

Ref No. AKBTPL/ENVCELL/2024-25/08

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-03 Circle, Sector – 10A,
Gandhinagar, Gujarat, India – 382007.
E-mail: ecompliance-guj@gov.in, iro.gandhingr-mefcc@gov.in

Sub.: Half yearly Compliance report of Environment and CRZ Clearance for the report namely "Construction of berthing and allied facilities of Tekra near tuna, Gujarat"

Ref:

1. Environment and CRZ clearance issued to M/s Kandla Port Trust (KPT) vide letter no. 10-10/2008-IA.III dated 01st November 2011 and transferred to M/s Adani Kandla Bulk Terminal Private Limited (AKBTPL) vide letter no. #10-10/2008-IA.III dated 10th November 2014.
2. CRZ recommendation for creation of Berthing and Allied Facilities off Tekra near tuna issued by forest and environment government of Gujarat white letter bearing number ENV-10-2009-1543-E dated 23rd June 2010

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 Kandla Bulk Terminal Pvt. Ltd.**


Mohit Shaktawat
(COO – AKBTPL)
(Authorized Signatory)



Copy to:

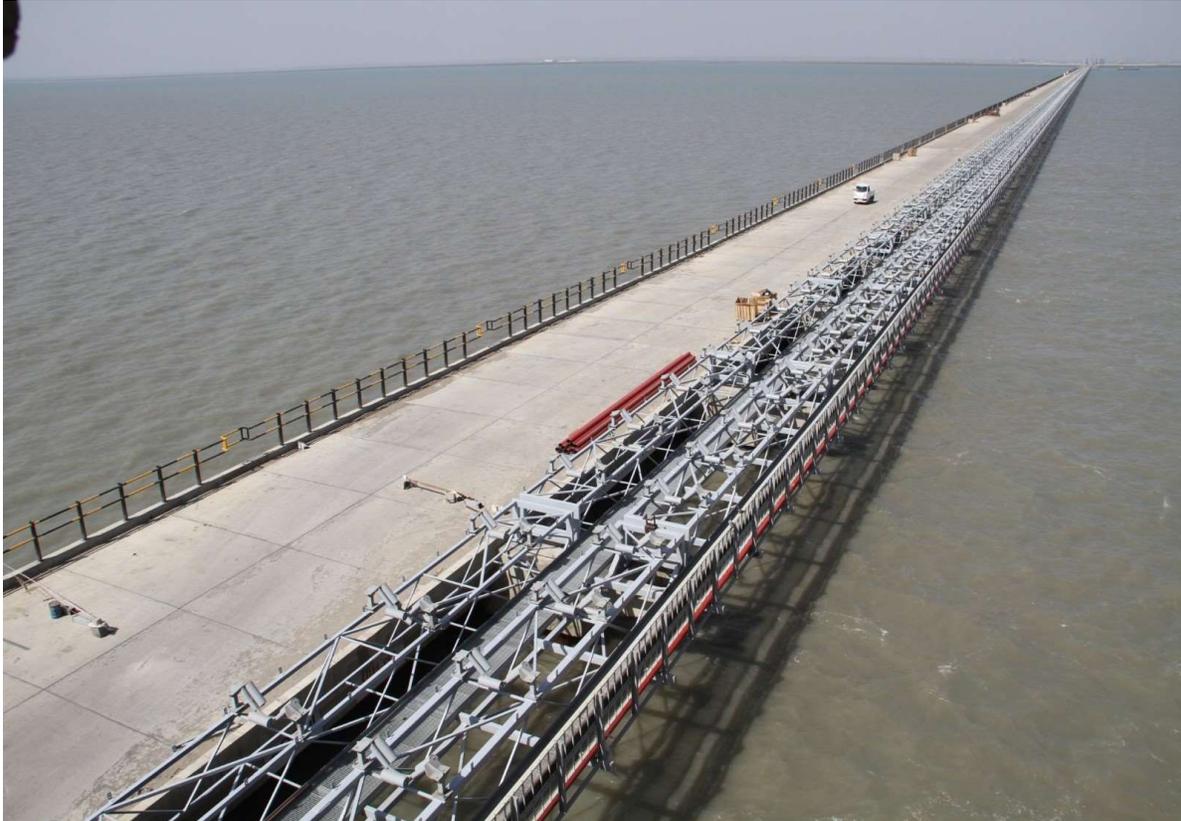
- 1) The Director (Monitoring-IA Division), Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003.
- 2) The Zonal Officer, Regional Office, CPCB – Western Region, Parivesh Bhawan, Opp. VMC Ward Office No. 10, Subhanpura, Vadodara – 390023.
- 3) The Member Secretary, GPCB – Head Office, Paryavaran Bhawan, 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.
- 6) The Chief Engineer, Administrative Building, Kandla Port Trust, Gandhidham 370201

Adani Kandla Bulk Terminal Pvt. Ltd.
Adani Corporate House,
Shantigram, Nr. Vaishno Devi Circle,
S G Highway, Khodiyar,
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Status of the conditions stipulated in Environment and CRZ Clearance

Environmental and CRZ Clearance Compliance Report of



**Construction of berthing & allied
facilities off Tekra near Tuna, Gujarat
Of
Adani Kandla Bulk Terminal Pvt. Ltd.
For Period:
April- 2024 to September- 2024**

Status of the conditions stipulated in Environment and CRZ Clearance

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Environmental and CRZ Clearance Letter issued by MoEF & CC

Compliance to Environmental and CRZ Clearance Letter issued by MoEF&CC

Environmental and CRZ clearance was obtained by Deendayal Port Trust (DPT) [Earlier named as Kandla Port Trust (KPT)] vide MoEF&CC letter dated 01.11.2011. AKBTPL and DPT entered into concession agreement for development of the dry bulk terminal at Tuna on BOOT basis. Said clearance was then transferred to AKBTPL vide MoEF&CC letter dated 10.11.2014

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of Environment and CRZ Clearance issued by MoEF&CC dated 1st November 2011 bearing F. No. 10-10/2008-IA-III for Construction of berthing & allied facilities off Tekra near Tuna, Gujarat.

Sr. No	Condition	Compliance status as on 30.09.2024												
5.	Specific Condition													
(i)	<p>"Consent for Establishment" shall be obtained from State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at site.</p>	<p>Complied.</p> <ul style="list-style-type: none"> Consent to Establishment (CtE) and Consent to Operate (CtO) is Obtained and renewed/amended from time to time as per the progress of the project activity. Construction activities are already completed, and the project is in operation phase since 2015. The present in-force CTO & amended CTE are mentioned below. <table border="1" data-bbox="732 863 1484 989"> <thead> <tr> <th>Sr. No</th> <th>Permission</th> <th>Project</th> <th>Ref. No./Order No.</th> <th>Validity</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>CTO renewal</td> <td>AKBTPL</td> <td>AWH-105213</td> <td>02.12.2024</td> <td></td> </tr> </tbody> </table> <ul style="list-style-type: none"> Copy of the above permission is already submitted as a part of half yearly compliance reports for the period of Oct'19 to Mar'20. 	Sr. No	Permission	Project	Ref. No./Order No.	Validity	Remarks	1.	CTO renewal	AKBTPL	AWH-105213	02.12.2024	
Sr. No	Permission	Project	Ref. No./Order No.	Validity	Remarks									
1.	CTO renewal	AKBTPL	AWH-105213	02.12.2024										
(ii)	<p>Scientific studies shall be carried out by some expert and reputed organization like BNHS focusing among other things the marine environment in general and preservation of mangroves in particular against any possible adverse impact due to creation of the proposed facilities.</p>	<p>Complied.</p> <ul style="list-style-type: none"> M/s. Gujarat Institute of Desert Ecology, Bhuj has conducted scientific studies for preservation and management of mangroves in May 2012. Details related to the same are already submitted as part of half yearly compliance report (Oct-14 to March-15) to MoEF & CC vide letter dated 11.05.2015 and there is no further change. Further, a study to ascertain tidal flushing in mangroves around the project area of the dry bulk terminal at Tuna was carried through M/s. GUIDE, Bhuj in April 2014 when construction activities were ongoing. Details related to the same were already submitted as part of half yearly compliance report (Oct-2016 to March-2017). Further, in order to understand the impacts of the existing project activity on marine ecology, a study was carried out through M/s. GUIDE. Details related to the same were already submitted as part of half yearly compliance report (Oct-2016 to March-2017). 												

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of Environment and CRZ Clearance issued by MoEF&CC dated 1st November 2011 bearing F. No. 10-10/2008-IA-III for Construction of berthing & allied facilities off Tekra near Tuna, Gujarat.

Sr. No	Condition	Compliance status as on 30.09.2024
		<ul style="list-style-type: none"> It may be noted that GUIDE is one of the authorized agencies of Forest & Environment dept. Govt. of Gujrat.
(iii)	Proponent shall explore the possibilities of plantation of mangrove in the entire mud flat areas and submit the action plan to the Ministry prior to the commencement of the activity.	<p>Complied.</p> <ul style="list-style-type: none"> Based on the scientific studies for preservation and management of mangroves in May 2012 carried out by M/s. GUIDE it was suggested to DPT to carry out mangrove plantation in 500 ha. Area. As agreed, AKBTPL has already completed Mangrove plantation in 250 ha area at Sach Sayeda bet. Balance 250 ha. Mangrove plantation shall be carried out by DPT. Monitoring report prepared by M/s. GUIDE for mangrove plantation in 250 ha carried out at Sach Saida bet is submitted as part of half yearly compliance report (Oct-14 to March-15) to MoEF & CC vide letter dated 11.05.2015.
(iv)	The dredge material shall be reused for low level rising whenever possible and excess shall be dumped into sea at the designated dumping areas identified based on mathematical model studies.	<p>Complied.</p> <ul style="list-style-type: none"> As per the study carried by IIT-Chennai, the dredge material is not suitable for reclamation/low level rising. Capital dredging was completed by DPT during the construction phase and the dredge material was disposed by DPT at a location identified by M/s. CWPRS, Pune in their study report. No digging activities are carried out during Period Apr'24 to Sep'24.
(v)	Though the project proponent has carried out EIA for individual components and it were examined by the committee before the issue of clearance, it is suggested that proponent shall update and submit a comprehensive EMP for the whole project and submit to the Ministry and Regional Office of the Ministry at Bhopal prior to commencement of the activity.	<p>Complied.</p> <ul style="list-style-type: none"> EMP was updated by AKBTPL and submitted to DPT. DPT has submitted the same vide letter dated 03.12.2013 to MoEF&CC as part of compliance report. Further, said EMP was also submitted by AKBTPL as a part of half yearly compliance report (Oct-14 to March-15) to MoEF & CC vide letter dated 11.05.2015 and there is no further change.

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of Environment and CRZ Clearance issued by MoEF&CC dated 1st November 2011 bearing F. No. 10-10/2008-IA-III for Construction of berthing & allied facilities off Tekra near Tuna, Gujarat.

Sr. No	Condition	Compliance status as on 30.09.2024
(vi)	The project proponent shall set up environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	<p>Complied.</p> <ul style="list-style-type: none"> AKBTPL has Environment Management Cell with qualified manpower for implementation of environmental safeguards and management. The site environment team directly reports to the Site Head. Further, the site Environment Cell continuously remains in loop with Corporate Environment Cell.
(vii)	The funds earmarked for environmental management plan shall be included in the budget and this shall not be diverted for any other purpose.	<p>Complied.</p> <ul style="list-style-type: none"> Environmental Management Plan is in place and the funds earmarked (budgeted separately for each financial year) are being utilized for effective implementation of environmental safeguards and environment monitoring. All the expenses related to Environment Management Plan are recorded in advanced accounting system of the organization. Expenditure on environmental safeguards (including horticulture) till September-2024 is approx. INR 104.65 Lakh from Budgeted Cost INR 226.67 Lakh for the period of FY 2024-25. Please refer Annexure – 1 for further details.
6	General Condition	
(i)	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	<p>Complied.</p> <ul style="list-style-type: none"> Construction activities of the project are completed in March 2015. The project is now in operation phase and no digging activities carried out during Apr'24 to Sep'24.
(ii)	Full support shall be extended to the officers of this Ministry/Regional Office at Bhopal by the project proponent during inspection of the project for	<p>Complied.</p> <ul style="list-style-type: none"> AKBTPL is always extending full support to the regulatory authorities during their visit to the project site.

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of Environment and CRZ Clearance issued by MoEF&CC dated 1st November 2011 bearing F. No. 10-10/2008-IA-III for Construction of berthing & allied facilities off Tekra near Tuna, Gujarat.

Sr. No	Condition	Compliance status as on 30.09.2024																					
	monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	<ul style="list-style-type: none"> Details related to the last visit of Scientist 'D', MoEF&CC, from Regional Office, Bhopal, were submitted as a part of half yearly compliance report (Oct-2016 to March-2017). 																					
(iii)	A six-monthly monitoring report shall need to be submitted by the project proponent to the Regional Office of this Ministry at Bhopal regarding the implementation of the stipulated conditions.	<p>Complied.</p> <ul style="list-style-type: none"> Compliance report of EC conditions is uploaded regularly. Last compliance report including results of monitoring data for the period of Oct'23 to Mar'24 was submitted to IRO MoEF&CC Gandhinagar, Head Office of MoEF&CC @ New Delhi, Zonal Office of CPCB @ Baroda, GPCB @ Gandhinagar & Gandhidham and Dept. of Forests & Environment, Gandhinagar vide our letter dated 27.05.2024. Please refer below for the details regarding past six compliance submissions. <table border="1" data-bbox="727 1213 1482 1501"> <thead> <tr> <th>Sr No.</th> <th>Compliance period</th> <th>Date of submission</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Apr'21 to Sep'21</td> <td>30.11.2021</td> </tr> <tr> <td>2</td> <td>Oct'21 to Mar'22</td> <td>27.05.2022</td> </tr> <tr> <td>3</td> <td>Apr'22 to Sep'22</td> <td>25.11.2022</td> </tr> <tr> <td>4</td> <td>Oct'22 to Mar'23</td> <td>23.05.2023</td> </tr> <tr> <td>5</td> <td>Apr'23 to Sep'23</td> <td>30.11.2023</td> </tr> <tr> <td>6</td> <td>Oct'23 to Mar'24</td> <td>29.05.2024</td> </tr> </tbody> </table>	Sr No.	Compliance period	Date of submission	1	Apr'21 to Sep'21	30.11.2021	2	Oct'21 to Mar'22	27.05.2022	3	Apr'22 to Sep'22	25.11.2022	4	Oct'22 to Mar'23	23.05.2023	5	Apr'23 to Sep'23	30.11.2023	6	Oct'23 to Mar'24	29.05.2024
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5	Apr'23 to Sep'23	30.11.2023																					
6	Oct'23 to Mar'24	29.05.2024																					
(iv)	Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary, in the interest of environment and the same shall be complied with.	<p>Point Noted.</p> <ul style="list-style-type: none"> All applicable conditions in the interest of environment will be complied. 																					
(v)	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.	<p>Point Noted.</p> <ul style="list-style-type: none"> During the last compliance verification visit as mentioned in the sr. no ii of General Conditions above, there was no non-compliance observed. 																					

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of Environment and CRZ Clearance issued by MoEF&CC dated 1st November 2011 bearing F. No. 10-10/2008-IA-III for Construction of berthing & allied facilities off Tekra near Tuna, Gujarat.

Sr. No	Condition	Compliance status as on 30.09.2024
(vi)	In the event of a change in the project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.	<p>Complied.</p> <ul style="list-style-type: none"> Details related to transfer of EC/CRZ clearance in the name of AKBTPL are submitted as a part of half yearly compliance report (Oct-14 to March-15) to MoEF & CC vide letter dated 11.05.2015. Please refer point no. I of specific conditions for further details.
(vii)	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and date of start of land development work.	<p>Complied.</p> <ul style="list-style-type: none"> DPT has informed about the financial closure vide their letter no. EG/WK /4604(EC)/562 dated 26th December 2012. There is no further change.
(viii)	A copy of the clearance letter shall be marked to concern Panchayat /local NGO, if any, from whom any suggestion /representation have been made, received while processing the proposal.	<ul style="list-style-type: none"> Condition is not applicable to AKBTPL.
(ix)	State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/ Tehsildar's office for 30 days.	<ul style="list-style-type: none"> Condition is not applicable to AKBTPL.
7	These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 1994 including the	<p>Complied.</p> <ul style="list-style-type: none"> Permissions under the applicable rules and acts mentioned are already obtained. Please refer point no. I of specific conditions for further details.

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of Environment and CRZ Clearance issued by MoEF&CC dated 1st November 2011 bearing F. No. 10-10/2008-IA-III for Construction of berthing & allied facilities off Tekra near Tuna, Gujarat.

Sr. No	Condition	Compliance status as on 30.09.2024
	amendments and rules made thereafter.	
8	All other statutory clearances such as the approvals for the storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980, Wildlife (Protection) Act, 1972 etc shall be obtained as applicable by the project proponents from the respective competent authorities.	<p>Not Applicable.</p> <ul style="list-style-type: none"> The permissions from the authorities mentioned in the condition are not applicable to this project.
9	<p>The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Env. Clearance and copies of clearances letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at http://www.envfor.nic.in. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to RO of this Ministry at Bhopal.</p>	<p>Complied.</p> <ul style="list-style-type: none"> DPT has published advertisement regarding accordance of the Environmental and CRZ clearance within 10 days from the date of receipt of the Clearance letter in two local newspapers (Aaj Kal and Divya Bhaskar) and copy of the same was submitted to the Regional office, MoEF&CC Bhopal by DPT vide letter no. EG/WK/4604(EC)/1036 dated 25th November, 2011.
10	Environmental Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition	<ul style="list-style-type: none"> Noted and same will be complied based on further directions given by concerned authorities in this regard.

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of Environment and CRZ Clearance issued by MoEF&CC dated 1st November 2011 bearing F. No. 10-10/2008-IA-III for Construction of berthing & allied facilities off Tekra near Tuna, Gujarat.

Sr. No	Condition	Compliance status as on 30.09.2024
	(Civil) No. 460 of 2004 as may be applicable to this project.	
11	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.	<p>Complied.</p> <ul style="list-style-type: none"> Please refer Point No. iii (Main Point 6 – General Condition) for compliance submission.
12	A copy of clearance letter shall be sent by the proponent to concern Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	<p>Complied.</p> <ul style="list-style-type: none"> Clearance letter is uploaded on our website: https://www.adaniports.com/Downloads
13	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	<p>Complied.</p> <p>Please refer Above point no. 11 of General conditions</p>
14	The environmental statement for each financial year ending 31 st March in Form –V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environmental (Protection) Rules, 1986 as amended subsequently,	<p>Complied.</p> <ul style="list-style-type: none"> Environment Statement for FY 2023– 24 has already been submitted to GPCB vide letter no. AKBTP/ENV/ENVSTATEMENT/2023-24 dated 16.09.2024 and copy of the same is attached as Annexure – 2. The Environment Statement Compliance Report is also uploaded on our website: https://www.adaniports.com/Downloads

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of Environment and CRZ Clearance issued by MoEF&CC dated 1st November 2011 bearing F. No. 10-10/2008-IA-III for Construction of berthing & allied facilities off Tekra near Tuna, Gujarat.

Sr. No	Condition	Compliance status as on 30.09.2024
	shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	

**Compliance to CRZ Recommendation Letter
Issued by
Forest and Environment Department,
Govt. of Gujarat**

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance
1	The provisions of the CRZ notification of 1991 and subsequent amendments issued from time to time shall be strictly adhered to by the KPT. No activity in contradiction to the provisions of the CRZ Notification shall be carried out by the KPT.	<p>Complied.</p> <ul style="list-style-type: none"> All activities are in line with the CRZ Notification 1991 and its subsequent amendment.
2	No dredging reclamation or any other project related activities shall be carried out in the CRZ area categorized as CRZ I (i) and it shall have to be ensured that the mangroves habitats and other ecologically important and significant areas, if any, in the region are not affected due to any of the project activities.	<p>Complied.</p> <ul style="list-style-type: none"> Construction of the project is completed in March 2015. All construction activities were carried out as per the environmental and CRZ clearance granted vide MoEF&CC letter dated 01.11.2011. All necessary precautions such as allowing free flow of water in the mangrove areas, waste management as per the applicable laws, treatment of sewage, dust suppression measures etc. are taken to ensure that the mangroves habitats and other ecologically important and significant areas in the region are not affected due to any of the project activities.
3	The KPT shall participate financially for installing and operating the Vessel Traffic Management System in the Gulf of Kutch and shall also take lead in preparing and operational sing the Regional Oil Spill Contingency plan in the Gulf of Kutch.	<p>Complied.</p> <ul style="list-style-type: none"> M/s Kandla Port Trust contributed an amount of INR 41.25 Cr for installing and operating VTMS in Gulf of Kutch. Information was submitted to MoEF&CC New Delhi (as part of half yearly compliance report (Apr – Sep 2014) vide letter dated 13th November, 2014. Please refer condition No.15 regarding Oil spill Contingency Plan. Regional Level Pollution Response exercise "SWACHCHH SAMUDRA-NW 2019" was carried out by Indian Coast Guard on 18th Dec 2019. All participants from various Oil Handling Agencies and

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance
		Stakeholders (ICG, GMB Port, DPT Vadinar, IOCL, RIL, NAYARA Energy, BORL, ESBTL Salaya, APSEZL, HMEL, GSFC, PCB, Forest Dept., Customs, Fisheries & DPT Kandla) were participated in this exercise.
4	The KPT shall strictly ensure that no creeks or rivers are blocked due to any activity at Kandla.	<p>Complied.</p> <ul style="list-style-type: none"> • No rivers are present at the project site. 3 Bridges and 8 culverts have been provided with total cost of 2.01 crores to allow free flow of water through creeks. • Further, a study to ascertain tidal flushing in mangroves around the project area of the dry bulk terminal at Tuna was carried through M/s. GUIDE, Bhuj in April 2014 when construction activities were ongoing. As outcome of that study is all water parameters are well within prescribe limit and no gross contamination could be discerned showing that the costal water in and around the jetty is clean and unpolluted. Also observed spatial variations in zooplankton density, composition was normal and no events negatively influencing the zooplankton community was noticed during the study. Details related to the same are already submitted as a part of half yearly compliance report (Oct-2016 to March-2017). The conditions as mentioned in the report are maintained.
5	Mangrove plantation in an area of 1000 ha. Shall be carried out by the KPT within 5 years in a time bound manner on Gujarat coastline either within or outside the Kandla Port Trust area and six-monthly compliance reports along with the	<p>Complied.</p> <ul style="list-style-type: none"> • AKBTPPL being BOOT operator, DPT requested AKBTPPL to carry out mangrove plantation in 250 ha area. As agreed, AKBTPPL has completed Mangrove plantation in 250 ha area at

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance
	satellite images shall be submitted to Ministry of Environment and Forests as well as to this department without fail.	Sach Saida bet. For further information regarding mangrove plantation activity, please refer reply to specific condition no ii and iii of the Environmental and CRZ clearance letter above.
6	No activities other than those permitted by the competent authority under the CRZ Notification shall be carried out.	<p>Complied.</p> <ul style="list-style-type: none"> All activities are being carried out as per the Environmental and CRZ clearance granted vide MoEF&CC letter dated 01.11.2011, amended till date.
7	No ground water shall be tapped for any purpose during the proposed expansion/modernization activities.	<p>Complied.</p> <ul style="list-style-type: none"> AKBTPL does not draw any ground water for the water requirement. Present source of water for various operation activities is Gujarat Water Infrastructure Limited (GWIL). Average Water consumption for the period Apr'24 to Sep'24 was 1175.61 KLD. Average Wastewater Received was 15.63 KLD & Treated water was 11.67 KLD for the period Apr'24 to Sep'24. Please refer Annexure - 3 for further details.
8	All necessary permission from different Government Departments/ agencies shall be obtained by the KPT before commencing the expansion activities.	<p>Not applicable at present</p> <ul style="list-style-type: none"> All construction activities are completed in March 2015. No expansion activities are carried out. All necessary permissions will be obtained in future before commencing the expansion activities. However, an application for carrying out additional capital dredging in the existing approach channel, berth pockets and turning circles (in order to handle capsized vessels, not to expand the approved project activity) to obtain Environment and CRZ clearance is in process with the MoEF&CC. the said

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance																									
		activity will be carried out only after obtaining the requisite permissions.																									
9	No effluent or sewage shall be discharged into the sea/creek or in the CRZ area and it shall be treated to conform to the norms prescribed by the Gujarat Pollution Control Board and would be reused/recycled within the plant premises.	<p>Complied.</p> <ul style="list-style-type: none"> No effluent is generated at the project site. Avg. 15.63 KLD of sewage generated during the period of Apr'24 to Sep'24 is treated in 25 KLD capacities STP based on FAB technology and treated water Avg. 11.67 KLD is used for horticulture purpose within plant premises after achieving permissible limits prescribed by GPCB. Third party analysis of the treated water is being carried out Twice in a month by NABL and MoEF&CC accredited agency namely M/s. Pollucon Laboratories Pvt. Ltd. Summary of the same for duration from Apr'24 to Sep'24 is mentioned below. <table border="1"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>Max</th> <th>Min</th> <th>Perm. Limit*</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>-</td> <td>7.63</td> <td>7.06</td> <td>6.5-9.0</td> </tr> <tr> <td>TSS</td> <td>mg/L</td> <td>21.74</td> <td>12.56</td> <td>30</td> </tr> <tr> <td>BOD (5 Days @ 20 °C)</td> <td>mg/L</td> <td>16.08</td> <td>11.62</td> <td>20</td> </tr> <tr> <td>Fecal Coliform</td> <td>MPN/100ml</td> <td>170</td> <td>46</td> <td><1000</td> </tr> </tbody> </table> <p style="text-align: right;">*as per CC&A granted by GPCB'</p> <ul style="list-style-type: none"> Please refer Annexure - 4 for detailed analysis reports. Total Expenditures of the Environment Monitoring for the period (Apr'24 to Sep'24) are INR 4.02 Lakh. 	Parameter	Unit	Max	Min	Perm. Limit*	pH	-	7.63	7.06	6.5-9.0	TSS	mg/L	21.74	12.56	30	BOD (5 Days @ 20 °C)	mg/L	16.08	11.62	20	Fecal Coliform	MPN/100ml	170	46	<1000
Parameter	Unit	Max	Min	Perm. Limit*																							
pH	-	7.63	7.06	6.5-9.0																							
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BOD (5 Days @ 20 °C)	mg/L	16.08	11.62	20																							
Fecal Coliform	MPN/100ml	170	46	<1000																							
10	All the recommendations and suggestions given by the NIOT in their Comprehensive Environment Impact Assessment report for conservation /protection and betterment of environment shall be implemented strictly by the KPT.	<p>Complied.</p> <ul style="list-style-type: none"> The EMP prepared by NIOT in the EIA report was updated by AKBTP (based on the condition mentioned in the EC and CRZ clearance) and submitted to DPT. DPT has submitted the same vide letter 																									

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance
		dated 03.12.2013 to MoEF&CC as part of compliance report. All the measures mentioned in the updated EMP prepared by AKBTPPL are implemented for environment protection.
11	The construction and operation activities shall be carried out in such a way that there is no negative impact on mangroves and other coastal/marine habitats. The construction activities and dredging shall be carried out only under the constant supervision and guidelines of the NIOT.	<p>Complied.</p> <ul style="list-style-type: none"> All construction and operation activities are carried out meticulously to ensure that there is no negative impact on mangroves and other coastal / marine habitats. Please refer to Sr. no. ii and iii of the specific conditions of the EC and CRZ clearance above for further details. Construction activities have been completed in March 2015 based on the NIOT recommendations. During construction phase capital dredging was carried out by DPT and the dredge material was disposed at a location identified by M/s. CWPRS, Pune in their study report. No digging activities are carried out during Apr'24 to Sep'24.
12	The KPT shall contribute financially for any common study or project that may be proposed by this Department for environmental management/conservation / improvement for the Gulf of Kutch.	<ul style="list-style-type: none"> Noted and same will be complied on receipt of such recommendations from concerned authorities
13	The construction debris and/or any other type of waste shall not be disposed-off into the sea, creek or in the CRZ areas. The debris shall be removed from the construction site immediately after construction is over.	<p>Complied.</p> <ul style="list-style-type: none"> Construction of the project is completed in March 2015.
14	The construction camps shall be located outside the CRZ area, and the construction labour shall be provided with	<p>Complied.</p> <ul style="list-style-type: none"> Construction of the project is completed in March 2015 and during construction

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance
	the necessary amenities, including sanitation, water supply and fuel and it shall be ensured that the environmental conditions are not deteriorated by the construction labours.	of the project we have provided necessary amenities like sanitation, water supply and fuel to the construction labours. Also we have ensured that environmental conditions are not deteriorated by the construction labours during the construction activities.
15	The KPT shall regularly update its Local Oil Spill Contingency and Disaster Management Plan in consonance with the National Oil Spill and Disaster Contingency Plan and shall submit the same to the MoEF, GOI and this Department after having it vetted through the Indian Coast Guard.	<p>Complied.</p> <ul style="list-style-type: none"> • DPT is already having updated Disaster Management Plan as well as Oil Spill Contingency Plan. • DPT has also executed MoU with oil companies i.e. IOCL, HPCL, BPCL etc. for setting up of their Tier I facility for combating Oil Spill at Kandla. • Necessary action will be taken by AKBTPL in consultation with DPT to combat with emergency situations.
16	The KPT 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 proposed activities.	<ul style="list-style-type: none"> • Noted and same will be complied on receipt of such recommendations from concerned authorities.
17	The KPT shall take up massive greenbelt development activities in and around Kandla and also within the KPT limits.	<p>Complied.</p> <ul style="list-style-type: none"> • Plantation activity is an on-going process. As part of the same, greenbelt within and along the periphery of the back-up area is being developed on regular basis. • Approx. 8.85 hectare area is developed till Sep'24 as greenbelt so far with various types of trees Approx. 22718 nos.. Please refer Annexure - 5 For further details regarding greenbelt development. Total expenditures spend of the horticulture department upto

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance
		September'24 are INR 40.25 lakh from the allocated amount is INR 42.47 lakh for the period of FY 2024-25.
18	The KPT shall have to contribute financially for taking up the socio-economic upliftment activities in this region in consultation with the Forest and Environment Department and the District Collector/District Development Officer.	<p>Complied.</p> <ul style="list-style-type: none"> Adani Foundation is the CSR wing of Adani group. All CSR activities are planned out at Tuna by Adani Foundation (AF). AF works in the following five main areas: <ol style="list-style-type: none"> Education Community Health Sustainable livelihood Rural Infrastructure Development Skill Development Various activities related to above mentioned areas are being carried out on regular basis for socio-economic upliftment of surrounding villages by Adani Foundation. Details of the activities carried out are shared with FOKIA (Federation of Kutch Industries Association). Total expenditures of the CSR activities are INR 36.42 Lakh for the period Apr'24 to Sep'24. Please refer Annexure - 6 for further details.
19	A separate budget shall be earmarked for environmental management and socio-economic activities and details thereof shall be furnished to this Department as well as the MoEF, Gol. The details with respect to the expenditure from this budget head shall also be furnished.	<p>Complied.</p> <ul style="list-style-type: none"> Main constituents of the Environmental Management Plan are Environmental Monitoring; Greenbelt Development; Mangrove Plantation; Maintaining Bridges/ Culverts for protection of Creeks; Treatment and Disposal of wastes; mechanization of operations etc. Approximately INR 104.65 Lakh is spent during the period (Apr'24 to Sep'24) for various activities mentioned here. Please

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance																																																								
		refer to Annexure - 1 for details related to Environmental Expenditures and Annexure - 6 for Expenditures related to CSR activities.																																																								
20	A separate environmental management cell with qualified personnel shall be created for environmental monitoring and management during construction and operational phases of the project.	<p>Complied.</p> <ul style="list-style-type: none"> AKBTPL has environment management cell with qualified manpower for implementation of environmental safeguards and management. The Environment Cell continuously remains in loop with Corporate Environment Cell. 																																																								
21	An Environmental report indicating the changes, if any, with respect to the baseline environment quality in the coastal and marine environment shall be submitted every year by the KPT to this Department as well as to the MoEF, Gol.	<p>Complied.</p> <ul style="list-style-type: none"> Ambient Air Quality (twice in a week), and Noise (4 times in a month) level monitoring at 4 Nos locations and marine water and sediment monitoring (once in a month) at 2 Nos locations are being carried out by NABL and MoEF&CC accredited agency namely M/s. Pollucon Laboratories Pvt. Ltd. Summary of the same for duration from Apr'24 to Sep'24 is mentioned below. <p>AAQM and noise sampling locations: 4 Locations</p> <table border="1"> <thead> <tr> <th>Para meter</th> <th>Unit</th> <th>Max</th> <th>Min</th> <th>Ave.</th> <th>Perm. Limit*</th> </tr> </thead> <tbody> <tr> <td>PM₁₀</td> <td>µg/m³</td> <td>86.71</td> <td>41.13</td> <td>63.80</td> <td>100</td> </tr> <tr> <td>PM_{2.5}</td> <td>µg/m³</td> <td>50.08</td> <td>15.57</td> <td>31.55</td> <td>60</td> </tr> <tr> <td>SO₂</td> <td>µg/m³</td> <td>26.39</td> <td>6.35</td> <td>14.67</td> <td>80</td> </tr> <tr> <td>NO₂</td> <td>µg/m³</td> <td>44.31</td> <td>13.13</td> <td>25.91</td> <td>80</td> </tr> <tr> <th>Noise</th> <th>Unit</th> <th>Leq Max</th> <th>Leq Min</th> <th>Leq Ave</th> <th>Leq Perm. Limit*</th> </tr> <tr> <td>Day Time</td> <td>dB(A)</td> <td>69.9</td> <td>50.3</td> <td>63.22</td> <td>75</td> </tr> <tr> <td>Night-time</td> <td>dB(A)</td> <td>64.4</td> <td>48.7</td> <td>57.03</td> <td>70</td> </tr> </tbody> </table> <p>* As per NAAQ standards, 2009 (IS 9876/IS 9989) * As per CC&A granted by GPCB</p> <p>Marine water sampling locations: 2 Nos.</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>Surface</th> <th>Bottom</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Para meter	Unit	Max	Min	Ave.	Perm. Limit*	PM ₁₀	µg/m ³	86.71	41.13	63.80	100	PM _{2.5}	µg/m ³	50.08	15.57	31.55	60	SO ₂	µg/m ³	26.39	6.35	14.67	80	NO ₂	µg/m ³	44.31	13.13	25.91	80	Noise	Unit	Leq Max	Leq Min	Leq Ave	Leq Perm. Limit*	Day Time	dB(A)	69.9	50.3	63.22	75	Night-time	dB(A)	64.4	48.7	57.03	70	Parameter	Unit	Surface	Bottom				
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Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance					
			Max	Min	Max	Min	
		pH	--	8.31	7.56	8.25	7.68
		TDS	mg/L	37298	35426	37794	36048
		TSS	mg/L	93.00	49.63	72.00	31.96
		BOD (3 Days @ 27 oC)	mg/L	5.43	3.40	4.96	2.96
		DO	mg/L	6.05	5.80	5.95	5.65
		Salinity	ppt	36.48	34.28	36.72	34.92
		COD	mg/L	23.40	15.18	19.83	13.28
		ND* - NOT DETECTED					
		Sediment sampling locations: 2 Nos.					
		Parameter	Unit	Sediment			
				Max	Min		
		Organic Matter	%	0.984	0.370		
		Phosphorus as P	µg/gm	937	704		
		Aluminium as Al	%	5.06	4.13		
		Total Chromium as Cr+3	µg/gm	103.00	73.15		
		Manganese as Mn	µg/gm	878	613		
		Iron as Fe	%	5.23	4.23		
		Nickel as Ni	µg/gm	66.73	30.78		
		Copper as Cu	µg/gm	52.69	27.67		
		Zinc as Zn	µg/gm	90.58	61.38		
		Lead as Pb	µg/gm	ND	ND		
		Mercury as Hg	µg/gm	ND	ND		
		ND* - NOT DETECTED					
		<ul style="list-style-type: none"> Please refer Annexure - 4 for detailed analysis reports. Approx. INR 4.02 Lakh is spent for all Environmental Monitoring activities during the period of Apr'24 to Sep'24. 					
22	The KPT shall have to contribute financially to support the National Green Corps Scheme being implemented in the Gujarat by GEER Foundation, Gandhi agar, in consultation with Forest and Environment Department.	<p>Complied.</p> <ul style="list-style-type: none"> National Green Corps Scheme is being implemented by GEER foundation. AKBTPL requested GEER foundation to provide details of the program and financial assistance required so that necessary support may be provided. Further to the communication from GEER foundation, various activities were carried out on 21 March, International Day of Forests in 2014, at a school in Rampar, under National Green Corps. Details regarding the same were 					

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance
		submitted as part of the compliance period Oct' 13 to Mar'14. Support will be extended to GEER foundation for any such activities in future
23	A six-monthly report on compliance of the conditions mentioned in this letter shall have to be furnished by the KPT on a regular basis to this Department/MoEF, GOI.	Complied. For further details, please refer point no. iii (Main Point No. 6 – General Condition).
24	The KPT before commencing any activity, at the location under the consideration, shall have the latest CRZ map prepared through one of the authorized agencies and the map shall have land use features within the area of 5 km radius from the location along with the HTL and LTL and CRZ boundary and inland if any or mangroves area shall be used for the proposed development.	Complied. <ul style="list-style-type: none"> CRZ map including land features prepared by institute of Remote sensing, Anna University, Chennai is already submitted by DPT to MoEF&CC vide letter no. EG/WK/4604 (EC)/146 dated 14.02.2012.
25	The entire jetty and approach shall be constructed on piles to ensure the free flow of water and that no creeks are blocked in any way.	Complied. <ul style="list-style-type: none"> As per the Environmental/ CRZ clearance obtained from MoEF&CC approach road of 2 km is constructed on rubble mound and 1.7 km approach road below low water line is constructed on piles. The entire jetty is constructed on piles. Bridges are constructed at three creeks and box/piped culverts are placed with total cost of 2.01 crores at various locations to allow free flow of water. Photographs of the same are already submitted as part of half yearly compliance report (Oct-14 to March-15) to MoEF & CC vide letter dated 11.05.2015 and there is no further change.

Status of the conditions stipulated in Environment and CRZ Clearance

Half yearly Compliance report of CRZ Recommendation for creation of Berthing and Allied Facilities off Tekra near Tuna issued by Forest and Environment, Govt. of Gujarat vide letter bearing no. ENV-10-2009-1543-E dated 23rd June, 2010

Sr. No	Condition	Compliance
26	The KPT shall create a full-fledged and environmental cell for implementation of the Environment Management Programme and monitoring of the environmental parameters/post project monitoring.	<p>Complied.</p> <ul style="list-style-type: none"> • Please refer above point no. (vi) of Specific conditions.
27	The KPT shall have to take up in-situ biodiversity conservation project for mangroves at least in 5 ha. of area in addition to plantation of mangrove in 1000 ha.	<p>Complied.</p> <ul style="list-style-type: none"> • 5 ha in-situ biodiversity conservation project for mangroves is carried out at Sach Saida bet (location identified by DPT). M/s GUIDE has prepared a final report of the same. Details related to the same are already submitted (as part of half yearly compliance report Apr-2017 to Sep-2017).
General conditions		
28	A separate budget shall be earmarked for environmental management and socio-economic activities and details thereof shall be furnished to this Department as well as the MoEF, Gol. The details with respect to the expenditure from this budget head shall also be furnished.	<p>Complied.</p> <ul style="list-style-type: none"> • Please refer point no. 19 above for the reply to this condition.
29	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 KPT.	Agreed.

Annexure- 1

Expenditure Details on Environmental Safeguards

Status of the conditions stipulated in Environment and CRZ Clearance

Sr. No.	Activity 2022 - 23	Cost incurred. (INR in Lacs)			Budgeted Cost (INR in Lacs)
		2022 - 23	2023 - 24	2024 - 25 (Till Sept.'24)	2024 - 25
1.	Environmental Monitoring	8.60	13.77	4.02	12
2.	Environment Days Celebration, Awareness Program, Award Application	1.0	1.90	1.23	4.00
3.	Greenbelt development	33.60	40.90	40.25	42.47
4.	Treatment and Disposal of Bio-medical Waste	1.08	1.45	0.59	1.20
5.	Hazardous/Non-Hazardous waste management & Disposal	11.63	12.86	4.08	17.60
6.	O&M of sewage treatment plant and OWC plant	11.96	12.90	0.45	7.25
7.	Dust Suppression Activities	240.32	261.58	49.09	120.00
8.	Maintenance of conveyor belt.	315.39	355.88	00	00
9	Expenditure of Environment Dept. (Apart from above head)	00	00	4.94	22.15
Total		623.58	701.24	104.65	226.67

Annexure- 2

Acknowledgement Copy of Environment Statement for 2023-24

Status of the conditions stipulated in Environment and CRZ Clearance**adani**Ports and
Logistics**PCB ID: 46110**

AKBTPL/ENV/ENVSTATEMENT/2023-24

Date: 16.09.2024

To,

The Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan,
Sector 10-A,
Gandhinagar – 382 010.

Sub: Environmental Statement for the Financial Year ending 31st March 2024 for
M/s Adani Kandla Bulk Terminal Pvt Ltd (AKBTPL)
Ref: PCB ID: 46110, Consent Order No. AWH – 105213, Date of issue: 21.11.2019,
Valid upto: 02.12.2024

Dear Sir,

With reference to the above mentioned subject and reference, please find enclosed Environmental Statement in Form-V prescribed under Rule 14 of the Environment (Protection) Rules 1986, for M/s. Adani-Kandla Bulk Terminal Pvt Ltd, Village: Tuna, Taluka: Anjar, Dist.: Kutch for the financial year ending 31st March 2024.

Thanking you,
Yours faithfully,
For, **Adani Kandla Bulk Terminal Pvt. Ltd.**


Authorised Signatory
Mohit Shaktawat
(COO-AKBTPL)

Encl: As above


19/09/24
Gujarat Pollution Control Board
Head Office
Sector No.-10-A,
Gandhinagar-382010

Copy to:
The Regional Officer, Gujarat Pollution Control Board (East – Kutch), Gandhidham

Adani Kandla Bulk Terminal Pvt. Ltd.
Adani Corporate House,
Shantigram, S G Highway
Ahmedabad 382 421
Gujarat, India
CIN: U63090GJ2012PTC069305

Tel +91 79 2555 4444
Fax +91 79 2555 7177
www.adaniports.com

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

Annexure- 3

Details of Water Consumption and Treated Water

Status of the conditions stipulated in Environment and CRZ Clearance

Water Consumption Details (Apr'24 to Sep'24)

Month	Domestic (KL)	Industrial (KL)	Total (KL)
April-24	420	40235	40655
May-24	503	53070	53573
June-24	483	43756	44239
July-24	492	27393	27885
August-24	460	15816	16276
September-24	456	32052	32508
Total	2814	212322	215136
Avg. Per Day	15.38	1160.23	1175.61

**Details of Wastewater Received & Treated
(Apr'24 to Sep'24)**

Month	Wastewater Received (KL)	Treated Water (KL)
April-24	455	320
May-24	518	384
June-24	392	352
July-24	546	379
August-24	481	356
September-24	468	344
Total	2860	2135
Avg. Per Day	15.63	11.67

Annexure- 4

Six Monthly Environment Monitoring Report (April'24 to Sep'24)

Status of the conditions stipulated in Environment and CRZ Clearance



Environmental Auditors, Consultants & Analysts.
Cleaner Production / Waste Minimization Facilitator

Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986

“ENVIRONMENTAL MONITORING REPORT”

For

**ADANI KANDLA BULK TERMINAL PRIVATE LIMITED.
KANDLA, KUTCH.**

APRIL 2024 TO SEPTEMBER 2024

H. T. Shah

Lab Manager



Dr. Arun Bajpai

Lab Manager (Q)

Status of the conditions stipulated in Environment and CRZ Clearance



Environmental Auditors, Consultants & Analysts.
Cleaner Production / Waste Minimization Facilitator

Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986

METHODS AND EQUIPMENTS USED FOR SAMPLING AND ANALYSIS

SR. NO.	Monitoring Details	Equipments Used	Sampling and Analysis Method
1	Ambient Air Quality Monitoring	RDS,FDS, Gaseous Attachment with Impinger	CPCB Guideline/IS:5182
2	Noise Monitoring	Noise Meter	IS 9876/IS 9989
3	Sea Water Monitoring	Depth Sampler	IS:3025/APHA/USEPA/ASTM
4	Sea Sediment Monitoring	Grab Sampler	CPCB Guideline/ IS/APHA/USEPA/ASTM
5	Drinking Water Analysis	Sealed & Sterile Bottle	IS:10500:2012
6	Sewage water Analysis	Sealed & Sterile Bottle	APHA/IS:3025
7	Stack Monitoring	Stack Monitoring Sampler/Kit	IS:11255/NDIR Gas Analyzer
8	Dump Pond Discharge	Sealed & Sterile Bottle	APHA/IS:3025
9	Wind Rose Diagram	Online Weather Station	Wind Rose Plotting Software



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)

Status of the conditions stipulated in Environment and CRZ Clearance



Environmental Auditors, Consultants & Analysts.
Cleaner Production / Waste Minimization Facilitator

Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986

NATIONAL AMBIENT AIR QUALITY STANDARDS
DATED 16TH NOV.2009, CPCB NEW DELHI.

SR. NO.	TEST PARAMETER	UNIT	Concentration in ambient air	Method Of Measurement
1	Particulate Matter (PM ₁₀)	µg/m ³	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	60	CPCB guidelines for AAQM (Vol. I, NAAQMS/36/2012-13)
3	Sulphur Dioxide (SO ₂)	µg/m ³	80	IS:5182(Part 2)
4	Oxides of Nitrogen (NO ₂)	µg/m ³	80	IS:5182(Part6)

NS#: Not Specified, ** National Ambient Air Quality Standards Dated: 18/11/2009 as per Central Pollution Control Board, New Delhi.



H. T. Shah
Lab Manager




Dr. Arun Bajpai
Lab Manager (Q)

Status of the conditions stipulated in Environment and CRZ Clearance



Environmental Auditors, Consultants & Analysts.
Cleaner Production / Waste Minimization Facilitator

Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986

TABLE NO. 1 RESULTS OF AAQM FOR NEAR SUB STATION -1 [APRIL 2024 TO SEPTEMBER 2024]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO _x) (µg/m ³)
1	01/04/2024	55.63	22.18	9.68	15.11
2	04/04/2024	66.61	35.69	7.49	13.74
3	08/04/2024	58.63	21.85	15.46	18.45
4	11/04/2024	71.21	40.13	8.61	14.72
5	15/04/2024	50.37	30.47	14.30	27.45
6	18/04/2024	61.33	23.42	11.62	25.65
7	22/04/2024	54.67	26.37	6.48	22.35
8	25/04/2024	43.46	17.83	12.37	19.63
9	29/04/2024	52.68	29.43	16.30	17.54
10	02/05/2024	58.65	21.64	11.63	30.69
11	06/05/2024	50.34	24.33	13.50	17.63
12	09/05/2024	69.65	38.93	7.58	14.35
13	13/05/2024	62.47	27.94	12.72	23.34
14	16/05/2024	55.97	20.31	9.64	16.43
15	20/05/2024	70.31	34.49	15.64	24.94
16	23/05/2024	52.64	25.70	8.74	28.29
17	27/05/2024	56.88	29.72	10.25	18.26
18	30/05/2024	45.97	23.42	6.58	21.32
19	03/06/2024	62.48	28.65	10.56	20.22
20	06/06/2024	58.27	25.62	8.64	15.32
21	10/06/2024	68.67	27.65	16.50	22.67
22	13/06/2024	55.64	22.62	13.56	18.18
23	17/06/2024	42.32	17.46	11.75	21.16
24	20/06/2024	63.43	33.63	9.67	14.36
25	24/06/2024	56.38	23.41	12.38	19.35
26	27/06/2024	50.22	19.25	6.64	13.65
27	01/07/2024	41.13	16.55	6.49	15.61
28	04/07/2024	56.26	21.58	12.40	18.62
29	08/07/2024	67.52	26.52	10.80	24.30
30	11/07/2024	42.63	15.63	8.23	13.13
31	15/07/2024	58.53	28.44	13.53	20.85
32	18/07/2024	47.52	18.67	7.11	17.73
33	22/07/2024	55.34	22.33	17.36	25.73
34	25/07/2024	49.36	20.62	15.20	22.94
35	29/07/2024	59.24	17.67	9.28	19.95
36	01/08/2024	57.65	23.82	9.32	18.62
37	05/08/2024	63.46	31.26	13.53	25.35
38	08/08/2024	72.64	35.30	6.47	19.98
39	12/08/2024	56.24	32.76	12.26	24.10
40	15/08/2024	61.32	29.48	10.35	14.71
41	19/08/2024	48.62	17.63	14.55	23.47
42	22/08/2024	65.63	30.31	7.83	17.75
43	26/08/2024	51.97	22.41	11.25	21.21
44	29/08/2024	45.37	16.34	8.65	15.55
45	02/09/2024	62.32	28.98	7.66	22.93
46	05/09/2024	43.85	18.63	11.52	29.63
47	09/09/2024	66.58	34.55	9.63	23.81
48	12/09/2024	55.30	22.33	13.91	20.22
49	16/09/2024	50.34	24.32	6.58	18.51
50	19/09/2024	63.43	32.47	15.30	26.87
51	23/09/2024	59.77	27.56	8.63	21.22
52	26/09/2024	41.28	21.33	10.33	25.42
53	30/09/2024	48.68	25.61	12.46	30.32

H. T. Shah

Lab Manager



Dr. Arun Bajpai

Lab Manager (Q)

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TABLE NO. 2 RESULTS OF AAQM FOR STARTING OF PILE APPROACH [APRIL 2024 TO SEPTEMBER 2024]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂) (µg/m ³)	Oxides of Nitrogen (NO _x) (µg/m ³)
1	01/04/2024	60.64	30.33	12.57	30.27
2	04/04/2024	76.03	41.96	16.59	27.54
3	08/04/2024	68.64	31.33	20.21	32.36
4	11/04/2024	75.28	42.75	13.39	25.46
5	15/04/2024	56.12	29.66	19.92	31.25
6	18/04/2024	65.68	26.23	15.50	28.66
7	22/04/2024	72.34	40.37	11.11	24.36
8	25/04/2024	55.37	24.34	14.16	26.32
9	29/04/2024	66.14	33.84	10.37	20.56
10	02/05/2024	70.63	37.52	22.43	36.67
11	06/05/2024	61.46	32.67	17.44	23.60
12	09/05/2024	76.25	43.34	11.94	21.26
13	13/05/2024	44.24	17.28	21.15	34.56
14	16/05/2024	51.32	24.43	16.34	30.34
15	20/05/2024	77.55	40.53	13.64	22.40
16	23/05/2024	64.57	38.53	20.33	35.46
17	27/05/2024	72.62	34.05	18.28	25.76
18	30/05/2024	67.85	39.78	14.73	31.63
19	03/06/2024	73.64	38.40	16.64	31.59
20	06/06/2024	67.52	33.46	18.44	28.34
21	10/06/2024	75.52	39.36	21.31	24.51
22	13/06/2024	68.43	31.28	14.64	30.47
23	17/06/2024	58.63	28.61	22.71	35.64
24	20/06/2024	71.22	43.87	17.62	33.49
25	24/06/2024	66.12	30.69	15.64	23.51
26	27/06/2024	59.37	27.52	11.55	20.32
27	01/07/2024	58.42	25.48	11.59	23.55
28	04/07/2024	66.36	34.24	16.56	27.65
29	08/07/2024	74.65	40.32	14.57	22.56
30	11/07/2024	52.62	22.64	17.66	24.85
31	15/07/2024	80.56	43.53	10.67	19.36
32	18/07/2024	64.34	23.44	18.31	28.32
33	22/07/2024	70.34	35.65	12.52	26.40
34	25/07/2024	62.52	32.40	20.21	34.58
35	29/07/2024	68.42	35.40	15.56	17.53
36	01/08/2024	62.68	27.36	12.43	25.28
37	05/08/2024	56.35	24.35	15.46	29.42
38	08/08/2024	78.97	38.66	13.51	33.46
39	12/08/2024	71.27	35.86	21.21	35.12
40	15/08/2024	75.68	42.49	11.40	24.48
41	19/08/2024	70.34	34.57	19.32	26.30
42	22/08/2024	77.52	40.37	14.23	21.55
43	26/08/2024	55.37	26.48	17.20	30.23
44	29/08/2024	51.26	23.48	21.01	34.25
45	02/09/2024	57.55	26.35	15.23	31.57
46	05/09/2024	65.42	31.86	21.33	33.42
47	09/09/2024	77.36	41.20	18.49	37.47
48	12/09/2024	60.35	25.44	16.48	29.57
49	16/09/2024	69.18	36.45	14.13	27.24
50	19/09/2024	73.56	42.33	17.34	30.17
51	23/09/2024	78.62	44.41	20.33	24.54
52	26/09/2024	63.52	35.70	13.58	32.47
53	30/09/2024	71.22	39.82	19.48	35.57

H. T. Shah

Lab Manager



Dr. Arun Bajpai

Lab Manager (Q)

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TABLE NO. 3 RESULTS OF AAQM FOR SOUTH WEST CORNER AT PUMP HOUSE [APRIL 2024 TO SEPTEMBER 2024]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO _x) (µg/m ³)
1	01/04/2024	72.42	38.04	15.40	24.63
2	04/04/2024	58.55	32.67	11.92	19.26
3	08/04/2024	65.04	29.63	14.29	23.68
4	11/04/2024	56.47	25.89	10.55	18.67
5	15/04/2024	64.65	34.55	17.40	25.87
6	18/04/2024	47.05	17.56	9.33	20.33
7	22/04/2024	61.24	30.84	13.42	16.43
8	25/04/2024	48.61	23.64	8.36	21.67
9	29/04/2024	59.02	31.96	6.36	15.65
10	02/05/2024	65.37	33.26	17.55	33.53
11	06/05/2024	45.38	21.31	7.81	14.23
12	09/05/2024	62.67	30.34	10.83	20.27
13	13/05/2024	68.32	24.35	16.92	26.21
14	16/05/2024	44.53	17.77	13.34	24.57
15	20/05/2024	63.65	31.84	8.85	17.22
16	23/05/2024	46.35	28.68	12.38	22.55
17	27/05/2024	64.36	38.62	15.56	28.04
18	30/05/2024	60.36	32.88	11.36	25.48
19	03/06/2024	68.37	32.42	13.37	14.86
20	06/06/2024	52.54	22.60	15.31	20.76
21	10/06/2024	58.16	25.60	9.72	17.28
22	13/06/2024	62.31	28.55	11.25	23.25
23	17/06/2024	46.14	21.35	21.49	29.44
24	20/06/2024	57.91	27.18	6.54	24.96
25	24/06/2024	47.57	19.56	10.84	21.53
26	27/06/2024	54.77	24.72	7.61	15.67
27	01/07/2024	53.11	27.64	8.62	17.66
28	04/07/2024	61.17	29.97	6.35	23.93
29	08/07/2024	52.64	34.84	12.34	19.24
30	11/07/2024	48.36	18.44	10.39	21.54
31	15/07/2024	71.76	36.58	14.38	25.62
32	18/07/2024	55.62	26.85	9.75	18.29
33	22/07/2024	62.62	30.26	11.10	20.61
34	25/07/2024	57.34	28.47	13.42	27.28
35	29/07/2024	50.74	21.60	7.60	15.75
36	01/08/2024	51.51	20.39	7.52	22.46
37	05/08/2024	45.02	18.31	9.50	19.25
38	08/08/2024	61.58	32.46	11.62	27.31
39	12/08/2024	66.33	27.76	18.68	30.43
40	15/08/2024	70.64	35.46	12.71	18.54
41	19/08/2024	52.67	25.43	10.24	21.64
42	22/08/2024	71.37	36.25	8.41	15.31
43	26/08/2024	46.35	19.48	15.29	16.38
44	29/08/2024	41.57	15.57	17.56	14.04
45	02/09/2024	46.06	18.98	11.73	26.90
46	05/09/2024	60.55	24.35	7.57	22.36
47	09/09/2024	53.28	22.56	13.63	31.74
48	12/09/2024	44.25	17.15	19.35	25.38
49	16/09/2024	64.41	28.30	10.20	23.33
50	19/09/2024	68.62	35.17	8.52	19.23
51	23/09/2024	72.65	37.54	6.44	16.47
52	26/09/2024	56.32	25.43	12.64	20.82
53	30/09/2024	65.35	31.22	14.53	27.57


H. T. Shah
Lab Manager




Dr. Arun Bajpai
Lab Manager (Q)

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TABLE NO. 4 RESULTS OF AAQM FOR NORTH EAST CORNER AT RAILWAY BUILDING [APRIL 2024 TO SEPTEMBER 2024]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO ₂) (µg/m ³)
1	01/04/2024	75.76	44.59	18.86	32.41
2	04/04/2024	82.42	47.52	13.14	23.84
3	08/04/2024	72.64	34.96	23.42	35.65
4	11/04/2024	84.37	46.02	17.62	29.46
5	15/04/2024	76.32	40.24	22.66	36.34
6	18/04/2024	67.03	32.70	24.31	31.51
7	22/04/2024	86.71	48.53	20.61	28.48
8	25/04/2024	61.75	30.32	15.64	30.47
9	29/04/2024	71.47	39.11	19.39	24.55
10	02/05/2024	77.67	41.66	26.39	44.31
11	06/05/2024	70.57	36.55	10.56	27.17
12	09/05/2024	82.61	50.08	16.60	24.89
13	13/05/2024	73.71	39.78	24.35	42.32
14	16/05/2024	67.77	33.16	18.59	35.34
15	20/05/2024	84.33	46.06	21.31	28.57
16	23/05/2024	71.07	40.45	23.47	38.64
17	27/05/2024	81.37	47.23	19.42	29.16
18	30/05/2024	78.68	43.30	17.80	33.55
19	03/06/2024	78.65	42.67	15.23	26.32
20	06/06/2024	72.86	35.59	21.70	35.34
21	10/06/2024	80.72	41.62	25.70	32.35
22	13/06/2024	74.46	36.43	16.89	34.33
23	17/06/2024	66.75	32.49	24.52	39.82
24	20/06/2024	83.42	48.66	22.35	36.47
25	24/06/2024	73.41	34.75	18.87	27.21
26	27/06/2024	64.56	31.70	14.43	31.66
27	01/07/2024	65.34	32.66	16.29	27.31
28	04/07/2024	71.55	40.32	14.22	33.48
29	08/07/2024	79.42	43.42	17.24	36.56
30	11/07/2024	58.68	26.67	21.53	40.22
31	15/07/2024	85.36	44.59	19.60	28.95
32	18/07/2024	72.45	29.56	15.44	32.42
33	22/07/2024	76.34	38.44	20.39	29.71
34	25/07/2024	66.52	35.42	23.44	38.63
35	29/07/2024	73.34	39.44	18.50	24.91
36	01/08/2024	69.55	34.38	14.29	34.55
37	05/08/2024	74.32	37.56	18.61	31.51
38	08/08/2024	85.65	48.45	16.42	35.61
39	12/08/2024	76.38	38.52	23.47	38.49
40	15/08/2024	83.42	45.14	15.58	26.22
41	19/08/2024	75.37	39.57	21.69	28.77
42	22/08/2024	84.38	43.55	17.69	24.39
43	26/08/2024	61.24	30.48	22.38	33.63
44	29/08/2024	54.21	36.22	24.55	36.45
45	02/09/2024	67.78	33.46	20.58	35.36
46	05/09/2024	72.62	35.21	17.54	38.53
47	09/09/2024	82.42	45.81	15.63	33.11
48	12/09/2024	65.68	32.37	24.56	39.58
49	16/09/2024	74.34	39.57	16.35	30.91
50	19/09/2024	78.60	44.34	19.60	36.82
51	23/09/2024	85.62	46.85	23.54	32.57
52	26/09/2024	68.35	37.06	18.69	34.33
53	30/09/2024	77.51	42.50	22.45	37.57

H. T. Shah
Lab Manager



Dr. Arun Bajpai
Lab Manager (Q)

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AMBIENT AIR QUALITY ANALYSIS REPORT OBSERVATIONS

Ambient Air Quality Monitoring Sample Analysis									
Sr. No.	Month	Particulate Matter (PM ₁₀) (µg/m ³)		Particulate Matter (PM _{2.5}) (µg/m ³)		Sulphur Dioxide (SO ₂)(µg/m ³)		Oxides of Nitrogen (NO ₂) (µg/m ³)	
		Max	Min	Max	Min	Max	Min	Max	Min
NEAR SUB STATION -1									
1	April-24	71.21	43.46	40.13	17.83	16.30	6.48	27.45	13.74
2	May-24	70.31	45.97	38.93	20.31	15.64	6.58	30.69	14.35
3	June-24	68.67	42.32	33.63	17.46	16.50	6.64	22.67	13.65
4	July-24	67.52	41.13	28.44	15.63	17.36	6.49	25.73	13.13
5	August-24	72.64	45.37	35.30	16.34	14.55	6.47	25.35	14.71
6	September-24	66.58	41.28	34.55	18.63	15.30	6.58	30.32	18.51
Starting Of Pile Approach									
1	April-24	76.03	55.37	42.75	24.34	20.21	10.37	32.36	20.56
2	May-24	77.55	44.24	43.34	17.28	22.43	11.94	36.67	21.26
3	June-24	75.52	58.63	43.87	27.52	22.71	11.55	35.64	20.32
4	July-24	80.56	52.62	43.53	22.64	20.21	10.67	34.58	17.53
5	August-24	78.97	51.26	42.49	23.48	21.21	11.40	35.12	21.55
6	September-24	78.62	57.55	44.41	25.44	21.33	13.58	37.47	24.54
South West Corner at Pump House									
1	April-24	72.42	47.05	38.04	17.56	17.40	6.36	25.87	15.65
2	May-24	68.32	44.53	38.62	17.77	17.55	7.81	33.53	14.23
3	June-24	68.37	46.14	32.42	19.56	21.49	6.54	29.44	14.86
4	July-24	71.76	48.36	36.58	18.44	14.38	6.35	27.28	15.75
5	August-24	71.37	41.57	36.25	15.57	18.68	7.52	30.43	14.04
6	September-24	72.65	44.25	37.54	17.15	19.35	6.44	31.74	16.47
North East Corner at Railway Building									
1	April-24	86.71	61.75	48.53	30.32	24.31	13.14	36.34	23.84
2	May-24	84.33	67.77	50.08	33.16	26.39	10.56	44.31	24.89
3	June-24	83.42	64.56	48.66	31.70	25.70	14.43	39.82	26.32
4	July-24	85.36	58.68	44.59	26.67	23.44	14.22	40.22	24.91
5	August-24	85.65	54.21	48.45	30.48	24.55	14.29	38.49	24.39
6	September-24	85.62	65.68	46.85	32.37	24.56	15.63	39.58	30.91

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Lab Manager



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Lab Manager (Q)

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RESULTS OF NOISE LEVEL MONITORING

Sampling Date	: As Per Table
Test Method	: IS 9876/IS 9989
Sampling Location	: As Per Table
Sampling By	: Pollucon Laboratories Pvt. Ltd.
Protocol (purpose)	: Environmental Monitoring

TABLE NO. 5 RESULTS OF DAY TIME NOISE LEVEL MONITORING [APRIL 2024 TO SEPTEMBER 2024]

Noise Level Day Time dB(A)Leq*									
Sr. No.	Name of Location	Near Sub Station-1		Starting Of Pile Approach		South West Corner at Pump House		North East Corner at Railway Building	
	Month	Max	Min	Max	Min	Max	Min	Max	Min
1.	April-24	68.8	57.5	68.3	55.6	69.9	56.6	68.1	57.2
2.	May-24	69.5	59.8	69.9	56.6	68.1	56.3	67.5	56.7
3.	June-24	68.9	61.1	68.8	55.1	69.7	54.8	69.5	57.2
4.	July-24	68.7	60.6	68.2	53.9	69.1	53.3	69.3	54.8
5.	August-24	68.6	58.2	67.8	51.7	68.5	52.4	69.4	55.2
6.	September-24	68.9	57.3	67.2	52.3	68.7	50.3	69.9	56.8

TABLE NO. 6 RESULTS OF NIGHT TIME NOISE LEVEL MONITORING [APRIL 2024 TO SEPTEMBER 2024]

Noise Level Night Time dB(A)Leq*									
Sr. No.	Name of Location	Near Sub Station-1		Starting Of Pile Approach		South West Corner at Pump House		North East Corner at Railway Building	
	Month	Max	Min	Max	Min	Max	Min	Max	Min
1.	April-24	60.2	51.4	58.5	52.6	64.1	54.1	62.3	53.4
2.	May-24	62.4	52.4	61.2	55.6	64.3	54.8	62.2	53.4
3.	June-24	63.1	50.7	61.4	54.1	64.4	53.3	61.5	51.7
4.	July-24	62.1	51.8	61.1	52.1	60.9	53.5	60.3	51.4
5.	August-24	60.1	50.5	60.3	54.1	63.1	53.8	61.3	48.9
6.	September-24	62.5	48.7	61.3	52.1	62.8	51.8	60.5	49.2

AMBIENT AIR QUALITY STANDARDS FOR NOISE SPECIFIED BY CPCB

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day time	Night time
A	Industrial area	75	70

Notes:

- Day time shall mean from 6.00 a.m. to 10.00 p.m.
- Night time shall mean from 10.00 p.m. to 06.00 a.m.

*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing


H. T. Shah
Lab Manager




Dr. Arun Bajpai
Lab Manager (Q)

Status of the conditions stipulated in Environment and CRZ Clearance



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AMBIENT AIR QUALITY MONITORING & NOISE QUALITY MONITORING LOCATIONS

Sr. No	Name of Location	GPS Coordinate
1.	Near Sub Station-1	N 22° 55' 51.53" E 70° 06' 01.09"
2.	Starting Of Pile Approach	N 22° 54' 27.47" E 70° 06' 15.63"
3.	South West Corner at Pump House	N 22° 55' 22.98" E 70° 06' 7.37"
4.	North East Corner at Railway Building	N 23° 0' 48.34" E 70° 12' 30.47"

FIGURE NO. 1 GOOGLE EARTH IMAGE OF AMBIENT AIR QUALITY MONITORING & NOISE QUALITY MONITORING LOCATION



(Signature)

H. T. Shah
Lab Manager



(Signature)

Dr. Arun Bajpai
Lab Manager (Q)

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RESULTS OF SEA WATER MONITORING
TABLE NO. 7 RESULTS OF SEA WATER [APRIL 2024 TO SEPTEMBER 2024]

Description of Sample	: Sea Water (Surface & Bottom)	Quantity/No. of Samples	: 10 Lit/12
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Sampling Procedure	: Grab
Packing/Seal	: Sealed	Protocol (purpose)	: Env. Monitoring
Test Method	: IS 3025 & APHA (22 nd Edi.) 2008	Test Parameters	: As per table

SR. NO	TEST PARAMETERS	UNIT	Near Mouth of Creek (M1)		Near Jetty (M2)		Near Mouth of Creek (M1)	
			April-24		May-24		June-24	
			09/04/2024		13/05/2024		14/06/2024	
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM
1	pH	--	8.17	8.10	8.31	8.25	8.03	7.91
2	Temperature	°C	30.9	30.7	32.3	32	31.8	31.2
3	Total Suspended Solids	mg/L	53.85	31.96	74.66	60.93	68.93	56.98
4	BOD (3 Days@27°C)	mg/L	4.10	3.84	4.82	4.58	5.43	4.96
5	Dissolved Oxygen	mg/L	5.80	5.70	5.90	5.95	6.00	5.80
6	Salinity	ppt	35.28	35.96	36.12	36.68	36.48	36.14
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
8	Nitrate as NO ₃	µmol/L	3.70	3.54	5.08	4.87	8.13	7.59
9	Nitrite as NO ₂	µmol/L	0.82	0.66	0.43	0.39	0.61	0.43
10	Ammonical Nitrogen as NH ₃	µmol/L	1.90	1.73	2.25	2.06	1.53	1.39
11	Phosphates as PO ₄	µmol/L	2.16	2.04	1.91	1.83	1.43	1.25
12	Total Nitrogen	µmol/L	6.94	6.32	7.86	7.54	10.69	9.73
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
14	Total Dissolved Solids	mg/L	36342	36968	36408	36628	37014	36914
15	COD	mg/L	17.20	15.12	19.24	18.40	23.40	19.83
A Flora and Fauna								
16.1	Primary Productivity	mgC/L/day	50.40		45.90		48.78	
B Phytoplankton								
17.1	Chlorophyll	mg/m ³	3.31	2.50	3.07	2.48	2.83	2.67
17.2	Phaeophytin	mg/m ³	0.45	1.19	0.85	1.65	0.87	1.14
17.3	Cell Count	No. x 10 ³ /L	520	495	425	396	478	436
17.4	Name of Group Number and name of group species of each group	--	<i>Coscinodiscus sp.</i> <i>Biddulphia sp.</i> <i>Melosira sp.</i> <i>Thalassiosira sp.</i> <i>Ulothrix sp.</i> <i>Cyclotella sp.</i>	<i>Nitzschia sp.</i> <i>Navicula sp.</i> <i>Cymbella sp.</i> <i>Skeletonema sp.</i> <i>Synedra sp.</i>	<i>Nitzschia sp.</i> <i>Biddulphia sp.</i> <i>Skeletonema sp.</i> <i>Ulothrix sp.</i> <i>Spirulina sp.</i> <i>Chaetognathes sp.</i>	<i>Melosira sp.</i> <i>Cymbella sp.</i> <i>Synedra sp.</i> <i>Rhizosolenia sp.</i> <i>Navicula sp.</i>	<i>Biddulphia sp.</i> <i>Skeletonema sp.</i> <i>Spirulina sp.</i> <i>Chaetognathes sp.</i> <i>Thalassiosira sp.</i> <i>Cymbella sp.</i>	<i>Melosira sp.</i> <i>Nitzschia sp.</i> <i>Synedra sp.</i> <i>Rhizosolenia sp.</i> <i>Ulothrix sp.</i>
C Zooplanktons								
18.1	Abundance (Population)	no x 10 ³ /100 m ³	27		39		43	
18.2	Name of Group Number and name of group species of each group	--	<i>Polychaetes</i> <i>Gastropods</i> <i>Bivalves</i>		<i>Polychaetes</i> <i>Bivalves</i> <i>Copepods</i> <i>Gastropods</i>		<i>Polychaetes</i> <i>Bivalves</i> <i>Gastropods</i>	
18.3	Total Biomass	mL/100 m ³	2.60		3.60		4.15	
D Microbiological Parameters								
19.1	Total Bacterial Count	CFU/mL	2380		2390		2460	
19.2	Total Coliform	/mL	Present		Present		Present	
19.3	E.coli	/mL	Absent		Absent		Absent	
19.4	Enterococcus species	/mL	Present		Present		Present	
19.5	Salmonella species	/mL	Absent		Absent		Absent	
19.6	Shigella species	/mL	Absent		Absent		Absent	
19.7	Vibrio species	/mL	Absent		Absent		Absent	

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

H. T. Shah
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TABLE NO. 8 RESULTS OF SEA WATER [APRIL 2024 TO SEPTEMBER 2024]

SR. NO.	TEST PARAMETERS	UNIT	Near Jetty (M2)		Near Mouth of Creek (M1)		Near Jetty (M2)	
			July-24		August-24		September-24	
			12/07/2024		12/08/2024		13/09/2024	
		SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1	pH	--	7.84	7.71	7.56	7.68	7.84	7.70
2	Temperature	°C	31.6	31.3	30.7	30.5	30.1	29.8
3	Total Suspended Solids	mg/L	49.63	38.52	72.00	59.00	93.00	72.00
4	BOD (3 Days @27°C)	mg/L	3.40	2.96	4.96	4.62	3.64	3.40
5	Dissolved Oxygen	mg/L	6.05	5.95	5.90	5.85	5.80	5.65
6	Salinity	ppt	34.28	34.92	35.70	35.98	36.14	36.72
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
8	Nitrate as NO ₃	µmol/L	7.63	6.18	9.28	8.13	11.37	9.86
9	Nitrite as NO ₂	µmol/L	0.28	0.21	0.79	0.68	2.06	1.97
10	Ammonical Nitrogen as NH ₃	µmol/L	2.09	1.87	2.95	2.39	4.16	3.79
11	Phosphates as PO ₄	µmol/L	2.35	2.19	3.16	2.78	3.89	3.56
12	Total Nitrogen	µmol/L	10.13	8.26	13.54	11.84	18.14	16.13
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
14	Total Dissolved Solids	mg/L	35426	36048	36814	36994	37298	37794
15	COD	mg/L	17.30	13.96	21.84	18.62	15.18	13.28
A Flora and Fauna								
16.1	Primary Productivity	mgC/L/day	49.95		42.30		52.90	
B Phytoplankton								
17.1	Chlorophyll	mg/m ³	2.48	2.24	2.64	2.40	1.97	1.09
17.2	Phaeophytin	mg/m ³	0.47	1.51	1.19	1.60	0.62	1.25
17.3	Cell Count	No. x 10 ³ /L	168	132	198	174	123	103
17.4	Name of Group Number and name of group species of each group	--	<i>Biddulphia sp.</i> <i>Synedra sp.</i> <i>Coscinodiscus sp.</i> <i>Chaetognathes sp.</i> <i>Thalassiosira sp.</i> <i>Cymbella sp.</i>	<i>Nitzschia sp.</i> <i>Rhizosolenia sp.</i> <i>Ulothrix sp.</i> <i>Spirulina sp.</i> <i>Navicula sp.</i>	<i>Rhizosolenia sp.</i> <i>Skeletonema sp.</i> <i>Biddulphia sp.</i> <i>Ulothrix sp.</i> <i>Coscinodiscus sp.</i> <i>Pediastrum sp.</i>	<i>Ulothrix sp.</i> <i>Navicula sp.</i> <i>Chaetognathes sp.</i> <i>Cymbella sp.</i> <i>Ceratium sp.</i> <i>Nitzschia sp.</i>	<i>Coscinodiscus sp.</i> <i>Nitzschia sp.</i> <i>Thalassionema sp.</i> <i>Thalassiosira sp.</i> <i>Cyclotella sp.</i>	<i>Navicula sp.</i> <i>Foraminiferans Gyro sigma sp.</i> <i>Nitzschia sp.</i>
C Zooplanktons								
18.1	Abundance (Population)	noX10 ³ /100m ³	34		28		35	
18.2	Name of Group Number and name of group species of each group	--	<i>Polychaetes</i> <i>Gastropods</i> <i>Copepods</i> <i>Hydrozoa</i>		<i>Gastropods</i> <i>Copepods</i> <i>Bivalves</i> <i>Mysids</i>		<i>Gastropods</i> <i>Bivalves</i> <i>Polychaetes</i> <i>Copepods</i>	
18.3	Total Biomass	mL/100 m ³	3.25		2.75		3.10	
D Microbiological Parameters								
19.1	Total Bacterial Count	CFU/mL	2520		2370		2380	
19.2	Total Coliform	/mL	Present		Present		Present	
19.3	E.coli	/mL	Absent		Absent		Absent	
19.4	Enterococcus species	/mL	Present		Present		Present	
19.5	Salmonella species	/mL	Absent		Absent		Absent	
19.6	Shigella species	/mL	Absent		Absent		Absent	
19.7	Vibrio species	/mL	Absent		Absent		Absent	

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

H. T. Shah
Lab Manager



Dr. Arun Bajpai
Lab Manager (Q)

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SEA WATER REPORT OBSERVATION

SeaWater Sample Analysis		Month : APRIL 2024 TO SEPTEMBER 2024			
Test Parameter	Unit	Surface		Bottom	
		Max	Min	Max	Min
pH	--	8.31	7.56	8.25	7.68
Total Dissolved Solids	mg/L	37298	35426	37794	36048
Total Suspended Solids	mg/L	93	49.63	72	31.96
BOD (3 Days @ 27 °C)	mg/L	5.43	3.40	4.96	2.96
Dissolved Oxygen	mg/L	6.05	5.80	5.95	5.65
Salinity	ppt	36.48	34.28	36.72	34.92
COD	mg/L	23.40	15.18	19.83	13.28

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RESULTS OF SEA SEDIMENT MONITORING

TABLE NO. 9 RESULTS OF SEA SEDIMENT [APRIL 2024 TO SEPTEMBER 2024]

Description of Sample	: Sea Sediment	Quantity/No. of Samples	: 10 Kg/06
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Sampling Procedure	: Grab
Packing/Seal	: Sealed	Protocol (purpose)	: Env. Monitoring
Test Method	: IS/ASTM/CPCB Guidelines	Test Parameters	: As per table

SR. NO.	TEST PARAMETERS	UNIT	Near Mouth of Creek (M1)	Near Jetty (M2)	Near Mouth of Creek (M1)	Near Jetty (M2)	Near Mouth of Creek (M1)	Near Jetty (M2)
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
			09/04/2024	13/05/2024	14/06/2024	12/07/2024	12/08/2024	13/09/2024
1	Organic Matter	%	0.37	0.69	0.846	0.984	0.824	0.924
2	Phosphorus as P	µg/g	704	815	903	937	873	913
3	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
5	Heavy Metals							
5.1	Aluminum as Al	%	4.82	4.13	4.46	4.28	4.49	5.06
5.2	Total Chromium as Cr+3	µg/g	79.43	91.26	87.35	103	81.23	73.15
5.3	Manganese as Mn	µg/g	814	732	814	878	769	613
5.4	Iron as Fe	%	4.58	4.23	5.12	4.9	5.23	4.28
5.5	Nickel as Ni	µg/g	30.78	41.69	37.56	66.73	57.41	50.17
5.6	Copper as Cu	µg/g	41.56	27.67	42.13	51.63	52.69	41.36
5.7	Zinc as Zn	µg/g	61.38	90.58	69.54	83.14	73.29	62.13
5.8	Lead as Pb	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
5.9	Mercury as Hg	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
6	Benthic Organisms							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Crustaceans Bivalves Gastropods	Crustaceans Bivalves Polychaetes Isopods	Crustaceans Bivalves Echinoderms Isopods	Crustaceans Bivalves Isopods	Polychaetes Bivalves Isopods	Polychaetes Bivalves Crustaceans
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	--	Nematodes	--	Nematodes	--	--
6.3	Population	no/m ²	439	643	789	409	351	760

Note: Minimum Detection Limit, Mercury as Hg: 0.0025 mg/L, Petroleum Hydrocarbon: 5 µg/g


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SEA SEDIMENT REPORT OBSERVATION

Sea Sediment Sample Analysis		Month : APRIL 2024 TO SEPTEMBER 2024	
Test Parameter	Unit	Sediment	
		Max	Min
Organic Matter	%	0.984	0.370
Phosphorus as P	µg/g	937	704
Aluminum as Al	%	5.06	4.13
Total Chromium as Cr ⁺³	µg/g	103	73.15
Manganese as Mn	µg/g	878	613
Iron as Fe	%	5.23	4.23
Nickel as Ni	µg/g	66.73	30.78
Copper as Cu	µg/g	52.69	27.67
Zinc as Zn	µg/g	90.58	61.38
Lead as Pb	µg/g	Not Detected	Not Detected
Mercury as Hg	µg/g	Not Detected	Not Detected

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SEA WATER & SEA SEDIMENT LOCATIONS

Sr. No	Name of Location	GPS Coordinate
1.	NEAR MOUTH OF CREEK (M1)	N 22°54'10.58" E 70° 8'34.86"
2.	NEAR JETTY (M2)	N 22°53.60" E 70° 6.47"

FIGURE NO. 2 GOOGLE EARTH IMAGE OF SEA WATER AND SEDIMENT LOCATION




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RESULTS OF DRINKING WATER ANALYSIS

STANDARD METHODS & PERMISSIBLE LIMIT FOR DRINKING WATER

SR. NO.	PARAMETERS	UNIT	DESIRABLE LIMIT AS PER IS:10500:2012	TEST METHOD
Chemical Parameters				
1	Odour	--	Agreeable	IS3025(P-5)83Re.02
2	Colour	Hazen	Max 5	IS3025(P-4)83Re.02
3	Taste	--	Agreeable	IS3025(P-8)84Re.02
4	pH Value	--	6.5 to 8.5	IS3025(P-11)83Re.02
5	Turbidity	NTU	Max 1	APHA 2130-B
6	Total Dissolved Solids	mg/L	Max 500	IS3025(P16)84Re.02
7	Total Hardness as CaCO ₃	mg/L	Max 200	IS3025(P-21) 84EDTARe.02
8	Alkalinity	mg/L	Max 200	IS3025(P23)86Re.03
9	Residual Free Chlorine	mg/L	Min 0.2	APHA(22 nd Edi)4500 Cl
10	Chloride as Cl	mg/L	Max 250	IS3025(P-32) 88Re.99Argentometric method
11	Calcium as Ca	mg/L	Max 75	IS3025(P40)91Re.03EDTA
12	Magnesium as Mg	mg/L	Max 30	IS3025(P46)94Re.99EDTA
13	Mineral Oil	mg/L	Max 0.5	APHA(22 nd Edi)5520D
14	Phenolic compounds as C ₆ H ₅ OH	mg/L	Max 0.001	IS3025(P43)92Re.03
15	Hexavalent Chromium as Cr ⁺⁶	mg/L	Max 0.05	APHA(22 nd Edi)3500CrB
16	Cadmium as Cd	mg/L	Max 0.003	APHA(22 nd Edi)3500Cd
17	Copper as Cu	mg/L	Max 0.05	IS3025(P42)92Re.03
18	Zinc as Zn	mg/L	Max 5	APHA(22 nd Edi)3500 Zn
19	Iron as Fe	mg/L	Max 0.3	APHA(22 nd Edi)3500Fe B
20	Lead as Pb	mg/L	Max 0.01	APHA(22 nd Edi)3500PbD
21	Mercury as Hg	mg/L	Max 0.001	IS3025(P48)94
22	Selenium as Se	mg/L	Max 0.01	APHA(22 nd Edi)3500 Se
23	Aluminum as Al	mg/L	Max 0.03	APHA(22 nd Edi)3500 Al
24	Manganese as Mn	mg/L	Max 0.1	APHA(22 nd Edi)3500 Mn B
25	Arsenic as As	mg/L	Max 0.01	IS3025(P-37)88
26	Sulphate as SO ₄	mg/L	Max 200	APHA(22 nd Edi)4500 SO ₄ E
27	Cyanide as CN	mg/L	Max 0.05	APHA(22 nd Edi)4500CN E
28	Boron as B	mg/L	Max 0.5	APHA(22 nd Edi)4500 B
29	Fluoride as F	mg/L	Max 1.0	APHA(22 nd Edi) 4500 F D SPANDS
30	Nitrate Nitrogen as NO ₃	mg/L	Max 45	IS3025(P34)88
31	Anionic Detergents as MBAS	mg/L	Max 0.2	14542/Methylene Blue extraction method
32	Pesticides	mg/L	Absent	GC MS
33	Coliform	/100 ml	Absent	APHA (22 nd Edi. Method) 9221-D
34	E-Coli	/100 ml	Absent	IS: 1622:1981 Edi. 2.4 (2003-05)

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TABLE NO.10 RESULTS OF DRINKING WATER [APRIL 2024 TO SEPTEMBER 2024]

TABLE NO.10.1 RESULTS OF DRINKING WATER [ESSENTIAL PARAMETER IN APRIL 2024 TO SEPTEMBER 2024]

SR. NO.	TEST PARAMETERS	UNIT	April-24	
			09/04/2024	
			LO-Staff Canteen	Narmada Water Pump House
1	Odour	--	Agreeable	Agreeable
2	Colour	Hazen	3	2
3	Taste	--	Agreeable	Agreeable
4	pH	--	7.81	7.51
5	Turbidity	NTU	0.01	0.07
6	Total Dissolved Solids	mg/L	326	324
7	Total Hardness as CaCO ₃	mg/L	112	118
8	Residual Free Chlorine	mg/L	Not Detected	Not Detected
9	Chloride as Cl	mg/L	91.97	81.97
10	Fluoride as F	mg/L	0.26	0.16
11	Iron as Fe	mg/L	0.170	0.076
12	Coliform	/100 ml	Absent	Absent
13	E-Coli	/100 ml	Absent	Absent


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TABLE NO.10.2 RESULTS OF DRINKING WATER [ESSENTIAL PARAMETER IN APRIL 2024 TO SEPTEMBER 2024]

SR. NO.	TEST PARAMETERS	UNIT	May-24	
			13/05/2024	
			POB Building	Narmada Water Pump House
1	Odour	--	Agreeable	Agreeable
2	Colour	Hazen	3	2
3	Taste	--	Agreeable	Agreeable
4	pH	--	7.40	7.59
5	Turbidity	NTU	0.09	0.08
6	Total Dissolved Solids	mg/L	351	281
7	Total Hardness as CaCO ₃	mg/L	120	105
8	Residual Free Chlorine	mg/L	Not Detected	Not Detected
9	Chloride as Cl	mg/L	91.97	79.97
10	Fluoride as F	mg/L	0.20	0.13
11	Iron as Fe	mg/L	0.081	0.080
12	Coliform	/100 ml	Absent	Absent
13	E-Coli	/100 ml	Absent	Absent



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TABLE NO.10.3 RESULTS OF DRINKING WATER [FULL PARAMETER IN APRIL 2024 TO SEPTEMBER 2024]

SR. NO.	PARAMETERS	UNIT	June-24	
			14/06/2024	
			LO- Staff Canteen	Narmada Water Pump House
Chemical Parameters				
1	Odour	--	Agreeable	Agreeable
2	Colour	Hazen	2	2
3	Taste	--	Agreeable	Agreeable
4	pH Value	--	7.69	7.56
5	Turbidity	NTU	0.24	0.13
6	Total Dissolved Solids	mg/L	278	229
7	Total Hardness as CaCO ₃	mg/L	65	67
8	Alkalinity	mg/L	120	71
9	Residual Free Chlorine	mg/L	Not Detected	Not Detected
10	Chloride as Cl	mg/L	58.99	31.94
11	Calcium as Ca	mg/L	15.20	22.00
12	Magnesium as Mg	mg/L	6.48	2.88
13	Mineral Oil	mg/L	Not Detected	Not Detected
14	Phenolic compounds as C ₆ H ₅ OH	mg/L	Not Detected	Not Detected
15	Chromium as Cr ⁺⁶	mg/L	Not Detected	Not Detected
16	Cadmium as Cd	mg/L	Not Detected	Not Detected
17	Copper as Cu	mg/L	Not Detected	Not Detected
18	Zinc as Zn	mg/L	Not Detected	Not Detected
19	Iron as Fe	mg/L	0.087	0.075
20	Lead as Pb	mg/L	Not Detected	Not Detected
21	Mercury as Hg	mg/L	Not Detected	Not Detected
22	Selenium as Se	mg/L	Not Detected	Not Detected
23	Aluminum as Al	mg/L	Not Detected	Not Detected
24	Manganese as Mn	mg/L	Not Detected	Not Detected
25	Arsenic as As	mg/L	Not Detected	Not Detected
26	Sulphate as SO ₄	mg/L	35.29	21.75
27	Cyanide as CN	mg/L	Not Detected	Not Detected
28	Boron as B	mg/L	Not Detected	Not Detected
29	Fluoride as F	mg/L	0.276	0.173
30	Nitrate Nitrogen as NO ₃	mg/L	2.36	1.95
31	Anionic Detergents as MBAS	mg/L	Not Detected	Not Detected
32	Pesticides	mg/L	Not Detected	Not Detected
Microbiological Parameters				
33	Coliform	/100 ml	Absent	Absent
34	E-Coli	/100 ml	Absent	Absent

H. T. Shah

Lab Manager



Dr. Arun Bajpai

Lab Manager (Q)

Status of the conditions stipulated in Environment and CRZ Clearance



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TABLE NO.10.4 RESULTS OF DRINKING WATER [ESSENTIAL PARAMETER IN APRIL 2024 TO SEPTEMBER 2024]

SR. NO.	TEST PARAMETERS	UNIT	July-24	
			12/07/2024	
			POB Building	Narmada Water Pump House
1	Odour	--	Agreeable	Agreeable
2	Colour	Hazen	2	3
3	Taste	--	Agreeable	Agreeable
4	pH	--	7.61	7.35
5	Turbidity	NTU	0.08	0.09
6	Total Dissolved Solids	mg/L	309	218
7	Total Hardness as CaCO ₃	mg/L	91	95
8	Residual Free Chlorine	mg/L	Not Detected	Not Detected
9	Chloride as Cl	mg/L	75.97	69.97
10	Fluoride as F	mg/L	0.16	0.13
11	Iron as Fe	mg/L	0.087	0.093
12	Coliform	/100 ml	Absent	Absent
13	E-Coli	/100 ml	Absent	Absent

H. T. Shah
Lab Manager



Dr. Arun Bajpai
Lab Manager (Q)

Status of the conditions stipulated in Environment and CRZ Clearance



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TABLE NO.10.5 RESULTS OF DRINKING WATER [ESSENTIAL PARAMETER IN APRIL 2024 TO SEPTEMBER 2024]

SR. NO.	TEST PARAMETERS	UNIT	August-24	
			12/08/2024	
			LO-Staff Canteen	Narmada Water Pump House
1	Odour	--	Agreeable	Agreeable
2	Colour	Hazen	2	2
3	Taste	--	Agreeable	Agreeable
4	pH	--	7.79	7.49
5	Turbidity	NTU	0.07	0.08
6	Total Dissolved Solids	mg/L	349	295
7	Total Hardness as CaCO ₃	mg/L	113	103
8	Residual Free Chlorine	mg/L	Not Detected	Not Detected
9	Chloride as Cl	mg/L	81.97	71.97
10	Fluoride as F	mg/L	0.14	0.15
11	Iron as Fe	mg/L	0.098	0.081
12	Coliform	/100 ml	Absent	Absent
13	E-Coli	/100 ml	Absent	Absent



H. T. Shah

Lab Manager





Dr. Arun Bajpai

Lab Manager (Q)

Status of the conditions stipulated in Environment and CRZ Clearance



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TABLE NO.10.6 RESULTS OF DRINKING WATER [FULL PARAMETER IN APRIL 2024 TO SEPTEMBER 2024]

SR. NO.	PARAMETERS	UNIT	September-24	
			13/09/2024	
			POB Building	Narmada Water Pump House
Chemical Parameters				
1	Odour	--	Agreeable	Agreeable
2	Colour	Hazen	2	3
3	Taste	--	Agreeable	Agreeable
4	pH Value	--	7.53	7.34
5	Turbidity	NTU	0.17	0.09
6	Total Dissolved Solids	mg/L	239	218
7	Total Hardness as CaCO ₃	mg/L	42	52
8	Alkalinity	mg/L	97	63
9	Residual Free Chlorine	mg/L	Not Detected	Not Detected
10	Chloride as Cl	mg/L	41.99	27.99
11	Calcium as Ca	mg/L	8.40	14.40
12	Magnesium as Mg	mg/L	5.04	3.84
13	Mineral Oil	mg/L	Not Detected	Not Detected
14	Phenolic compounds as C ₆ H ₅ OH	mg/L	Not Detected	Not Detected
15	Chromium as Cr ⁺⁶	mg/L	Not Detected	Not Detected
16	Cadmium as Cd	mg/L	Not Detected	Not Detected
17	Copper as Cu	mg/L	Not Detected	Not Detected
18	Zinc as Zn	mg/L	Not Detected	Not Detected
19	Iron as Fe	mg/L	0.073	0.063
20	Lead as Pb	mg/L	Not Detected	Not Detected
21	Mercury as Hg	mg/L	Not Detected	Not Detected
22	Selenium as Se	mg/L	Not Detected	Not Detected
23	Aluminum as Al	mg/L	Not Detected	Not Detected
24	Manganese as Mn	mg/L	Not Detected	Not Detected
25	Arsenic as As	mg/L	Not Detected	Not Detected
26	Sulphate as SO ₄	mg/L	27.85	24.98
27	Cyanide as CN	mg/L	Not Detected	Not Detected
28	Boron as B	mg/L	Not Detected	Not Detected
29	Fluoride as F	mg/L	0.198	0.156
30	Nitrate Nitrogen as NO ₃	mg/L	2.13	2.13
31	Anionic Detergents as MBAS	mg/L	Not Detected	Not Detected
32	Pesticides	mg/L	Not Detected	Not Detected
Microbiological Parameters				
33	Coliform	/100 ml	Absent	Absent
34	E-Coli	/100 ml	Absent	Absent

H. T. Shah
Lab Manager



Dr. Arun Bajpai
Lab Manager (Q)

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TABLE NO.11 RESULTS OF SEWAGE WATER [APRIL 2024 TO SEPTEMBER 2024]

SR. NO.	PARAMETERS	UNIT	STP OUTLET PERMISSIBLE LIMIT [#]	TEST METHOD
1	pH	--	6.5-9.0	IS: 3025 (Part – 11) (Electrometric Method)
2	Total Suspended Solids	mg/L	30	IS3025(P17)
3	BOD (5 Days @ 20 °C)	mg/L	20	IS 3025 (Part – 44)
4	Fecal Coliform	MPN/100 ml	<1000	APHA(22 nd Edi)9221 C & E

RESULTS OF SEWAGE WATER ANALYSIS

DATE OF SAMPLING			April-24			
			09/04/2024		29/04/2024	
SR. NO.	PARAMETERS	UNIT	STP Inlet	STP Outlet	STP Inlet	STP Outlet
1	pH	--	7.72	7.51	7.68	7.43
2	Total Suspended Solids	mg/L	102	17.92	91.92	12.95
3	BOD (5 Days @ 20 °C)	mg/L	74.86	14.62	86.32	15.24
4	Fecal Coliform	MPN/100 ml	>1600	84	>1600	120

DATE OF SAMPLING			May-24			
			13/05/2024		30/05/2024	
SR. NO.	PARAMETERS	UNIT	STP Inlet	STP Outlet	STP Inlet	STP Outlet
1	pH	--	7.35	7.21	7.76	7.41
2	Total Suspended Solids	mg/L	123	17.92	105	15.96
3	BOD (5 Days @ 20 °C)	mg/L	76.47	12.48	84.28	12.13
4	Fecal Coliform	MPN/100 ml	>1600	79	>1600	84

DATE OF SAMPLING			June-24			
			14/06/2024		28/06/2024	
SR. NO.	PARAMETERS	UNIT	STP Inlet	STP Outlet	STP Inlet	STP Outlet
1	pH	--	7.51	7.36	7.69	7.53
2	Total Suspended Solids	mg/L	137	14.92	124	12.90
3	BOD (5 Days @ 20 °C)	mg/L	74.65	11.62	69.43	14.27
4	Fecal Coliform	MPN/100 ml	>1600	140	>1600	170


H. T. Shah
Lab Manager




Dr. Arun Bajpai
Lab Manager (Q)

Status of the conditions stipulated in Environment and CRZ Clearance



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DATE OF SAMPLING			July-24			
			12/07/2024		29/07/2024	
SR. NO.	PARAMETERS	UNIT	STP Inlet	STP Outlet	STP Inlet	STP Outlet
1	pH	--	7.73	7.29	8.12	7.63
2	Total Suspended Solids	mg/L	108	17.84	97.24	12.56
3	BOD (5 Days @ 20 °C)	mg/L	74.55	12.62	83.36	14.72
4	Fecal Coliform	MPN/100 ml	>1600	63	>1600	84

DATE OF SAMPLING			August-24			
			12/08/2024		29/08/2024	
SR. NO.	PARAMETERS	UNIT	STP Inlet	STP Outlet	STP Inlet	STP Outlet
1	pH	--	7.54	7.19	7.43	7.06
2	Total Suspended Solids	mg/L	114	17.58	87.16	13.86
3	BOD (5 Days @ 20 °C)	mg/L	74.92	12.48	69.75	16.08
4	Fecal Coliform	MPN/100 ml	>1600	49	>1600	70

DATE OF SAMPLING			September-24			
			13/09/2024		27/09/2024	
SR. NO.	PARAMETERS	UNIT	STP Inlet	STP Outlet	STP Inlet	STP Outlet
1	pH	--	7.01	7.29	7.19	7.35
2	Total Suspended Solids	mg/L	113	21.74	96.26	17.18
3	BOD (5 Days @ 20 °C)	mg/L	78.4	13.56	61.32	12.98
4	Fecal Coliform	MPN/100 ml	>1600	46	>1600	84

SEWAGE WATER REPORT OBSERVATION

SR. NO.	PARAMETERS	UNIT	STP Outlet		Permissible Limit**
			Max.	Min.	
1	pH	--	7.63	7.06	6.5-9.0
2	Total Suspended Solids	mg/L	21.00	12.56	30
3	BOD (5 Days @ 20 °C)	mg/L	16.08	11.62	20
4	Fecal Coliform	MPN/100 ml	170	46	<1000

** : Details provided by customer.

H. T. Shah
Lab Manager



Dr. Arun Bajpai
Lab Manager (Q)

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TABLE NO.12 RESULTS OF STACK MONITORING

PERMISSIBLE LIMIT FOR STACK MONITORING

SR. NO.	TEST PARAMETER	UNIT	GPCB LIMIT**	TEST/SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	150	IS:11255 (Part-1)
2	Sulfur Dioxide as SO ₂	ppm	100	IS:11255 (Part-2)
3	Oxides of Nitrogen as NO _x	ppm	50	IS: 11255 (Part-7)

**Details provided by customer.

RESULTS OF STACK MONITORING

Date of Monitoring			June-24		
			20/06/2024		
Sampling Location			SS-1 DG Set -1 (125 KVA)	SS-2 DG Set -2 (125 KVA)	SS-3 DG Set -3 (125 KVA)
SR. NO.	TEST PARAMETER	UNIT	RESULT		
1	Particulate Matter	mg/Nm ³	23.42	20.51	28.19
2	Sulfur Dioxide as SO ₂	ppm	7.67	6.52	8.38
3	Oxides of Nitrogen as NO _x	ppm	34.55	30.72	36.46
4	Noise Level Monitoring				
4.1	Near DG Set	dB(A)	72.9	68.6	70.3


H. T. Shah
Lab Manager




Dr. Arun Bajpai
Lab Manager (Q)

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TABLE NO. 13 RESULTS OF DUMP POND DISCHARGE

SR. NO.	PARAMETERS	UNIT	TEST METHOD
1	pH	--	IS3025(P11)83Re.02
2	Total Dissolved Solids	mg/L	IS3025(P16)84Re.02
3	Total Suspended Solids	mg/L	IS3025(P17)84Re.02
4	Turbidity	NTU	APHA 2130-B
5	BOD (3 Days @ 27 °C)	mg/L	IS 3025 (P44)1993 Re.03Edition2.1
6	Dissolved Oxygen	mg/L	IS3025(P38)89Re.99
7	COD	mg/L	APHA(22 nd Edi) 5520-D Open Reflux
8	Salinity	ppt	APHA 2550 B
9	Oil & Grease	mg/L	APHA(22 nd Edi)5520D
10	Total Hardness as CaCO ₃	mg/L	IS3025(P-21) 84EDTARE.02
11	Fluoride as F	mg/L	APHA(22 nd Edi) 4500 F D SPANDS
12	Chloride as Cl	mg/L	IS3025(P-32) 88Re.99Argentometric method
13	Zinc as Zn	mg/L	AAS- APHA (22 nd Edition) 3111 B
14	Cadmium as Cd	mg/L	AAS- APHA (22 nd Edition) 3111 B
15	Lead as Pb	mg/L	AAS- APHA (22 nd Edition) 3111 B
16	Mercury as Hg	mg/L	AAS-APHA (22 nd Edition) 3112 B



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)

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RESULTS OF DUMP POND DISCHARGE

Location Name			Dump Pond Near TT4	
Date			09/04/2024	12/07/2024
SR. NO.	TEST PARAMETER	UNIT	RESULTS	RESULTS
1	pH	--	8.49	8.21
2	Total Dissolved Solids	mg/L	1116	1056
3	Total Suspended Solids	mg/L	76	51
4	Turbidity	NTU	9.8	9.2
5	BOD (3 Days @ 27 °C)	mg/L	20.64	29.6
6	Dissolved Oxygen	mg/L	5.62	5.9
7	COD	mg/L	104	134
8	Salinity	ppt	0.216	0.238
9	Oil & Grease	mg/L	Not Detected	Not Detected
10	Total Hardness as CaCO3	mg/L	164	156
11	Fluoride as F	mg/L	0.45	0.314
12	Chloride as Cl	mg/L	119	131
13	Zinc as Zn	mg/L	0.078	0.091
14	Cadmium as Cd	mg/L	Not Detected	Not Detected
15	Lead as Pb	mg/L	0.024	0.031
16	Mercury as Hg	mg/L	Not Detected	Not Detected

Note: Minimum Detection Limit; Oil & Grease: 2.0 mg/L, Cadmium as Cd: 0.001 mg/L, Mercury as Hg: 0.00025mg/L

H. T. Shah
Lab Manager

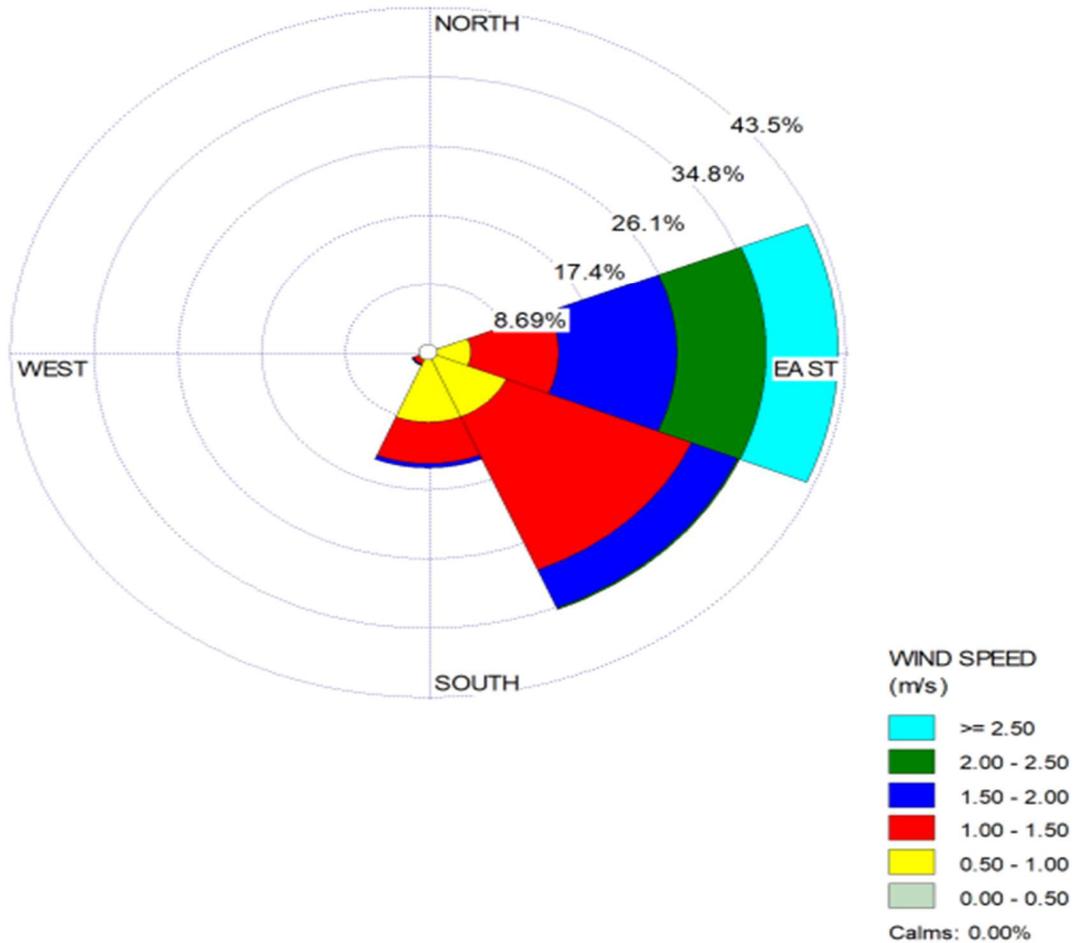


Dr. Arun Bajpai
Lab Manager (Q)

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FIGURE NO.3 WIND ROSE DIAGRAM [APRIL 2024 TO SEPTEMBER 2024]



H. T. Shah
Lab Manager



Dr. Arun Bajpai
Lab Manager (Q)

Annexure- 5

Green Zone Details of Tuna Port (AKBTPL) upto September'24

Status of the conditions stipulated in Environment and CRZ Clearance

CURRENT GREEN ZONE DETAILS OF TUNA PORT (AKBTPL) UP TO SEP'2024

Sr. No.	Location	Area (Ha)	Tree (No.)	Shrubs (SQM)	Green Carpet (SQM)	Palm (No.)
1.	Site Office Building and POB Building Area, SS-01 Building, Canteen Area	2.51	5171	4790	1305	709
2.	Pump House & Main Road Parallel towards SS-02	0.65	3478	150	00	14
3.	At Outside Main Gate (Zero Point to Port Main Gate 5 Km Road)	0.38	910	00	00	288
4.	SS-2 Building Area & Jetty Road	2.64	4105	450	00	1084
5.	Internal Road surround Railway Building, Custom House, Security Main Gate, TT-03, Coal Yard Area	2.43	6674	210	00	28
6.	Near Weigh Bridge -04	0.24	2380	00	00	00
Total		8.85	22718	5600	1305	2123



Annexure- 6

Details of CSR activities carried out by Adani
Foundation FY 2024-25 upto September'24

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Sr. No.	Village & Fisherman Vasahat	CSR Activities	Beneficiaries	Expense Amount in Lakhs
1.	Health Projects			
	Vira Bandar Fisherman Vasahat	Mobile Van	78	0.01
	Tuna, Vandi & Rampar	Medical Support	20	0.18
2.	Sustainable Livelihood Projects			
	Vandi Village	Water Supply (Through a under pipeline)	2000	5.68
	Vira Bandar Fisherman Vasahat	Water Supply by Tanker	390	1.22
	Dhavar varo Fisherman Vasahat	Water Supply by Tanker	395	1.20
	Rampar Village	Green Fodder Support	135	9.77
	Tuna Village	Green Fodder Support	140	9.18
	Tuna Vadi Vistar	Green Fodder Support	70	6.24
	Tuna & Vadi Vistar	Dry Fodder Support	339	1.27
	Rampar Village	Dry Fodder Support	129	1.37
	Rampar Village	Fan Collaboration in midday meal shed	350	0.20
	Tuna, Vandi & Rampar	Public and religious places Tree Plantation	3500	0.10
Total			7546	36.42

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Green Fodder Support of 5,60,000 kg in Tuna & Vandi Gaushala.



Dry Fodder Support of 27,000 kg in Tuna & Vandi Gaushala.



Water Supply at Fisherman Vasahat Vira & Dhavar VaroBandar



Tree Plantation at Tuna Village on World Environment Day.



Cleanliness campaign in Vandi & Tuna Village



Vira Fisherman Vasahat Mobile Van Weekly Service



The Children were honored by holding a competition on World Environment day at Rampar Primary School.



Fan Collaboration in Midday Meal Shed at Rampar Primary School