><th>Disposal Method</th></tr>
<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>39.80</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">Hazardous Waste Total</td><td colspan="2">147.39</td></tr>
<tr><td rowspan="4">Non-Hazardous Waste</td><td>Glass Waste</td><td>16.65</td><td>After recovery sent for recycling / Reuse within premises</td></tr>
<tr><td>Horticulture Waste</td><td>359.15</td><td>Used for making of manure and utilize for horticulture purpose</td></tr>
<tr><td>Metal Scrap</td><td>1418.91</td><td>After recovery sent for recycling / Reuse within premises</td></tr>
<tr><td>Organic / Food Waste</td><td>537.95</td><td>Converted to Manure for Horticulture use / Biogas for cooking purpose</td></tr>
</table>
</td></tr>
</table>

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024

		Paper Waste	23.57	After recovery sent for recycling / Reuse within premises
		Plastic Waste	159.20	After recovery sent for recycling / Reuse within premises
		RDF (Non Recyclable Waste)	145.88	Co-processing at cement industries
		Rubber Waste	262.47	After recovery sent for recycling / Reuse within premises
		Wooden waste	57.45	After recovery sent for recycling / Reuse within premises
	Non-Hazardous Waste Total		**2981.21**	
	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
	Other Waste Total		**22.92**	
	Grand Total		**3151.52**	

(v) In order to carry out the environmental monitoring during the operational phase of the project, the project authorities should provide an environmental laboratory well equipped with standard equipment and facilities and qualified manpower to carry out the testing of various environmental parameters.

Complied.

Ambient Air Quality (twice in a week) and Noise (once in a month) monitoring are being carried out by NABL and MoEF&CC accredited 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.

Total Ambient Air & Noise Sampling Locations: 5 Nos.

Parameter	Unit	Min	Max	Average	Perm. Limit[$]
AAQM					
PM_{10}	$\mu g/m^3$	36.49	87.39	66.30	100
$PM_{2.5}$	$\mu g/m^3$	16.94	36.72	26.54	60
SO_2	$\mu g/m^3$	10.87	33.71	22.20	80
NO_2	$\mu g/m^3$	13.66	38.91	25.63	80

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		<table><tr><th>Noise</th><th>Unit</th><th>Leq Min</th><th>Leq Max</th><th>Leq Ave.</th><th>Leq Perm. Limit*</th></tr><tr><td>Day Time</td><td>dB(A)</td><td>58.3</td><td>69.6</td><td>64.6</td><td>75</td></tr><tr><td>Night Time</td><td>dB(A)</td><td>57.8</td><td>64.8</td><td>61.6</td><td>70</td></tr></table> $ as per NAAQ standards, 2009 * as per CC&A granted by GPCB Values recorded confirms to the stipulated standards. Please refer **Annexure – 4** for detailed analysis reports. M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi has an environmental laboratory well equipped with standard equipment and facilities and qualified manpower to carry out the testing of various environmental parameters. Approx. INR 6.11 Lakh is spent for all environmental monitoring activities during the FY 2024-25 (till Sep'24) for overall APSEZ.
(vi)	The sand dunes and mangroves, if any, on the site should not be disturbed in any way.	Complied. There are no sand dunes and mangroves within the project area. However, mangrove conservation plan has been developed by NSCSM and same has been submitted. Please refer Condition No. x of specific conditions for further details.
(vii)	A copy of the clearance letter will be marked to the concerned Panchayat / local NGO, if any, from whom any suggestion / representation has been received while processing the proposal.	Not applicable at present
(viii)	The Gujarat Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industries center and Collector's Office / Tehsildar's Office for 30 days.	Not Applicable This condition does not belong to project proponent.
(ix)	The funds earmarked for environment protection	Complied.

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
	measures should be maintained in a separate account and there should be no diversion of these funds for any other purpose. A year wise expenditure on environmental safeguards should be reported to this Ministry's Regional Office at Bhopal and the State Pollution Control Board.	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. 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 FY 2024-25 (till Sep'24). Detailed breakup of the expenditures for the past 3 years is attached as **Annexure – 5.**
(x)	Full support should be extended to the officers of this Ministry's Regional Office at Bhopal and the officers of the Central and State Pollution Control Board by the project proponents during their inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.	Complied. APSEZL is always extending full support to the regulatory authorities during their visit to the project site. Last visit of Regional Office, GPCB was done on 07.03.2022 for Main port and compliance of the same has been submitted vide our letter dated 11.03.2022. Details of the same were submitted as part of compliance report submission for the duration of Oct'21 to Mar'22. Inline to the compliance certification process of Environment Clearance condition of Waterfront Development Plan, RO, MoEF&CC Bhopal had visited the site on 27th & 28th January, 2020 for compliance verification. APSEZ provided all requisite information and documents required by the Regional Officer MoEF&CC). During the said compliance verification visit and as per the compliance certification received, there was no non-compliance observed. 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 17th 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-

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
		compliance observed. Inline to the compliance of MoEF&CC Order dated 18th September, 2015, Joint Review Committee (JRC) comprising officials from various competent authorities visited the APSEZ, Mundra from 1st to 3rd 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&CC vide dated 01.12.2021, there was no non-compliance observed. Inline to the compliance certification process for getting Environment Clearance of Waterfront Development Plan, IRO- MoEF&CC Gandhinagar has lastly visited the site on 18th to 20th December, 2023 for compliance verification. APSEZ provided all requisite information and documents required by the Regional Officer MoEF&CC). During the said compliance verification visit and as per the compliance certification received, there was no non-compliance observed. Copy of submitted action taken report were submitted as part of compliance report submission for the duration of Oct'23 to Mar'24.
(xi)	In case of deviation or alteration in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new one for ensuring environmental protection.	Complied. Construction phase is completed and the project is in operation phase. There is no deviation or alteration in project including implementing agency.
(xii)	This Ministry reserves the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.	Point noted.
(xiii)	This Ministry or any other competent authority may stipulate any other	Point noted.

Sr. No.	Conditions as per clearance letter	Compliance Status as on 30-09-2024
	additional conditions subsequently, if deemed necessary, for environmental protection, which should be complied with.	
(xiv)	The project proponent should advertise in at least in two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board and may also be seen at the website of the Ministry of Environment & Forests at http://www.envfor.nic.in. The advertisement should be made within seven days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bhopal.	Complied
(xv)	The projects proponents should inform regional Office at Bhopal as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	Complied. The construction phase is completed and the project is in operation phase.

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

ANNEXURE – A

Half yearly Compliance report of CRZ recommendation

Half yearly Compliance report of CRZ recommendation for the project namely "Development of Multipurpose berth (Terminal – 2) at Mundra Port, Dist. Kutch" issued by DoEF, GOG vide letter no. ENV-10-2005-222-P dated 12th October, 2006.

Sr. No.	Conditions	Compliance Status as on 30.09.2024
Specific Condition		
1	The provision of the CRZ notification of 1991 and subsequent amendments issued from time to time shall be strictly adhered to by the GAPL. No activity in contradiction to the provision of the CRZ Notification shall be carried out by the GAPL.	Complied. Construction activities are completed and the project is in operation phase. All stipulations with respect to the CRZ notification and its subsequent amendments are complied with.
2	All permissions from different Government Departments / agencies shall be obtained by the GAPL before commencing the expansion activities.	Complied. Please refer to specific condition no. 2 of the EC and CRZ clearance above for details upon NOC & CC&A obtained from GPCB. Construction activity is already completed and the project is in operation phase. APSEZ had obtained No Objection Certificate vide GPCB letter No. GPCB/Unit-1/FT-139/11944 dated 27th April 2005.
3	No Dredging and /or reclamation activity shall be carried out in the CRZ area categorized as CRZ (i) and it shall have to be ensured that the mangrove habitats and other ecologically important and significant areas are not affected due to any of the project activities.	Complied. No dredging or reclamation is carried out in CRZ – 1 (A) area. Capital dredging is completed and only maintenance dredging is being carried out, Please refer to specific condition no. x of the EC and CRZ clearance for mangrove conservation.
4	The dredge material shall be disposed of into pre-designated areas duly identified and got approved through the Gujarat Coastal Zone Management Authority for which the company shall	Complied. Construction and capital dredging activities are completed and the project is in operation phase. Impact assessment was done for the same and EIA report was submitted to GCZMA and MoEF&CC based on which the final Environmental and CRZ clearance was granted.

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	have to make separate application along with proper EIA indicating the exact location of the dredge material disposal area on the CRZ map of the region prepared by the Space Application Center, Ahmedabad, as there exists best mangrove area in and around Bocha and Navinal islands, which requires to be protected.	Detail on study for conservation and monitoring for natural mangrove stands at Mundra is as provided in condition no. 3 above.
5	Massive mangrove plantation activity in at least 1200 ha. Area shall be carried out within a time frame of 5 years commencing from July, 2006 without any delay whatsoever.	Complied. It may be noted that to enhance the marine biodiversity, till date APSEZ has carried out mangrove afforestation in 4140 ha. till Sep'2024 Area across the coast of Gujarat. Total expenditure for the same till date is INR 1592.8 lakh. Details on mangroves afforestation & Green belt development carried out by APSEZ till date is annexed as **Annexure – 1**. Please refer condition no. v of specific conditions (EC & CRZ Clearance) for further details.
6	No effluent or sewage shall be discharged into the sea / creek or in the CRZ area and shall be treated to conform the norms prescribed by the Gujarat Pollution Control Board and would be reused/ recycled within the plant premises.	Complied. Entire quantity of sewage generated is being treated in designated ETP/STPs and treated sewage is used for gardening. Please refer to specific condition no. xi of the EC and CRZ clearance above for more details.

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30.09.2024</th></tr>
<tr><td>7</td><td>All the recommendation and suggestions given by the NIO in its Comprehensive Environment Impact Assessment report for conservation / protection and betterment of environment shall be implemented strictly by the GAPL.</td><td>Complied.

All the recommendation and suggestions for conservation / protection and betterment of environment given by the NIO in its comprehensive EIA have been implemented. Few examples are provided below.
Few Marine EIA recommendations:

<table>
<tr><td>Operational protocols and safety procedure should be printed and freely available to concerned staff. The employees must be adequately trained to inculcate a high level of competence not only in day to day operations but also during emergency situations. Periodic refresher courses must also be organized to maintain the level of their competence.</td><td>The company has written the operational protocols and safety procedures as a part of ISO 14001:2015, ISO 45001:2018 and ISO 9001:2015 certifications.

APSEZ has established training department to impart training to its employees.

IMO module course organized by OSCT India, ICG & Sea Care Marne Services are conducted & 24 personnel have achieved IMO level 1, 04 personnel have achieved IMO Level 2. Different training modules as Oil Spill, Oil Spill Equipment, Oil spill Management course, Notification exercise, Table Top, Incident are conducted at different frequency.</td></tr>
<tr><td>Temporary colonies of workforce should be located sufficiently away from the HTL with proper sanitation. Adequate arrangement of fuel supply to the workers</td><td>Construction activity is already completed.
Most of the construction labours were residing in the nearby villages where all basic facilities are easily available. However, for those residing near the</td></tr>
</table></td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 30.09.2024	
		should be made to discourage them from using mangroves for firewood.	construction site, infrastructure facilities such as water supply, fuel, sanitation, first aid, ambulance etc. were provided by APSEZ.
		Adequate vigilance is required to adherence of ships to Marpol protocol and related regulations.	During the vessel declaration compliances with respect to Air Pollution and Oil are monitored by the Port Authority. The ships are certified with international certification bodies only after complying with the Marpol protocol.
		Manual Listing Procedure for conducting ship movement operations in the port area must be available to the concerned staff.	Berthing Policy & Tariff Structure is made available for conducting ship movement to the concerned staff and made available on web link www.adaniports.com/pdfs/PIB_06122013.pdf Port Information Booklet is also made available on web link www.adaniports.com/Port_Operations_Port_Tariffs.aspx
8	The construction and operational activities shall be carried out in such a way that there is no negative impact on mangroves and other coastal / marine habitat. The construction activities and dredging shall be carried out only under the constant supervision of the NIO.	Complied. Construction and capital dredging activity is already completed. All operational activities are being carried out in such a way that there are no impacts on the nearby mangroves. Details on mangrove conservation and afforestation are provided against Specific Condition No. 5 above.	
9	The GAPL shall strictly ensure that no creeks are blocked due to any activity at Mundra Port and the	Complied. As per Marine EIA carried out by NIO in 2008, prominent creek system (main creeks and small branches of creeks)	

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	mangrove habitats are neither disturbed nor destroyed due to any activity.	in the study region are: (1) Kotdi (2) Baradimata (3) Navinal (4) Bocha (5) Mundra (Oldest port (Juna Bandar) leading to Bhukhi river). All above creeks are in existence allowing free flow of water and there is no filling or reclamation of any creek area. APSEZL has so far constructed 19 culverts having total length of 44approx. 1100 m with total cost of INR 20 Crores. Three RCC Bridges have been constructed over Kotdi creek with total length of 230 m and cost of INR 10 Crores. Photographs of the same have already been submitted as part of the compliance for the period of Apr'17 to Sep'17. As per the bathymetry study carried out by NCSCM in 2017-18, it can be concluded that there are sufficient depths at the creek mouths and all creek mouths are open allowing flushing of water.
10	The GAPL shall contribute financially for any common study or project proposed that may be proposed by this Department for environmental management / conservation / improvement for the Gulf of Kutch.	Complied As part of the directions given by MoEF&CC vides order dated 18th Sep, 2015, following studies were conducted. 1. NCSCM study on comprehensive and integrated plan for preservation and conservation of mangroves and associated creeks in and around APSEZ and the 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 cost of said study was 3.15 Cr, which was incurred by APSEZ. The same was further submitted to GCZMA and MoEF&CC for their examination and recommendation vide (with a copy to MoEF&CC vide letter dated 04.06.2018 & reminder letter vide dated 4th Jan, 2019). Presentation on the findings of the report was made to GCZMA committee on 4th October 2019 and the recommendation for the same has been received vide email dtd 22nd Sept, 2020 with conditions.

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30.09.2024</th></tr>
<tr><td></td><td></td><td>
As a part of GCZMA recommendations and NCSCM mangrove conservation action plan, APSEZ has undertaken following activities with expenditure.

e. Mangrove mapping and monitoring in and around APSEZ – 23.56 Lacs
f. Tidal observation in creeks in and around APSEZ – 1.0 Lacs
g. 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 FY 2023-24. The algal removal report was submitted during the last compliance report submission Oct'23 to Mar'24.
h. Awareness of mangroves importance in surrounding communities & 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.

<u>Summary of Conservation of mangroves:</u>

<table>
<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>
<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>Total</td><td></td><td>2723</td><td>629</td><td>--</td></tr>
</table>

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%).

As a part of GCZMA recommendations and NCSCM mangrove conservation action plan, APSEZ has undertaken following activities.
</td></tr>
</table>

Status of the conditions stipulated in Environment Clearance

Sr. No.	Conditions	Compliance Status as on 30.09.2024

Sr. No.	Recommendations	Compliance
1.	Mangrove mapping and monitoring in and around APSEZ	• APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island. • 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 & 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%. • 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. • Hence, there is an overall growth of mangroves in creeks in and around APSEZ, Mundra is 502 Ha between 2011 and 2019. • The cost of the said study was INR 23.56 Lacs incurred by APSEZ. • 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

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th colspan="3">Compliance Status as on 30.09.2024</th></tr>
<tr><td></td><td></td><td></td><td></td><td>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.
• 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%).
• The cost of the said study was INR 23.60 Lacs incurred by APSEZ.

Summary of Mangrove mapping and monitoring (from 2011 to 2021):

<table>
<tr><th rowspan="2">Mangrove mapping Year</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>
<tr><td>2011</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>2596</td><td>256</td><td>10.94%</td></tr>
<tr><td>2019 to 2021 till March</td><td>2723</td><td>127</td><td>4.89</td></tr>
<tr><td>Total</td><td>2723</td><td>629</td><td>--</td></tr>
</table>
</td></tr>
<tr><td></td><td></td><td>2.</td><td>Tidal observation in creeks in and around APSEZ</td><td>• APSEZ carried out the tidal observations at locations similar to 2017 in Kotdi, Baradimata, Navinal, Bocha and Khari creeks under the guidance of NCSCM.
• The observed tidal ranges indicate that the creeks experience normal tidal ranges, adequate for the growth of mangroves.
• The cost of the said activity was INR 1.0 Lacs.</td></tr>
<tr><td></td><td></td><td>3.</td><td>Removal of Algal and Prosopis growth from mangrove areas</td><td>• Algal and Prosopis growth monitoring was done in and around mangrove area and algal encrustation was found in some</td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 30.09.2024		
				of the mangrove areas, which has been removed manually. • 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.
		4.	Awareness of mangroves importance in surrounding communities	• 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. • Awareness of mangroves importance in surrounding communities & 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. • **Grass Land development:** 213 acres of gauchar land has been cleaned and allocated for Grass land development with strong Community Contribution and Mobilization. • 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. • APSEZ has celebrated the International Day for the Conservation of the Mangrove Ecosystem with coordination of Adani Foundation from 24th to 26th July 2024 to raise awareness of the importance of mangrove ecosystems as "a unique, special and vulnerable

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		ecosystem". The report for the same is attached as **Annexure - 3**. • Refer CSR report attached as **Annexure – 2.** 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. Please refer to specific condition no. x of the EC and CRZ clearance for more details w.r.t. Mangrove conservation action plan. 2. A Regional Impact Assessment study to identify impacts of all the existing as well as proposed project activities in Mundra region inline to ToR issued by GCZMA. 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'19 to Sep'19. The cost of said study was 1.3 Cr, which was incurred by APSEZ. • Presentation on the findings of the report was made to GCZMA committee on 4th October 2019 and after detailed discussion, authority has decided to constitute committee to discuss the details of the report further. • Reminder Letter vide dated 07.09.2020 & 10.03.2021 submitted to the GCZMA, Gandhinagar for further directives to present the findings of the CIA report in detail. Details were submitted along with last half yearly compliance report for the period Oct'20 to Mar'21. • Presentation done before GCZMA on 31.10.2021 and 16.02.2021 to discuss proposed EMP of CIA study in detail and way forward. • GCZMA, Gandhinagar issued a letter to co-ordinate with various departments in the matter of CIA with

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		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. Details are –the same were submitted during compliance period Apr'22 to Sep'22. 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 **Annexure – 6**.
11	The construction debris and/or any other type of waste shall not be disposed of into the sea, creek or in the CRZ areas. The debris shall be removed from the construction site immediately after the construction is over.	Complied. Construction activity is already completed. Project is in operation phase.
12	The construction camp shall be located outside the CRZ area and the construction labour shall be provided the necessary amenities, including sanitation, water supply & fuel and it shall be ensured that the environmental conditions are not deterioted by the construction labours.	Complied. The construction activity of said project is already completed. Project is in operation phase. No construction camps were located in CRZ area. Most workers came from nearby villages however, for others; construction camps were located outside CRZ area. All necessary infrastructure and facilities like mobile toilets, safe drinking water, medical health care etc. were provided.
13	The GAPL shall prepare and regularly update their local Oil Spill Contingency and Disaster Management Plan in for their all activities in Mundra Port consonance with the National Oil Spill and Disaster Contingency	Complied. Oil spill contingency response plan is being updated on regular basis and the same was last updated on 31.07.2022 is in place and implemented. The Oil spill contingency response plan same were submitted during compliance period Apr'22 to Sep'22.

Sr. No.	Conditions	Compliance Status as on 30.09.2024
	Plan and shall submit the same to this department after having it vetted through Indian Coast Guard.	Latest Regional Level Pollution Response exercise "SWACHCHH SAMUDRA-NW 2024" was carried out by Indian Coast Guard on 02-03 May 2024 at Mundra, Gujarat. All participants from various Oil Handling Agencies and Stakeholders (DPA, HMEL, ICGS and APSEZ, Mundra) were participated in this exercise. Details of the same is attached **Annexure - 7**. For responding to oil spill, the Indian Coast Guard has developed the National Oil Spill Disaster Contingency Plan NOSDCP which has the approval of the Committee of Secretaries and has been in operation since 1996. Oil Spill Contingency Response Plan (OSCRP) prepared by APSEZ is in accordance with the NOSDCP. Disaster Management Plan is updated regularly and the updated DMP was submitted to the MoEF & CC along with half yearly compliance report Apr – 2016 to Sep – 2016. On Site Emergency Response Plan and Crisis Management Plan is in place and implemented. The updated (Aug'23) Onsite emergency plan was submitted during the compliance period Apr'23 to Sep'23.
14	The Gujarat Maritime Board shall expedite for the Vessel Traffic Management System for the Gulf of Kutch and would work out the modus operandi for cost sharing by the different players in the Gulf indicating the GAPL. The GAPL shall contribute for the same as may be decided by the Gujarat Marine Board or any other competent authority for this purpose.	Point noted. APSEZ is practicing well defined traffic control procedure. A VTMS service for Gulf of Kutch is operated by Directorate General of Lighthouses and Lightships (DGLL), Govt. of India. Marine Control of APSEZ provides traffic update to vessels in Mundra Port Limit on VHF Channel- 77. Arrival and departure information before arrival and departure respectively in Gulf of Kutch is provided to VTMS information cell through agent or by directly sending mail to vtsmanagergulfofkutch@yahoo.com and vtsgok@yahoo.com.

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		Mundra port has subscribed and taking VTMS feed from Kandla from link www.vts.gov.in
15	The GAPL shall bear the cost of the external agency that may be appointed by this Department for supervision / monitoring of proposed activities and the environmental impacts of the proposed activities.	Complied Please refer to condition no. 10 of the CRZ recommendations above for details upon cost incurred for various proposed studies and activities.
General Condition		
16	The ground water shall not be tapped by the GAPL to meet with the water requirement in any case.	Complied. APSEZ does not draw any ground water for the water requirement. Present source of water for various project activities is desalination plant of APSEZ and/or Gujarat Water Infrastructure Limited (GWIL). Average water consumption for entire APSEZ area is 5.34 MLD during compliance period i.e. Apr'24 to Sep'24.
17	The GAPL shall take up massive greenbelt development activities in consultation with Forest and Environment Department.	Complied. APSEZ has consulted Gujarat Institute of Desert Ecology (GUIDE) as they are one of the authorized agencies of Dept. of Forest & Env., Govt. of Gujarat for carrying out mangrove afforestation. Please refer condition no. v of specific conditions (EC & CRZ Clearance) for further details.
18	The GAPL shall have to contribute financially for taking up the socio-economic upliftment activities in this region in consultation with the Forests and Environment Department and the District Collector / District Development officer.	Complied. APSEZ performs a large-scale socio-economic upliftment program and shares with FOKIA (Federation of Kutch Industries Association) chaired by District Collector quarterly. APSEZL have provided necessary facilities including health care, education, sanitation, livelihood, drinking water & other infrastructural support to Local community in the region. For further information related to the CRS activities being carried out by Adani Foundation in Mundra region, please refer to specific condition no. 7 of
19	A separate budget shall be earmarked for the purpose of socio-economic upliftment	

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance Status as on 30.09.2024</th></tr>
<tr><td></td><td>activities and details thereof shall be furnished to this department as well as the MoEF&CC, GOI from time to time. The details with respect to the expenditure from this budget head shall also be furnished on annual basis.</td><td>the EC and CRZ clearance above.</td></tr>
<tr><td>20</td><td>A separate environment management cell with qualified personnel shall be created for environmental monitoring and management during construction and operational phases of the project.</td><td>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 Annexure – 8.</td></tr>
<tr><td>21</td><td>Environmental Post Project Monitoring report indicating the changes, if any, with respect to the baseline environmental quality in the coastal and marine environment shall be submitted every year by the GAPL to this department as well as to the MoEF&CC, GOI.</td><td>Complied.

The quality of treated effluent, emission and noise level is being monitored regularly by a MoEF&CC/NABL accredited agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd. Monitoring results are confirming to the applicable norms.

Marine monitoring (Surface, Bottom & Sediment) is being carried out once in a month. Summary of the same for duration from Apr'24 to Sep'24. is mentioned below.

Total Sampling Locations & frequency: 09 Nos. (Frequency: Once a month)

<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Unit</th><th colspan="3">Surface</th><th colspan="3">Bottom</th></tr>
<tr><th>Min</th><th>Max</th><th>Avg.</th><th>Min</th><th>Max</th><th>Avg.</th></tr>
<tr><td>pH</td><td>--</td><td>7.91</td><td>8.24</td><td>8.12</td><td>7.74</td><td>8.16</td><td>7.97</td></tr>
<tr><td>BOD (3 Days @ 27 °C)</td><td>mg/L</td><td>2.2</td><td>3.4</td><td>2.89</td><td>BDL (MDL 1.0)</td><td>BDL (MDL 1.0)</td><td>BDL (MDL 1.0)</td></tr>
<tr><td>TSS</td><td>mg/L</td><td>94</td><td>144</td><td>127.04</td><td>76</td><td>132</td><td>106.96</td></tr>
<tr><td>DO</td><td>mg/L</td><td>5.73</td><td>6.69</td><td>6.23</td><td>5.48</td><td>6.49</td><td>6.04</td></tr>
<tr><td>Salinity</td><td>ppt</td><td>35.31</td><td>38.82</td><td>36.07</td><td>26.76</td><td>37.54</td><td>36.86</td></tr>
</table>
</td></tr>
</table>

Sr. No.	Conditions	Compliance Status as on 30.09.2024
		<table><tr><td>TDS</td><td>mg/L</td><td>34410</td><td>36550</td><td>35858</td><td>35370</td><td>37610</td><td>36873</td></tr></table> *BDL – Below Detection Limit *MDL – Minimum Detection Limit Please refer **Annexure – 5** for detailed analysis reports. Approx. INR 6.11 Lakh is spent for all environmental monitoring activities during the compliance period i.e. FY 2024-25 (till Sep'24) for overall APSEZ, Mundra.
22	The GAPL shall have to contribute financially to support the National Green Corps Scheme being implemented in Gujarat by the GEER foundation, Gandhinagar in consultation with Forests and Environment Department.	Complied. Necessary contribution if require will be provided on hearing from GEER foundation to support NGC scheme.
23	A six monthly report of compliance of the conditions mentioned in this letter shall have to be furnished by the GAPL on a regular basis to this department without fail.	Complied. Six Monthly environment clearance compliance report is being submitted regularly to the concerned authorities. Compliance report of EC conditions is uploaded regularly. A soft copy of last compliance report including results of monitoring data for the period of Oct'23 to Mar'24 was submitted through e-mail to Regional Office of Integrated Regional Office (IRO), MoEF&CC @ Gandhinagar, Zonal Office of CPCB @ Baroda, GPCB @ Gandhinagar & Gandhidham and Dept. of Forests & Env., Gandhinagar on dated 29.05.2024. Copy of the same is also available on our web site https://www.adaniports.com /ports-downloads. Please refer below for the details regarding past six compliance submissions. <table><tr><th>Sr. No.</th><th>Compliance period</th><th>Date of submission</th></tr><tr><td>1</td><td>Apr'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>29.11.2023</td></tr><tr><td>6</td><td>Oct'23 to Mar'24</td><td>29.05.2024</td></tr></table>

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

Sr. No.	Conditions	Compliance Status as on 30.09.2024
24	Any other condition that may be stipulated by this department from time to time for environment protection / management purpose shall also have to be complied with by the GAPL.	Complied. Any other condition stipulated for environment protection / management purpose will be complied by APSEZ.

Annexure – 1

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
TOTAL (APSEZL)	**457.99**	**775082**	**131156**	**425984.27**	**265148.18**
		906238.00			

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
Total			**4140**			

Annexure – 2

adani Foundation

Mundra

Half Yearly update: Apr – Sept 2024

Utilization status

Rs. in Lakhs

Site name: Mundra

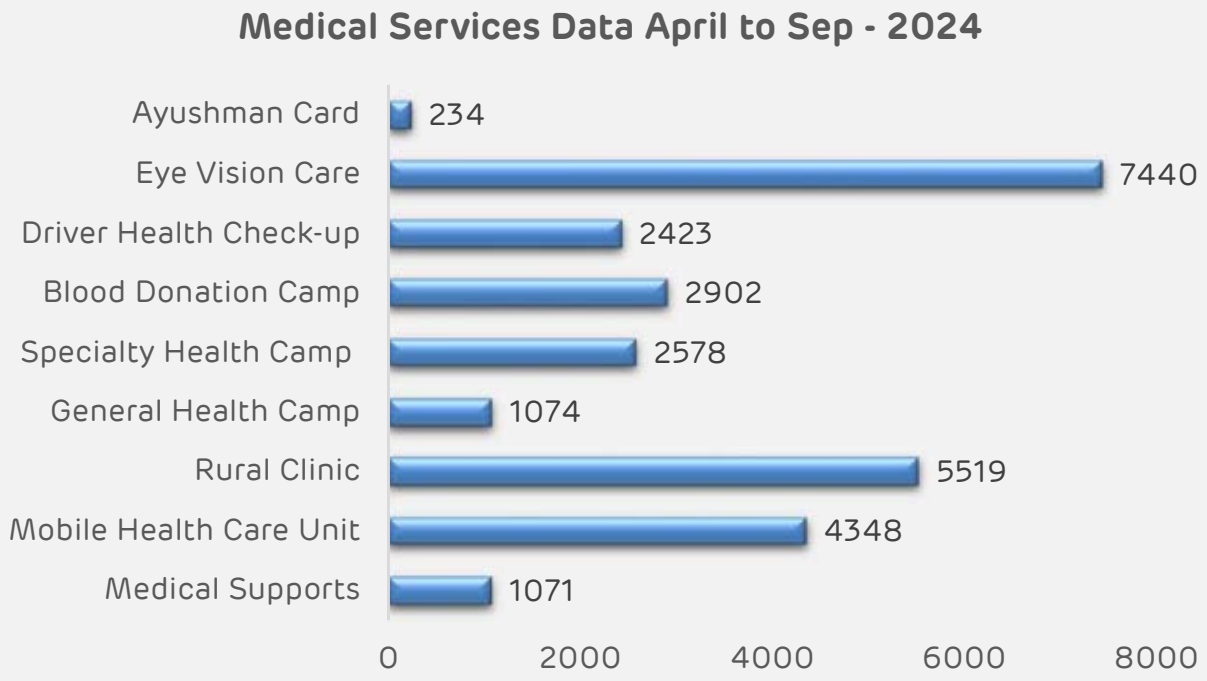
Adani Foundation - Mundra
Budget Tracking

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%
	Total AF CSR Budget :	1.30	530.62	531.92	170.24	361.68	322.21	308.33	147.75	200.13	37.62%
							89.09%	95.69%	47.92%	37.62%	
									Fodder Support- 1 Cr +	56.42%	

Key programmatic accomplishments

- **Community Health**
- **Education**
- **Sustainable Livelihoods**
- **Community Infrastructure**
- **Stakeholder engagement**



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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 (Studnets) + 3958 (Drivers) = 11434**

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

❖ **Cataract Screening 366**

❖ **Cataract Surgery 18**

adani Foundation

Highlights: Community Health

Eye Vision Care

Cataract Surgery

Nutritional kits to 153 children with thalassemia

adani Foundation

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

adani Foundation

Highlights: Education

Abacus Mathematics

Eye Vision Care in Utthan School

Green School Initiative – plastic collection

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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/-

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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,

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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

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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 Dhrub 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.

adani Foundation

Highlights: **Vruksh Se Vikas**

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

Costal cleanup Day

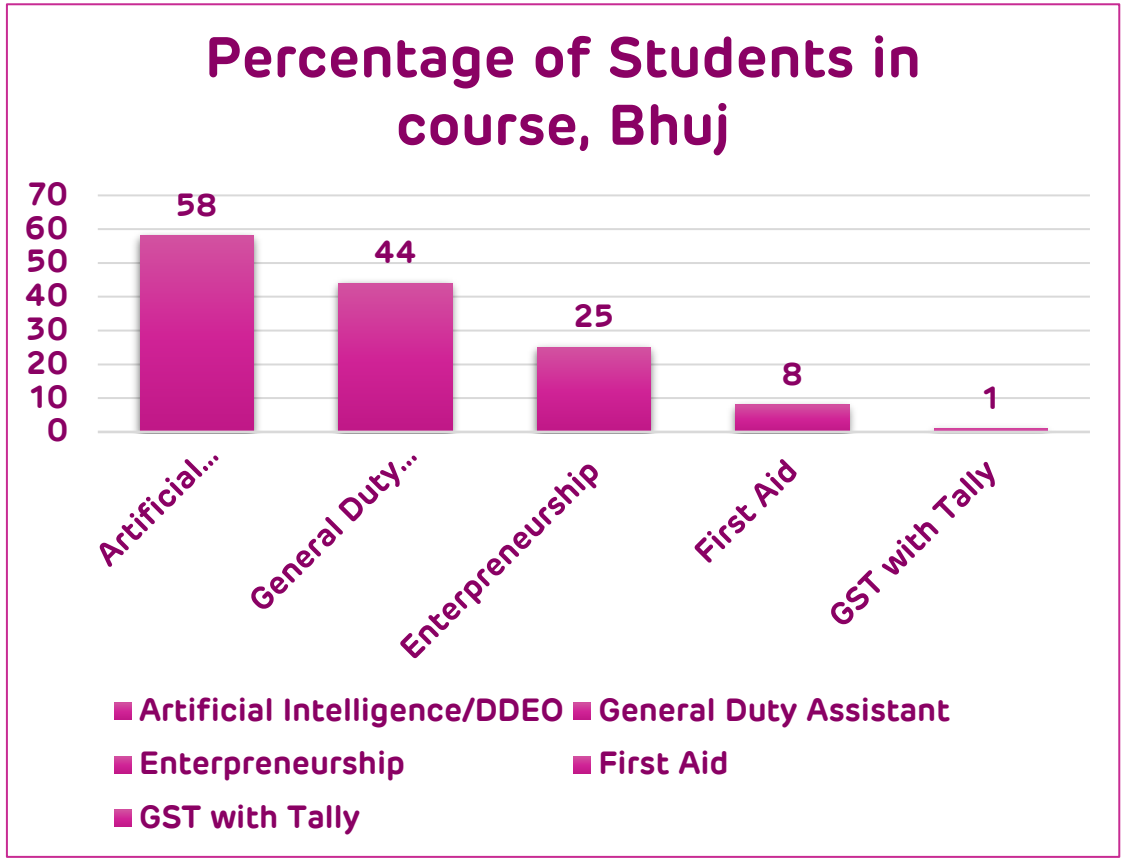
adani Foundation

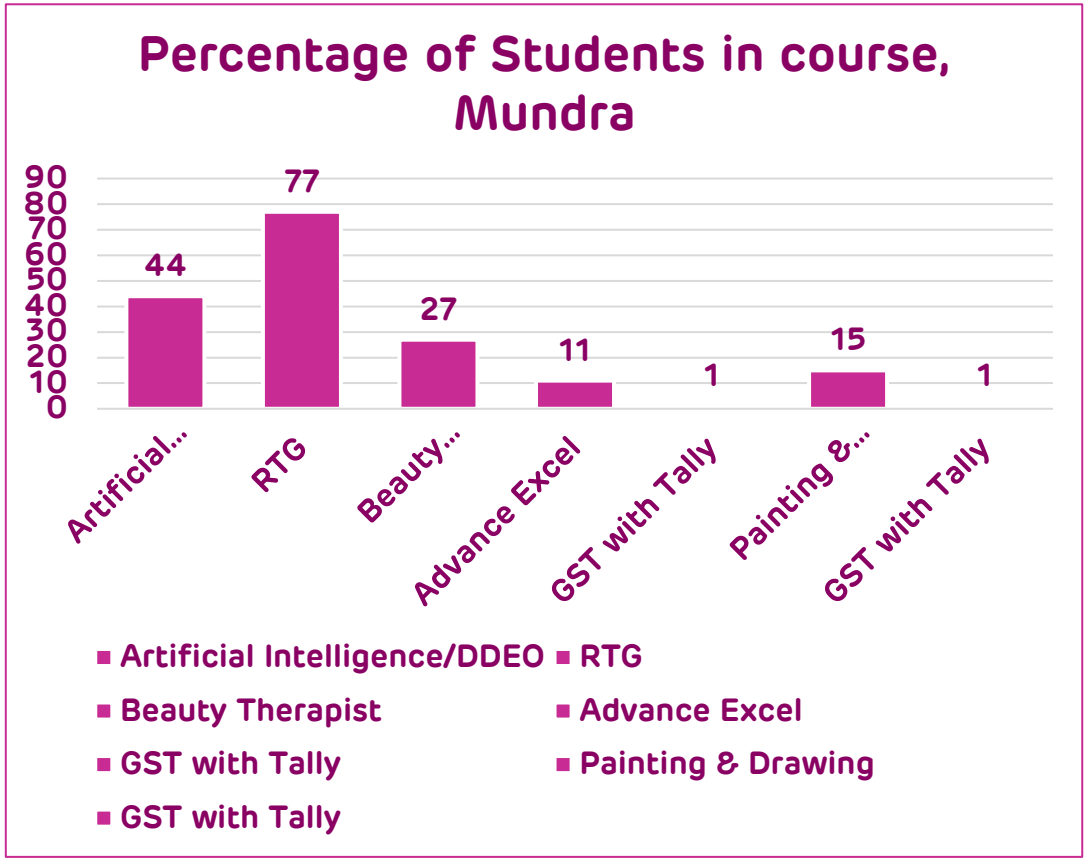
Adani skill development center

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

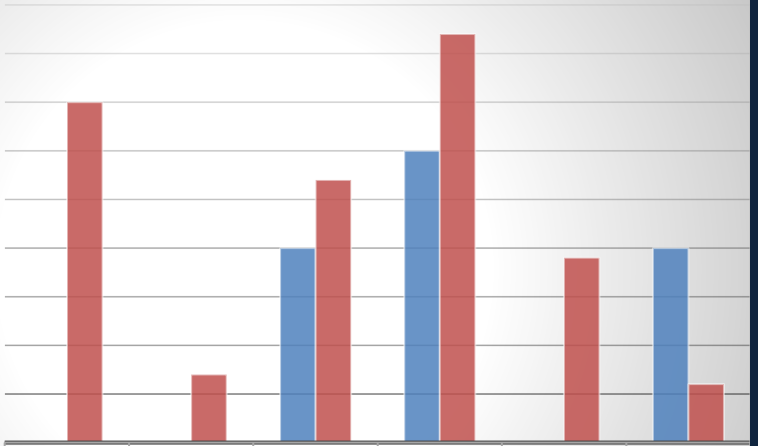
ASDC has significantly enhanced employability in Mundra and Mandvi. Training programs in digital literacy, RTG crane operation, beauty therapy, and advanced Excel have provided practical skills and certifications. Real-time exposure along with the Entrepreneurship Development Program (EDP), has further 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.





Some glimpse of ASDC Mundra and Bhuj

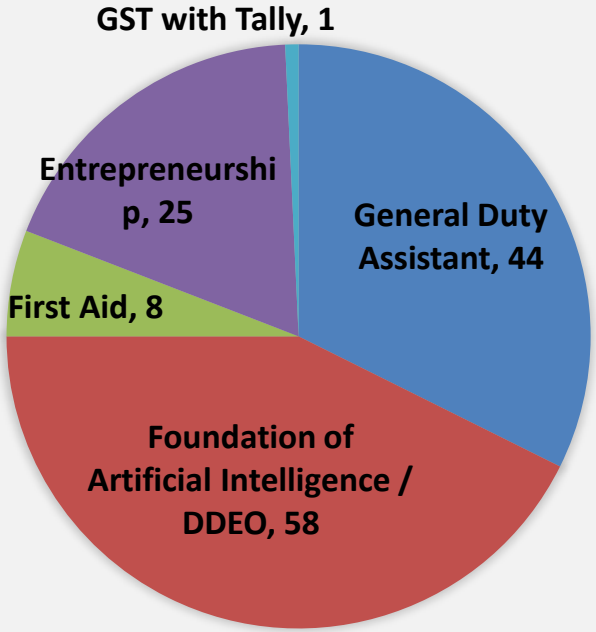
Half Yearly Target Vs Achievement Bhuj



	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

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	**284500**
Foundation of Artificial Intelligence / DDEO	177000	0	0	**177000**
First Aid	4792	0	0	**4792**
Tally with GST	8000	0	0	**8000**
Total	**4,74,292**	**0**	**0**	**4,74,292**

Bhuj Center Activities Photos

Bhuj Center Press Notes

કચ્છ આજકાલ Kutch aajkaal Follow us Dt. 2 August 2024 03

અનુશાસનનું પાલન લક્ષ્યસિદ્ધિનું પ્રથમ સોપાન

જવાનોની જીવનશૈલી અનુરૂપ રાંધણ કળા વિકાસ માટે ૨૪ બહેનોએ તાલીમ લીધી

આર્મી મથક ખાતે અદાણી સ્કીલ ડેવલપમેન્ટ સેન્ટર દ્વારા સફળતાપૂર્વક ટ્રેનિંગ પૂર્ણ કર્યા બદલ પ્રમાણપત્રો અપાયા

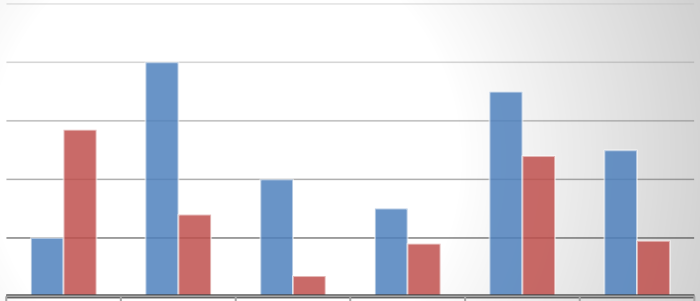
કચ્છ આજકાલ । ભુજ

ભુજ ખાતે અદાણી સ્કીલ ડેવલપમેન્ટ સેન્ટર દ્વારા ચાલતા વિવિધ તાલીમ વર્ગો અંતર્ગત આર્મીના જવાનોની જીવનશૈલીને અનુરૂપ પોષણ આહાર તૈયાર કરવા માટે જવાનોની પત્નીઓને અપાયેલી ડાયેટ એન્ડ ન્યુટ્રીશનમાં ૨૪ બહેનોએ સફળતાપૂર્વક ટ્રેનિંગ પૂર્ણ કર્યા બદલ તેમને પ્રમાણપત્ર વિતરણ કરવાનો કાર્યક્રમ યોજાયો હતો. આર્મી સ્ટેશનના ઓડિટોરિયમમાં યોજાયેલા કાર્યક્રમમાં પ્રમાણપત્ર સ્વીકાર કરતાં આર્મી વેલ્ફેર ઓર્ગેનાઈઝેશનના ચેરપર્સન શાલિની સિંહે જણાવ્યું કે, જવાનોની જીવનશૈલીને અનુરૂપ રાંધણ કલાનો વિકાસ કરવા અને જવાનોના સ્વાસ્થ્ય માટે આ તાલીમ પ્રાપ્ત કરી છે જે એક ઉત્તમ પગલું પુરવાર થશે. તેમણે સંસ્થાનાં પ્રકલ્પનો આભાર માન્યો હતો. ભુજ યુનિટના જુનિ. ઓફિસર ડો. પૂર્વી ગોસ્વામીએ પ્રમાણપત્રો એનાયત કર્યા હતા. વ્યવસ્થા આર્મી વેલ્ફેરના સેક્રેટરી પ્રિયા સેલ્વમએ તથા સંચાલન માધવી ગુરવએ કર્યું હતું.

હેપ્પી મધર્સ ડે : માતૃત્વની વાત્સલ્યમૂર્તિએ કૌશલ્ય ઉજાગર કરી દીકરીને પગભર કરી

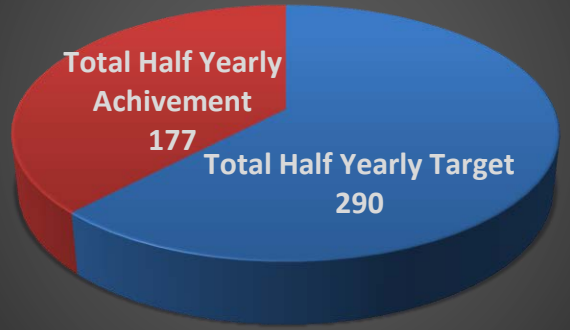
ભુજમાં સાસરેથી પાછી ફરેલી દિકરીને વેદનામાંથી બહાર લાવી માતાએ નર્સિંગ આસિસ્ટન્ટ બનવા માટે સક્ષમ બનાવી

Half Yearly Target Vs Achievement Mundra

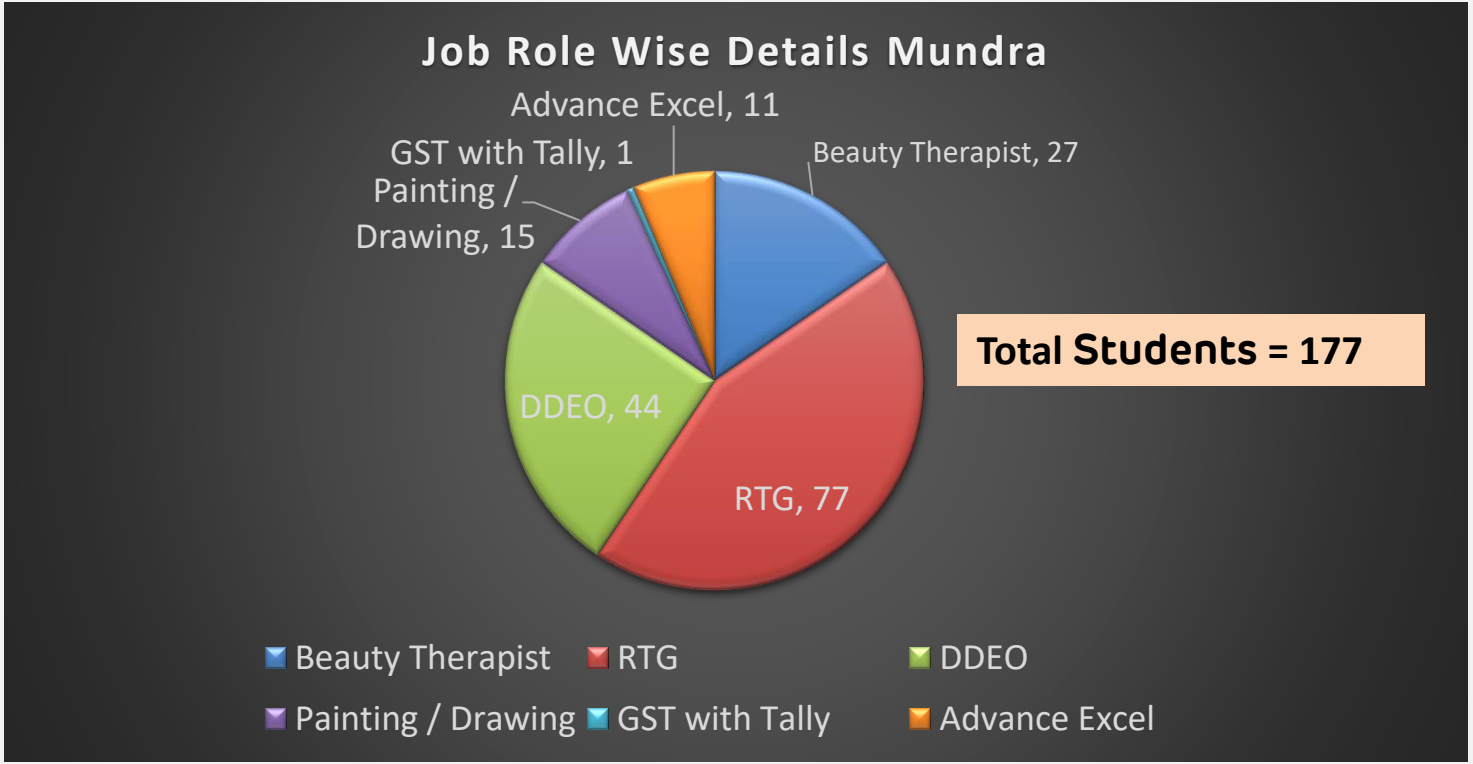


	Apr	May	Jun	Jul	Aug	Sep
Target	20	80	40	30	70	50
Achivement	57	28	7	18	48	19

Yearly Target Vs Achievement Mundra



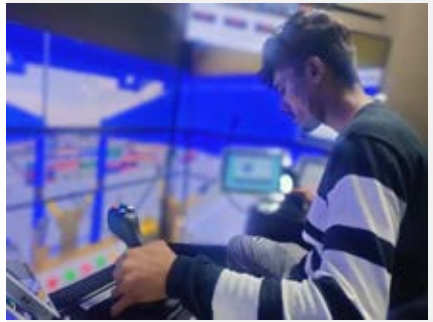
Total Half Yearly Target Total Half Yearly Achivement


Job Role Wise Details Mundra
Advance Excel, 11
GST with Tally, 1
Painting / Drawing, 15
Beauty Therapist, 27
DDEO, 44
RTG, 77
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	**756000**
German Language Training	10000	0	0	**10000**
Beauty Therapist	54000	0	0	**54000**
DDEO	28000	0	0	**28000**
Tally with GST	3000	0	0	**3000**
Drawing/ Painting	18000	0	0	**18000**
Total	**1,13,000**	**7,56,000**	**0**	**8,69,000**

Mundra Center Activities Photos



Mundra Center Press note

મુન્દ્રામાં યુવાનો ક્રેન ઓપરેટરની તાલીમ પ્રાપ્ત કરી રોજગાર મેળવવા બન્યા સુસજ્જ

અદાણી કૌશલ્ય વિકાસ કેન્દ્ર દ્વારા સફળ તાલીમાર્થીને પ્રમાણપત્રનું કરાયું વિતરણ

ભારત ન્યૂઝ | મુન્દ્રા

તાજેતરમાં મુન્દ્રા ખાતે અદાણી સ્કીલ ડેવલોપમેન્ટ સેન્ટર દ્વારા નવી બેચના ઉદ્ઘાટન સાથે તાલીમાર્થીઓને આરટીજી ક્રેન 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 બનાવાના ઉદેશ્ય સાથે ધોરણ દસ બાદ આઈટીઆઈ અથવા ધોરણ બાર ઉતીર્ણ વિદ્યાર્થીઓને તાલીમ આપી રોજગાર અર્થે સક્ષમ બનાવામાં આવે છે.એસ.ડી.એસ દ્વારા છેલ્લા બે વર્ષમાં ક્રેન 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 વિવિધ જિલ્લાના લેવામાં આવશે. પ્રમાપપત્ર વિતરણ સમારંભ માં ઉપસ્થિત ખાસ મહેમાનોને પણ સન્માનિત કરવામાં આવ્યા હતા. મુખ્ય અતિથી તરીકે એપીસેઝ ના એચ આર હેડ સ્નેહાશીષ ભટાચાર્યએ ક્રેન ઓપરેટર ની ભૂમિકા અંગે વિસ્તૃત માહિતી આપી હતી.અને તાલીમાર્થીઓને અદ્યતન ટેક્નોલોજી સાથે અપડેટ રહેવા અને સતત નવું શીખતું રહેવા પ્રોત્સાહિત કર્યા હતા.રાષ્ટ્ર નિર્માણમાં યોગદાનના ઉદેશ્ય 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 અત્યાધુનિક ટેક્નોલોજી 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

લોકભાષા-મુન્દ્રા:

અદાણી ફાઉન્ડેશન યુવા રોજગારીને પ્રાધાન્ય આપતા અનેક કાર્યક્રમોમાં પ્રવૃત્ત છે. તાજેતરમાં અદાણી સ્કિલ ડેવલપમેન્ટ સેન્ટર મુન્દ્ર દ્વારા નવી બેચના ઉદ્ઘાટન સાથે તાલીમાર્થીઓને આરટીજી ક્રેન ઓપરેટર પ્રમાણપત્રો વિતરીત કરવામાં આવ્યા હતા. ક્રેન ઓપરેટરની તાલીમ સફળતાપૂર્વક પૂર્ણ કરનારા યુવાઓ આત્મનિર્ભર બની સમાજમાં તેમની આગવી ઓળખ ઊભી કરશે.

અદાણી સ્કીલ ડેવલપમેન્ટ સેન્ટરનું ધ્યેય યુવાધનને રોજગારલક્ષી પ્રશિક્ષણ આપી તેમની કૌશલ્ય ક્ષમતામાં વધારો કરવાનું છે. ધોરણ ૧૦ આઇ. આઈટીઆઈ અથવા ધોરણ ૧૨ ઉત્તીર્ણ કરનાર વિદ્યાર્થીઓ એએસડીસીમાં સફળતાપૂર્વક તાલીમ લઈ રોજગાર સક્ષમ બની શકે છે. કચ્છ ડ્રાઇવર લિમિટેડ ધોરણ ૧૨ પાસ ઉમેદવારોને પ્રશિક્ષિત કરવા માટે ભંડોળ ઉપલબ્ધ કરાવશે.

એએસડીસી દ્વારા છેલ્લા ૨ વર્ષમાં આરટીજી ક્રેન ઓપરેશન ટ્રેડમાં ૧૨૦ ઉમેદવારોને સફળતાપૂર્વક તાલીમ આપવામાં આવી છે. જેમાંથી ૮૦ ઉમેદવારો અદાણી પોર્ટ પર જ નોકરીઓ મેળવી આત્મનિર્ભર બન્યા છે. નવી બેચમાં ૭૦ટકા ઉમેદવારો કચ્છ જિલ્લાના અને અન્ય ૩૦ટકા વિવિધ જિલ્લાના અને સતત નવું શીખતા રહેવા માટે પ્રોત્સાહિત કર્યા હતા.

સક્ષમના પ્રમાણપત્ર વિતરણ કાર્યક્રમમાં ઉપસ્થિત ખાસ મહેમાનોને પણ સન્માનિત કરવામાં આવ્યા હતા, જેમાં અદાણી કૌશલ્ય વિકાસ કેન્દ્રના ક્લસ્ટર હેડ, અદાણી પોર્ટ્સ અને સ્પેશિયલ ઇકોનોમિક ઝોન અને કર્મેસ કંપનીના ઉચ્ચાધિકારીઓનો સમાવેશ થયો છે. મુખ્ય અતિથિ તરીકે અદાણી પોર્ટ સેઝના એચઆર હેડ સ્નેહાશીષ ભટ્ટાચાર્યએ અદાણી પોર્ટ ખાતે આરટીજી ક્રેન ઓપરેટરની ભૂમિકા વિશે સંક્ષિપ્ત માહિતી આપી હતી. તેમણે તાલીમાર્થીઓને આત્મનિર્ભર બની સમાજમાં તેમની આગવી ઓળખ ઊભી કરશે.

રાષ્ટ્રનિર્માણમાં યોગદાનના ઉદેશથી ભારતના યુવાધનને સક્ષમ બનાવવા અદાણી કૌશલ્ય વિકાસ કેન્દ્રની સ્થાપના ૧૬મે, ૨૦૧૬ના રોજ કરવામાં આવી હતી. એએસડીસી વર્ટિકલ ભવિષ્ય માટે તૈયાર વ્યાવસાયિકોને અત્યાધુનિક ટેક્નોલોજીનો ઉપયોગ કરી તાલીમ આપવાના મિશનને સતત આગળ ધપાવી રહ્યું છે.

અદાણી કૌશલ્ય વિકાસ કેન્દ્ર દ્વારા ક્રેન ટ્રેડની ૧૨૦ ઉમેદવારને તાલીમ

મુંદરા, તા. ૧૮ : અદાણી ફાઉન્ડેશન યુવા રોજગારીને પ્રાધાન્ય આપતા અનેક કાર્યક્રમોમાં પ્રવૃત્ત છે. તાજેતરમાં અદાણી સ્કિલ ડેવલપમેન્ટ સેન્ટર (એએસડીસી) મુંદરા દ્વારા નવી બેચના ઉદ્ઘાટન સાથે તાલીમાર્થીઓને આરટીજી ક્રેન ઓપરેટર પ્રમાણપત્રો વિતરિત કરવામાં આવ્યાં હતાં. આ તાલીમ સફળતાપૂર્વક પૂર્ણ કરનારા યુવાનો આત્મનિર્ભર બની સમાજમાં તેમની આગવી ઓળખ ઊભી કરશે.

એએસડીસી યુવાઓને આત્મનિર્ભર બનાવવાની દિશામાં અગ્રેસર : ૮૦ને અદાણીમાં જ નોકરી

સેન્ટરનું ધ્યેય યુવાધનને રોજગારલક્ષી પ્રશિક્ષણ આપી તેમની કૌશલ્ય ક્ષમતામાં વધારો કરવાનું છે. ધોરણ ૧૦ આઇ. આઈટીઆઈ અથવા ધોરણ ૧૨ ઉત્તીર્ણ કરનાર વિદ્યાર્થીઓ એએસડીસીમાં સફળતાપૂર્વક તાલીમ લઈ રોજગાર સક્ષમ બની શકે છે. કચ્છ ડ્રાઇવર લિમિટેડ ધોરણ ૧૨ પાસ ઉમેદવારોને પ્રશિક્ષિત કરવા માટે ભંડોળ ઉપલબ્ધ કરાવશે.

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

સક્ષમના પ્રમાણપત્ર વિતરણ કાર્યક્રમમાં ઉપસ્થિત ખાસ મહેમાનોને પણ સન્માનિત કરવામાં આવ્યા હતા, જેમાં અદાણી કૌશલ્ય વિકાસ કેન્દ્રના ક્લસ્ટર હેડ, અદાણી પોર્ટ્સ અને સ્પેશિયલ ઇકોનોમિક ઝોન અને કર્મેસ કંપનીના ઉચ્ચાધિકારીઓનો સમાવેશ થયો છે.

મુખ્ય અતિથિ તરીકે અદાણી પોર્ટ અને સેઝના એચઆર હેડ સ્નેહાશીષ ભટ્ટાચાર્યએ અદાણી પોર્ટ ખાતે આરટીજી ક્રેન ઓપરેટરની ભૂમિકા વિશે સંક્ષિપ્ત માહિતી આપી હતી. તેમણે તાલીમાર્થીઓને આત્મનિર્ભર બની સમાજમાં તેમની આગવી ઓળખ ઊભી કરશે.

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

અદાણી કૌશલ્ય કેન્દ્ર દ્વારા તાલીમાર્થીઓને પ્રમાણપત્ર વિતરણ કાર્યક્રમનું દ્રશ્ય.

Annexure – 3

Report on World Mangroves Day Celebration by Adani Foundation

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, Bhadreshwar

On July 24, an awareness lecture was conducted by Dr. Mansi Goswami, Biodiversity expert, for the students of Adani Vidya Mandir, Bhadreshwar. 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.

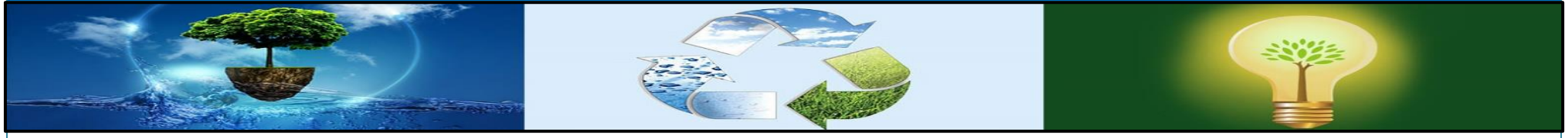
Through these programs, Adani Foundation - Mundra aimed to foster greater understanding and commitment to mangrove conservation among community members. The foundation has planted mangrove trees over 162 hectares, significantly contributing to marine environmental protection. Such awareness programs 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 Govertment colleges

MEDIA COVERAGE

Annexure – 4



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Submitted By

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UniStar Environment & Research Labs Pvt. Ltd.

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

MARINE WATER MONITORING SUMMARY REPORT

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.11	7.94	7.96	7.81	8.05	7.89	7.98	7.74	7.91	7.82	8.12	7.94	IS 3025 (Part 11) :2022
2.	Temperature	°C	29.9	29.8	30.5	30.4	30.7	30.6	30.1	30	30	29.9	29.9	29.8	IS 3025 (Part 9):2023
3.	Total Suspended Solids	mg/L	138	118	144	120	132	118	98	82	142	126	128	102	APHA 24th Ed., 2023,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.9	BDL(MDL :1.0)	3.1	BDL(MDL :1.0)	2.9	BDL(MDL :1.0)	3.1	BDL(MDL :1.0)	2.6	BDL(MDL :1.0)	2.8	BDL(MDL :1.0)	IS 3025 (Part 44):2023
5.	Dissolved Oxygen	mg/L	6.12	5.92	6.02	5.77	5.93	5.68	6.42	6.22	6.59	6.3	6.69	6.4	APHA 24th Ed.2023,4500 -O, B
6.	Salinity	ppt	35.86	37.11	35.92	37.28	38.82	37.15	36.12	36.88	35.78	36.71	35.87	36.64	By Calculation
7.	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)	BDL(MDL :2.0)	BDL(MDL :2.0)	BDL(MDL :2.0)	BDL(MDL :2.0)	BDL(MDL :2.0)	BDL(MDL :2.0)	IS 3025 (Part 39) :2021
8.	Nitrate as NO_3	µmol/L	3.39	3.06	3.55	3.23	3.71	3.39	3.55	3.39	1.94	1.61	2.32	1.72	APHA 24th Ed. 2023,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.543	0.478	0.609	0.565	0.565	0.522	0.456	0.435	0.174	0.13	0.379	0.312	APHA 24th Ed.2023,4500 NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	4.22	4.11	4.48	4.37	4.43	4.37	3.8	3.69	3.954	3.85	2.59	2.16	APHA 24th Ed. 2023,4500-NH3 B
11.	Phosphates as PO_4	µmol/L	1.68	1.58	1.9	1.68	1.16	1.05	1.05	BDL(MDL :0.4)	1.37	1.16	1.47	1.26	APHA 24th Ed.2023,4500 -P, D

12.	Total Nitrogen	µmol/L	8.153	7.648	8.639	8.165	8.705	8.282	7.806	7.515	6.068	5.59	5.289	4.192	APHA 24th Ed. 2023,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ND	ND	ND	ND	ND	ND	APHA 24th ED.2023,5520 F
14.	Total Dissolved Solids	mg/L	36410	37180	36550	37210	36480	37180	36120	36980	34970	35960	34740	35830	IS 3025(Part 16):2023
15.	COD	mg/L	23.9	7.9	28.17	12.07	23.9	8	16.1	4	20	8	24.1	12	IS 3025(Part 58):2023

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	April-24		May-24		June-24		July-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton														
1.	Chlorophyll	mg/m³	3.05	3.25	3.06	3.24	3.08	3.26	3.07	3.27	3.08	3.26	3.07	3.07	APHA (24th Ed. 2023)10200A-G
2.	Phaeophytin	mg/m³	2	1.56	3	1.59	4	1.56	3	1.55	4	1.57	6	6	APHA (24th Ed. 2023)10200A-G
3.	Cell Count	No. x 10³/L	109	90	110	92	114	91	112	92	114	93	112	112	APHA (24th Ed. 2023)10200A-G
4	Name of Group Number and name of group species of each group	--	*Coscinodiscus*	*Odontella*	*Nitzschia*	*Biddulphia*	*Nitzschia*	*Biddulphia*	*Thalassiothrix*	*Dinophysis*	*Thalassiothrix*	*Dinophysis*	*Thalassiothrix*	*Dinophysis*	APHA (24th Ed. 2023)10200A-G
			Diploneis	*Rhizosolenia*	*Diploneis*	*Rhizosolenia*	*Pinnularia*	*Rhizosolenia*	*Surirella*	*Pinnularia*	*Surirella*	*Pinnularia*	*Biddulphia*	*Pinnularia*	
			Rhizosolenia	*Coscinodiscus*	*Rhizosolenia*	*Coscinodiscus*	*Rhizosolenia*	*Coscinodiscus*	*Navicula*	*Thalassiothrix*	*Navicula*	*Thalassiothrix*	*Navicula*	*Thalassiothrix*	
			Dinophysis	*Grammatophora*	*Dinophysis*	*Grammatophora*	*Dinophysis*	*Grammatophora*	*Thallassiosira*	*Grammatophora*	*Nitzschia*	*Grammatophora*	*Nitzschia*	*Grammatophora*	
			Thalassionema	*Thallassiosira*	*Biddulphia*	*Navicula*	*Biddulphia*	*Navicula*	*Skeletonema*	*Ceratium*	*Skeletonema*	*Ceratium*	*Skeletonema*	*Ceratium*	

B	Zooplankton								
1	Abudance(Population)	noX103/ 100 m3	66	65	64	66	68	67	APHA (24rd Ed. 2023)10200 G
2	Name of Group Number and name of group species of each group		*Crustacean Larvae*	*Oikoplura*	*Oikoplura*	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	
			Egg(Fish and Shrimps)	*Pinnularia*	*Pinnularia*	*Oikoplura*	*Oikoplura*	*Oikoplura*	
			Copepods	*Copepods*	*Copepods*	*Copepods nauplii*	*Copepods nauplii*	*Copepods nauplii*	
			Crustacean	*Copepods nauplii*	*Copepods nauplii*	*Crustacean*	*Crustacean*	*Crustacean*	
			Bivalve Larvae	*Thalassionema*	*Thalassionema*	*Bivalve Larvae*	*Bivalve Larvae*	*Bivalve Larvae*	
3	Total Biomass	ml/100 m³	13.64	13.65	13.64	13.66	13.67	13.67	

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	April-24		May-24		June-24		July-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological														
1	Total Bacterial Count	CFU/ml	100		102		104		106		108		110		APHA 24th Ed.2023,9215-C
2	Total Coliform	/100ml	12		10		11		12		14		13		APHA 24thEd.2023,9222-B
3	Ecoli	/100ml	10		12		9		8		7		8		IS :15185:2016
4	Enterococcus	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 24thEd.2023,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

Mr. Nilesh Patel
Sr. Chemist

GUJARAT VAPI

Mr. Nitin Tandel
Technical Manager

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.43	0.46	0.44	0.48	0.41	0.44	IS: 2720 (Part 22):1972
2.	Phosphorus as P	µg/g	558.4	551.2	558.6	542.2	510.5	524.2	IS: 10158 :1982, Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 24th Ed.2023,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.09	4.05	4.08	3.98	3.82	3.88	IS3025(Part 55):2003
5.2	Total Chromium as Cr+3	µg/g	138.4	132.2	136.4	144.2	120.8	128.7	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.3	Manganese as Mn	µg/g	594.6	580.4	574.2	550.6	610.2	624.3	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.4	Iron as Fe	%	4.12	4.08	3.98	3.86	3.94	3.86	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.5	Nickel as Ni	µg/g	42.06	41.25	41.36	42.35	48.65	44.62	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.6	Copper as Cu	µg/g	42.86	41.94	42.28	43.25	51.25	48.96	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.7	Zinc as Zn	µg/g	122.4	120.2	120.84	116.5	124.6	120.3	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.8	Lead as Pb	µg/g	2.41	2.36	2.48	2.41	2.31	2.22	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.9	Mercury as Hg	µg/g	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	EPA 7471B (Extraction &Analytical Method) :2007

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms								
1	Macrobenthos	--	*Isopods*	*Isopods*	*Isopods*	*Foraminiferan*	*Foraminiferan*	*Foraminiferan*	APHA (24th Ed. 2023)10500
			Polychates	*Polychates*	*Polychates*	*Decapods Larvae*	*Decapods Larvae*	*Decapods Larvae*	
			Sipunculids	*Sipunculids*	*Sipunculids*	*Amphipods*	*Gastropods*	*Gastropods*	
			Amphipods	*Foraminiferan*	*Foraminiferan*	*Polychates*	*Polychates*	*Polychates*	
2	MeioBenthos	--	*Herpectacoids*	*Gastropods*	Herpectacoids	Turbellarians	*Turbellarians*	*Turbellarians*	
			Decapods Larvae	*Decapods Larvae*	*Decapods Larvae*	*Foraminiferan*	*Foraminiferan*	*Foraminiferan*	
3	Population	no/m²	364	366	368	367	368	367	

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.18	7.98	8.06	7.86	8.12	7.94	8.05	7.86	7.96	7.84	8.06	7.94	IS 3025(Part 11):2022
2.	Temperature	°C	29.8	29.7	30.4	30.3	30.5	30.4	30.2	30.1	30.1	30	29.8	29.7	IS 3025(Part 9):2023
3.	Total Suspended Solids	mg/L	142	118	136	104	142	122	118	96	94	76	114	88	APHA 24th Ed.,2023,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.9	BDL(MDL:1.0)	3.2	BDL(MDL:1.0)	2.8	BDL(MDL:1.0)	2.5	BDL(MDL:1.0)	2.6	BDL(MDL:1.0)	2.8	BDL(MDL:1.0)	IS 3025(Part 44):2023
5.	Dissolved Oxygen	mg/L	6.12	5.82	6.02	5.67	5.93	5.58	6.22	6.03	6.4	6.1	6.49	6.2	APHA 24th Ed.2023,4500-O, B
6.	Salinity	ppt	36.38	37.13	36.44	37.42	36.35	37.36	35.94	36.84	35.69	36.72	35.59	36.78	By Calculation
7.	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)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	IS 3025(Part 39):2021
8.	Nitrate as NO_3	µmol/L	3.39	3.23	3.71	3.55	3.87	3.55	3.39	3.23	2.42	2.1	2.49	2.15	APHA 24th Ed.2023,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.5	0.478	0.543	0.522	0.5	0.456	0.478	0.435	0.239	0.196	0.259	0.13	APHA 24th Ed.2023,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	4.27	4.16	4.48	4.43	4.32	4.27	3.74	3.69	4.11	4.014	2.28	1.81	APHA 24th Ed.2023,4500-NH3 B
11.	Phosphates as PO_4	µmol/L	1.68	1.47	1.47	1.37	1.26	1.16	1.16	1.05	1.05	BDL(MDL:0.4)	1.16	1.05	APHA 24th Ed.2023,4500-P, D
12.	Total Nitrogen	µmol/L	8.16	7.868	8.733	8.502	8.69	8.276	7.608	7.355	6.769	6.31	5.029	4.09	APHA 24th Ed.2023,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ND	ND	ND	ND	ND	ND	APHA 24th ED.2023,5520 F
14.	Total Dissolved Solids	mg/L	36240	37310	36280	37340	36110	37140	35860	36920	35810	36860	35860	36740	IS 3025(Part 16):2023
15.	COD	mg/L	19.9	7.9	32.19	16.1	27.9	12	20.1	8	24	12	28.1	16.1	IS 3025(Part 58):2023

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton														
1.	Chlorophyll	mg/m³	2.98	2.69	2.97	2.64	2.96	2.63	2.95	2.66	2.98	2.67	2.99	2.68	APHA (24th Ed. 2023)10200A-G
2.	Phaeophytin	mg/m³	2.09	2.06	2.08	2.07	2.05	2.05	2.06	2.06	2.08	2.05	2.06	2.04	APHA (24th Ed. 2023)10200A-G
3.	Cell Count	No. x 10^3/L	95	147	97	146	94	148	95	147	93	148	94	147	APHA (24th Ed. 2023)10200A-G
4	Name of Group Number and name of group species of each group	--	*Thalassiothrix*	*Pinnularia*	*Thalassiothrix*	*Pinnularia*	*Dinophysis*	*Pinnularia*	*Navicula*	*Thalassiothrix*	*Surirella*	*Thalassiothrix*	*Surirella*	*Thalassiothrix*	APHA (24th Ed. 2023)10200A-G
			Surirella	*Biddulphia*	*Surirella*	*Biddulphia*	*Surirella*	*Biddulphia*	*Skeletonema*	*Surirella*	*Pinnularia*	*Surirella*	*Pinnularia*	*Surirella*	
			Navicula	*Navicula*	*Navicula*	*Navicula*	*Nitzschia*	*Navicula*	*Rhizosolenia*	*Navicula*	*Rhizosolenia*	*Navicula*	*Melosira*	*Navicula*	
			Thallassiosira	*Rhizosolenia*	*Cyclotella*	*Rhizosolenia*	*Cyclotella*	*Rhizosolenia*	*Dinophysis*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	
			Skeletonema	*Skeletonema*	*Skeletonema*	*Thallassiosira*	*Skeletonema*	*Thallassiosira*	*Thalassionema*	*Skeletonema*	*Thalassionema*	*Skeletonema*	*Thalassionema*	*Skeletonema*	

B	Zooplankton								
1	Abudance (Population)	noX10 3/ 100 m3	42	44	43	42	43	42	APHA (24rd Ed. 2023)10200 G
2	Name of Group Number and name of group species of each group		*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	*Crustacean Larvae*	*Crustacean Larvae*	*Crustacean Larvae*	
			Copepods	*Oikoplura*	*Nitzschia*	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	
			Copepods nauplii	*Copepods nauplii*	*Copepods nauplii*	*Copepods*	*Copepods*	*Copepods*	
			Crustacean	*Crustacean*	*Pinnularia*	*Crustacean*	*Crustacean*	*Copepods nauplii*	
			Bivalve Larvae	*Bivalve Larvae*	*Bivalve Larvae*	*Bivalve Larvae*	*Bivalve Larvae*	*Bivalve Larvae*	
3	Total Biomass	ml/10 0 m^3	15.74	15.7	15.25	15.5	15.3	15.3	

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological														
1	Total Bacterial Count	CFU/ml	110		114		116		118		120		122		APHA 24th Ed.2023,9215 -C
2	Total Coliform	/100ml	32		34		33		34		35		36		APHA 24thEd.2023, 9222-B
3	E.coli	/100ml	13		16		14		13		14		12		IS :15185:2016
4	Enterococcus	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 24thEd.2023, 9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.48	0.44	0.49	0.46	0.52	0.48	IS: 2720 (Part 22):1972
2.	Phosphorus as P	µg/g	574.2	564.8	562.2	550.2	590.5	582.1	IS: 10158 :1982, Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 24th Ed.2023,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.12	4.06	4.11	4.02	3.83	3.84	IS3025(Part 55):2003
5.2	Total Chromium as Cr+3	µg/g	151.4	154.2	148.9	135.4	146.2	152.2	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.3	Manganese as Mn	µg/g	659	668	672.2	640.5	710.2	685.4	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.4	Iron as Fe	%	4.09	4.02	4.11	4.02	4.16	4.02	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.5	Nickel as Ni	µg/g	43.21	44.13	44.28	39.82	42.44	44.31	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.6	Copper as Cu	µg/g	43.05	42.64	42.86	41.25	48.95	46.36	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.7	Zinc as Zn	µg/g	155.4	146.5	145.6	136.4	142.4	135.4	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.8	Lead as Pb	µg/g	2.33	2.13	1.96	2.05	2.11	2.04	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.9	Mercury as Hg	µg/g	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	EPA 7471B (Extraction &Analytical Method) :2007

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D			Benthic Organisms						
1	Macrobenthos	--	*Decapods Larvae*	*Polychates*	*Polychates*	*Foraminiferan*	*Foraminiferan*	*Foraminiferan*	APHA (24th Ed. 2023)10500
			Isopods	Isopods	*Isopods*	*Gastropods*	*Gastropods*	Gastropods	
			Amphipods	*Amphipods*	*Gastropods*	*Isopods*	*Isopods*	*Isopods*	
			Sipunculids	*Sipunculids*	*Sipunculids*	*Sipunculids*	*Amphipods*	*Amphipods*	
2	MeioBenthos	--	*Foraminiferan*	*Foraminiferan*	*Decapods Larvae*	*Herpectacoids*	*Sipunculids*	*Sipunculids*	
			Herpectacoids	*Herpectacoids*	*Herpectacoids*	*Polychates*	*Polychates*	*Polychates*	
3	Population	no/m²	305	296	307	306	303	301	

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.22	8.1	8.14	8.06	8.18	8.08	8.07	7.91	8.11	7.89	8.14	7.93	IS 3025(Part 11):2022
2.	Temperature	°C	29.9	29.8	30.5	30.4	30.4	30.3	30.2	30.1	30.1	30	29.9	29.8	IS 3025(Part 9):2023
3.	Total Suspended Solids	mg/L	136	112	142	116	136	116	128	118	112	94	106	82	APHA 24th Ed.,2023,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3	BDL(MDL:1.0)	2.8	BDL(MDL:1.0)	2.9	BDL(MDL:1.0)	2.4	BDL(MDL:1.0)	2.8	BDL(MDL:1.0)	3.1	BDL(MDL:1.0)	IS 3025(Part 44):2023
5.	Dissolved Oxygen	mg/L	5.92	5.72	5.82	5.57	5.73	5.48	6.32	6.22	6.49	6.3	6.59	6.4	APHA 24th Ed.2023,4500-O, B
6.	Salinity	ppt	36.58	37.28	36.64	37.44	36.55	37.38	36.24	37.21	35.96	36.88	35.88	36.74	By Calculation
7.	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)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	IS 3025(Part 39):2021
8.	Nitrate as NO_3	µmol/L	3.23	2.9	3.87	3.55	3.23	2.9	3.06	2.9	2.26	1.94	3.23	2.59	APHA 24th Ed.2023,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.435	0.413	0.478	0.456	0.522	0.5	0.435	0.413	0.304	0.261	0.413	0.379	APHA 24th Ed.2023,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	4.37	4.22	4.498	4.32	4.22	4.16	3.64	3.59	3.95	3.85	3.66	2.93	APHA 24th Ed.2023,4500-NH3 B
11.	Phosphates as PO_4	µmol/L	1.37	1.16	1.26	1.05	1.37	1.26	1.26	1.05	1.37	1.16	1.05	BDL(MDL:0.4)	APHA 24th Ed.2023,4500-P, D
12.	Total Nitrogen	µmol/L	8.035	7.533	8.846	8.326	7.972	7.56	7.135	6.903	6.514	6.051	7.303	5.899	APHA 24th Ed.2023,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ND	ND	ND	ND	ND	ND	APHA 24th ED.2023,5520 F
14.	Total Dissolved Solids	mg/L	36246	37250	36270	37310	36190	37240	35560	36770	35090	36680	35120	36550	IS 3025(Part 16):2023
15.	COD	mg/L	15.9	7.9	28.17	16.1	23.9	12	12	BDL(MDL:2.0)	16	4	20.1	8	IS 3025(Part 58):2023

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	2.47	2.47	2.44	2.48	2.42	2.44	2.43	2.46	2.42	2.47	2.41	2.46	APHA (24th Ed. 2023)10200A-G
2.	Phaeophytin	mg/m³	1.66	1.47	1.65	1.42	1.67	1.43	1.68	1.44	1.67	1.42	1.68	1.41	APHA (24th Ed. 2023)10200A-G
3.	Cell Count	No. x 10³/L	140	98	142	97	146	96	148	97	150	98	154	99	APHA (24th Ed. 2023)10200A-G
4	Name of Group Number and name of group species of each group	--	*Pinnularia*	*Coscinodiscus*	*Pinnularia*	*Coscinodiscus*	*Pinnularia*	*Coscinodiscus*	*Melosira*	*Cyclotella*	*Melosira*	*Cyclotella*	*Melosira*	*Cyclotella*	APHA (24th Ed. 2023)10200A-G
			Biddulphia	*Pinnularia*	*Biddulphia*	*Pinnularia*	*Biddulphia*	*Pinnularia*	*Pinnularia*	*Pinnularia*	*Pinnularia*	*Pinnularia*	*Pinnularia*	*Pinnularia*	
			Navicula	*Rhizosolenia*	*Navicula*	*Rhizosolenia*	*Navicula*	*Rhizosolenia*	*Skeletonema*	*Skeletonema*	*Rhizosolenia*	*Skeletonema*	*Rhizosolenia*	*Skeletonema*	
			Thallassiosira	*Dinophysis*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	*Dinophysis*	*Thallassiosira*	*Thallassiosira*	*Thallassiosira*	*Thallassiosira*	*Thallassiosira*	*Thallassiosira*	
			Skeletonema	*Thalassionema*	*Skeletonema*	*Thalassionema*	*Skeletonema*	*Thalassionema*	*Thalassionema*	*Thalassionema*	*Thalassionema*	*Thalassionema*	*Thalassionema*	*Thalassionema*	

B			Zooplankton						
1	Abudance (Population)	noX10 3/ 100 m3	40	41	40	43	45	44	APHA (24rd Ed. 2023)10200 G
2	Name of Group Number and name of group species of each group		*Copepods*	*Copepods*	*Rhizosolenia*	*Crustacean*	*Crustacean*	*Crustacean*	
			Copepods nauplii	*Copepods nauplii*	*Crustacean Larvae*	*Copepods nauplii*	*Copepods nauplii*	*Copepods nauplii*	
			Egg(Fish and Shrimps)	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	*Crustacean Larvae*	*Crustacean Larvae*	*Crustacean Larvae*	
			Crustacean	*Pinnularia*	*Oikoplura*	*Crustacean*	*Crustacean*	*Egg(Fish and Shrimps)*	
			Bivalve Larvae	*Bivalve Larvae*	*Thalassionema*	*Bivalve Larvae*	*Bivalve Larvae*	*Bivalve Larvae*	
3	Total Biomass	ml/100 m³	14.48	15.5	15.4	15.6	15.5	15.5	

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24	Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM		
C			Microbiological											
1	Total Bacterial Count	CFU/ml	126		128		130		132		130	132		APHA 24th Ed.2023,9215 -C
2	Total Coliform	/100ml	28		27		29		30		31	30		APHA 24thEd.2023, 9222-B
3	E.coli	/100ml	24		23		22		21		22	21		IS :15185:2016
4	Enterococcus	/100ml	Absent		Absent		Absent		Absent		Absent	Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent	Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent	Absent		APHA 24thEd.2023, 9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent	Absent		IS: 5887 (Part V):1976

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.42	0.46	0.42	0.48	0.52	0.46	IS: 2720 (Part 22):1972
2.	Phosphorus as P	µg/g	618.2	620.5	611.8	618.6	632.4	610.2	IS: 10158 :1982, Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 24th Ed.2023,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.14	4.36	4.09	4.12	3.94	3.88	IS3025(Part 55):2003
5.2	Total Chromium as Cr+3	µg/g	146.2	154.1	146.5	138.5	124.5	132.4	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.3	Manganese as Mn	µg/g	618.9	620.2	608.5	619.2	520.6	538.4	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.4	Iron as Fe	%	4.09	4.11	4.06	3.98	4.09	4.14	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.5	Nickel as Ni	µg/g	44.6	42.5	44.8	41.62	36.8	35.2	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.6	Copper as Cu	µg/g	42.05	43.11	43.82	45.08	40.95	36.8	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.7	Zinc as Zn	µg/g	134.6	142.2	143.8	146.7	124.9	115.8	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.8	Lead as Pb	µg/g	2.33	2.16	2.22	2.15	1.96	2.05	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.9	Mercury as Hg	µg/g	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	EPA 7471B (Extraction &Analytical Method) :2007

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms								
1	Macrobenthos	--	Polychates	*Polychates*	*Amphipods*	*Gastropods*	*Gastropods*	*Decapods Larvae*	APHA (24th Ed. 2023)10500
			Gastropods	*Gastropods*	*Gastropods*	*Isopods*	*Isopods*	*Isopods*	
			Isopods	*Isopods*	*Isopods*	*Amphipods*	*Amphipods*	*Amphipods*	
			Sipunculids	*Sipunculids*	*Sipunculids*	*Sipunculids*	*Sipunculids*	*Sipunculids*	
2	MeioBenthos	--	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Polychates*	*Polychates*	*Foraminiferan*	
			Polychates	*Polychates*	*Polychates*	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	
3	Population	no/m²	298	296	298	297	295	294	

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.19	8.01	8.14	8.04	8.17	8.01	8.12	7.99	8.05	7.92	8.16	7.98	IS 3025(Part 11):2022
2.	Temperature	°C	29.8	29.7	30.4	30.3	30.6	30.5	30.1	30	30	29.9	29.9	29.8	IS 3025(Part 9):2023
3.	Total Suspended Solids	mg/L	138	122	142	128	144	132	132	114	124	108	132	102	APHA 24th Ed.,2023,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.8	BDL(MDL:1.0)	3.1	BDL(MDL:1.0)	3.2	BDL(MDL:1.0)	2.6	BDL(MDL:1.0)	2.9	BDL(MDL:1.0)	2.5	BDL(MDL:1.0)	IS 3025(Part 44):2023
5.	Dissolved Oxygen	mg/L	6.22	6.12	6.12	5.97	6.03	5.88	6.42	6.32	6.59	6.4	6.69	6.49	APHA 24th Ed.2023,4500-O, B
6.	Salinity	ppt	35.94	36.97	36.15	37.22	36.18	37.24	35.84	36.92	35.66	36.78	35.74	36.82	By Calculation
7.	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)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	IS 3025(Part 39):2021
8.	Nitrate as NO_3	µmol/L	3.39	3.23	3.55	3.39	3.23	2.9	3.06	2.9	2.1	1.77	2.37	2.16	APHA 24th Ed.2023,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.435	0.391	0.478	0.5	0.543	0.522	0.391	0.37	0.239	0.174	0.207	0.189	APHA 24th Ed.2023,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	4.27	4.16	4.22	4.16	4.32	4.27	3.53	3.48	4.01	3.9	2.75	2.62	APHA 24th Ed.2023,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	1.79	1.68	1.16	1.05	1.26	1.16	1.05	BDL(MDL:0.4)	1.26	1.05	1.16	BDL(MDL:0.4)	APHA 24th Ed.2023,4500-P, D
12.	Total Nitrogen	µmol/L	8.095	7.781	8.248	8.05	8.093	7.692	6.981	6.75	6.349	5.844	5.327	4.969	APHA 24th Ed.2023,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ND	ND	ND	ND	ND	ND	APHA 24th ED.2023,5520 F
14.	Total Dissolved Solids	mg/L	36380	37320	36410	37360	36320	37180	35730	36810	35650	36780	35710	36790	IS 3025(Part 16):2023
15.	COD	mg/L	23.9	7.9	32.19	20.12	27.9	16	16.1	4	20	8	24.1	12	IS 3025(Part 58):2023

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A	Phytoplankton														
1.	Chlorophyll	mg/m³	2.36	3.14	2.38	3.17	2.37	3.19	2.35	3.2	2.36	3.1	2.37	3.2	APHA (24th Ed. 2023)10200A-G
2.	Phaeophytin	mg/m³	2.69	2	2.66	3	2.59	4	2.6	5	2.7	4	2.5	6	APHA (24th Ed. 2023)10200A-G
3.	Cell Count	No. x 10³/L	154	88	156	86	154	84	155	88	152	89	156	88	APHA (24th Ed. 2023)10200A-G
4	Name of Group Number and name of group species of each group	--	*Coscinodiscus*	*Surirella*	*Surirella*	*Surirella*	*Coscinodiscus*	*Surirella*	*Thallassiosira*	*Coscinodiscus*	*Thallassiosira*	*Coscinodiscus*	*Thallassiosira*	*Coscinodiscus*	APHA (24th Ed. 2023)10200A-G
			Diploneis	*Biddulphia*	*Diploneis*	*Biddulphia*	*Diploneis*	*Biddulphia*	*Melosira*	*Diploneis*	*Melosira*	*Diploneis*	*Melosira*	*Diploneis*	
			Rhizosolenia	*Navicula*	*Thalassiothrix*	*Coscinodiscus*	*Skeletonema*	*Coscinodiscus*	*Nitzschia*	*Rhizosolenia*	*Nitzschia*	*Rhizosolenia*	*Nitzschia*	*Rhizosolenia*	
			Dinophysis	*Thallassiosira*	*Navicula*	*Thallassiosira*	*Navicula*	*Thallassiosira*	*Rhizosolenia*	*Dinophysis*	*Rhizosolenia*	*Dinophysis*	*Rhizosolenia*	*Dinophysis*	
			Thalassionema	*Skeletonema*	*Thalassionema*	*Skeletonema*	*Thalassionema*	*Skeletonema*	*Pleurosigma*	*Thalassionema*	*Pleurosigma*	*Thalassionema*	*Pleurosigma*	*Thalassionema*	

B	Zooplankton														
1	Abudance (Population)	noX10 3/ 100 m3	37		36		37		36		37		38		APHA (24rd Ed. 2023)10200 G
2	Name of Group Number and name of group species of each group		*Oikoplura*		*Oikoplura*		*Copepods nauplii*		*Copepods nauplii*		*Copepods nauplii*		*Copepods nauplii*		
			Copepods nauplii		*Rhizosolenia*		*Rhizosolenia*		*Crustacean Larvae*		*Crustacean Larvae*		*Egg(Fish and Shrimps)*		
			Crustacean Larvae		*Crustacean Larvae*		*Egg(Fish and Shrimps)*		*Oikoplura*		*Oikoplura*		*Oikoplura*		
			Crustacean		*Crustacean*		*Crustacean*		*Bivalve Larvae*		*Bivalve Larvae*		*Copepods nauplii*		
			Bivalve Larvae		*Bivalve Larvae*		*Bivalve Larvae*		*Oikoplura*		*Oikoplura*		*Oikoplura*		
3	Total Biomass	ml/100 m³	14.22		14.24		14.23		14.26		14.27		14.27		

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	100		92		94		96		98		100		APHA 24th Ed.2023,9215 -C
2	Total Coliform	/100ml	44		42		44		43		42		44		APHA 24thEd.2023, 9222-B
3	E.coli	/100ml	12		11		10		11		10		12		IS :15185:2016
4	Enterococcus	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 24thEd.2023, 9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.51	0.52	0.49	0.41	0.49	0.44	IS: 2720 (Part 22):1972
2.	Phosphorus as P	µg/g	619.4	621.4	624.2	612.5	580	560.8	IS: 10158 :1982, Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 24th Ed.2023,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.14	4.06	3.98	3.88	3.92	3.99	IS3025(Part 55):2003
5.2	Total Chromium as Cr+3	µg/g	144.4	138.9	142.2	132.6	122.6	132.2	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.3	Manganese as Mn	µg/g	611.5	602.5	610.4	589.2	554.6	540.3	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.4	Iron as Fe	%	4.06	4.11	4.08	4.11	4.18	4.06	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.5	Nickel as Ni	µg/g	51.24	52.2	53.1	55.6	48.6	48.2	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.6	Copper as Cu	µg/g	48.62	48.44	49.02	52.1	46.9	45.3	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.7	Zinc as Zn	µg/g	134.2	136.2	138.4	148.6	138	144.2	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.8	Lead as Pb	µg/g	2.24	2.22	2.31	2.24	2.11	2.16	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.9	Mercury as Hg	µg/g	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	EPA 7471B (Extraction &Analytical Method) :2007

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms								
1	Macrobenthos	--	*Foraminiferan*	*Amphipods*	*Amphipods*	*Sipunculids*	*Sipunculids*	Sipunculids	APHA (24th Ed. 2023)10500
			Gastropods	*Gastropods*	*Gastropods*	*Decapods Larvae*	*Decapods Larvae*	*Decapods Larvae*	
			Isopods	*Isopods*	*Isopods*	*Polychates*	*Polychates*	*Polychates*	
			Sipunculids	*Sipunculids*	*Turbellarians*	*Isopods*	*Isopods*	*Foraminiferan*	
2	MeioBenthos	--	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Turbellarians*	Gastropods	*Gastropods*	
			Polychates	*Turbellarians*	*Decapods Larvae*	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	
3	Population	no/m^2	322	341	288	304	308	300	

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.16	8.06	8.18	8.11	8.21	8.09	8.14	8.04	8.07	7.88	8.18	8.02	IS 3025(Part 11):2022
2.	Temperature	°C	29.8	29.7	30.5	30.4	30.6	30.5	30.2	30.1	30.1	30	30	29.9	IS 3025(Part 9):2023
3.	Total Suspended Solids	mg/L	134	114	128	112	130	108	138	114	132	108	122	104	APHA 24th Ed.,2023,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.1	BDL(MDL:1.0)	3.3	BDL(MDL:1.0)	3.1	BDL(MDL:1.0)	2.7	BDL(MDL:1.0)	2.8	BDL(MDL:1.0)	2.7	BDL(MDL:1.0)	IS 3025(Part 44):2023
5.	Dissolved Oxygen	mg/L	6.22	6.02	6.12	5.87	6.03	5.78	6.22	6.13	6.4	6.2	6.49	6.3	APHA 24th Ed.2023,4500-O, B
6.	Salinity	ppt	36.54	37.1	36.62	37.26	36.55	37.33	35.55	36.28	35.42	36.34	35.31	36.41	By Calculation
7.	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)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	IS 3025(Part 39):2021
8.	Nitrate as NO_3	µmol/L	3.87	3.55	4.03	3.87	3.71	3.39	2.9	2.74	2.1	1.94	2.8	2.37	APHA 24th Ed.2023,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.456	0.413	0.522	0.5	0.478	0.456	0.435	0.413	0.391	0.348	0.259	0.189	APHA 24th Ed.2023,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	3.95	3.8	4.16	4.11	4.11	4.06	3.64	3.59	3.48	3.42	4.05	3.83	APHA 24th Ed.2023,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	1.9	1.68	1.37	1.26	1.16	1.05	1.05	BDL(MDL:0.4)	1.16	BDL(MDL:0.4)	1.26	1.16	APHA 24th Ed.2023,4500-P, D
12.	Total Nitrogen	µmol/L	8.276	7.763	8.712	8.48	8.298	7.906	6.975	6.743	5.971	5.708	7.109	6.389	APHA 24th Ed.2023,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ND	ND	ND	ND	ND	ND	APHA 24th ED.2023,5520 F
14.	Total Dissolved Solids	mg/L	36210	37300	36250	37340	36190	37240	35640	36930	34680	35880	34720	35910	IS 3025(Part 16):2023
15.	COD	mg/L	23.9	11.9	24.14	20.12	19.9	16	4	BDL(MDL:2.0)	8	4	12	8	IS 3025(Part 58):2023

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	3.17	3.15	3.14	3.17	3.11	3.15	3.13	3.16	3.14	3.18	3.12	3.17	APHA (24th Ed. 2023)10200A-G
2.	Phaeophytin	mg/m³	2.4	1.25	2.3	1.24	2.2	1.23	2.3	1.24	2.4	1.23	2.3	1.22	APHA (24th Ed. 2023)10200A-G
3.	Cell Count	No. x 10³/L	115	105	118	107	120	106	122	108	123	109	122	110	APHA (24th Ed. 2023)10200A-G
4	Name of Group Number and name of group species of each group	--	*Diplonеis*	*Navicula*	*Diplonеis*	*Navicula*	*Navicula*	*Navicula*	*Navicula*	*Pinnularia*	*Navicula*	*Pinnularia*	*Navicula*	*Pinnularia*	APHA (24th Ed. 2023)10200A-G
			Rhizosolenia	*Skeletonema*	*Rhizosolenia*	*Skeletonema*	*Biddulphia*	*Skeletonema*	*Biddulphia*	*Biddulphia*	*Biddulphia*	*Biddulphia*	*Biddulphia*	*Rhizosolenia*	
			Nitzschia	*Rhizosolenia*	*Nitzschia*	*Rhizosolenia*	*Nitzschia*	*Rhizosolenia*	*Nitzschia*	*Navicula*	*Nitzschia*	*Navicula*	*Odontella*	*Dinophysis*	
			Cyclotella	*Dinophysis*	*Cyclotella*	*Biddulphia*	*Cyclotella*	*Biddulphia*	*Cyclotella*	*Thallassiosira*	*Cyclotella*	*Thallassiosira*	*Cyclotella*	*Coscinodiscus*	
			Pleurosigma	*Thalassionema*	*Pleurosigma*	*Thalassionema*	*Pleurosigma*	*Thalassionema*	*Pleurosigma*	*Skeletonema*	*Pleurosigma*	*Skeletonema*	*Pleurosigma*	*Skeletonema*	

B			Zooplankton												
1	Abudance (Population)	noX10 3/ 100 m3	48		49		48		50		52		51		APHA (24rd Ed. 2023)10200 G
2	Name of Group Number and name of group species of each group		*Copepods nauplii*		*Nitzschia*		*Nitzschia*		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		
			Crustacean Larvae		*Crustacean Larvae*		*Crustacean Larvae*		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		*Egg(Fish and Shrimps)*		
			Oikoplura		*Oikoplura*		*Oikoplura*		*Copepods*		*Copepods*		*Copepods nauplii*		
			Bivalve Larvae		*Bivalve Larvae*		*Bivalve Larvae*		*Crustacean*		*Crustacean*		*Crustacean*		
			Oikoplura		*Oikoplura*		*Oikoplura*		*Bivalve Larvae*		*Bivalve Larvae*		*Bivalve Larvae*		
3	Total Biomass	ml/100 m³	14.17		14.15		14.12		14.13		14.12		14.12		

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
C			Microbiological												
1	Total Bacterial Count	CFU/ml	130		134		134		136		140		144		APHA 24th Ed.2023,9215 -C
2	Total Coliform	/100ml	27		30		31		32		33		31		APHA 24thEd.2023, 9222-B
3	E.coli	/100ml	15		16		18		17		18		17		IS :15185:2016
4	Enterococcus	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 24thEd.2023, 9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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Technical Manager

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24 SEDIMENT	May-24 SEDIMENT	Jun-24 SEDIMENT	Jul-24 SEDIMENT	Aug-24 SEDIMENT	Sep-24 SEDIMENT	TEST METHOD
1.	Organic Matter	%	0.48	0.49	0.46	0.42	0.53	0.48	IS: 2720 (Part 22):1972
2.	Phosphorus as P	µg/g	728.4	710.5	698.5	650.9	612.1	590.8	IS: 10158 :1982, Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 24th Ed.2023,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.06	4.08	4.12	3.91	3.88	3.92	IS3025(Part 55):2003
5.2	Total Chromium as Cr+3	µg/g	142.2	162.4	166.2	156.4	142.3	136.2	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.3	Manganese as Mn	µg/g	598.4	602.4	609.8	617.2	570.9	560.4	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.4	Iron as Fe	%	4.06	4.14	4.09	4.16	4.19	4.11	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.5	Nickel as Ni	µg/g	44.36	43.36	43.12	42.19	44.36	45.68	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.6	Copper as Cu	µg/g	45.91	45.28	45.11	45.86	41.25	48.2	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.7	Zinc as Zn	µg/g	121.4	124.4	122.2	120.8	111.6	116.5	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.8	Lead as Pb	µg/g	2.09	1.89	1.94	2.08	1.92	2.11	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.9	Mercury as Hg	µg/g	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	EPA 7471B (Extraction &Analytical Method) :2007

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D			Benthic Organisms						
1	Macrobenthos	--	*Amphipods*	*Amphipods*	*Amphipods*	*Isopods*	*Isopods*	*Isopods*	APHA (24th Ed. 2023)10500
			Polychates	*Sipunculids*	*Polychates*	*Polychates*	*Polychates*	*Gastropods*	
			Isopods	*Isopods*	*Isopods*	*Sipunculids*	*Sipunculids*	*Sipunculids*	
			Gastropods	*Gastropods*	*Gastropods*	*Amphipods*	*Amphipods*	*Amphipods*	
2	MeioBenthos	--	Decapods Larvae	Decapods Larvae	Foraminiferan	Polychates	Herpectacoids	*Herpectacoids*	
			Herpectacoids	*Gastropods*	*Herpectacoids*	*Foraminiferan*	*Foraminiferan*	*Polychates*	
3	Population	no/m²	306	305	304	305	307	305	

GUJARAT VAPI.

Mr. Nilesh Patel
Sr. Chemist

Mr. Nitin Tandel
Technical Manager

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.18	7.98	8.15	8.04	8.19	8.06	8.04	7.88	8.15	7.98	8.16	8.04	IS 3025(Part 11):2022
2.	Temperature	°C	29.9	29.8	30.5	30.4	30.7	30.6	30.2	30.1	30.1	30	29.8	29.7	IS 3025(Part 9):2023
3.	Total Suspended Solids	mg/L	118	96	124	106	120	108	134	116	122	106	104	78	APHA 24th Ed.,2023,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.1	BDL(MDL:1.0)	3.4	BDL(MDL:1.0)	2.8	BDL(MDL:1.0)	2.5	BDL(MDL:1.0)	3.1	BDL(MDL:1.0)	2.5	BDL(MDL:1.0)	IS 3025(Part 44):2023
5.	Dissolved Oxygen	mg/L	6.02	5.92	5.92	5.77	5.83	5.68	6.42	6.22	6.59	6.3	6.69	6.4	APHA 24th Ed.2023,4500-O, B
6.	Salinity	ppt	36.52	37.35	36.58	37.48	36.42	37.21	36.14	36.97	35.97	36.77	35.81	36.58	By Calculation
7.	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)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	IS 3025(Part 39):2021
8.	Nitrate as NO_3	µmol/L	3.39	3.23	4.19	4.03	4.03	3.71	3.39	3.23	2.42	2.1	3.66	3.44	APHA 24th Ed.2023,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.5	0.456	0.565	0.522	0.564	0.543	0.37	0.348	0.196	0.13	0.413	0.379	APHA 24th Ed.2023,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	4.06	3.9	4.16	4.11	4.27	4.22	3.69	3.59	4.22	4.06	3.96	3.62	APHA 24th Ed.2023,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	2.21	2	2.11	1.9	1.9	1.68	1.37	1.26	1.47	1.37	1.58	1.47	APHA 24th Ed.2023,4500-P, D
12.	Total Nitrogen	µmol/L	7.95	7.586	8.915	8.662	8.864	8.473	7.45	7.168	6.836	6.29	8.033	7.439	APHA 24th Ed.2023,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ND	ND	ND	ND	ND	ND	APHA 24th ED.2023,5520 F
14.	Total Dissolved Solids	mg/L	36290	37340	36320	37110	36260	37180	35860	36720	35780	36690	35690	36480	IS 3025(Part 16):2023
15.	COD	mg/L	19.9	7.9	36.22	24.14	31.9	19.9	8	4	12	8	16.1	12	IS 3025(Part 58):2023

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	3.04	2.3	3.06	2.6	3.08	2.5	3.07	2.4	3.08	2.6	3.07	2.6	APHA (24th Ed. 2023)10200A-G
2.	Phaeophytin	mg/m³	2.6	1.77	2.7	1.78	2.5	1.77	2.6	1.78	2.7	1.77	2.6	1.78	APHA (24th Ed. 2023)10200A-G
3.	Cell Count	No. x 10^3/L	88	122	89	124	87	123	89	122	91	123	92	122	APHA (24th Ed. 2023)10200A-G
4	Name of Group Number and name of group species of each group	--	*Nitzschia*	*Thalassiothrix*	*Nitzschia*	*Rhizosolenia*	*Nitzschia*	*Rhizosolenia*	*Diploneis*	*Coscinodiscus*	*Diploneis*	*Coscinodiscus*	*Diploneis*	*Coscinodiscus*	APHA (24th Ed. 2023)10200A-G
			Pinnularia	*Surirella*	*Pinnularia*	*Surirella*	*Odontella*	*Surirella*	*Rhizosolenia*	*Diploneis*	*Rhizosolenia*	*Diploneis*	*Rhizosolenia*	*Diploneis*	
			Odontella	*Navicula*	*Dinophysis*	*Navicula*	*Dinophysis*	*Navicula*	*Nitzschia*	*Rhizosolenia*	*Nitzschia*	*Rhizosolenia*	*Nitzschia*	*Rhizosolenia*	
			Dinophysis	*Thallassiosira*	*Pleurosigma*	*Thalassionema*	*Pleurosigma*	*Thalassionema*	*Thalassiothrix*	*Dinophysis*	*Thalassiothrix*	*Dinophysis*	*Thalassiothrix*	*Dinophysis*	
			Surirella	*Skeletonema*	*Surirella*	*Skeletonema*	*Cyclotella*	*Skeletonema*	*Pleurosigma*	*Thalassionema*	*Pleurosigma*	*Thalassionema*	*Cyclotella*	*Thalassionema*	

B			Zooplankton						
1	Abudance (Population)	noX10 3/ 100 m3	41	42	42	43	42	43	APHA (24rd Ed. 2023)10200 G
2	Name of Group Number and name of group species of each group		*Nitzschia*	*Nitzschia*	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	
			Pinnularia	*Pinnularia*	*Coscinodiscus*	*Oikoplura*	*Oikoplura*	*Oikoplura*	
			Odontella	*Odontella*	*Odontella*	*Copepods nauplii*	*Copepods nauplii*	*Copepods nauplii*	
			Dinophysis	*Dinophysis*	*Dinophysis*	*Crustacean*	*Crustacean*	*Crustacean*	
			Surirella	*Surirella*	*Bivalve Larvae*	*Bivalve Larvae*	*Bivalve Larvae*	*Bivalve Larvae*	
3	Total Biomass	ml/100 m³	16.54	16.55	16.57	16.58	16.59	16.59	

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	90		94		94		92		94		92		APHA 24th Ed.2023,9215 -C
2	Total Coliform	/100ml	29		27		25		26		27		26		APHA 24thEd.2023, 9222-B
3	E.coli	/100ml	11		13		12		13		14		12		IS :15185:2016
4	Enterococcus	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 24thEd.2023, 9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

GUJARAT VAPI.

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.14	7.94	8.24	8.11	8.18	8.02	8.1	7.94	8.21	8.06	8.15	8.01	IS 3025(Part 11):2022
2.	Temperature	°C	29.9	29.8	30.5	30.4	30.7	30.6	30.2	30.1	30.1	30	29.9	29.8	IS 3025(Part 9):2023
3.	Total Suspended Solids	mg/L	114	92	118	104	122	110	108	88	124	98	122	94	APHA 24th Ed.,2023,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.9	BDL(MDL:1.0)	2.8	BDL(MDL:1.0)	2.9	BDL(MDL:1.0)	2.4	BDL(MDL:1.0)	2.8	BDL(MDL:1.0)	3.2	BDL(MDL:1.0)	IS 3025(Part 44):2023
5.	Dissolved Oxygen	mg/L	6.02	5.82	5.92	5.67	5.83	5.58	6.42	6.32	6.59	6.4	6.69	6.49	APHA 24th Ed.2023,4500-O, B
6.	Salinity	ppt	36.42	37.24	35.44	37.37	35.39	37.28	35.44	37.05	35.48	36.82	35.64	36.71	By Calculation
7.	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)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	IS 3025(Part 39):2021
8.	Nitrate as NO_3	µmol/L	3.71	3.23	4.03	3.71	4.19	3.87	3.55	3.23	2.74	2.42	3.45	3.02	APHA 24th Ed.2023,4500 NO3-
9.	Nitrite as NO_2	µmol/L	0.522	0.478	0.565	0.522	0.609	0.543	0.478	0.456	0.239	0.174	0.379	0.328	APHA 24th Ed.2023,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	4.16	4.11	4.11	4.06	4.32	4.27	3.59	3.48	4.37	4.22	3.84	3.62	APHA 24th Ed.2023,4500- NH3
11.	Phosphates as PO_4	µmol/L	2.21	2	1.9	1.79	1.68	1.58	1.26	1.05	1.26	BDL(MDL:0.4)	BDL(MDL:0.4)	BDL(MDL:0.4)	APHA 24th Ed.2023,4500-P, D
12.	Total Nitrogen	µmol/L	8.392	7.818	8.705	8.292	9.119	8.683	7.618	7.166	7.349	6.814	7.669	6.968	APHA 24th Ed.2023,4500 NH3 -
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ND	ND	ND	ND	ND	ND	APHA 24th ED.2023,5520 F
14.	Total Dissolved Solids	mg/L	36540	37610	36410	37480	36220	37340	35760	36520	35110	36460	35260	36180	IS 3025(Part 16):2023
15.	COD	mg/L	23.9	15.9	32.19	28.17	23.9	19.9	8	BDL(MDL:2.0)	12	4	16.1	8	IS 3025(Part 58):2023

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	3.1	3.17	3.2	3.14	3.1	3.12	3.2	3.11	3.3	3.12	3.2	3.11	APHA (24th Ed. 2023)10200A-G
2.	Phaeophytin	mg/m³	1.8	1.34	1.4	1.38	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.7	APHA (24th Ed. 2023)10200A-G
3.	Cell Count	No. x 10³/L	109	107	112	109	114	107	116	108	117	109	116	108	APHA (24th Ed. 2023)10200A-G
4	Name of Group Number and name of group species of each group	--	*Odentella*	*Cyclotella*	*Odentella*	*Cyclotella*	*Odentella*	*Cyclotella*	*Nitzschia*	*Diploneis*	*Nitzschia*	*Diploneis*	*Nitzschia*	*Diploneis*	APHA (24th Ed. 2023)10200A-G
			Rhizosolenia	*Pinnularia*	*Rhizosolenia*	*Pinnularia*	*Rhizosolenia*	*Pinnularia*	*Grammatophora*	*Rhizosolenia*	*Grammatophora*	*Rhizosolenia*	*Grammatophora*	*Rhizosolenia*	
			Coscinodiscus	*Skeletonema*	*Coscinodiscus*	*Skeletonema*	*Coscinodiscus*	*Skeletonema*	*Diplones*	*Nitzschia*	*Diplones*	*Nitzschia*	*Diplones*	*Nitzschia*	
			Grammatophora	*Thallassiosira*	*Grammatophora*	*Thallassiosira*	*Grammatophora*	*Thallassiosira*	*Thalassiothrix*	*Cyclotella*	*Thalassiothrix*	*Cyclotella*	*Thalassiothrix*	*Grammatophora*	
			Thallassiosira	*Thalassionema*	*Thallassiosira*	*Thalassionema*	*Thallassiosira*	*Thalassionema*	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	*Pleurosigma*	

B			Zooplankton						
1	Abudance (Population)	noX10 3/ 100 m3	34	33	31	32	33	31	APHA (24rd Ed. 2023)10200 G
2	Name of Group Number and name of group species of each group		*Coscinodiscus*	*Coscinodiscus*	*Odontella*	*Oikoplura*	*Oikoplura*	*Oikoplura*	
			Diploneis	*Egg(Fish and Shrimps)*	*Egg(Fish and Shrimps)*	*Copepods nauplii*	*Copepods nauplii*	*Egg(Fish and Shrimps)*	
			Rhizosolenia	*Rhizosolenia*	*Rhizosolenia*	*Crustacean Larvae*	*Crustacean Larvae*	*Crustacean Larvae*	
			Dinophysis	*Bivalve Larvae*	*Bivalve Larvae*	*Crustacean*	*Crustacean*	*Crustacean*	
			Thalassionema	*Thalassionema*	*Thalassionema*	*Bivalve Larvae*	*Bivalve Larvae*	*Bivalve Larvae*	
3	Total Biomass	ml/100 m³	14.78	14.77	14.78	14.77	14.78	14.78	

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	96		98		96		94		98		90		APHA 24th Ed.2023,9215 -C
2	Total Coliform	/100ml	14		16		15		14		12		11		APHA 24thEd.2023, 9222-B
3	E.coli	/100ml	13		14		11		10		11		13		IS :15185:2016
4	Enterococcus	/100ml	8		7		9		8		6		7		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 24thEd.2023, 9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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Technical Manager

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.49	0.42	0.41	0.49	0.53	0.45	IS: 2720 (Part 22):1972
2.	Phosphorus as P	µg/g	602	596	602.4	610.5	564.8	574.2	IS: 10158 :1982, Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 24th Ed.2023,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	3.98	3.94	3.98	4.05	4.19	4.06	IS3025(Part 55):2003
5.2	Total Chromium as Cr+3	µg/g	122.4	128.6	132.2	134.4	142.3	134.2	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.3	Manganese as Mn	µg/g	618.3	606	608.4	612.6	580.5	590.4	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.4	Iron as Fe	%	4.11	4.02	4.06	4.11	4.09	4.12	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.5	Nickel as Ni	µg/g	42.31	43.22	43.84	44.69	39.55	40.85	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.6	Copper as Cu	µg/g	44.86	44.685	44.23	42.36	51.31	52.31	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.7	Zinc as Zn	µg/g	121.2	120.4	122.5	114.6	128.4	122	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.8	Lead as Pb	µg/g	2.44	2.52	2.43	2.31	2.06	1.92	EPA 3050B/7000B (Extraction &Analytical Method):2007
5.9	Mercury as Hg	µg/g	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	EPA 7471B (Extraction &Analytical Method) :2007

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D			Benthic Organisms						
1	Macrobenthos	--	*Polychates*	*Gastropods*	*Gastropods*	*Polychates*	*Polychates*	*Polychates*	APHA (24th Ed. 2023)10500
			Decapods Larvae	*Decapods Larvae*	*Decapods Larvae*	*Amphipods*	*Amphipods*	*Amphipods*	
			Isopods	*Isopods*	*Isopods*	*Isopods*	*Isopods*	*Sipunculids*	
			Sipunculids	*Sipunculids*	*Sipunculids*	*Sipunculids*	*Herpectacoids*	*Herpectacoids*	
2	MeioBenthos	--	*Herpectacoids*	*Herpectacoids*	*Herpectacoids*	*Foraminiferan*	*Foraminiferan*	*Foraminiferan*	
			Turbellarians	*Turbellarians*	Turbellarians	Turbellarians	Turbellarians	*Turbellarians*	
3	Population	no/m²	368	367	365	366	367	368	

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.21	8.06	8.24	8.16	8.17	8	8.09	7.89	8.02	7.84	8.11	7.91	IS 3025 (Part 11):2022
2.	Temperature	°C	29.8	29.7	30.5	30.4	30.7	30.6	30.2	30.1	30.1	30	29.8	29.7	IS 3025 (Part 9):2023
3.	Total Suspended Solids	mg/L	132	108	124	112	130	118	122	104	138	116	142	128	APHA 24th Ed.,2023,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.9	BDL(MDL:1.0)	3.4	BDL(MDL:1.0)	3.1	BDL(MDL:1.0)	2.8	BDL(MDL:1.0)	2.2	BDL(MDL:1.0)	3.4	BDL(MDL:1.0)	IS 3025 (Part 44):2023
5.	Dissolved Oxygen	mg/L	6.02	5.92	5.92	5.77	5.83	5.68	6.32	6.22	6.49	6.3	6.59	6.4	APHA 24th Ed.2023,4500-O, B
6.	Salinity	ppt	36.34	37.33	36.42	37.51	36.34	37.39	35.82	37.08	35.73	37.12	35.84	36.98	By Calculation
7.	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)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	IS 3025 (Part 39):2021
8.	Nitrate as NO_3	µmol/L	3.06	2.74	3.39	3.23	3.55	3.39	3.06	2.74	2.42	2.26	3.02	2.59	APHA 24th Ed. 2023,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.565	0.543	0.652	0.609	0.543	0.522	0.5	0.456	0.413	0.37	0.276	0.215	APHA 24th Ed.2023,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	4.22	4.06	4.32	4.22	4.37	4.27	3.48	3.42	4.43	4.27	3.79	3.36	APHA 24th Ed. 2023,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	1.9	1.68	1.79	1.68	1.47	1.37	1.16	1.05	1.16	1.05	BDL(MDL:0.4)	BDL(MDL:0.4)	APHA 24th Ed.2023,4500-P, D
12.	Total Nitrogen	µmol/L	7.845	7.343	8.362	8.059	8.463	8.182	7.04	6.616	7.263	6.9	7.086	6.165	APHA 24th Ed. 2023,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ND	ND	ND	ND	ND	ND	APHA 24th ED.2023,5520 F
14.	Total Dissolved Solids	mg/L	36280	37190	36240	37230	36230	37140	36110	36940	35280	36860	35310	36520	IS 3025(Part 16):2023
15.	COD	mg/L	19.9	11.9	28.17	24.14	19.9	16	8	4	12	8	16.1	12	IS 3025(Part 58):2023

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	2.9	2.8	2.7	2.6	2.6	2.7	2.7	2.8	2.6	2.9	2.9	2.8	APHA (24th Ed. 2023)10200A-G
2.	Phaeophytin	mg/m³	2.7	1.6	2.6	1.7	2.7	1.5	2.9	1.6	2.8	1.5	2.7	1.6	APHA (24th Ed. 2023)10200A-G
3.	Cell Count	No. x 10^3/L	132	117	129	115	128	116	130	117	133	118	132	117	APHA (24th Ed. 2023)10200A-G
4	Name of Group Number and name of group species of each group	--	*Dinophysis*	*Navicula*	*Odontella*	*Cyclotella*	*Cyclotella*	*Surirella*	*Odontella*	*Nitzschia*	*Odontella*	*Nitzschia*	*Odontella*	*Nitzschia*	APHA (24th Ed. 2023)10200A-G
			Pinnularia	*Skeletonema*	*Rhizosolenia*	*Pinnularia*	*Pinnularia*	*Skeletonema*	*Rhizosolenia*	*Pinnularia*	*Rhizosolenia*	*Pinnularia*	*Rhizosolenia*	*Pinnularia*	
			Thalassiothrix	*Rhizosolenia*	*Coscinodiscus*	*Skeletonema*	*Thalassiothrix*	*Rhizosolenia*	*Coscinodiscus*	*Odontella*	*Coscinodiscus*	*Odontella*	*Coscinodiscus*	*Odontella*	
			Grammatophora	*Dinophysis*	*Grammatophora*	*Thallassiosira*	*Rhizosolenia*	*Cyclotella*	*Grammatophora*	*Dinophysis*	*Grammatophora*	*Dinophysis*	*Pleurosigma*	*Dinophysis*	
			Ceratium	*Thalassionema*	*Thallassiosira*	*Thalassionema*	*Ceratium*	*Thalassionema*	*Thallassiosira*	*Surirella*	*Thallassiosira*	*Surirella*	*Thallassiosira*	*Surirella*	

B			Zooplankton						
1	Abudance (Population)	noX10 3/ 100 m3	31	36	35	34	35	36	APHA (24rd Ed. 2023)10200 G
2	Name of Group Number and name of group species of each group		*Diploneis*	*Diploneis*	*Diploneis*	*Decapoda*	*Decapoda*	*Decapoda*	
			Rhizosolenia	*Rhizosolenia*	*Rhizosolenia*	*Copepods*	*Copepods*	*Oikoplura*	
			Nitzschia	*Nitzschia*	*Nitzschia*	*Crustacean Larvae*	*Crustacean Larvae*	*Crustacean Larvae*	
			Thalassiothrix	*Coscinodiscus*	*Coscinodiscus*	*Crustacean*	*Crustacean*	*Bivalve Larvae*	
			Pleurosigma	*Pleurosigma*	*Pleurosigma*	*Oikoplura*	*Oikoplura*	*Oikoplura*	
3	Total Biomass	ml/100 m³	15.23	15.22	15.23	15.23	15.23	15.25	

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
C			Microbiological												
1	Total Bacterial Count	CFU/ml	224		230		230		234		230		232		APHA 24th Ed.2023,9215 -C
2	Total Coliform	/100ml	42		40		40		43		44		43		APHA 24thEd.2023, 9222-B
3	E.coli	/100ml	32		33		33		33		32		31		IS :15185:2016
4	Enterococcus	/100ml	18		15		15		12		14		13		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 24thEd.2023, 9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.18	8.03	8.12	7.94	8.15	8.04	8.07	7.94	8.12	7.88	8.16	7.96	IS 3025 (Part 11):2022
2.	Temperature	°C	29.8	29.7	30.4	30.3	30.6	30.5	30.3	30.2	30.2	30.1	29.9	29.8	IS 3025 (Part 9):2023
3.	Total Suspended Solids	mg/L	142	122	130	104	132	112	120	102	110	92	124	88	APHA 24th Ed.,2023,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.1	BDL(MDL:1.0)	3.3	BDL(MDL:1.0)	3.1	BDL(MDL:1.0)	2.2	BDL(MDL:1.0)	2.8	BDL(MDL:1.0)	3.4	BDL(MDL:1.0)	IS 3025 (Part 44):2023
5.	Dissolved Oxygen	mg/L	5.92	5.82	5.82	5.67	5.73	5.58	6.42	6.32	6.59	6.4	6.69	6.49	APHA 24th Ed.2023,4500-O, B
6.	Salinity	ppt	36.39	37.44	36.42	37.54	36.12	37.28	35.74	36.91	35.81	36.87	35.67	26.76	By Calculation
7.	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)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	IS 3025 (Part 39):2021
8.	Nitrate as NO_3	µmol/L	3.06	2.74	3.23	3.06	3.39	3.23	3.23	2.9	2.1	1.77	2.67	2.54	APHA 24th Ed. 2023,4500 NO3-B
9.	Nitrite as NO_2	µmol/L	0.543	0.5	0.652	0.565	0.609	0.565	0.522	0.478	0.435	0.371	0.414	0.362	APHA 24th Ed.2023,4500NO_2B
10.	Ammonical Nitrogen as NH_3	µmol/L	4.43	4.22	4.37	4.27	4.43	4.32	3.74	3.64	4.16	3.95	3.4	3.32	APHA 24th Ed. 2023,4500- NH3 B
11.	Phosphates as PO_4	µmol/L	2	1.79	2.11	1.9	1.9	1.68	1.37	1.26	1.26	1.16	1.16	1.05	APHA 24th Ed.2023,4500-P, D
12.	Total Nitrogen	µmol/L	8.033	7.46	8.252	7.895	8.429	8.115	7.492	7.018	6.695	6.091	6.484	6.222	APHA 24th Ed. 2023,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ND	ND	ND	ND	ND	ND	APHA 24th ED.2023,5520 F
14.	Total Dissolved Solids	mg/L	36370	37410	36230	37140	36190	37110	35720	36410	34680	35370	34410	35420	IS 3025(Part 16):2023
15.	COD	mg/L	11.9	7.9	24.14	20.123	16	12	12	8	16	12	20.1	16.1	IS 3025(Part 58):2023

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m³	2.7	2.8	2.6	2.7	2.5	2.5	2.3	2.6	2.2	2.5	2.1	2.4	APHA (24th Ed. 2023)10200A-G
2.	Phaeophytin	mg/m³	1.16	1.45	1.17	1.47	1.18	1.48	1.17	1.46	1.18	1.47	1.17	1.46	APHA (24th Ed. 2023)10200A-G
3.	Cell Count	No. x 10³/L	75	122	77	126	75	127	77	130	78	133	77	132	APHA (24th Ed. 2023)10200A-G
4	Name of Group Number and name of group species of each group	--	*Ceratium*	*Melosira*	*Ceratium*	*Rhizosolenia*	*Surirella*	*Rhizosolenia*	*Skeletonema*	*Odontella*	*Skeletonema*	*Odontella*	*Skeletonema*	*Odontella*	APHA (24th Ed. 2023)10200A-G
			Pinnularia	*Dinophysis*	*Pinnularia*	*Dinophysis*	*Pinnularia*	*Dinophysis*	*Grammatophora*	*Rhizosolenia*	*Grammatophora*	*Rhizosolenia*	*Grammatophora*	*Rhizosolenia*	
			Odontella	*Skeletonema*	*Odontella*	*Skeletonema*	*Grammatophora*	*Skeletonema*	*Nitzschia*	*Coscinodiscus*	*Nitzschia*	*Coscinodiscus*	*Nitzschia*	*Coscinodiscus*	
			Thalassiothrix	*Thallassiosira*	*Thalassiothrix*	*Thallassiosira*	*Thalassiothrix*	*Thallassiosira*	*Thalassiothrix*	*Grammatophora*	*Thalassiothrix*	*Grammatophora*	*Coscinodiscus*	*Pinnularia*	
			Thallassiosira	*Thalassionema*	*Thallassiosira*	*Melosira*	*Rhizosolenia*	*Melosira*	*Pleurosigma*	*Thallassiosira*	*Pleurosigma*	*Thallassiosira*	*Pleurosigma*	*Thallassiosira*	
B			Zooplankton												
1	Abudance (Population)	noX10 3/ 100 m3	66		37		68		67		67		70		APHA (24rd Ed. 2023)10200 G
2	Name of Group Number and name of group species of each group		*Nitzschia*		*Nitzschia*		*Nitzschia*		*Copepods*		*Copepods*		*Copepods*		
			Grammatophora		*Grammatophora*		*Grammatophora*		*Oikoplura*		*Oikoplura*		*Oikoplura*		
			Diploneis		*Diploneis*		*Egg(Fish and Shrimps)*		*Crustacean Larvae*		*Crustacean Larvae*		*Crustacean Larvae*		
			Thalassiothrix		*Thalassiothrix*		*Thalassiothrix*		*Crustacean*		*Crustacean*		*Crustacean*		
			Pleurosigma		*Pleurosigma*		*Pleurosigma*		*Bivalve Larvae*		*Bivalve Larvae*		*Egg(Fish and Shrimps)*		
3	Total Biomass	ml/100 m³	14.56		14.55		14.54		14.57		14.54		14.57		

Continue…

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

SR. NO.	TEST PARAMETERS	UNIT	Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
C			Microbiological												
1	Total Bacterial Count	CFU/ml	248		250		254		256		250		254		APHA 24th Ed.2023,9215 -C
2	Total Coliform	/100ml	50		52		50		52		51		50		APHA 24thEd.2023, 9222-B
3	E.coli	/100ml	40		41		44		43		45		44		IS :15185:2016
4	Enterococcus	/100ml	31		30		32		31		32		30		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 24thEd.2023, 9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976

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RESULTS OF ETP OUTLET WATER

SR.NO.	TEST PARAMETERS	UNIT	LIQUID TERMINAL						GPCB Limit	TEST METHOD
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24		
			27-04-2024	25-05-2024	27-06-2024	24-07-2024	06-08-2024	20-09-2024		
1.	Colour	Pt. Co. Scale	40	40	40	60	50	50	100	IS 3025(Part 4):2021
2.	pH @ 27 ° C	--	7.35	6.97	7.11	6.96	6.87	7.51	6.5 to 8.5	IS 3025(Part 11):2022
3.	Temperature	^{0}C	30.5	31.5	31	30	29.5	30	40	IS 3025(Part 9):2023
4.	Total Suspended Solid	mg/L	34	28	22	24	32	46	100	APHA 24th Ed.2023,2540 –D
5.	Total Dissolved Solids	mg/L	1242	1318	940	720	636	629	2100	APHA 24th Ed.2023,2540- C
6.	COD	mg/L	86	88	92	86.2	82.1	91.2	100	IS 3025(Part 58):2023
7.	BOD (3 days at 27 ^{0}C)	mg/L	24.9	27	25.3	24	24	27	30	IS 3025(Part 44):2023
8.	Chloride (as Cl) $^-$	mg/L	486	502.4	437.1	400	234	247.7	600	IS 3025(Part 32):1988
9.	Oil & Grease	mg/L	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	10	IS 3025(Part 39):2021
10.	Sulphate (as SO_4)	mg/L	42	48	44	42	36.8	34	1000	IS 3025(Part 24):2022
11.	Ammonical Nitrogen	mg/L	30.2	34.4	32.5	30.2	15.8	28.5	50	IS 3025(Part 34):1988,
12.	Phenolic Compound	mg/L	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	1	IS 3025(Part 43):2022
13.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	3	IS 3025(Part 42):1992
14.	Lead as Pb	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	0.1	APHA 24th Ed.2023,3111-B

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SR.NO.	TEST PARAMETERS	UNIT	LIQUID TERMINAL						GPCB Limit	TEST METHOD
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24		
			27-04-2024	25-05-2024	27-06-2024	24-07-2024	06-08-2024	20-09-2024		
15.	Sulphide as S	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	APHA 24th Ed.2023,4500 S^{-2} F
16.	Cadmium as Cd	mg/L	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	0.04	0.017	BDL(MDL:0.003)	2	APHA 24th Ed.2023,3111-B
17.	Fluoride as F	mg/L	1.8	1.64	1.58	1.74	1.88	1.84	2	APHA 24th Ed.2023,4500 F, D
18.	Residual Chlorine	mg/L	0.66	0.74	0.68	0.74	0.68	BDL(MDL:0.1)	0.5 Min.	APHA 24th Ed.2023,4500-Cl-G
19.	Percent Sodium	%	46.77	47.38	47.39	47.64	47.25	46.91	60	By Calculation
20.	Sodium Absorption ratio	--	3.06	3.3	3.4	3.3	2.5	3.1	26	By Calculation

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Technical Manager

Results of Ambient Air Quality Monitoring

Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
1.	01-04-2024	79.75	31.28	27.86	31.25	1.1	--	NOT DETECTED
2.	04-04-2024	77.45	30.83	26.91	30.26	1.12	5.59	NOT DETECTED
3.	08-04-2024	81.36	33.46	29.75	32.37	1.16	5.62	NOT DETECTED
4.	11-04-2024	84.91	36.13	32.32	35.92	1.19	5.85	NOT DETECTED
5.	15-04-2024	82.37	32.86	29.4	32.53	1.15	5.76	NOT DETECTED
6.	18-04-2024	80.95	31.81	27.65	31.27	1.12	5.54	NOT DETECTED
7.	22-04-2024	82.52	33.37	30.48	34.64	1.14	5.68	NOT DETECTED
8.	25-04-2024	85.1	35.05	31.11	35.63	1.17	5.81	NOT DETECTED
9.	29-04-2024	83.26	33.49	30.64	34.13	1.12	5.7	NOT DETECTED
10.	02-05-2024	82.37	34.10	29.42	33.19	1.14	5.82	NOT DETECTED
11.	06-05-2024	84.13	36.72	31.64	35.32	1.15	5.89	NOT DETECTED
12.	09-05-2024	80.84	33.87	28.93	31.78	1.12	5.73	NOT DETECTED
13.	13-05-2024	78.46	32.87	29.98	33.52	1.10	5.61	NOT DETECTED
14.	16-05-2024	81.25	35.38	32.31	36.74	1.13	5.73	NOT DETECTED
15.	20-05-2024	79.63	33.89	30.13	34.62	1.12	5.56	NOT DETECTED

Continue…

Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
16.	23-05-2024	76.47	31.32	27.53	31.29	1.10	5.46	NOT DETECTED
17.	27-05-2024	78.52	34.54	28.41	32.48	1.13	5.37	NOT DETECTED
18.	30-05-2024	81.13	35.81	30.37	34.35	1.15	5.52	NOT DETECTED
19.	03-06-2024	80.62	33.35	28.84	31.98	1.12	5.57	NOT DETECTED
20.	06-06-2024	78.63	31.29	26.54	30.28	1.13	5.41	NOT DETECTED
21.	10-06-2024	81.12	33.27	29.17	32.48	1.16	5.69	NOT DETECTED
22.	13-06-2024	78.92	30.71	27.24	31.63	1.14	5.45	NOT DETECTED
23.	17-06-2024	74.39	28.16	26.19	30.84	1.1	5.32	NOT DETECTED
24.	20-06-2024	76.26	29.43	28.83	31.35	1.13	5.25	NOT DETECTED
25.	24-06-2024	63.37	26.71	25.69	28.14	1	4.74	NOT DETECTED
26.	27-06-2024	58.42	24.84	23.96	26.84	0.87	4.55	NOT DETECTED
27.	01-07-2024	60.75	26.86	24.62	27.46	1	--	NOT DETECTED
28.	04-07-2024	57.48	25.62	22.75	25.37	0.95	4.68	NOT DETECTED
29.	08-07-2024	63.48	27.19	24.59	28.11	1.02	4.78	NOT DETECTED
30.	11-07-2024	67.51	29.38	26.42	29.64	1.07	4.65	NOT DETECTED
31.	15-07-2024	64.38	26.51	24.96	27.15	1.03	4.73	NOT DETECTED

Continue…

Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
32.	18-07-2024	68.73	29.31	26.18	28.97	1.1	4.86	NOT DETECTED
33.	22-07-2024	65.41	27.54	25.38	28.26	1.12	4.79	NOT DETECTED
34.	25-07-2024	63.27	25.48	23.64	26.48	1.08	4.72	NOT DETECTED
35.	29-07-2024	59.83	24.28	22.69	25.13	1.02	4.61	NOT DETECTED
36.	01-08-2024	57.27	24.84	22.16	25.53	0.98	4.24	NOT DETECTED
37.	05-08-2024	61.29	26.58	23.81	26.48	1.04	4.41	NOT DETECTED
38.	08-08-2024	63.18	29.63	25.11	28.37	1.1	4.58	NOT DETECTED
39.	12-08-2024	60.72	27.37	22.84	25.42	1.06	4.38	NOT DETECTED
40.	15-08-2024	62.39	28.15	23.21	26.84	1.08	4.49	NOT DETECTED
41.	19-08-2024	64.15	29.52	25.37	28.15	1.12	4.64	NOT DETECTED
42.	22-08-2024	62.19	28.31	23.68	26.49	1.1	4.73	NOT DETECTED
43.	26-08-2024	58.37	25.48	22.57	25.16	1.05	4.51	NOT DETECTED
44.	29-08-2024	61.29	26.38	24.63	27.35	1.08	4.62	NOT DETECTED
45.	02-09-2024	60.17	25.52	21.92	24.63	1.02	4.42	NOT DETECTED
46.	05-09-2024	62.38	26.19	22.74	25.16	1.05	4.6	NOT DETECTED
47.	09-09-2024	65.13	28.36	24.82	27.48	1.08	4.66	NOT DETECTED

Continue…

Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
48.	12-09-2024	63.29	25.91	23.69	26.41	1.04	4.56	NOT DETECTED
49.	16-09-2024	65.49	27.47	25.12	28.74	1.10	4.62	NOT DETECTED
50.	19-09-2024	68.42	29.3	25.81	27.98	1.14	4.71	NOT DETECTED
51.	23-09-2024	66.1	27.85	24.39	27.63	1.11	4.64	NOT DETECTED
52.	26-09-2024	62.37	24.41	22.35	25.68	1.06	4.49	NOT DETECTED
53.	30-09-2024	65.18	25.37	23.7	26.45	1.1	4.58	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)

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

Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
1.	01-04-2024	79.67	30.14	26.39	30.11	0.82	--	NOT DETECTED
2.	04-04-2024	81.38	32.74	29.51	33.46	0.88	3.74	NOT DETECTED
3.	08-04-2024	77.49	30.13	25.38	30.27	0.85	3.68	NOT DETECTED
4.	11-04-2024	79.13	31.82	27.91	32.47	0.82	3.53	NOT DETECTED
5.	15-04-2024	75.37	27.42	24.89	30.11	0.77	3.38	NOT DETECTED
6.	18-04-2024	77.91	29.73	25.52	29.28	0.86	3.49	NOT DETECTED
7.	22-04-2024	80.15	32.49	29.73	33.42	0.83	3.71	NOT DETECTED
8.	25-04-2024	75.24	28.47	26.93	30.17	0.79	3.56	NOT DETECTED
9.	29-04-2024	78.42	29.85	28.12	32.73	0.78	3.67	NOT DETECTED
10.	02-05-2024	78.72	28.84	25.91	29.18	0.78	3.58	NOT DETECTED
11.	06-05-2024	75.92	26.79	24.43	28.73	0.75	3.49	NOT DETECTED
12.	09-05-2024	79.63	29.26	26.8	30.02	0.85	3.66	NOT DETECTED
13.	13-05-2024	81.27	31.36	28.75	31.97	0.84	3.81	NOT DETECTED
14.	16-05-2024	78.64	29.74	27.45	31.12	0.78	3.61	NOT DETECTED
15.	20-05-2024	75.64	27.46	25.61	29.53	0.75	3.58	NOT DETECTED

Continue…

Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
16.	23-05-2024	73.4	26.99	24.94	27.88	0.73	3.51	NOT DETECTED
17.	27-05-2024	76.62	29.17	27.32	31.42	0.80	3.67	NOT DETECTED
18.	30-05-2024	74.96	27.84	25.63	29.85	0.83	3.57	NOT DETECTED
19.	03-06-2024	79.14	29.73	25.94	28.13	0.71	3.62	NOT DETECTED
20.	06-06-2024	77.38	26.85	24.58	27.63	0.69	3.54	NOT DETECTED
21.	10-06-2024	80.62	29.16	25.72	28.11	0.73	3.6	NOT DETECTED
22.	13-06-2024	76.37	27.48	24.94	27.27	0.75	3.43	NOT DETECTED
23.	17-06-2024	73.29	25.85	23.84	26.05	0.68	3.35	NOT DETECTED
24.	20-06-2024	69.52	24.87	22.58	25.71	0.73	3.27	NOT DETECTED
25.	24-06-2024	48.42	20.73	18.68	22.31	ND	2.67	NOT DETECTED
26.	27-06-2024	42.83	18.65	17.12	20.64	ND	2.42	NOT DETECTED
27.	01-07-2024	45.38	17.69	15.44	18.61	0.31	--	NOT DETECTED
28.	04-07-2024	48.63	19.47	17.15	20.57	0.37	2.65	NOT DETECTED
29.	08-07-2024	55.14	22.72	19.46	23.1	0.45	2.71	NOT DETECTED
30.	11-07-2024	58.27	24.15	20.84	23.79	0.51	2.77	NOT DETECTED
31.	15-07-2024	53.84	21.29	17.35	20.45	0.46	2.85	NOT DETECTED

Continue…

Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
32.	18-07-2024	60.15	24.59	19.72	22.31	0.55	2.71	NOT DETECTED
33.	22-07-2024	57.51	23.43	17.1	20.84	0.49	2.65	NOT DETECTED
34.	25-07-2024	54.19	20.81	14.89	17.57	0.42	2.59	NOT DETECTED
35.	29-07-2024	48.76	18.93	13.47	16.39	0.28	2.55	NOT DETECTED
36.	01-08-2024	49.81	19.1	14.82	18.31	0.4	2.51	NOT DETECTED
37.	05-08-2024	52.37	19.86	15.71	19.53	0.45	2.58	NOT DETECTED
38.	08-08-2024	55.71	20.42	16.29	20.81	0.42	2.64	NOT DETECTED
39.	12-08-2024	58.74	21.79	17.63	22.1	0.48	2.76	NOT DETECTED
40.	15-08-2024	53.29	20.63	15.24	19.21	0.41	2.61	NOT DETECTED
41.	19-08-2024	56.48	21.24	16.1	20.64	0.45	2.65	NOT DETECTED
42.	22-08-2024	59.63	22.14	17.71	22.15	0.48	2.72	NOT DETECTED
43.	26-08-2024	57.14	21.28	16.32	20.61	0.46	2.67	NOT DETECTED
44.	29-08-2024	54.59	20.81	15.39	19.3	0.43	2.59	NOT DETECTED
45.	02-09-2024	47.15	18.84	14.13	18.26	0.42	2.56	NOT DETECTED
46.	05-09-2024	50.18	19.24	15.25	19.42	0.45	2.63	NOT DETECTED
47.	09-09-2024	48.74	18.92	14.73	18.68	0.43	2.66	NOT DETECTED

Continue…

Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
48.	12-09-2024	52.38	19.65	15.69	19.36	0.48	2.59	NOT DETECTED
49.	16-09-2024	55.38	20.14	15.89	20.05	0.5	2.67	NOT DETECTED
50.	19-09-2024	57.28	21.75	16.29	21.14	0.51	2.72	NOT DETECTED
51.	23-09-2024	54.39	20.43	15.36	19.74	0.48	2.60	NOT DETECTED
52.	26-09-2024	50.82	19.53	14.48	18.63	0.44	2.54	NOT DETECTED
53.	30-09-2024	53.37	20.42	15.1	18.86	0.47	2.59	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)

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

Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
1.	01-04-2024	85.53	36.13	33.57	38.91	1.15	--	NOT DETECTED
2.	04-04-2024	82.38	34.62	30.98	35.64	1.12	4.71	NOT DETECTED
3.	08-04-2024	80.93	32.48	29.18	33.45	1.14	4.53	NOT DETECTED
4.	11-04-2024	83.47	35.63	33.45	37.61	1.17	4.69	NOT DETECTED
5.	15-04-2024	78.39	30.16	30.74	35.2	1.10	4.47	NOT DETECTED
6.	18-04-2024	80.63	32.7	28.46	33.29	1.13	4.61	NOT DETECTED
7.	22-04-2024	76.36	29.95	31.29	35.42	1.12	4.5	NOT DETECTED
8.	25-04-2024	82.35	31.56	33.71	38.81	1.15	4.73	NOT DETECTED
9.	29-04-2024	79.24	33.72	30.37	34.78	1.11	4.57	NOT DETECTED
10.	02-05-2024	80.26	32.91	30.18	34.51	1.12	4.48	NOT DETECTED
11.	06-05-2024	82.75	34.2	32.1	36.27	1.14	4.61	NOT DETECTED
12.	09-05-2024	79.64	30.73	29.38	32.63	1.15	4.42	NOT DETECTED
13.	13-05-2024	76.39	28.98	28.61	31.85	1.13	4.36	NOT DETECTED
14.	16-05-2024	78.63	30.73	29.86	33.41	1.12	4.45	NOT DETECTED
15.	20-05-2024	81.24	33.17	31.28	34.62	1.13	4.59	NOT DETECTED

Continue…

Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
16.	23-05-2024	79.84	30.82	28.41	32.55	1.11	4.41	NOT DETECTED
17.	27-05-2024	76.54	29.71	27.94	31.28	1.1	4.29	NOT DETECTED
18.	30-05-2024	78.16	30.47	29.74	33.46	1.14	4.38	NOT DETECTED
19.	03-06-2024	78.72	30.25	27.64	31.38	1.11	4.39	NOT DETECTED
20.	06-06-2024	80.16	31.28	28.73	32.17	1.13	4.53	NOT DETECTED
21.	10-06-2024	76.39	28.63	26.37	30.62	1.1	4.42	NOT DETECTED
22.	13-06-2024	79.93	30.12	28.19	32.85	1.12	4.36	NOT DETECTED
23.	17-06-2024	75.59	28.83	25.48	29.16	1.11	4.27	NOT DETECTED
24.	20-06-2024	73.43	27.19	24.81	28.36	1.08	4.1	NOT DETECTED
25.	24-06-2024	56.32	24.75	22.59	25.42	0.74	3.38	NOT DETECTED
26.	27-06-2024	48.64	21.29	20.11	24.05	0.51	3.13	NOT DETECTED
27.	01-07-2024	54.38	23.51	20.83	23.49	0.67	--	NOT DETECTED
28.	04-07-2024	57.69	24.35	23.47	27.15	0.79	3.56	NOT DETECTED
29.	08-07-2024	63.48	26.61	24.06	27.39	0.83	3.61	NOT DETECTED
30.	11-07-2024	66.17	27.42	25.11	28.13	0.89	3.7	NOT DETECTED
31.	15-07-2024	65.49	25.15	24.63	26.96	0.81	3.76	NOT DETECTED

Continue…

Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
32.	18-07-2024	68.58	28.35	25.21	28.74	0.87	3.68	NOT DETECTED
33.	22-07-2024	62.49	24.12	23.47	26.55	0.79	3.59	NOT DETECTED
34.	25-07-2024	58.57	22.75	20.91	24.1	0.74	3.54	NOT DETECTED
35.	29-07-2024	55.69	21.27	18.75	22.46	0.71	3.47	NOT DETECTED
36.	01-08-2024	55.14	22.63	20.45	24.21	0.72	3.41	NOT DETECTED
37.	05-08-2024	60.53	25.17	22.53	26.81	0.75	3.52	NOT DETECTED
38.	08-08-2024	58.28	23.48	21.53	25.48	0.73	3.45	NOT DETECTED
39.	12-08-2024	63.48	25.37	23.1	26.93	0.8	3.62	NOT DETECTED
40.	15-08-2024	65.12	26.91	24.36	28.13	0.85	3.71	NOT DETECTED
41.	19-08-2024	61.29	24.38	22.86	26.42	0.81	3.63	NOT DETECTED
42.	22-08-2024	63.45	25.18	23.41	27.36	0.77	3.69	NOT DETECTED
43.	26-08-2024	59.83	23.15	21.79	25.22	0.74	3.48	NOT DETECTED
44.	29-08-2024	61.27	24.61	23.24	27.46	0.79	3.57	NOT DETECTED
45.	02-09-2024	58.26	23.75	21.38	24.87	0.69	3.6	NOT DETECTED
46.	05-09-2024	55.93	22.59	20.88	24.56	0.64	3.54	NOT DETECTED
47.	09-09-2024	57.94	23.15	21.27	24.98	0.67	3.63	NOT DETECTED

Continue…

Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
48.	12-09-2024	60.38	25.47	22.63	26.14	0.71	3.68	NOT DETECTED
49.	16-09-2024	63.38	25.96	22.78	26.69	0.74	3.74	NOT DETECTED
50.	19-09-2024	66.26	26.75	23.57	27.42	0.76	3.82	NOT DETECTED
51.	23-09-2024	64.39	25.14	22.63	26.46	0.73	3.71	NOT DETECTED
52.	26-09-2024	60.42	22.84	20.74	24.35	0.67	3.64	NOT DETECTED
53.	30-09-2024	62.54	23.67	21.81	24.63	0.71	3.68	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)

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

Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
1.	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

Continue…

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
16.	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	NOT DETECTED	1.87	NOT DETECTED
26.	27-06-2024	37.91	20.75	13.97	16.20	NOT DETECTED	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

Continue…

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
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

Continue…

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
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)

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

Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		CT-4 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
1.	01-04-2024	85.13	30.82	27.35	30.15	0.81	--	NOT DETECTED
2.	04-04-2024	82.39	29.25	25.72	29.13	0.78	4.74	NOT DETECTED
3.	08-04-2024	80.18	27.31	24.86	27.35	0.73	4.61	NOT DETECTED
4.	11-04-2024	77.49	29.16	23.12	26.83	0.75	4.53	NOT DETECTED
5.	15-04-2024	81.93	28.38	24.64	28.02	0.86	4.86	NOT DETECTED
6.	18-04-2024	84.13	29.48	25.81	28.37	0.80	4.93	NOT DETECTED
7.	22-04-2024	87.39	32.15	27.68	30.64	0.85	4.75	NOT DETECTED
8.	25-04-2024	83.57	30.57	24.82	27.91	0.78	4.67	NOT DETECTED
9.	29-04-2024	86.12	32.81	27.14	31.25	0.83	4.81	NOT DETECTED
10.	02-05-2024	83.74	29.83	25.24	29.15	0.79	4.75	NOT DETECTED
11.	06-05-2024	85.19	32.53	27.81	31.11	0.85	4.88	NOT DETECTED
12.	09-05-2024	82.37	30.88	25.37	29.42	0.75	4.81	NOT DETECTED
13.	13-05-2024	79.36	28.64	24.93	28.64	0.73	4.73	NOT DETECTED
14.	16-05-2024	82.38	31.27	26.45	29.71	0.83	4.61	NOT DETECTED
15.	20-05-2024	80.91	30.15	25.19	29.37	0.79	4.70	NOT DETECTED

Continue…

Name of Location		CT-4 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
16.	23-05-2024	77.37	28.53	23.75	26.89	0.75	4.63	NOT DETECTED
17.	27-05-2024	79.52	29.75	25.29	28.74	0.81	4.68	NOT DETECTED
18.	30-05-2024	81.27	31.43	28.31	31.74	0.84	4.61	NOT DETECTED
19.	03-06-2024	81.84	30.14	24.26	28.74	0.80	4.67	NOT DETECTED
20.	06-06-2024	78.63	28.58	22.19	26.54	0.77	4.58	NOT DETECTED
21.	10-06-2024	80.27	29.18	22.97	27.15	0.72	4.63	NOT DETECTED
22.	13-06-2024	82.36	30.47	23.65	27.14	0.81	4.75	NOT DETECTED
23.	17-06-2024	76.21	27.63	22.10	26.74	0.70	4.67	NOT DETECTED
24.	20-06-2024	74.39	26.84	21.62	25.36	0.68	4.52	NOT DETECTED
25.	24-06-2024	60.67	23.71	18.64	22.37	0.24	3.65	NOT DETECTED
26.	27-06-2024	56.52	20.85	16.39	19.96	0.16	3.32	NOT DETECTED
27.	01-07-2024	58.28	22.31	17.53	20.47	0.38	--	NOT DETECTED
28.	04-07-2024	55.91	21.85	16.48	18.95	0.45	3.64	NOT DETECTED
29.	08-07-2024	61.38	24.62	18.25	22.17	0.49	3.78	NOT DETECTED
30.	11-07-2024	66.38	26.82	19.69	23.53	0.54	3.83	NOT DETECTED
31.	15-07-2024	63.73	25.21	18.14	22.16	0.46	3.71	NOT DETECTED

Continue…

Name of Location		CT-4 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
32.	18-07-2024	70.16	27.13	21.36	24.64	0.52	3.77	NOT DETECTED
33.	22-07-2024	67.52	24.31	18.77	21.38	0.47	3.63	NOT DETECTED
34.	25-07-2024	63.10	21.96	16.35	19.13	0.41	3.69	NOT DETECTED
35.	29-07-2024	59.47	20.58	15.19	18.57	0.36	3.59	NOT DETECTED
36.	01-08-2024	61.42	21.86	16.58	20.81	0.52	3.61	NOT DETECTED
37.	05-08-2024	59.47	21.28	15.87	19.38	0.51	3.56	NOT DETECTED
38.	08-08-2024	63.71	22.64	16.95	20.15	0.55	3.68	NOT DETECTED
39.	12-08-2024	67.39	24.47	17.12	21.63	0.51	3.73	NOT DETECTED
40.	15-08-2024	65.28	23.19	16.56	20.06	0.56	3.70	NOT DETECTED
41.	19-08-2024	69.63	25.38	18.19	22.31	0.58	3.76	NOT DETECTED
42.	22-08-2024	63.29	24.37	17.42	21.35	0.57	3.73	NOT DETECTED
43.	26-08-2024	62.11	23.42	16.36	20.81	0.52	3.67	NOT DETECTED
44.	29-08-2024	65.38	24.88	17.15	21.37	0.58	3.71	NOT DETECTED
45.	02-09-2024	64.19	22.47	16.93	21.16	0.55	3.65	NOT DETECTED
46.	05-09-2024	67.28	23.81	17.24	21.72	0.58	3.72	NOT DETECTED
47.	09-09-2024	65.38	22.74	16.69	20.48	0.54	3.62	NOT DETECTED

Continue…

Name of Location		CT-4 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM_{10} µg/m³	$PM_{2.5}$ µg/m³	SO_2 µg/m³	NO_2 µg/m³	CO mg/m³	HC µg/m³	Benzene µg/m³
48.	12-09-2024	63.29	22.53	16.24	21.15	0.50	3.66	NOT DETECTED
49.	16-09-2024	67.63	23.96	17.48	21.95	0.57	3.69	NOT DETECTED
50.	19-09-2024	70.16	25.91	18.37	22.28	0.60	3.74	NOT DETECTED
51.	23-09-2024	68.47	24.63	17.86	21.42	0.57	3.71	NOT DETECTED
52.	26-09-2024	65.28	22.85	16.43	20.57	0.53	3.63	NOT DETECTED
53.	30-09-2024	67.83	23.47	17.12	21.63	0.56	3.59	NOT DETECTED
Permissible Value as per NAAQMS		**100.0**	**60.0**	**80.0**	**80.0**	**2.0**	**---**	**5.0**
Test Method		**IS - 5182, Part- 23**	**UERL/AIR/ SOP/11**	**IS - 5182, Part - 2**	**IS - 5182, Part - 6**	**IS - 5182, Part - 10**	**Gas analyzer**	**IS – 5182, Part – 11**

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Results of Noise Level Monitoring							
Location Name		CT3 RMU-2					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		11-04-2024	13-05-2024	13-06-2024	11-07-2024	12-08-2024	12-09-2024
1	06:00 to 07:00	64.7	63.7	64.1	62.7	62.3	62.8
2	07:00 to 08:00	66.2	64.6	63.7	61.9	62.5	63.2
3	08:00 to 09:00	65.4	63.8	65.4	63.6	65.1	63.7
4	09:00 to 10:00	66.6	65.2	67.8	64.3	65.4	64.5
5	10:00 to 11:00	66.4	63.8	66.2	64.9	63.8	65.3
6	11:00 to 12:00	65.3	64.7	65.4	67.4	65.7	65.4
7	12:00 to 13:00	64.5	65.4	66.3	65.1	66.7	65.6
8	13:00 to 14:00	63.8	66.8	67.2	66.3	65.4	64.2
9	14:00 to 15:00	66.8	65.2	66.9	65.9	67.3	66.6
10	15:00 to 16:00	65.3	64.8	65.1	64.3	66.4	65.7
11	16:00 to 17:00	67.8	64.7	62.4	64.3	65.2	64.3
12	17:00 to 18:00	65.4	66.1	64.8	65.9	64.3	63.1
13	18:00 to 19:00	63.1	64.8	64.2	63.4	64.7	63.5
14	19:00 to 20:00	64.3	65.2	63.4	65.1	63.2	64.6
15	20:00 to 21:00	62.6	64.3	66.2	63.8	63.4	64.2
16	21:00 to 22:00	62.3	63.2	64.1	62.2	62.5	62.4
Day Time		<75 dB (A)					

Continue...

Location Name		CT3 RMU-2					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		11-04-2024	13-05-2024	13-06-2024	11-07-2024	12-08-2024	12-09-2024
1	22:00 to 23:00	63.2	63.5	63.3	62.7	61.8	61.3
2	23:00 to 24:00	63.4	62.4	63.8	62.4	62.3	62.6
3	24:00 to 01:00	61.9	63.5	62.7	63.9	62.8	63.5
4	01:00 to 02:00	63.5	63.8	63.2	63.1	62.5	61.5
5	02:00 to 03:00	62.6	62.3	61.7	63.4	63.2	63.5
6	03:00 to 04:00	61.1	60.6	62.3	61.7	60.7	62.1
7	04:00 to 05:00	61.7	62.3	60.4	61.1	61.3	60.7
8	05:00 to 06:00	61.3	61.6	61.6	60.2	59.4	59.2
Night Time		<70 dB (A)					

Test Method	IS: 9989 : 1981

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

Nikunj D. Patel
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Jaivik S. Tandel
(Manager - Operations)

Results of Noise Level Monitoring							
Location Name		Near Fire Station					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		04-04-2024	06-05-2024	06-06-2024	04-07-2024	05-08-2024	05-09-2024
1	06:00 to 07:00	64.8	62.9	63.2	62.4	61.8	62.1
2	07:00 to 08:00	64.2	65.1	64.3	63.7	63.5	63.3
3	08:00 to 09:00	65.3	64.7	65.7	63.2	64.6	63.8
4	09:00 to 10:00	66.9	65.4	64.2	66.4	65.3	64.5
5	10:00 to 11:00	65.4	66.8	66.1	65.2	65.2	66.2
6	11:00 to 12:00	66.8	65.4	65.8	61.3	63.7	65.4
7	12:00 to 13:00	68.4	67.2	66.7	63.8	64.2	66.6
8	13:00 to 14:00	66.2	65.8	66.3	64.5	65.7	64.9
9	14:00 to 15:00	65.8	68.1	67.5	66.4	64.8	66.5
10	15:00 to 16:00	65.8	66.2	68.3	65.8	66.1	65.3
11	16:00 to 17:00	65.4	65.1	66.8	67.2	66.7	65.8
12	17:00 to 18:00	65.8	63.4	65.4	64.2	65.4	64.3
13	18:00 to 19:00	63.4	64.7	65.1	62.8	63.8	63.6
14	19:00 to 20:00	65.2	62.9	63.4	64.7	64.1	65.2
15	20:00 to 21:00	64.3	64.2	65.1	63.3	62.8	64.1
16	21:00 to 22:00	62.8	63.6	63.1	62.7	62.1	62.5
Day Time		<75 dB (A)					

Continue…

Location Name		Near Fire Station					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		04-04-2024	06-05-2024	06-06-2024	04-07-2024	05-08-2024	05-09-2024
1	22:00 to 23:00	61.4	62.3	63.1	63.5	62.5	62.7
2	23:00 to 24:00	62.5	62.9	62.4	63.8	63.4	63.1
3	24:00 to 01:00	60.4	61.6	62.7	61.7	62.7	62.4
4	01:00 to 02:00	63.5	63.2	63.2	63.2	62.8	63.6
5	02:00 to 03:00	62.3	62.8	62.6	62.8	63.2	63.3
6	03:00 to 04:00	59.7	62.2	62.5	61.7	62.5	62.1
7	04:00 to 05:00	60.3	61.5	60.3	60.1	61.2	60.6
8	05:00 to 06:00	59.6	60.1	59.7	60.2	60.7	59.7
Night Time		<70 dB (A)					

Test Method	IS: 9989 : 1981

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

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Results of Noise Level Monitoring

Location Name		ADANI PORT – TUG Berth 600 KL Pump House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		08-04-2024	09-05-2024	10-06-2024	08-07-2024	08-08-2024	09-09-2024
1	06:00 to 07:00	62.4	64.2	62.8	61.8	60.5	61.3
2	07:00 to 08:00	63.7	62.8	63.4	64.1	61.8	60.7
3	08:00 to 09:00	63.8	65.4	63.9	62.8	63.3	61.5
4	09:00 to 10:00	64.3	64.9	66.1	64.5	63.8	63.4
5	10:00 to 11:00	64.2	65.4	64.8	65.8	64.6	62.8
6	11:00 to 12:00	65.1	66.3	67.3	64.7	66.1	64.5
7	12:00 to 13:00	66.5	67.3	65.4	67.3	65.4	67.2
8	13:00 to 14:00	67.9	67.1	68.4	65.2	67.3	65.4
9	14:00 to 15:00	65.4	66.4	65.3	64.8	66.2	65.8
10	15:00 to 16:00	63.6	65.3	67.2	66.3	65.7	66.3
11	16:00 to 17:00	65.1	63.8	64.7	65.7	64.3	65.2
12	17:00 to 18:00	63.6	64.7	67.2	66.3	66.8	65.7
13	18:00 to 19:00	65.3	64.3	65.3	64.6	65.2	64.3
14	19:00 to 20:00	63.6	66.1	64.7	62.8	64.3	61.7
15	20:00 to 21:00	62.7	63.4	64.5	65.1	64	63.4
16	21:00 to 22:00	60.5	62.7	63.8	63.5	61.9	61.7
Day Time		<75 dB (A)					

Continue…

Location Name		ADANI PORT – TUG Berth 600 KL Pump House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		08-04-2024	09-05-2024	10-06-2024	08-07-2024	08-08-2024	09-09-2024
1	22:00 to 23:00	60.8	61.7	61.5	60.3	60.1	58.5
2	23:00 to 24:00	58.8	60.3	59.8	61.5	62.8	59.9
3	24:00 to 01:00	61.3	62.7	60.4	63.2	63.2	62.5
4	01:00 to 02:00	62.8	61.3	62.7	62.6	63.6	62.5
5	02:00 to 03:00	61.7	63.4	62.9	61.2	61.9	62.8
6	03:00 to 04:00	63.3	61.8	61.3	60.5	62.3	63.4
7	04:00 to 05:00	62.3	61.6	61.8	58.7	60.5	62.3
8	05:00 to 06:00	60.1	59.8	60.3	59.5	58.6	61.1
Day Time		<70 dB (A)					

Test Method	IS: 9989 : 1981

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(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
Day Time		**<75 dB (A)**					

Continue…

Location Name		PUB/Adani House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		01-04-2024	02-05-2024	03-06-2024	01-07-2024	01-08-2024	02-09-2024
1	22:00 to 23:00	59.7	60.1	60.3	61.2	59.7	58.5
2	23:00 to 24:00	58.4	59.4	60.8	59.6	60.1	60.4
3	24:00 to 01:00	59.7	60.3	61.4	62.5	62.3	61.7
4	01:00 to 02:00	60.2	62.3	62.1	62.8	63.6	62.5
5	02:00 to 03:00	63.1	62.6	61.8	61.1	62.4	61.4
6	03:00 to 04:00	60.3	61.2	61.6	60.4	61.7	63.2
7	04:00 to 05:00	58.3	59.7	60.4	58.4	59.7	58.7
8	05:00 to 06:00	57.8	58.3	59.2	58.7	59.3	58.5
Day Time		<70 dB (A)					

Test Method	IS: 9989 : 1981

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Results of Noise Level Monitoring						
Location Name		CT-4 RMU-2				
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time				
		20-04-2024	25-05-2024	22-06-2024	27-07-2024	24-08-2024
1	06:00 to 07:00	61.3	61.6	61.4	59.8	61.3
2	07:00 to 08:00	63.6	62.8	63.5	61.3	63.7
3	08:00 to 09:00	64.8	65.2	63.7	65.5	62.8
4	09:00 to 10:00	65.2	65.7	64.1	64.2	64.5
5	10:00 to 11:00	68.7	66.8	65.4	66.1	65.7
6	11:00 to 12:00	66.1	68.2	66.5	64.7	64.3
7	12:00 to 13:00	66.7	66.4	65.8	64.9	67.5
8	13:00 to 14:00	64.7	65.9	64.7	63.6	65.8
9	14:00 to 15:00	68.9	67.3	65.3	64.2	65.2
10	15:00 to 16:00	65.4	68.3	67.4	66.8	66.7
11	16:00 to 17:00	67.3	66.4	65.9	64.7	63.8
12	17:00 to 18:00	65.4	65.9	66.3	65.3	64.5
13	18:00 to 19:00	63.6	64.2	63.8	63.9	63.5
14	19:00 to 20:00	62.7	63.5	65.2	60.8	61.3
15	20:00 to 21:00	65.4	64.3	64.2	62.4	61.5
16	21:00 to 22:00	63.4	62.8	62.3	61.6	60.8
Day Time		<75 dB (A)				

Continue…

Location Name		CT-4 RMU-2				
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time				
		20-04-2024	25-05-2024	22-06-2024	27-07-2024	24-08-2024
1	22:00 to 23:00	62.2	61.8	61.3	61.5	60.2
2	23:00 to 24:00	61.7	63.4	62.7	63.7	61.8
3	24:00 to 01:00	63.2	64.8	61.3	62.6	62.5
4	01:00 to 02:00	61.7	63.7	62.8	63.8	62.8
5	02:00 to 03:00	63.5	63.1	62.7	61.5	63.2
6	03:00 to 04:00	61.2	62.3	61.6	62.3	61.8
7	04:00 to 05:00	62.4	61.8	60.4	61.1	59.8
8	05:00 to 06:00	60.8	61.3	60.8	60.3	60.5
Day Time		<70 dB (A)				

Test Method	IS: 9989 : 1981

GUJARAT VAPI.

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Results of Stack Monitoring

Sr. No.	Parameter	Unit	Hot Water System-1 (Liquid Terminal)	Hot Water System-2 (Liquid Terminal)	Thermic Fluid Heater (Bitumin-1)	Thermic Fluid Heater (Bitumin-2)	GPCB LIMIT	Method of Test
Apr-24								
1	Particulate Matter	mg/Nm^3	23.07	20.75	22.48	20.94	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	7.89	6.98	8.53	8.11	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	21.68	21.63	20.84	20.83	50	IS 11255 (Part - 7)
May-24								
1	Particulate Matter	mg/Nm^3	22.78	21.11	21.85	20.10	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO2	ppm	7.53	7.15	8.13	7.92	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NOX	ppm	20.85	22.24	19.95	20.22	50	IS 11255 (Part - 7)
Jun-24								
1	Particulate Matter	mg/Nm^3	20.54	20.13	20.46	19.27	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	6.93	6.63	7.57	7.38	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	18.79	20.74	17.83	19.85	50	IS 11255 (Part - 7)
Jul-24								
1	Particulate Matter	mg/Nm^3	19.47	18.37	18.93	17.59	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	6.59	6.14	7.12	6.85	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	18.11	19.12	17.31	17.74	50	IS 11255 (Part - 7)

Continue…

Sr. No.	Parameter	Unit	Hot Water System-1 (Liquid Terminal)	Hot Water System-2 (Liquid Terminal)	Thermic Fluid Heater (Bitumin-1)	Thermic Fluid Heater (Bitumin-2)	GPCB LIMIT	Method of Test
Aug-24								
1	Particulate Matter	mg/Nm^3	19.13	18.63	19.15	17.31	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	7.09	6.51	7.47	6.69	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	19.12	19.48	18.82	17.38	50	IS 11255 (Part - 7)
Sep-24								
1	Particulate Matter	mg/Nm^3	20.86	19.06	19.84	19.23	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	7.38	6.89	7.79	7.35	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	19.74	20.17	19.46	17.96	50	IS 11255 (Part - 7)

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Results of Stack Monitoring

Sr. No.	Parameter	Unit	D.G. Set-6, 7 & 8 (1250 KVA - CT2) Common Stack	D.G. Set-9 (1500 KVA - CT3)	D.G. Set-10 (1500 KVA - CT3)	D.G. Set-11 (1500 KVA - CT3)	GPCB LIMIT	Method of Test
			Aug-24	Aug-24				
			16-08-2024	16-08-2024	16-08-2024	16-08-2024		
1	Particulate Matter	mg/Nm^3	22.14	16.11	18.63	18.26	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	8.68	14.36	14.98	13.85	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	17.39	24.93	26.39	20.38	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm3	3.55	3.6	3.3	3.1	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	Not Detected	Not Detected	Not Detected	--	UERL/AIR/SOP/27

Sr. No.	Parameter	Unit	D.G. Set-12 (1500 KVA) - CT4	D.G. Set-13 (1500 KVA) - CT4	D.G. Set-14 (1500 KVA) - CT4	D.G. Set-1 (500 KVA) - DG House - MPT	GPCB LIMIT	Method of Test
			Aug-24			Aug-24		
			12-08-2024	12-08-2024	12-08-2024	11-08-2024		
1	Particulate Matter	mg/Nm^3	21.38	25.48	19.86	21.48	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	8.17	9.1	8.87	8.14	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	18.64	21.37	18.42	27.19	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm3	3.1	4.61	3.7	2.97	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	Not Detected	Not Detected	Not Detected	--	UERL/AIR/SOP/27

Continue…

Sr. No.	Parameter	Unit	D.G. Set-2 (500 KVA) - DG House - MPT	D.G. Set-3 (500 KVA) - DG House - MPT	D.G. Set-4 (500 KVA) - DG House - MPT	D.G. Set-5 (500 KVA) - DG House - MPT	GPCB LIMIT	Method of Test
			Aug-24					
			11-08-2024	11-08-2024	11-08-2024	11-08-2024		
1	Particulate Matter	mg/Nm^3	25.47	21.91	26.83	20.86	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO_2	ppm	7.12	9.32	8.79	8.11	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO_X	ppm	28.73	27.68	28.13	25.37	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm3	3.28	4.25	4.31	3.19	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	Not Detected	Not Detected	Not Detected	--	UERL/AIR/SOP/27

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RESULTS OF BORE HOLE WATER

SR.NO.	TEST PARAMETERS	UNIT	Pump House-1	Pump House-2	Pump House-3	Near Unloading bays	Near ETP	TEST METHOD
			14-06-2024	14-06-2024	14-06-2024	14-06-2024	14-06-2024	
1.	pH @ 25 ° C	--	8.12	7.13	8.17	7.83	8.11	IS 3025(Part 11):2022
2.	Salinity	ppt	3.3	0.9	1.2	1.1	1.2	APHA 24th Ed.,2023,2520 B
3.	Oil & Grease	mg/L	BDL(MDL:5.0)	BDL(MDL:5.0)	BDL(MDL:5.0)	BDL(MDL:5.0)	BDL(MDL:5.0)	IS 3025(Part 39):2021
4.	Hydrocarbon	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	GC/GCMS
5.	Lead as Pb	mg/L	BDL(MDL:0.01)	0.012	BDL(MDL:0.01)	0.013	0.024	IS 3025 (PART 47) 1994
6.	Arsenic as As	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	APHA 24th Ed.,2023,3114-C
7.	Nickel as Ni	mg/L	0.097	0.098	0.093	0.098	0.089	IS 3025 (PART 54) 2003
8.	Total Chromium as Cr	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	IS 3025 (PART 52) 2003
9.	Cadmium as Cd	mg/L	0.047	0.042	0.042	0.026	0.045	IS 3025(PART 41) 1992
10.	Mercury as Hg	mg/L	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	APHA 24th Ed.,2023, 3112-B
11.	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)	IS 3025(PART 49) 1994
12.	Copper as Cu	mg/L	0.075	0.079	0.095	0.096	0.104	IS 3025 (PART 42) 1992
13.	Iron as Fe	mg/L	BDL(MDL:0.1)	0.331	0.435	0.606	0.119	IS 3025(PART 53) 2003
14.	Insecticides/Pesticides	µg/L	Absent	Absent	Absent	Absent	Absent	USEPA 8081 B
15.	Depth of Water Level from Ground Level	meter	1.95	2.15	2	2.25	2.15	--

GUJARAT VAPI. ENVIRONMENT & RESEARCH LABS PVT. LTD.

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Sr. Chemist

Mr. Nitin Tandel
Technical Manager

Minimum Detection Limit

Ambient Air Quality Monitoring

Sr. No.	Test Parameter	Unit	MDL
1	Particulate Matter (PM10)	µg/m3	5 µg/m3
2	Particulate Matter (PM2.5)	µg/m3	5 µg/m3
3	Sulphur Dioxide (SO2)	µg/m3	4 µg/m3
4	Nitrogen Dioxide (NO2)	µg/m3	5 µg/m3
5	Carbon Monoxide (CO)	mg/m3	0.01 mg/m3
6	Ammonia (NH3)	µg/m3	5 µg/m3
7	Ozone (O3)	µg/m3	5 µg/m3
8	Lead (Pb)	µg/m3	0.5 µg/m3
9	Nickle (Ni)	ng/m3	1 ng/m3
10	Arsenic (As)	ng/m3	1 ng/m3
11	Benzene	µg/m3	1µg/m3
12	Benzo(o)Pyrene	ng/m3	0.1 ng/m3
14	Hydro Carbon	µg/m3	1 µg/m3

Stack Emission Monitoring

Sr. No.	Test Parameter	Unit	MDL
1	Suspended particulate matter	mg/Nm3	2 mg/Nm3
2	Sulphur Dioxide SOX	mg/Nm3	4 mg/Nm3
3	Oxides of Nitrogen NOX	mg/Nm3	5 mg/Nm3

ETP Water

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

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

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

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

Annexure – 5

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
	Total	**1366.28**	**1366.78**	**365.97**	**1340.21**

Annexure – 6

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 & Magnitude1	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
1	**Land Use Change**						
1.1	It is predicted that the built up land in the rural areas would increase by an order 50% from the baseline 2015. New settlements near the SEZ area might create slums. Unorganized urban development leading to poor sanitation and proliferation	Level - 1	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.	The existing townships will be expanded to accommodate about 4 lakh people when the APSEZ is fully developed.	APSEZ	As and when Required	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 & SEZ industries. Out of which 87.14 % Occupancies are accommodated within the townships and rest are available for employees working within APSEZ. At present 61 nos. of industries (processing & 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. Most of the employees working in SEZ industries are residing in Mundra township having all basic requirements and associated facilities. The existing social infrastructure facilities are adequate for present development at APSEZ. The existing townships with associated facilities will be

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	of vectors and disease.						expanded as per requirement. 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.
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, ASPEZ 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	Presently, ~ 51.7 % of the total SEZ is developed. Based on technical studies, 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&CC accredited laboratory. Analysis report of the same shows there is

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			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 **Annexure – i**. During compliance period FY 2024-25 till Sep'24 total recorded rain fall was **1349 mm** 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 de-silting activities in the natural steams 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.

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			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	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. 1. NCSCM (MoEF&CC promoted Government Agency) study on comprehensive and integrated plan for preservation and conservation of mangroves and associated creeks in and around

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	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 eco-system.		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				APSEZ in year 2016-17. The cost of said study was 3.15 Cr, which was incurred by APSEZ. As a part of mangrove conservation plan, APSEZ has done following activities. 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. b. Tidal observation in creeks in and around APSEZ – The cost of the said activity was INR 1.0 Lacs incurred by APSEZ. c. Algal & 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. d. Awareness of mangroves importance in surrounding communities & 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 is activity is being done on continuous basis as a part of CSR activity. **Summary of Conservation of mangroves:**

<table>
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<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>
<table>
<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>
<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>Total</td><td></td><td>2723</td><td>629</td><td>--</td></tr>
</table>
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%).
As a part of GCZMA recommendations and NCSCM mangrove conservation action plan, APSEZ has undertaken following activities.
<table>
<tr><th>Sr.</th><th>Recommendations</th><th>Compliance</th></tr>
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							No. | | 1. | Mangrove mapping and monitoring in and around APSEZ | • APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island. • 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 & 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%. • 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. • Hence, there is an overall growth of mangroves in creeks in and

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									around APSEZ, Mundra is 502 Ha between 2011 and 2019. • The cost of the said study was INR 23.56 Lacs incurred by APSEZ. • 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. • 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%). • The cost of the said study was INR 23.60 Lacs incurred by APSEZ.

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<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>
Summary of Mangrove mapping and monitoring (from 2011 to 2021):
<table>
<tr><th rowspan="2">Mangrove mapping Year</th><th rowspan="2">Mangrove cover total Area (Ha.)</th><th colspan="2">Mangrove cover area Increased</th></tr>
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							Total | **2723** | **629** | **--**
							2. Tidal observation in creeks in and around APSEZ: • APSEZ carried out the tidal observations at locations similar to 2017 in Kotdi, Baradimata, Navinal, Bocha and Khari creeks under the guidance of NCSCM. • The observed tidal ranges indicate that the creeks experience normal tidal ranges, adequate for the growth of mangroves. • The cost of the said activity was INR 1.0 Lacs.
							3. Removal of Algal and Prosopis growth from mangrove areas: • 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 FY 2023-24. The algal removal report was submitted during the last compliance report submission Oct'23 to Mar'24.
							4. Awareness of mangroves importance in surrounding communities: • 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

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									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. • Awareness of mangroves importance in surrounding communities & 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. • **Grass Land development:** 213 acres of gauchar land has been cleaned and allocated for Grass land development with strong Community Contribution and Mobilization. • 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. • 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

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							and vulnerable ecosystem". The report for the same is attached as **Annexure - 10.** • Refer CSR report attached as **Annexure – 2**. 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.
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	Shore line change aspect has been studied in detail as part of following two studies; • Bathymetry & Topography study, preparation of plan for protection of creeks/ mangrove area including buffer zone, mapping of co-ordinates, running length, HTL, CRZ boundary. • A Regional Impact Assessment study to identify impacts of all the existing as well as proposed project activities in Mundra region. As per the outcome of these studies, no erosion is observed on the coast of the project area. As part of

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	shoreline. Shoreline of any area also can be influenced by storm surges and other natural processes.		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 ± 0.5 m/year. which reconfirms that the waterfront development activities of APSEZ would pose insignificant impact on the Mundra shoreline.				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. Based on the study outcome, it is recommended to map the coastal morphology (shoreline change) at least once in three years. 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. 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.

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<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>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.

The details of the rate of shoreline changes (Short interval time) recorded from 2015 to 2022 are summarized in below table.

<table>
<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>
<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>
</table>

The Shoreline Change Assessment Study report of GUIDE was submitted along with six monthly compliance report for the period Oct'22 to Mar'23.

Shoreline change study was carried out by M/s. Chola MS, Chennai (NABET accredited consultant) also as a</td></tr>
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							part of Waterfront Development Project – Expansion EIA study. The summary of the said study are as below. 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. 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. 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.

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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.
2	**Regional Traffic Management Plan**						
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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	18,300 and 10,400 vehicles per day respectively. There could be a possible increase in traffic congestions on village-highway intersections and road accidents.		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. Out of eight artillery roads considered in APSEZ master plan, seven roads	network.			

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			were already developed and functional.				
			APSEZ has been imparting Driver Training Programs to all their contractors to enhance awareness on road safety.	APSEZ can undertake technical feasibility of implementing Intelligent Transport System (ITS) for the freight carriers associated with their development activities.	APSEZ & GSRDC*	Long Term	APSEZ is being imparting the regular in-house training awareness program in different mode i.e., classroom, on-job training, virtual platform & Assessment by internal & external trainer to all drivers and employees on below topics: ✓ Basic induction Training for drivers ✓ ITV Driver Training ✓ ITV Driver Induction for Supervisor ✓ Defensive Driving for LMV & HMV ✓ Defensive Driving & BBS ✓ Driver Assessment ✓ Road accident & rescue ✓ Traffic Management & Road Signage ✓ Driving safety training ✓ RORO Driver training ✓ Road Safety ✓ Defensive Driving & Emergency Action Plan ✓ Drivers Responsibilities & Safe driving ✓ Emergency Rescue (Vehicle) Training 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.

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							APSEZ has also implemented the Remote traffic management system (RTMS) to manage the traffic movements and capturing the violations to further improve the system. Following steps were taken by APSEZ to reduce the accidents. ✓ Handling and escorting of the ODC for ensuring the smooth movement on the roads. ✓ Traffic Awareness programs for the drivers and regular briefing of the drivers in the parking areas. ✓ Incident handling and root cause analysis for taking necessary action in order to avoid such incidents. ✓ BAC checks for the drivers in order to identify the intoxicated drivers and necessary action is being taken against them. ✓ Water spray drive at gates are being conducted on regular basis during night hours to avoid doziness by the driver while driving. ✓ RTMS devices are being installed at 08 critical locations in order to capture speed violations and enforcing road safety regulations. ✓ 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.

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							✓ 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. ✓ 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. ✓ 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. ✓ 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. ✓ Ensuring Drivers must wear near necessary PPEs, for that we have arranged a PPE's Stall at APMS parking area (issued on chargeable basis). ✓ Night Patrolling and PA announcement by Traffic DSO to manage traffic condition. ✓ Safety briefing via PA system at Security Gate.
3	**Water resources Management and sewage treatment & disposal Plan**						
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. **Desalination Plant** – 47 MLD

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	water demand will be in the order of 4,30,000 m3/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 m3/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.			**Gujarat Water Infrastructure Limited (GWIL)** – 9 MLD (sanctioned capacity). Current water demand for APSEZ along with SEZ industries including Adani Power Plant is an avg. of 28.78 MLD. So presently, these sources are adequate to fulfill the current freshwater requirement of entire APSEZ including member units. The desalination plant of additional capacities will be installed on modular basis considering future requirement of APSEZ.
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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	the Mundra taluk is estimated as 8500 m3/day (@55 lpcd) and the potable and sanitation water needs would increase to 37,000 m3/day (@125 lpcd) in future when the area is fully grown into larger municipality due to induced economic growth. Water demand of the local		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.	implement the various water resource conservation programs in next ten years under various schemes.			water is not utilized for any activities within APSEZ. 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. To make connections between human actions and the level of biological diversity found within a habitat and/or ecosystem, this year Adani Foundation launch project "Sanrakshan" in coordination with GUIDE and Sahjeevan. Since, 10 years considerable Water Conservation Work carried out in Mundra Taluka. Due to satisfactory rain in current year 1.11 mtr ground water table increased as per increased in coastal belt of Mundra as per Government Figures. **WORK COMPLETED:** Water Conservation Projects completed during last Compliance period:

<table>
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<tr><td></td><td>communities is met through Narmada water supply system to some extent, but largely depending on the ground water 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</td><td></td><td></td><td></td><td></td><td></td><td>
<u>Water Conservation Projects:</u>

<u>Swajal Project:</u>
➢ Aim: 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.
➢ Water Security Plan: 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.

<table>
<tr><th>Block Name</th><th>Water conservation structure</th><th>Total no. of Structure</th><th>Total Capacity Created (CUM)</th></tr>
<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>
</table>
Earlier Completed Activities/Projects:
<table>
<tr><th>Sr. No.</th><th>Project</th><th>Unit</th><th>Outcome</th><th>Impact</th></tr>
<tr><td>1</td><td>Check dam Restrengtheni</td><td>1</td><td>Water Storage Capacity</td><td>60 + farmer's 120+Acre Area of</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Identified environmental and social impacts for the fully developed scenario (year 2030)</th><th>Type of Impact & Magnitude1</th><th>Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.</th><th>Additional Risk Mitigation Measures/ESMP</th><th>Responsible agency</th><th>Timeframe for implementation</th><th>Compliance</th></tr>
<tr><td></td><td>development, there could be some stress on the ground water resources in future.</td><td></td><td></td><td></td><td></td><td></td><td>
<table>
<tr><td></td><td>ng-Nana Kapaya</td><td></td><td>increased by 48000 Cum</td><td>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>
<tr><td>3</td><td>Pipe Culvert at Checkdam at Bhujpur</td><td>1</td><td>prevent water runoff into seaside.</td><td>35 farmers' 120+Acre Area of Agri land can be Irrigated</td></tr>
</table>

Large number of water harvesting structure (18 Nos. of check dams in coordination with salinity department) and Augmentation of 3 check dams.
Ground recharge activities (pond deepening work for 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.
New Pond Deepening Under Ajadi ka Amrut Mahotsav done in Goyarsama village Approx Deepening Capacity is 12000 Cum.
Roof Top Rainwater Harvesting 145 Nos. (40 Nos. current FY 2022-23) which is having 10,000 liter storage which is sufficient for one year drinking water purpose for 5 people family.

</td></tr>
</table>

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							• Recharge Borewell 208 Nos (19 Nos. current FY 2022-23) which is best ever option to direct recharge the soil. • Drip Irrigation approx. 1505 Farmers benefitted in coordination with Gujrat Green Revolution Company till date. • Bund construction on way of Nagmati River could save more than 575 MCFT water quantity which recharged in ground due to which borewell depth decreased by 50-100 Ft in Zarpara, Bhujpur and Navinal Vadi Vistar. • Pond Pipeline work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area. • Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year. 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. Adani foundation has spent approx. INR 8824.17 lakhs from April – 2018 to September– 2024 for CSR activities which also includes water conservation projects as mentioned above.
3.3	It is estimated that about 60,000 m3/day (60	No Impact	Seven sewage treatment plants with an aggregate	APSEZ is permitted to develop decentralized sewage	APSEZ	As and When Required	Current installed capacity of wastewater treatment plants is 6.255 MLD (ETP, STPs & CETP) for treatment of effluent & sewage generated at various locations of APSEZ excluding wastewater treatment plants installed within induvial member units.

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	MLD) of sewage will be generated from the APSEZ facility when the project is fully developed.		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.	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.			Out of 46 only 4 operational industries within the SEZ are sending their partially treated industrial as well as domestic effluent to the CETP confirming 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. APSEZ also granted permission to treat 2.5 MLD of sewage generated from Mundra village through CETP and STP. Presently avg. 2.52 MLD of wastewater (into ETP, STPs & 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 development. Existing wastewater treatment facilities will be augmented, or new plants will be developed on modular basis considering future requirement.
4	**Air quality management Plan**						
4.	Although all		APSEZ and	All existing and	APSEZ	Continual	APSEZ has been granted requisite permissions from

<table>
<tr><th>S. No.</th><th>Identified environmental and social impacts for the fully developed scenario (year 2030)</th><th>Type of Impact & Magnitude1</th><th>Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.</th><th>Additional Risk Mitigation Measures/ESMP</th><th>Responsible agency</th><th>Timeframe for implementation</th><th>Compliance</th></tr>
<tr><td>1</td><td>the regulated activities in the study area will be adopting promulgated emission norms, total air emission mass discharge from the study area would increase.</td><td>Level-2</td><td>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 are monitoring the ambient air quality on regular intervals as per</td><td>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.</td><td>And Other Industries</td><td>Process</td><td>the concerned authorities with stipulated norms for air emission (flue gas as well as ambient air).

Ambient Air Quality monitoring is being carried out by NABL accredited and MoEF&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.

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.

The AAQM summary for last six months (Apr'24 to Sep'24) are as below.

Locations: 18 Nos. (APSEZ – 15 + APL – 3 including 4 villages)
Frequency: Twice in a week
<table>
<tr><th>Parameter</th><th>Unit</th><th>Min</th><th>Max</th><th>Average</th><th>Perm. Limit$</th></tr>
<tr><td>PM_{10}</td><td>µg/m^3</td><td>30.61</td><td>87.52</td><td>64.53</td><td>100</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Identified environmental and social impacts for the fully developed scenario (year 2030)</th><th>Type of Impact & Magnitude1</th><th>Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.</th><th>Additional Risk Mitigation Measures/ESMP</th><th>Responsible agency</th><th>Timeframe for implementation</th><th>Compliance</th></tr>
<tr><td></td><td></td><td></td><td>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 as per CPCB directive.</td><td></td><td></td><td></td><td>
<table>
<tr><td>$PM_{2.5}$</td><td>µg/m^3</td><td>12.84</td><td>44.72</td><td>26.20</td><td>60</td></tr>
<tr><td>SO_2</td><td>µg/m^3</td><td>7.13</td><td>40.42</td><td>19.17</td><td>80</td></tr>
<tr><td>NO_2</td><td>µg/m^3</td><td>9.63</td><td>44.27</td><td>22.82</td><td>80</td></tr>
</table>
$ as per NAAQ standards, 2009
Values recorded confirms to the stipulated standards.

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.

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 last visit was conducted during September, 2024 for EMS & 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.</td></tr>
</table>

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							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.
				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 quality management goals.	APSEZ and Other Industries, Stakeholders, District Administration and GPCB*	Long Term And Continual	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: • Identification of sources of air & noise emission and its dispersion in surrounding villages • Remedial measures to eliminate, control, reduce or capture air & noise emission. • Identify available resource to abate the air and noise emission. • Required additional resources for control of air and noise emission. • Drinking water and its testing of all the available fresh water sources in surrounding villages • Identify any surrounding villages affected by organization's improper waste disposal mechanism. Last committee meeting was conducted on dated 20.11.2024 and below was the point of discussion for way forward.

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude1	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
							• Brief introduction about the Environment Management Plan (EMP) • All members conveyed his environment management practices, issue & suggestions. • Discussed about the various ways to improve existing practice to control the emission in terms of Air, Water and Noise. • Discussed about the proper management of the canteen waste. • Discussed about the cleaning of outside of the SEZ units. • Discussed about the management of rain water & proper cleaning of the common storm water drainage system. • Discussed about proper segregation & disposal of solid waste material. • Discussed about to increase more green belt area inside plant premises of SEZ units. • Discussed about disposal of minor qty. of generated hazardous waste & E-waste materials at authorized recycler/vendor. 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.
	Release of		APSEZ has				Following safeguard measures are taken by APSEZ for

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4.2	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 asthma and COPD etc. among the local communities.	Health Impact	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 water sprinkling on road and other open areas, regular cleaning of	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	abatement of dust emissions. • Adequate stack heights to the Boilers, D.G. Sets, TFHs & HWGs for proper dispersion of pollutants within APSEZ • Using of liquid & Gaseous fuels instead of solid fuels in Boilers, Thermic fluid heaters and hot water generators. • Regular sprinkling on road and other open area • Regular cleaning of roads • Dry fog Dust Suppression System (DSS) in hopper, transfer towers and conveyor belts • Use of water mist canon • Closed type conveyor belts • Regular sprinkling on coal heaps • Covering other types of dry bulk cargo heaps • Installation of wind breaking wall • Development of greenbelt along the periphery of the storage yards/back up area • Mechanized handling system for coal and other dry bulk cargo • Wagon loading and truck loading through closed silo • Optimized the weigh bridge location to reduce the movement of trucks. Adequate air pollution control measures like ESPs,

<table>
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<tr><td></td><td></td><td></td><td>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,</td><td></td><td></td><td></td><td>FGDs, Bag Filters, etc. and adequate stack heights provisions are implemented within the thermal power plant.

The stack monitoring summary for last six months (Apr'24 to Sep'24) are as below.

Total Nos. of Stacks: 23 Nos.
Frequency: Monthly / Half Yearly
<table>
<tr><th>Parameter</th><th>Unit</th><th>GPCB Limit</th><th>Min</th><th>Max</th><th>Avrg.</th></tr>
<tr><td>PM</td><td>mg/Nm^3</td><td>150</td><td>16.11</td><td>28.19</td><td>20.61</td></tr>
<tr><td>SO_2</td><td>Ppm</td><td>100</td><td>5.80</td><td>16.24</td><td>8.55</td></tr>
<tr><td>NO_x</td><td>ppm</td><td>50</td><td>17.31</td><td>32.26</td><td>21.65</td></tr>
</table>
Values recorded confirms to the stipulated standards.

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.

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</td></tr>
</table>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude1	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
							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 coal and other dry bulk cargo and Wagon loading and truck loading	An internal Coal Dust Management Working Group shall be formed by APSEZ to effectively co-ordinate the approach to coal dust management and monitoring	APSEZ and Other Industries, Concerned Stake holders, District Administration*	Long Term	As mentioned above, earlier APSEZ has formed Internal Environment Monitoring Committee, involving Officials of APSEZ, Adani Power Limited & other member units, with specific role and responsibilities as defined above. 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. 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. 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. Last committee meeting was conducted on dated 20.11.2024 and below were the points of discussion for way forward. • Brief introduction about the Environment Management Plan (EMP)

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			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 and EC conditions, the relative air pollution impacts due to release				• All members conveyed his environment management practices, issue & suggestions. • Discussed about the various ways to improve existing practice to control the emission in terms of Air, Water and Noise. • Discussed about the proper management of the canteen waste. • Discussed about the cleaning of outside of the SEZ units. • Discussed about the management of rain water & proper cleaning of the common storm water drainage system. • Discussed about proper segregation & disposal of solid waste material. • Discussed about to increase more green belt area inside plant premises of SEZ units. • Discussed about disposal of minor qty. of generated hazardous waste & E-Waste materials at authorized recycler/vendor.

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			of emissions from two power plants is insignificant.				
4.3	Ships are one of the significant sources of SO2 and NOX emissions in the study area. Marine diesel engines on the ships often utilize fuel oils that might contain higher sulphur content. As per the international best practices,	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 anchored at the port are adopting the MARPOL4 regulations.	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 explore the possibility of providing shore power to the ships at the port to reduce idling	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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	these marine diesel engines are designed to meet MARPOL regulations with NOX emissions less than 14.4 gram/Kwh of engine. Due to lower stack heights of the marine diesel engine, ship emissions often gets dispersed in the local environment and might pose risk of fumigation			stage ship emissions.			

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	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 when the facility is fully developed.	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 robust contractor environmental policy to ensure that Bharat Stage VI	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. Electrification of Rail Corridor from Dhrub Railway Station to Adipur Railway Station has completed and movement started by electric locomotive. It will leads to reduce the gaseous emission and increase efficiency of transportation by rail.

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				emission norms are adopted by all their contractors and sub-contractors.			
5	**Noise emissions**						
5.1	Noise emissions are envisaged from port operations, industrial operations and power plants in the study area. Any increase in noise levels beyond three decibels from the background	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 greenbelt is being developed by APSEZ to further reduce any	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 by APSEZ at facility boundary to address the community grievances, whenever	APSEZ	Continual Process	Below Safeguard measures are already taken for abatement of noise emissions. • Development of greenbelt along the periphery of the operational area. • D.G. Sets having Acoustic enclosures. • Maintenance of plant machineries and equipment's on regular frequency. 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. The noise monitoring summary for last six months (Apr'24 to Sep'24) are as below. Locations: 15 Nos. Frequency: Once in a month (24 hourly)

<table>
<tr><th>S. No.</th><th>Identified environmental and social impacts for the fully developed scenario (year 2030)</th><th>Type of Impact & Magnitude1</th><th>Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.</th><th>Additional Risk Mitigation Measures/ESMP</th><th>Responsible agency</th><th>Timeframe for implementation</th><th>Compliance</th></tr>
<tr><td></td><td>levels would be perceived as noise nuisance (USEPA)7.</td><td></td><td>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 facilities.</td><td>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.</td><td></td><td></td><td>
<table>
<tr><th>Noise</th><th>Unit</th><th>Leq Min</th><th>Leq Max</th><th>Leq Avr.</th><th>Leq Perm. Limit $</th></tr>
<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>
</table>
$ as per GPCB standards

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.

All the results are well within the standards. From this it can be inferred that there no impacts on the surrounding community.

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 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.</td></tr>
</table>

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				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. • Brief introduction about the Environment Management Plan (EMP) • All members conveyed his environment management practices, issue & suggestions. • Discussed about the various ways to improve existing practice to control the emission in terms of Air, Water and Noise. • Discussed about the proper management of the canteen waste. • Discussed about the cleaning of outside of the SEZ units. • Discussed about the management of rain water & proper cleaning of the common storm water drainage system. • Discussed about proper segregation & disposal of solid waste material. • Discussed about to increase more green belt area inside plant premises of SEZ units.

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							• Discussed about disposal of minor qty. of generated hazardous waste & E-Waste materials at authorized recycler/vendor. No grievance received for noise related issues, and it is observed that ambient noise level are well within the permissible standards.
6	**Surface water quality (Terrestrial and Marine)**						
6.1	In general, release of untreated wastewater from industrial facilities would pose threat to water quality of streams, estuaries and marine water bodies.	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 decentralized CETPs of various capacities	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 permits. Remaining treated wastewater shall	APSEZ	As and When Required	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. 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. 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 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.

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			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 utilization for greenbelt development within the	be utilized for horticulture purpose.			The capacities of CETP will be enhanced on modular basis as per future requirement. Presently avg. 2.52 MLD (from CETP, ETP & 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.

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			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 monsoon from coal storage yards is	Storm water runoff from the facility during the first rain shall be sampled and analyzed for the	APSEZ	Continual	There are provision of drains around coal stack yard to carry to runoff water to dump ponds. This water is either used for dust suppression or after sedimentation (to remove residual dust), is allowed disposal to sea. Presently Marine monitoring is being carried out once

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<tr><td></td><td></td><td></td><td>collected in sedimentation ponds (dump pond) to remove any residual dust particulates for further disposal into sea</td><td>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.</td><td></td><td></td><td>in a month by NABL and MoEF&CC accredited agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi for APSEZ & APL both. The analysis reports of the same are being submitted to the concerned authorities on regular basis.

The marine water quality monitoring summary for last six months (Apr'24 to Sep'24) is as per below.

Locations: 14 Nos. (APSEZ – 9 + APL – 5)
Frequency: Once in a Month / Half Yearly
<table>
<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>
<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>
<tr><td>Salinity</td><td>ppt</td><td>35.20</td><td>39.20</td><td>36.46</td><td>26.76</td><td>39.40</td><td>36.91</td></tr>
</table></td></tr>
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<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>TDS</td><td>mg/L</td><td>34410</td><td>36550</td><td>35858</td><td>35370</td><td>37610</td><td>36873</td></tr>
<tr><td>Temperature</td><td>oC</td><td>29.00</td><td>30.70</td><td>29.90</td><td>28.90</td><td>30.60</td><td>29.71</td></tr>
</table>
MDL – Minimum Detection Limit

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.</td></tr>
<tr><td></td><td></td><td></td><td>Detailed marine hydrodynamic modelling studies revealed that the current and proposed dredged soil disposal practices, sea water intake and outfall facilities and desalination</td><td>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 screens near mangrove areas</td><td>APSEZ</td><td>Long Term</td><td>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.

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.

Marine monitoring is being carried out once in a month by NABL and MoEF&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. Summary of marine water for the last six months is as</td></tr>
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			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.	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.			mentioned above. The same practice will be continued in future also as per direction by MoEF&CC as well as GPCB. Monitoring will be focused near ecological sensitive area in case of need to carryout capital dragging near such areas.
7	**Groundwater quality and salinity ingress**						
	While		APSEZ is not	A dedicated			Present source of water for various project activities is

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7.1	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 TDS and	Level-2	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.	desalination plant of capacity 4,50,000 m3/day (450 MLD) will be developed in progressive manner to meet the APSEZ requirements.	APSEZ	As and When Required	desalination plant of APSEZ and/or through Gujarat Water Infrastructure Limited (GWIL) and same is sufficient to meet the present water demand. APSEZ does not draw any ground water. The desalination plant of additional capacities will be installed on modular basis considering future development and requirement.

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	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 possibility of	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	APSEZ will co-operate and comply with the directions from concerned regulatory authorities. APSEZ does not draw any ground water for the fresh water requirement. However, Adani Foundation – CSR arm of Adani Group has carried out rainwater harvesting activities in the nearby villages for benefit of the locals. Water conservation Projects i.e. Roof Top 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. To make connections between human actions and the level of biological diversity found within a habitat and/or ecosystem, this year Adani Foundation launch project "Sanrakshan" in coordination with GUIDE and Sahjeevan. Since, 10 years considerable Water Conservation Work carried out in Mundra Taluka. Due to satisfactory rain in current year 1.11 mtr ground water table increased

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			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 that the				as per increased in coastal belt of Mundra as per Government Figures. **WORK COMPLETED:** Water Conservation Projects completed during last Compliance period: **Water Conservation Projects:** **Swajal Project:** ➢ **Aim:** 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. ➢ **Water Security Plan:** 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.

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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<tr><td></td><td></td><td></td><td>overall salinity ingress from the shore into the land due to existing APSEZ facilities and power plant outfalls are less significant.</td><td></td><td></td><td></td><td>Earlier Completed Activities/Projects:
<table>
<tr><th>Sr. No.</th><th>Project</th><th>Unit</th><th>Outcome</th><th>Impact</th></tr>
<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>
<tr><td>3</td><td>Pipe Culvert at Checkdam at Bhujpur</td><td>1</td><td>prevent water runoff into seaside.</td><td>35 farmers' 120+Acre Area of Agri land can be Irrigated</td></tr>
</table>
Large number of water harvesting structure (18 Nos. of check dams in coordination with salinity department) and Augmentation of 3 check dams.</td></tr>
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							• 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. • New Pond Deepening Under Ajadi ka Amrut Mahotsav done in Goyarsama village Approx Deepening Capacity is 12000 Cum. • Roof Top Rainwater Harvesting 145 Nos. (40 Nos. current FY 2022-23) which is having 10,000 liter storage which is sufficient for one year drinking water purpose for 5 people family. • Recharge Borewell 208 Nos (19 Nos. current FY 2022-23) which is best ever option to direct recharge the soil. • Drip Irrigation approx. 1505 Farmers benefitted in coordination with Gujrat Green Revolution Company till date. • Bund construction on way of Nagmati River could save more than 575 MCFT water quantity which recharged in ground due to which borewell depth decreased by 50-100 Ft in Zarpara, Bhujpur and Navinal Vadi Vistar. • Pond Pipeline work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area. • Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year. 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.

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<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Narmada Water Resources, Water Supply & 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.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>While the individual industries in the study area will continue to undertake ground water quality monitoring as per the environmental clearances issued for the</td><td>All Concerned Stakeholders, District Administration and CGWB*</td><td>Continual Process</td><td>APSEZ (9 Locations – half yearly) & 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.

The summary of APSEZ ground water quality monitoring for last six months (Apr'24 to Sep'24) are as below.
Nos. of Location: 09

<table>
<tr><th>Parameters</th><th>Unit</th><th>Min</th><th>Max</th><th>Average</th></tr>
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				respective projects, a regional level ground water conservation action committee can be formed under the guidance of state ground water board and district Administration.			pH @ 25 ° C -- 7.11 8.54 7.84 Salinity ppt 0.90 18.38 4.08 Oil & Grease mg/L BDL(MDL:2.0) BDL(MDL:2.0) BDL(MDL:2.0) Hydrocarbon mg/L Not Detected Not Detected Not Detected Lead as Pb mg/L 0.01 0.02 0.02 Arsenic as As mg/L BDL(MDL:0.01) BDL(MDL:0.01) BDL(MDL:0.01) Nickel as Ni mg/L 0.09 0.19 0.11 Total Chromium as Cr mg/L 0.00 0.00 #DIV/0! Cadmium as Cd mg/L 0.03 0.12 0.06 Mercury as Hg mg/L BDL(MDL:0.001) BDL(MDL:0.001) BDL(MDL:0.001) Zinc as Zn mg/L 0.07 0.14 0.10

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Copper as Cu	mg/L	0.08	0.13	0.10
Iron as Fe	mg/L	0.12	0.61	0.26
Insecticides/Pesticides	µg/L	Absent	Absent	Absent
Depth of Water Level from Ground Level	meter	1.95	2.25	2.12

BDL – Below Detection Limit
MDL – Minimum Detection Limit

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.

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.

As mentioned above, presently, APSEZ has formed Internal Environment Monitoring Committee, involving Officials of APSEZ, Adani Power Limited and other

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							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.
8	**Waste Management**						
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 material, constructio	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 date.	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 there by avoiding ecological	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 has also been recognized for Zero Waste to Landfill certification from reputed organization.

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	n 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.			impacts.			APSEZ, Mundra is certified for Zero Waste to Landfill management system (ZWTL MS 2020) by TUVRheinland India Pvt. Ltd. APSEZ is being done proper solid waste management in his operational area with 5R principle as per Waste Management Plan.
			APSEZ has made a	The existing waste			Industries located within the SEZ area are also complying with the waste management rules stipulated by statutory authorities and same is also being confirmed by APSEZ as well SPCB on regular

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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	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.	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	basis.
8.3	About 35 TPD (13,000 TPA) of solid waste would be	Level-2	As per the MSW Rules 2016 all the industrial facilities and	Solid Waste Management Program shall be adopted and implemented as per Municipal	All Industries	Continual Process	

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	generated from the proposed industrial areas located outside the APSEZ area.		SEZs are required to adopt waste segregation facilities at the respective properties and non-recyclable waste shall be disposed to landfill sites.	Solid Waste Management Rules 2016 and Construction Waste Management Rules 2016			
9	**Ecological aspects (terrestrial and marine)**						
9.1	About 1576 ha of shrub forest land contiguous to APSEZ area is applied for	Level -1	It is noted that the designated forest land is free from any native vegetation and comprises of	APSEZ has approached concerned authorities for diversion of designated forest land. Suitable compensatory afforestation plan shall be	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 is being carried out through NABET accredited consultant.

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	land diversion for various developmental activities. This might have certain level of changes in the biodiversity in the study area.		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 species reported in	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 when the project is fully			

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			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.	developed.			
9.2	Mangrove conservation areas are located adjacent to the APSEZ area.	Level -1	No development activities will be undertaken within mangrove conservation areas.	Mangrove footprint and health status shall be monitored annually	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) study on comprehensive and integrated plan for preservation and conservation of mangroves and

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	Accidental discharges of industrial effluents into the marine environment would pose certain ecological risk.		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 Plantation' scheme in				associated creeks in and around APSEZ in year 2016-17. The cost of said study was 3.15 Cr, which was incurred by APSEZ. As a part of mangrove conservation plan, APSEZ has done following activities. 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. b. Tidal observation in creeks in and around APSEZ – The cost of the said activity was INR 1.0 Lacs incurred by APSEZ. c. Algal & 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. d. Awareness of mangroves importance in surrounding communities & 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 is activity is being done on continuous basis as a part of CSR activity. **Summary of Conservation of mangroves:**

<table>
<tr><th>S. No.</th><th>Identified environmental and social impacts for the fully developed scenario (year 2030)</th><th>Type of Impact & Magnitude1</th><th>Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.</th><th>Additional Risk Mitigation Measures/ESMP</th><th>Responsible agency</th><th>Timeframe for implementation</th><th>Compliance</th></tr>
<tr><td></td><td></td><td></td><td>the area as an alternative income generating activity for the people of the region.</td><td></td><td></td><td></td><td>
<table>
<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>
<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>Total</td><td></td><td>2723</td><td>629</td><td>--</td></tr>
</table>
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%).
As a part of GCZMA recommendations and NCSCM mangrove conservation action plan, APSEZ has undertaken following activities.
<table>
<tr><th>Sr.</th><th>Recommendations</th><th>Compliance</th></tr>
</table>
</td></tr>
</table>

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No.		
1.	Mangrove mapping and monitoring in and around APSEZ	• APSEZ entrusted NCSCM, Chennai to carry out Monitoring of mangrove distribution in creeks in and around APSEZ and shoreline changes in Bocha island. • 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 & 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%. • 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

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									sparse which also shows that the growth of mangroves in a progressive direction. • Hence, there is an overall growth of mangroves in creeks in and around APSEZ, Mundra is 502 Ha between 2011 and 2019. • The cost of the said study was INR 23.56 Lacs incurred by APSEZ. • 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

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<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>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.
• 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%).
• The cost of the said study was INR 23.60 Lacs incurred by APSEZ.

Summary of Mangrove mapping and monitoring (from 2011 to 2021):
<table>
<tr><th rowspan="2">Mangrove mapping Year</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>
</table></td></tr>
</table>

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<tr><td>Total</td><td>2723</td><td>629</td><td>--</td></tr>
</table>
</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.</td><td>Tidal observation in creeks in and around APSEZ</td><td>• APSEZ carried out the tidal observations at locations similar to 2017 in Kotdi, Baradimata, Navinal, Bocha and Khari creeks under the guidance of NCSCM.
• The observed tidal ranges indicate that the creeks experience normal tidal</td></tr>
</table>

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									ranges, adequate for the growth of mangroves. • The cost of the said activity was INR 1.0 Lacs.
							3.	Removal of Algal and Prosopis growth from mangrove areas	• 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 FY 2023-24. The algal removal report was submitted during the last compliance report submission Oct'23 to Mar'24.
							4.	Awareness of mangroves importance in surrounding communities	• 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

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							productivity. Dry Fodder 10,90,875 Kg Green – 27,64,920 Kg. • Awareness of mangroves importance in surrounding communities & 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. • **Grass Land development:** 213 acres of gauchar land has been cleaned and allocated for Grass land development with strong Community Contribution and Mobilization. • 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. • APSEZ has celebrated the International Day for the Conservation of the

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							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 **Annexure - 10.** • Refer CSR report attached as **Annexure – 2**. 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.
9.3	Outfall from the thermal power plants desalination	Level-1	A detailed marine hydro-dynamic and dispersion modelling of the study area	All approved marine outfalls shall be monitored for salinity, temperature and other designated	APSEZ and Concerned Industry	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. APSEZ is carrying out Marine monitoring once in a month at 9 locations in deep sea by NABL and MoEF&CC accredited agency namely M/s. Unistar

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<tr><td></td><td>and CETP would pose certain level of impact on the marine environment.</td><td></td><td>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 status on monthly basis for the</td><td>parameters as per consent to establish issued by GPCB.
Existing marine environmental monitoring program shall be continued.</td><td></td><td></td><td>Environment and Research Labs Pvt. Ltd., Vapi. The analysis reports of the same are being submitted to the concerned authorities on regular basis.

Adani power plant is also doing marine water quality at 5 locations (2 locations at outfall location) in deep sea by NABL and MoEF&CC accredited agency namely M/s. Unistar Environment & 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.

The comparison of marine water results between CIA and current monitoring data are as below.

<table>
<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>
<tr><td>Temp.</td><td>^{0}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>
</table>

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.</td></tr>
</table>

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			stipulated environmental and ecological parameters.				
9.4	**Terrestrial Ecology:** 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 green-cover/vegetation in the	Level-1	APSEZ has developed greenbelt in an area of 550ha as against the committed area of 430ha. A dedicate 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	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 & Adani Power Plant. Dedicated horticulture department is maintaining and monitoring the terrestrial green belt development on regular basis to check the survival rate of plantation. 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.

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	area is very small.						
10	**Socio-economic aspects**						
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 an additional need for public	Level-1	Dedicated townships are developed within APSEZ area with necessary community infrastructures such as hospital, school, recreational facilities, sewage treatment and waste collection facilities. Adani Foundation has been undertaking various CSR programs under the	The existing townships will be expanded to accommodate about 4lakh people when the project activity is fully developed.	APSEZ	As and When Required	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 & SEZ industries. Out of which 87.14 % Occupancies are accommodated within the townships and rest are available for employees working within APSEZ. At present 46 nos. of industries (processing & 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. 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 requirement. Other infrastructure facilities have been developed for people are as follows. • Multi-Specialty Hospital

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	infrastructure in the region.		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 allocation of appropriate budget.				• School • Commercial complex • Religious place 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. • Community Health • Sustainability Livelihood – Fisher Folk • Education • Rural Infrastructures • Skill Development 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. Major works carried out since April 2018 as a part of CSR activities are as below. **Last FY 2023-24 infrastructure development activities:**

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							• 377 - AC Roof sheet support to Fisherfolk Vasaha 1700+ Benefited. • 2 Development of Common Gathering flooring work – 4000+ Benefited. • 195 Stall – Vegetable market– 900+ Benefited. • Solar Panel System at Mundra – 600+ Benefited. • Maintenance, Fencing & Material Support - 30+ Benefited. Renovation of Shed at Shekranpir Bhopavandh - 2000+ Benefited. • Renovation Check dam and CC road work at Nani Khakhar – 200+ Benefited. • Renovation of High School at Zarpara – 2200+ Benefited. • Construction of Pipe Culvert – 400+ Benefited. • Construction of chain-link fencing at Mangra village – 300 people benefited. • Gaushala Shed at Zarpara village – 400 cattle benefited. • Renovation of approach road, Zarpara – benefiting 400 villagers. • Renovation of Civil and Electrical Work at ITI, Mundra - 500 students benefited. • Construction of 21 Borewell Recharge in Nagmati River - 150+ farmer benefited. • Check dam Desilting and restoration at Nana Bhadiya – 100+ farmers benefited. • Renovation of Check dam at Pavadiyara village - 300 people benefited.

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							• Renovation of Balwadi at Juna bandar & Luni bandar. • 185 RRWHS construction is ongoing in various villages - will benefit 1300+ residents. • Supply & installation of Solar panel (3.25 KV) at CGP, Mundra – benefiting 1200 people. • Development of Model Farm in Zarpara, Siracha & Mangra – Benefiting 300 people. • Renovation of approach road at various fisherfolk vasahat. **Previous FY 2022-23 infrastructure development activities:** • 40 RRWHS structure have been completed • 208 Bore-well recharging activity is completed. • Percolation well Recharging work at Bhadiya & Mota Kandgra village. • Sluice gate Construction to Control Flood during Flooding at Khoydivadi Vistar Bhujpur. • Pond Beatification and Bund Strengthening at Bhujpur village. • Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year. • commissioning of Community Training Centre at Shekhadiya. • Two Pond Deepening at Zarpara under Amrut Sarovar Yojna.

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							• Ground recharge activities (pond deepening work for 61 ponds) individually and 26 ponds under Sujlam Suflam Jal Abhiyan. • Pond Pipeline work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area. • JCB & Hitachi Machine Support for Pre-Monsoon activities. Repairing and Maintenance work of Approach at Luni, Bavdi and Navinal Fishermen Bandar. • 3 Re-strengthening of Approach Road. • Renovate Blood storage Lab CHC Mundra Renovation Blood storage Lab CHC Mundra. • Constructed 2 nos. of CC Road of 700 mtr. • Constructed Community Training center Shekadiya. • Constructed 2 nos. Disable Widow Toilet Block • Installed R.O. Plant at Mokha with capacity 1000ltr /HR. • Constructed 4 nos. Common gathering Open Shed • Constructed 03 nos. of Water Tank at Luni Bandar. • Developed of Cricket Ground at Hatdi Village • Pond Deepening work at Vadala & Mota Bhadiya • Artificial recharge borewell in Borana, Mangara & Dhrub village. • Under Dignity of Drivers Project, Adani Foundation has constructed Resting Shed for Drivers entering in SEZ Premises. Total 50 beds are constructed,

<table>
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<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>drinking water and sanitation plus recreational – TV Facilities.

Similar community development programs (based on need based assessment) will be continued in future as well with allocation of appropriate budget.</td></tr>
<tr><td>10.2</td><td>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 continue in future due to induced</td><td>Level-2</td><td>Adani foundation is taking up several girl child education programs as part of CSR activities to create awareness about girl child protection.</td><td>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.</td><td>APSEZ, Other development projects and District Administration*</td><td>Long Term</td><td>Major works carried out since April 2018 as a part of CSR activities to create awareness about girl child protection are as below.

• 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.".
• Student Benefitted Under Uthhan Project:
<table>
<tr><th>Utthan Initiatives</th><th>Benefited</th></tr>
<tr><td>Strengthening government Primary & High schools</td><td>31 Villages, 77 Schools, 12000+ Students, Efforts for Increase Gunotsav result & 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>
<tr><td>Providing required</td><td>Sports Kit, Music Kit, TLM Kit, Science Kit provided in schools.</td></tr>
</table></td></tr>
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	economic growth in the region.						resources and facilities | Enabling joyful learning spaces | Smart Class with Navneet software+ Bala painting + Activity base learning. Adani Students Development Center (ASDC) | 2 Adani Evening Education Center, 5 Adani Competitive Coaching Center, 5 Adani English Coaching Center Introducing English as a Third Language | Students: 5000+ Classes 1-4, Curriculum, Every Friday morning assembly in English Enhancing Reading Habits | Redding corner, 1000+ Oasis workshop, 162780 Books CICO, 100+ Schools partner from 10+ Country in International school library month (ISLM) IT on Wheels | 2 dedicative van, 2 IT instructors, 55 laptops, 34 schools, Empowering 4170 students, 200+ High schools' students Promote sports | 6 Students selected in District level sports school, Inspiring more 100 Students. Khel Maha Kumbh: 2000+ Teachers' & Sahayak Capacity Building | 3500+ Hours Capacity building program + Webinar + Diksha + 10 full days training. Formation of Eco Club | Plastic free village workshop: 1250+ Students, Environment Awareness program & Tree plantation in schools. Day Celebrations & Collaboration with GoG | Summer Camp: 6000+ Students Diwali Mela: 5500+ Students. 1400+ Parents participated. Mothers as catalyst in transformation | Mothers meet 700+ Mothers Joined: 15000+ this year. (Meetings + Home Visit)

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							<table><tr><td>Strengthening Stakeholders</td><td>Support in Taluka, District & state level various initiative with DIRT, BRC, Strengthening SMC Committee.</td></tr></table> • 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. • 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. • Separate sanitation facilities for girl child in schools. • 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." • Till date 36% women had never used sanitary Napkin 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. • Beti Vadhavo Programme was organized in 32 Villages in the presence of Village Sarpanch and other leaders in year 2017-18. We explained people about the various topics i.e. importance of girl

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							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. • During the year various activity like, Covid-19 awareness in village & Slum Area, Menstrual Hygiene Day, Breastfeeding Week, National Deworming Day, National Nutrition Month had been celebrated. • 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. ✓ 204 beneficiaries covered in Breastfeeding Week ✓ 320 beneficiaries covered in National Deworming Day ✓ 20 villages covered in celebration of NATIONAL NUTRITION MONTH ✓ 42 FAMILY COUNSELLING ✓ 2059 Women participated in celebration of Women's Day week. • To reduce malnutrition and anemia amongst Children 95 % & adolescent girls and pregnant & lactating women by 70 % in three years • Reduction IMR and MMR

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							• Support Awareness & Cover 100 % Vaccination taken by Child & women. • 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. • 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 have received approval letter from GOG and 15 forms filled upon the same day. • 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. 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.
	Due to economic growth		Adani hospitals, Mundra is setup by	APSEZ will explore other possibilities to augment the primary and	APSEZ	Long Term	Adani hospitals (Multi-specialty), Mundra is having 110 bed facility and same is setup by Adani group near Samudra township.

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10.4	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 about 540 beds would be required.	Level-2	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.	secondary healthcare facilities in future depending on the growth scenario at APSEZ development.			Primary health center and community health center are in place within the Mundra taluka. Other than this Adani foundation is doing various activities as part of community health. The details of last year are as below. • Mobile Heath Care Units and Rural Clinics • 07 Rural Clinics • 05 villages of Mundra & 02 village Mandvi block has benefited by rural clinic service. • Total 5519 Patients Benefitted FY 24-25 till Sep'24 (direct & indirect) by Mobile van and rural clinic. • 2 financially challenged patients has been supported with Dialysis treatment at 22 Times which added day in their Life. • Provided 27,355 medical health services 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.

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							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 nos. of peoples **Cataract Surgery**: 18 nos. of peoples **Medical Services Data April to Sep - 2024:** • Ayushman Card: 243 beneficiaries • Eye Vision Care; 7740 beneficiaries • Driver Health Check-up: 2423 beneficiary • Blood Donation Camp: 2902 beneficiary • Specialty Health Camp: 2578 beneficiary • General Health Camp: 1074 beneficiary • Rural Clinic: 5519 beneficiaries • Mobile Health Care Unit: 4348 beneficiaries • Medical Supports: 1071 beneficiary • **Dialysis Support:** During this year, 2 patients were supported for regular dialysis with 22 Times which added day in their Life. • 1094 –Economically Challenged patients have been supported for operation, OPD, IPD, Medicines and lab-test. **Animal Husbandry:**

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							• 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, **Previously Conducted Community Health Details:** • Total Patients Benefitted FY 23-24: - 23327 (direct & indirect) by Mobile van and rural clinic • 2 financially challenged patients has been supported with Dialysis treatment at 124 Times which added day in their Life. • Provided 41,546 medical health services and conducted health awareness camps for 763 High school students. • **Cataract-Free Mundra:** The initiative is a dedicated effort to eradicate cataract-related vision impairments specially focused on Senior citizen through Meticulous planning as below. **Lives Impacted: - 1131** ➢ Comprehensive Eye Screenings at Village level ➢ Cataract Surgeries to GKGH, Bhuj ➢ Post-Operative Care and Follow-up

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							➢ 5 successful Operation **Health camp:** • Specialty camps, Eye checkup camps, Blood donation camp, Anti-tobacco awareness camp, TB screening, and other are conducted in core villages as well as in labour colonies. • Specialty health (Gynec, ophthalmic, specialty health camp): - 5795 Patients Benefited. • General health camp: - 1618 Patients benefited. • Blood Donation Camp: 1715 people have donated blood. • Conducted health programs for students, engaging 763 participants, and held sessions on Personal Health & Hygiene Awareness, addressing critical health issues and promoting overall well-being. • Women's Health: Provided health services to more than 2610 women benefitted through Menstrual & Mental Health Awareness Drive. • Dialysis Support: During this year, 2 patients were supported for regular dialysis with 124Times which added day in their Life. • Medical Supports: 1007 beneficiary in 35 village. • **International year of Millets – 2023:** To promote millet culture and raise awareness about its benefits in Mundra, we organized a Millet Competition across nine villages. Over 715 women

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							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. • **Ayushman card facilitation:** Ayushman card issued to 5584 for 25 village of 686.50 Cr. health insurance. • 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. • **Sample Survey Report 2023-24** o 55% Never heard about Menstrual hygiene. o 60% Are using cloths on regular basis. o 36% Had never used sanitary pads. o 68% Had no information about UTI. o 30% Never used millets in their diet. o 60% Never heard about millets or it's benefits. • 2222 –Economically Challenged patients have been supported for operation, OPD, IPD, Medicines and lab-test. • For Preventive health care General and multispecialty camps Paediatric camp, General

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							Health camps in 7 villages and Super specialist camp which benefitted more than 4690 patients of Mundra & Mandvi Taluka. • **Cattle Health Camp:** 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 & Fodder Support Program • 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. APSEZ will explore other possibilities to augment the primary and secondary healthcare facilities in future depending on the future development at APSEZ.
	Due to rapid economic development in the region,		APSEZ has been giving preferences to people from				**Last FY 2023-24 fishermen livelihood activities development activities:**

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10.5	several employment opportunities can be generated to the local people. 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 45% of the total envisaged population in Mundra Taluk by the end of 2030.		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 livelihood options have been introduced by the Adani Skill Development Centre,	APSEZ is committed to provide support for fishermen livelihood activities and has submitted a detailed 5 years plan to MoEF&CC with a total budget of Rs.13.5 Cr.	APSEZ	Short Term	**Overall Persistent efforts for Fisherman development:** • 598 Education Kit Support • 273 Fisherman Shelter Support • 1,247 Vehicle transportation support of Mundra and Mandvi taluka • 106 Cycle Support to high school going students. • 613 Scholarship Support • 419 Youth Employment • 195 Linkages with Fisheries Scheme • 3,534 Ramatotsav Community Engagement • 56,523 Man days Mangroves Plantation • **Vehicle Transportation Facilities:** 146 Students supported Mundra Taluka and 58 Students supported at Mandvi Taluka during the compliance period. • **Education Kits Support:** 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). • **Educational Awareness Sessions:** Through targeted awareness sessions in Fisherfolk Vasahat, we promote the transformative power of education, with a particular focus on advancing girl-child education. (487 Students motivated for high school Education).

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			Mundra. In these centers, 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.				• **Scholarship Support:** 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. • **Cycle Support:** Overcoming transportation obstacles, our cycle support initiative enables six 9th standard fisherfolk students from Juna Bandar to continue their education with ease. • **Assisting During Emergencie**s: 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) • **Fostering Youth Employment:** 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) • **Strengthening Fisherfolk women:** 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,

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							clean water access, and mental health support. (449 Women benefited) • **Potable Water Distribution:** Providing potable water facilities to 9 Fisherfolk Vasahat 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). • **Cement Roof Sheet Support:** fisherfolk Home were significantly damaged by the **Bipor 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." • **Potable water Distribution:** Providing access of potable Drinking water Facilities to Nine fisherfolk vasahat on Daily bases, either By Water tanker or Linkage with Nearest Gram panchayat. • More than 5000 Fisherfolk Population are getting benefit which impact on their health and efficiency. • Water distribution to Luni & Bavadi Bandar Fishfolk Vasahat: 35000 KL water for 936 people. • **Sagar Mitra Card:** 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

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							have implemented this system for Navinal Fisherfolk, and so far, we have issued a total of 57 Sagar Mitra Cards." • 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. • More than 35% of enrolled students in AVMB come from the Fisherfolk community. • **Youth Employment:** 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. • **Vidya Sahay Yojana – Scholarship Support:** 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 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."

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							• During FY2023-24 Approx. INR 122.32 lakh were spent for Fisherfolk Amenities work in different core areas • Till FY 2023-24, Adani Foundation has done total expenditure of INR 1460.51 lakh for Fisherfolk Amenities work in different core areas. APSEZ is carrying out various initiatives specific to the Fisherfolk community which includes: • Vidya Deep Yojana • Vidya Sahay Yojana – Scholarship Support • Adani Vidya Mandir • Fisherman Approach in SEZ • Machhimar Arogya Yojana • Machhimar Kaushalya Vardhan Yojana • Machhimar Sadhan Sahay Yojana • Machhimar Awas Yojana • Machhimar Shudhh Jal Yojana • Sughad Yojana • Machhimar Akshay kiran Yojana • Machhimar Suraksha Yojana • Machhimar Ajivika Uparjan Yojana • Bandar Svachhata Yojana 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",

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude1	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
							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 **Annexure – 11**.

Annexure – 7

AREA LEVEL POLLUTION RESPONSE TRAINING/EXERCISE- 2024 REPORT 02-03rd MAY 2024

Date: 02-03 May 2024	**Exercise:** Area Level PR Exercise
Name: Mr. Shashank Badola	**Position:** Radio Officer
Contact Number: 9825228673	**Location:** APSEZL, Mundra

Date: 02 May 2024: Final Planning and Tabletop Exercise

0930-1230 hrs: Tabletop Exercise carried out at Indian Coast Guard Station Mundra. Participants- APSEZ Mundra and HMEL.

Date: 03 May 2024- Mock OSR drill

Location- Near IOCL SPM (22^0 41' N 069^0 39.2' E)/APSEZL, Mundra

Drill Activity Timeline:

1000 hrs.: ICGS Informed regarding commencement of drill.

1005 hrs.: Tug Ocean Citrine immediately reported to Marine Control and Diving Supervisor that due to internal explosion observed two 6 inches hole in 1st Wing starboard tank but no injury, no casualty and no fire occurred. Maneuvering capability is intact. There are 33 crew on board, head count taken and all present.

1006 hrs.: Marine Control informed Marine HOD/HOS and all concerned departments.

1007 hrs.: Ocean Citrine team was asked to take the sounding of damaged tanks and all other tanks.

1009 hrs.: Ocean Citrine commenced boom deployment.

1010 hrs.: Commenced internal transferring of oil from damaged tank to 3rd Wing starboard tank.

1011 hrs.: Ocean Citrine informed her company DPA about the incident.

1011 hrs.: Marine Control informed all vessels at anchor regarding oil spill near IOCL SPM area. The control room requested all underway vessels to pass 5 miles from IOCL SPM. Unberthing operations suspended.

1012 hrs.: Ocean Citrine requested Marine Control for Barge BB-10, tug and additional boom standby in case more support required.

1013 hrs.: Dredging head informed for the deployment of BB10 and make ready.

1014 hrs.: Marine Control informed Tug Dol 17 & 18 to standby with OSD for spraying.

1015 hrs.: Informed commercial team (Mr. Jagdish Rabadia), environment cell (Mr. Radhe Shyam Singh) and Liquid Control Room by Mr. Sudhakar Singh about the drill/incident to be in immediate readiness.

1016 hrs.: Marine Control informed Barge BB-10 along with Tug Dol 10 to be stand by.

1017 hrs.: Security department were informed to allow entry of authorized persons, emergency vehicles without any delay and OHS/Adani hospital to be on alert.

1018 hrs.: Barge BB-10 underway with Tug Dol 10 to IOCL SPM.

1019 hrs.: Ocean Citrine informed internal transferring in progress and spillage rate getting reduced and hole came up to half meter above water level.

1020 hrs.: Ocean Citrine reported 150m boom deployed and continued to deploy the remaining 100 meters and reported wind speed 12-14 knots and direction westerly.

1021 hrs.: Capt. Girish Chandra informed Commandant Konark Sharma ICGS Mundra about the incident through phone.

1023 hrs.: Marine Control informed jetty team to be stand by with crew for mooring the Barge BB-10 at B-6 berth. Jetty supervisor also informed to deploy one hydra for loading/unloading of OSR equipment at SPM Store and jetty.

1025 hrs.: Ocean Citrine informed that spill is spread in an area of around 35-50 m^2.

1039 hrs.: Ocean Citrine reported 250 m boom deployment completed and commenced J-formation.

1040 hrs.: Mr. Mahendra Singh Solanki from Corporate affairs informed DM Bhuj office about the incident.

1041 hrs.: Initial intimation mail sent to GMB/MMD Kandla/Coast Guard Station/MRCC.

1050 hrs.: Ocean Citrine reported J-formation completed, and oil containment is in progress and commenced skimmer deployment. And this is HSD so it is volatile in nature, hence deploying resources to contain.

1052 hrs.: Barge BB-10 arrived at IOCL SPM with Tug Dol 10.

1053 hrs.: Skimmer lowered and commenced recovering of spilled oil to floating tank.

1054 hrs.: Barge BB-10 secured P/S of Ocean Citrine and commenced transferring of oil in barge BB-10.

1055 hrs.: Liquid team informed Marine Control that motor pump and other equipment is standby at berth B-6.

1056 hrs.: Liquid team informed Marine Control that 6 no. of Tanker/bowser arrived and standby at berth B-6.

1100 hrs.: Ocean Citrine reported approx. 1 T of recovered oil loaded in barge BB-10.

1105 hrs.: Recovery of spilled oil completed (1 T).

1118 hrs.: Drill called off and at the same time informed all concerns.

1119 hrs.: BB-10 cast off and proceed to B-6 berth for transfer of oil for disposal.

1120 hrs.: Boom recovery started.

1125 hrs.: Area assessed by diving team for recovered oil and confirmed all clear.

1128 hrs.: Informed environment team for water sampling of spillage area.

1145 hrs.: Environment team informed that area is clear of oil and no harm for sea.

1147 hrs.: BB-10 arrived at B-6 berth.

1155 hrs.: Liquid team started loading oil from BB-10 to tankers for disposal.

1210 hrs.: Tanker loaded with oil departed from B-6 for disposal of oil at Oil Water Separator unit.

1235 hrs.: Tanker reached Oil Water Separator unit.

1240 hrs.: Recovered oil transfer from tanker to OWS unit completed.

1255 hrs.: Environment team informed that GPCB approved recycler has executed disposal.

1315 – 1330 hrs.: De-briefing carried out at Adani House in presence of Capt. Santosh Kumar Darokar, Principal Officer MMD Kandla.

Personnel & Boats Participated in Drill

Off Shore

1. Capt. Hemant Dhruv-APSEZL
2. Capt. Sonu Yadav-APSEZL
3. Capt. Lalji Meena - Harbor Master DPA
4. Mr. Vikram Pratap Singh-APSEZL
5. Mr. Ashok Tiwari - HMEL
6. Mr. MP Choudhary, APSEZL
7. Mr. Shashikant Padave-APSEZL
8. Mr Ayush Jha, APSEZL Mundra
9. Mr. Narayan -APSEZL
10. Mr. Dharamveer Yadav-APSEZL
11. Members from M/s Sea Care – 04
12. Crew of Tug Ocean Citrine
13. Crew of Tug KB 48
14. Tug Dol 10 and BB10
15. ICGS Mundra – 02

16. Mr. Abhishek -APSEZL/Environment

Onshore:

1. Capt. Girish Chandra
2. Sudhakar Singh
3. Mr. Shashank Badola
4. Mr. Rajeev Kumar
5. Mr. Om Prakash Yadav

Drill Performance Monitoring:

Sl. No	Activity	Time Taken
1.	Time taken to shift OSR equipment from SPM Store to load on DSV tugs	NA / 200-meter Fence boom and 1- skimmer is kept 24 x 7 on Tug Ocean citrine.
2.	Time taken for Tug cast off from time information given.	NA
3.	Time taken from tug cast off to Reach at Location.	NA
4.	Time taken for deploying 250-meter boom and skimmer after reaching at site.	30 min.
5	Time taken for J/U formation and deployment of skimmer.	11 min.

Observations:

SR. NO.	POINTS	ACTION TAKEN	TARGET DATE	RESPONSIBILITY	REMARKS
1	Internal communication on tug should be streamlined specially between deck and bridge.	Point discussed during de-brief	10.05.2024	HMEL	
2	There should be pads on the roller to avoid chafing against metal at aft end of deck where lowering of boom deployment is done.	Point discussed during de-brief	31.07.2024	HMEL	
3	Bow thruster must be made readily available immediately in such emergencies.	Point discussed during de-brief	04.05.2024	HMEL	

Tabletop Exercise- 02 May 2024

Drill Scenario presented by ICG

Table top Discussion with the participants

PR Drill snap – 03 May 2024

Area Level Pollution Response Exercise at IOCL SPM	
Boom laying from Tug Ocean Citrine	
	
J formtion making in progress	Skimmer Operations
	

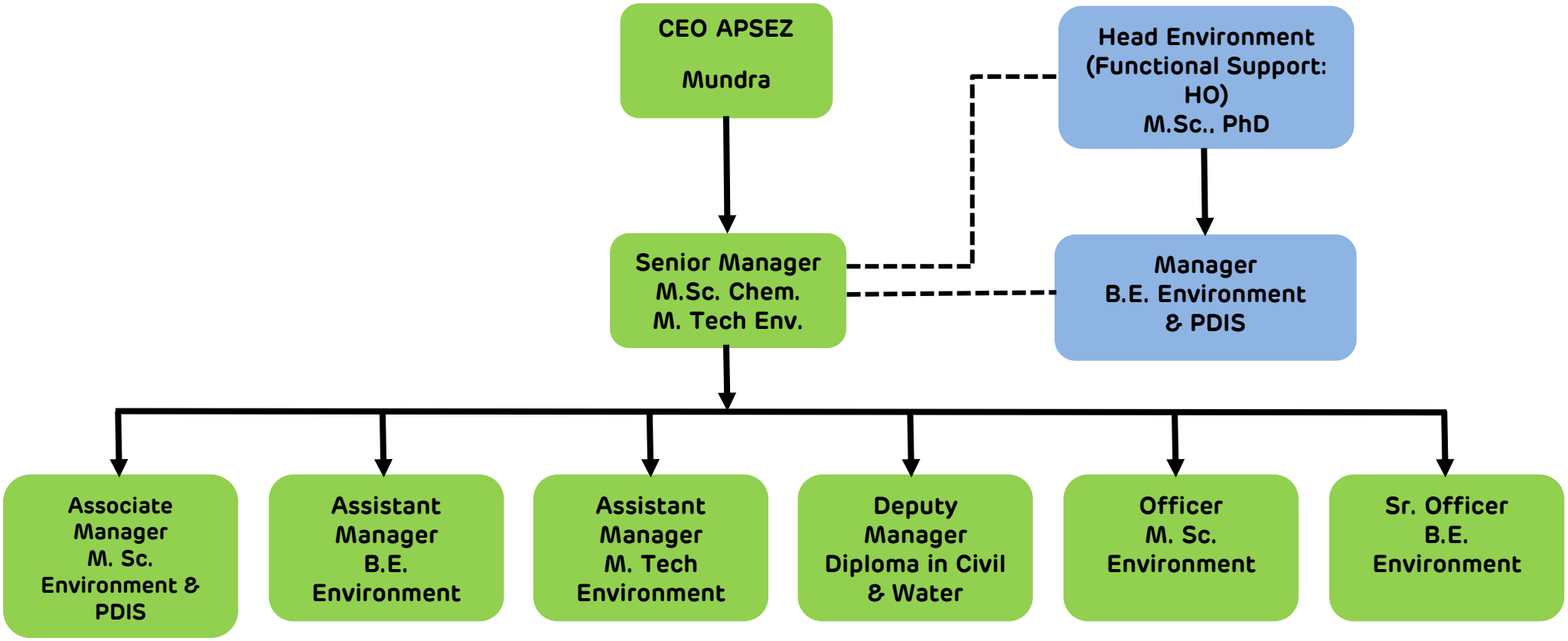
Area Level Pollution Response Team on Tug Ocean Citrine

De-briefing at Adani House

Annexure – 8

adani
Ports and Logistics

Updated Organogram of Environment Management Cell, APSEZ, Mundra



Annexure – 11

Expense Details for Fisherfolk Amenitites 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
	TOTAL	**24,063,638**	**20,785,119**	**15,541,000**	**20,949,883**	**12,889,964**	**21,051,941**	**18,537,489**	**12,232,390**	**4,611,545**	**150,662,969**	**1,506.63**

Annexure - i

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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
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	^{0}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 ^{0}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

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^{-2} 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 NO3-N)	APHA 24th Ed.,2023,4500 NO3-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)

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

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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
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	^{0}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 ^{0}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

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^{-2} 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 NO3-N)	APHA 24th Ed.,2023,4500 NO3-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)

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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
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	^{0}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 ^{0}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

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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^{-2} 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 NO3-N)	APHA 24th Ed.,2023,4500 NO3-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)

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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
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	^{0}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 ^{0}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

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

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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^{-2} 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 NO3-N)	APHA 24th Ed.,2023,4500 NO3-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)

UERL/CHM/F–2/05

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