

Date: 31.05.2022

Deputy Director General of Forest (c)  
Ministry of Environment, Forest & Climate Change,  
Integrated Regional Office, Ground Floor, East Wing,  
New Secretariat Building, Civil Lines, Nagpur - 440001

Dear Sir,

**Sub:** Half yearly Compliance report of Environment and CRZ Clearance for Dighi Port development project 1<sup>st</sup> phase, Dighi, District Raigarh, Maharashtra for the period of October 2021 to March 2022 - Reg.

**Ref:** 1. Environment Clearance for Dighi Port Limited (Phase I) dated 30.09.2005 (File No: 10-8/2005-IA-III)  
2. Corrigendum dated 26.12.2005: Dighi Port Development Project 1<sup>st</sup> Phase, Dighi, District Raigarh, Maharashtra-Environment Clearance -Regarding ((F.No. 10-8/2005-IA-III)  
3. MoEF Letter dated 25.06.2012 "Handling of LNG Cargo at Dighi Port, Maharashtra, by M/s Dighi Port Regarding" (F.No. 10-8/2005-IA-III)  
4. MoEF&CC Corrigendum letter dated 27.01.2022

We would like to inform you that National Company Law Tribunal (NCLT), has approved the resolution plan of Adani Ports and Special Economic Zone (APSEZ) to acquire the Dighi Port Limited (DPL) under the Insolvency and Bankruptcy Code 2016, (IBC). Pursuant to the approval of APSEZ's Resolution Plan by the NCLT, in accordance with the terms and conditions therein, APSEZ has completed the acquisition of the DPL on 15<sup>th</sup> February 2021. Intimation in this regard has already been submitted to your good office vide our letter No. DPL/ENV/2021/34 dated 25.05.2021.

DPL under its new management has started operation at Dighi Port in very limited way and is in the process of obtaining/restoring the requisite statutory permissions and complying with the requirements of all the statutory permissions (as applicable) in line to reliefs/waiver as given under IBC and approved resolution plan.

With reference to the captioned subject and cited reference above; we are herewith submitting the Half yearly compliance report for the compliance period **October 2021 to March 2022** to the conditions stipulated in the cited reference for your kind information.

Thanking you,  
Yours Sincerely,  
For, Dighi Port Limited



**Capt Ryan Fernandez**  
Chief Operating Officer

Encl: As above

Dighi Port Limited  
At & Po Dighi  
Taluka- Shrivardhan  
Dist:Raigad Maharashtra-402402  
CIN: U35110MH2000PLC127953

[info@adani.com](mailto:info@adani.com)  
[www.adaniports.com](http://www.adaniports.com)

Registered Office: New Excelsior Building, A. K. Nayak Marg, Fort Mumbai, Maharashtra - 400001

**Copy to:**

1. The Director (Monitoring –IA-III Division), Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi – 110003 (Email : [monitoring-ec@nic.in](mailto:monitoring-ec@nic.in) )
2. Zonal Office, Central Pollution Control Board, Parivesh Bhawan, Opp. Ward No. 10 VMC Office Subhanpura, Vadodara – 390 023, Gujarat (Email: [westzonecpcb@yahoo.com](mailto:westzonecpcb@yahoo.com))
3. The Member Secretary, Maharashtra Pollution Control Board, Kalpataru Point, 3<sup>rd</sup> Floor, Road No. 8, Sion Circle, Mumbai-400022 (Email : [ms@mpcb.gov.in](mailto:ms@mpcb.gov.in))
4. Member Secretary, Maharashtra Coastal Zone Management Authority, Director, Environment Department, 15<sup>th</sup> Floor, New Administrative Building, Opp. Mantralaya, Mumbai – 400032 ((Email : [dir1.mev-mh@nic.in](mailto:dir1.mev-mh@nic.in))
5. Regional Officer- Raigad, Maharashtra Pollution Control Board, Raigad Bhavan, 6th floor, Sector - 11, C.B.D Belapur, Navi Mumbai- 400 614 (Email : [rorraigad@mpcb.gov.in](mailto:rorraigad@mpcb.gov.in), [mpcbraigad@mpcb.gov.in](mailto:mpcbraigad@mpcb.gov.in))
6. S.R.O. Mahad, Maharashtra Pollution Control Board, Samaik Suvidha Kendra Building, MIDC - Mahad, District Raigad - 402 309 (Email : [sromahad@mpcb.gov.in](mailto:sromahad@mpcb.gov.in))

Dighi Port Limited  
At & Po Dighi  
Taluka- Shrivardhan  
Dist:Raigad Maharashtra-402402  
CIN: U35110MH2000PLC127953

[info@adani.com](mailto:info@adani.com)  
[www.adaniports.com](http://www.adaniports.com)

Registered Office: New Excelsior Building, A. K. Nayak Marg, Fort Mumbai, Maharashtra - 400001

## **Brief Note on Dighi Port**

Environment Clearance (EC) for development of Dighi Port project was granted to M/s. Dighi Port Limited (DPL) by Ministry of Environment, Forest & Climate change (MoEF) vide their letter dated 30<sup>th</sup> September 2005 (F. No. 10-8/2005-IA-III).

Subsequently corrigendum was issued vide a MoEF letter dated 26.12.2005, permission for Handling of LPG Cargo was given by MoEF vide its letter dated 25.06.2012 and corrigendum regarding berth length was issued vide letter dated 27.01.2022.

As per the EC and CRZ clearance the development in Phase-1 involved construction of 4 new multi-purpose berths and strengthening upgrading of the existing one berth all the berths will be of 325 X 35 meters.

Previous developer has developed 2 berths on the north side (Agardanda) and 1 berth on south side (Dighi) also the strengthening work on the existing berth is completed. In addition, previous developer had carried out reclamation, dredging and development of various back-up infrastructure as per the approvals obtained.





Being an organization committed for protection and improvement of environment, DPL, under its new management, will comply with all the necessary environment approvals/ permits/ (as applicable) from the concerned authorities, comply with them and also abide MoEF&CC's directions and guidelines issued from time to time.

DPL under its new management is hereby submitting the compliance report for the period October 2021 to March 2022.

	<b>Dighi Port Ltd</b>	<b>From: October 2021 To : March 2022</b>
<b>Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005</b>		

<b>Half yearly Compliance report on conditions stipulated in Environmental &amp; CRZ Clearance</b>		
<b>S. No.</b>	<b>Conditions</b>	<b>Compliance Status</b>
<b>A. Specific Conditions</b>		
(i)	The company must take up and earmark adequate funds for the socio-economic development and welfare measures in the area including drinking water supply, vocational training, fishery related development programmes (like cold storages).	<p><b>Being Complied</b></p> <p>Dighi Port Limited has earmarked adequate funds under Corporate Social Responsibility (CSR) scheme.</p> <p>The action on socio-economic aspects such as, supply of water to nearby villages, financial support to the existing school, provision of ambulance, advantage to the local enterpreneurs for bauxite handling, etc. are already complied with. Also the actions on issues such as hospital for medical health, drinking water availability, vocational training, port cluster development for economic growth of the region are in planning stage. The CSR activities are undertaken by Adani Foundation (AF) the CSR arm of Adani group. The CSR activities will be based on the need assessment study conducted by AF, broadly in 4 major verticals</p> <ol style="list-style-type: none"> <li>1. Education</li> <li>2. Community Health</li> <li>3. Sustainable Livelihood Development</li> <li>4. Community Infrastructure Development</li> </ol> <p>Attached herewith details of activities and funding wrt CSR activities conducted by Adani Foundation and Dighi Port Limited as Annexure 1.</p>
(ii)	The fishing activities by the fishermen living in the settlement along the creek should not be hindered and a mechanism may be evolved for the movement of fishing boats vis-a-vis shipping activities.	<p><b>Being Complied</b></p> <p>The cargo handling activities involved in operation phase are confined to the project area and hence no hindrance to fishing is anticipated. DPL is continuing to Educate the fishermen about Port activities</p>
(iii)	Company should take up green belt programme in the project area including an ecological park and a plan may be submitted to the Ministry within one year.	<p><b>Complied</b></p> <p>Although natural greenbelt/greenery exists in and around the Port; the port has taken plantation activities on North and South Side with suitable species (Karanj, Alstonia, Casurina etc.) along the periphery (North Side) and at appropriate places on South Side. The same shall be continued and greenbelt coverage will further be enhanced on continuous basis.</p>

	Dighi Port Ltd	From: October 2021 To : March 2022
Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005		


		   
--	--	--



	<b>Dighi Port Ltd</b>	<b>From: October 2021 To : March 2022</b>
<b>Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005</b>		

(iv)	The company may suitably modify the alignment of channel entrance including its width, turning circle, taking into consideration the wave traversal, its intensity etc. to facilitate smoother navigation of ships.	<b>Noted for Compliance</b>
(v)	The breakwater alignment and its design should be further modified based on relevant model studies, bore hole data etc. keeping in view the tranquility condition required for berthing and maneuvering of ships and subsequent cargo handling operations.	<b>Complied</b> No breakwater has been developed as of now. The same shall be developed based on project requirement basis modelling studies, bore hole data and study of other data/parameter as required.
(vi)	The height of dumping in the dumping site should be restricted to 30 cm as against 90 cm proposed.	<b>Complied</b> There was no dredging and dumping activity conducted during the compliance period at the selected location as per EIA report of Dighi port.
(vii)	The project proponent will not undertake any destruction of mangroves during construction and operation of the project.	<b>Complied</b> There are no mangroves in the vicinity of project area.
(viii)	All the conditions stipulated by the Maharashtra Pollution Control Board in their Consent No.BO/Raigad-65/CE/CC-65, dated 7.4.2005 should be effectively implemented.	<b>Complied</b> All the conditions of the Consent to Establish granted vide Consent No. BO/Raigad-65/CE/CC-65 dated 7.4.2005 were complied with and subsequently Consent to Operate was granted by Maharashtra Pollution Control Board vide order dated 7.12.2011.
(ix)	Sewage arising in the port area should be disposed off through septic tank - soak pit system or shall be treated alongwith the industrial effluents to conform to the standards stipulated by Maharashtra Pollution Control Board and should be utilized/re-cycled for gardening, plantation and irrigation.	<b>Being Complied</b> Presently there is very limited port related activity and domestic sewage generated is being treated through septic tank-soak pit system.
(x)	Adequate plantation should be carried out along the roads of the Port premises and a green belt shall be developed.	<b>Complied</b> Although natural greenbelt/greenery exists in and around the Port; the port has taken plantation activities on North and South Side with suitable species (Karanj, Alstonia, Casurina etc.) along the periphery (North Side) and at appropriate places on South Side. The same shall be continued and greenbelt coverage will further be enhanced on continuous basis.

	Dighi Port Ltd	From: October 2021 To : March 2022
Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005		

		   
--	--	--

	<b>Dighi Port Ltd</b>	<b>From: October 2021 To : March 2022</b>
<b>Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005</b>		



(xi)	DPL should prepare and regularly update the Disaster Management Plan from time to time.	<b>Complied</b> DPL has prepared Onsite Emergency Response Plan inclusive of Natural Calamities. The same is being followed and updated from time to time.
(xii)	Fire Fighting arrangements are examined to the new proposal.	<b>Noted</b>
(xiii)	There should be no withdrawal of ground water in CRZ area, for this project. The proponent shall ensure that as a result of the proposed constructions, ingress of saline water into ground water does not take place. Piezometers shall be installed for regular monitoring for this purpose at appropriate locations on the project site.	<b>Being Complied</b> No groundwater is being withdrawn from CRZ area. Groundwater is being extracted outside CRZ area for which DPL obtained CGWA permission and same is attached as <b>Annexure 2</b> .
(xiv)	The project should not be commissioned till the requisite water supply and electricity to the project are provided by the PWD/Electricity Department.	<b>Complied</b> Requisite permission from concerned authorities for Electricity has been obtained. Water requirement is presently being met from outside sources (Tanker) and also from rain water harvesting pond.
(xv)	Specific arrangements for rainwater harvesting should be made in the project design and the rain water so harvested should be optimally utilized. Details in this regard should be furnished to this Ministry's Regional Office at Bhopal within 3 months.	<b>Complied</b> DPL has developed a pond (25 m x 40 m x 3 m) for rainwater harvesting. The water so collected is distributed to nearby villagers. <div data-bbox="829 1131 1388 1482" data-label="Image"> </div> <div data-bbox="829 1545 1388 1944" data-label="Image"> </div>
(xvi)	The facilities to be constructed in the CRZ area as part of this project should be	<b>Complied.</b> All the project related



	<b>Dighi Port Ltd</b>	<b>From: October 2021 To : March 2022</b>
<b>Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005</b>		

	strictly in conformity with the provisions of the CRZ Notification, 1991 as amended subsequently.	construction/developments are in line to CRZ Notification 2011 as amended.
(xvii)	<p>No land reclamation should be carried out for this project</p> <p><b>Corrigendum Dated 26.12.2005</b> (xvii) Reclamation within the Port area shall be carried out (+) 5 metre level from the existing ground level. The material for reclamation shall be mainly from the dredged material and the rest should be sourced from approved government areas in the vicinity. Further, the details pertaining to reclamation in the inter-tidal area should be provided to this Ministry within 3 months from the date of receipt of the letter."</p>	<p><b>Being Complied</b> This condition has been modified vide MoEF corrigendum dated 26.12.2005.</p> <p>No reclamation was carried out during the compliance period.</p>
(xviii)	Green buffer zone should be provided all around the project area in consultation with local forest department and the report submitted to this Ministry's Regional Office at Bhopal.	<p><b>Being Complied</b> Although natural green buffer zone exists in and around the Port; the port has taken plantation activities on North and South Side with suitable species along the periphery (North Side) and at appropriate places on South Side. The same shall be continued and greenbelt coverage will further be enhanced on continuous basis.</p>  

	<b>Dighi Port Ltd</b>	<b>From: October 2021 To : March 2022</b>
<b>Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005</b>		

		 
(xix)	No product other than those permissible in the Coastal Regulation Zone Notification, 1991 shall be stored in the Coastal Regulation Zone area.	<b>Complied</b> Handling and Storage of product is strictly in accordance with CRZ Notification and as per the EC & CRZ Clearance obtained.
<b>General Conditions:</b>		
(i)	Construction of the proposed structures should be undertaken meticulously conforming to the existing Central/local rules and regulations including Coastal Regulation Zone Notification 1991 & its amendments. All the construction designs/ drawings relating to the proposed construction activities must have approvals of the concerned State Government Departments / Agencies.	<b>Complied</b> Construction/development of the project is in accordance with existing Central/Local rules including CRZ Notification 1991 as amended. Requisite permission from concerned authorities have been obtained
(ii)	Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. should be ensured for construction workers during the construction phase of the project so as to avoid felling of trees/mangroves and pollution of water and the surroundings.	<b>Complied</b> There was no construction during the compliance period. Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. were made for the workers during construction phase.
(iii)	The project authorities must make necessary arrangements for disposal of solid wastes and for the treatment of effluents by providing a proper wastewater treatment plant outside the CRZ area. The quality of treated effluents, solid wastes and noise level etc. must conform to the standards laid down by the competent authorities	<b>Being Complied</b> Presently there is very limited port related activity and domestic sewage generated is being treated through septic tank-soak pit system. Sewage Treatment Plant of adequate capacity will be developed in phased manner based on the need.  All the solid waste generated will be properly

	<b>Dighi Port Ltd</b>	<b>From: October 2021 To : March 2022</b>
<b>Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005</b>		

	including the Central/State Pollution Control Board and the Union Ministry of Environment and Forests under the Environment (Protection) Act, 1986, whichever are more stringent.	collected, source segregation of all types of Solid Waste will be practised and will be disposed as per the provision of Solid Waste Management Rules 2016, as amended.  Environment Monitoring at site has been started from June-2021 and Ambient Air Quality, Noise, Soil, Marine Water and sediment, Ground Water and drinking water, DG Stack emission is being monitored on regular basis through NABL accredited and MoEF&CC recognized laboratory. Summary of the monitoring report for the period Oct'21-Mar'22 is attached as <b>Annexure 3</b> .
(iv)	The proponent shall obtain the requisite consents for discharge of effluents and emissions under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (prevention and Control of Pollution) Act, 1981 from the Maharashtra Pollution Control Board before commissioning of the project and a copy of each of these shall be sent to this Ministry	<b>Complied</b> DPL has obtained Consent/NOC from MPCB vide letter No. BO/Raigad-65/CE/CC-65 dated 07.04.2005. The same was submitted to MoEF vide DPL letter dated 15.03.2008
(v)	The proponents shall provide for a regular monitoring mechanism so as to ensure that the treated effluents conform to the prescribed standards. The records of analysis reports must be properly maintained and made available for inspection to the concerned State/Central officials during their visits.	<b>Being Complied</b> Presently there is very limited port related activity and domestic sewage generated is being treated through septic tank-soak pit system. Sewage Treatment Plant of adequate capacity will be developed in phased manner.  Environment Monitoring at site has been started from June-2021 and Ambient Air Quality, Noise, Soil, Marine Water and sediment, Ground Water and drinking water, DG Stack emission is being monitored on regular basis through NABL accredited and MoEF&CC recognized laboratory. Summary of the monitoring report for the period October 21 to March 22 is attached as <b>Annexure 3</b> . The records of analysis reports are properly maintained and will be made available for inspection to the concerned State/Central officials during their visits.
(vi)	In order to carry out the environmental monitoring during the operational phase of the project, the project authorities should provide an environmental laboratory well equipped with standard equipment and facilities and qualified manpower to carry out the testing of various environmental parameters.	<b>Complied</b> Environment Monitoring at site has been started from June-2021 and Ambient Air Quality, Noise, Soil, Marine Water and sediment, Ground Water and drinking water, DG Stack emission is being monitored on regular basis through NABL accredited and MoEF&CC recognized laboratory. Summary of the monitoring report for the period Oct'21-Mar'22 is attached as <b>Annexure 3</b> .
(vii)	The sand dunes and mangroves, if any, on the site should not be disturbed in any way.	<b>Noted for Compliance</b> There are no sand dunes and mangrove in the project area.

	<b>Dighi Port Ltd</b>	<b>From: October 2021 To : March 2022</b>
<b>Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005</b>		

(viii)	A copy of the clearance letter will be marked to the concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	<b>Complied</b>
(ix)	The Maharashtra Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/Tehsildar's Office for 30 days.	<b>Complied</b> This condition doesn't pertain to project proponent.
(x)	The funds earmarked for environment protection measures should be maintained, in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry's Regional Office at Bhopal and the State Pollution Control Board.	<b>Complied</b> Appropriate funds are being earmarked for environment protection measures (Viz. Regular Environment Monitoring, Greenbelt Development and Maintenance, Waste Management, Road Cleaning etc.). The funds earmarked are not diverted for any other purpose.
(xi)	Full support should be extended to the officers of this Ministry's Regional Office at Bhopal and the officers of the Central and State Pollution Control Boards by the project proponents during their inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.	<b>Complied</b> Full support is being extended to the officers of Ministry/Regional Office, as well as officers of Central and State Pollution Control Board during their visit and the same shall be continued in future also.
(xii)	In case of deviation or alteration in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection.	<b>Complied</b> National Company Law Tribunal (NCLT), has approved the resolution plan of Adani Ports and Special Economic Zone (APSEZ) to acquire the Dighi Port Limited (DPL) under the Insolvency and Bankruptcy Code 2016, (IBC). Pursuant to the approval of APSEZ's Resolution Plan by the NCLT, in accordance with the terms and conditions therein, APSEZ has completed the acquisition of the DPL on 15 <sup>th</sup> February 2021. Intimation in this regard has been submitted by new management of DPL vide letter No. DPL/ENV/2021/34 dated 25.05.2021. Copy of the same is attached as <b>Annexure 4</b> .
(xiii)	This Ministry reserve the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.	<b>Noted</b>
(xiv)	This Ministry or any other competent authority may stipulate any other additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.	<b>Noted for Compliance</b>
(xv)	The project proponent should advertise in at least two local newspapers widely	<b>Complied</b>



	<b>Dighi Port Ltd</b>	<b>From: October 2021 To : March 2022</b>
<b>Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005</b>		

	circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment & Forests at <a href="http://www.envforin.in">http://www.envforin.in</a> . The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bhopal.	
(xvi)	The Project proponents should inform the Regional Office at Bhopal as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of start of Land Development Work	<b>Complied</b>
	The above mentioned stipulations will be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (protection) Act, 1986, the Hazardous Chemicals (Manufacture, Storage and Import) Rules, 1989, the Coastal Regulation Zone Notification, 1991 and its subsequent amendments and the Public Liability Insurance Act, 1991 and the Rules made thereunder from time to time. The Project Proponent should also ensure that the proposal complies with the provisions of the approved Coastal Zone Management Plan of Maharashtra State and the Supreme Court's order dated 18 <sup>th</sup> April, 1996 in the Writ Petition No. 664 of 1993 to the extent the same are applicable to this proposal.	<b>Noted for Compliance</b>

**Enclosures:**

<b>Annexure Number</b>	<b>Details of Annexure</b>
Annexure 1:	Details of activities and funding wrt CSR activities conducted by Adani Foundation
Annexure 2:	NOC obtained from Central Groundwater Authority (CGWA) for withdrawal of Groundwater.
Annexure 3:	Summary of Environment Monitoring during Compliance Period

	<b>Dighi Port Ltd</b>	<b>From: October 2021 To : March 2022</b>
<b>Status of Conditions Stipulated in Environmental and CRZ Clearance File no: 10-8/2005-IA-III dated: 30/09/2005</b>		
<b>Annexure 4:</b>	Intimation to MoEF&CC regarding acquisition of Dighi Port by APSEZ	

Expenditure on  
Corporate Social  
Responsibility (CSR) by  
Adani Foundation and  
Dighi Port Limited

Sr No	Activities	Exp upto March-2022 (Rs. In Lacs)
<b>Adani Foundation</b>		
<b>1</b>	General Management and Administration	0.81
<b>2</b>	Education	1.64
<b>3</b>	Community Health	20.26
<b>4</b>	Sustainable Livelihood Development	19.75
<b>5</b>	Community Infrastructure Development	0.00
<b>Dighi Port Limited</b>		
<b>6</b>	Water Supply to Villages	27.55
<b>7</b>	Total Project Cost	70.01



Adani Foundation observed "**International women's day**" In village Rajpuri on the eve of International women's day on 8<sup>th</sup> March 2022.

### Activities

1. Deployment of Biomass chulha to 150 women
2. Knowledge sharing program
3. Guidance on anemia and women health
4. Health & hygiene
5. Adani Foundation activities sharing





Images affected Dighi Sub-Station Health facility during cyclone



Images renovated Dighi Sub-Station Health facility during cyclone

Adani Foundation has renovated Dighi Sub-Station Health Facility which was affected due to cyclone in 2020.





Installation of Solar dryer for fish drying activity



Installation of Solar dryer for fish drying activity





Masala making entrepreneurship program in village Rajpuri.



Self Help group meetings with Adani Foundation representative





Adani Foundation organized cultural events in Raigad Zila Parishad Primary school Rajpuri. In this program mentioned below activities carried out.

1. Fancy dress competition
2. Drawing competition
3. Debate competition





Water supply to villages through water tanker on daily basis.



भारत सरकार  
जल शक्ति मंत्रालय  
जल संसाधन, नदी विकास  
और गंगा संरक्षण विभाग  
केन्द्रीय भूमि जल प्राधिकरण  
Government of India  
Ministry of Jal Shakti  
Department of Water Resources,  
River Development & Ganga Rejuvenation  
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)

**NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION**

Project Name:	Dighi Port Limited		
Project Address:	Dighi Port Limited, Village And Post- Dighi,, Taluka Shrivardhan, District- Raigad		
Village:	Dighi	Block:	Shrivardhan
District:	Raigad	State:	Maharashtra
Pin Code:			
Communication Address:	Dighi Port Limited, Village And Post - Dighi, Taluka - Shrivardhan, District - Raigad, Shrivardhan, Raigad, Maharashtra - 402402		
Address of CGWB Regional Office :	Central Ground Water Board Central Region, N.s. Building, Civil Lines, Nagpur, Maharashtra - 440001		

1. <b>NOC No.:</b>		CGWA/NOC/INF/ORIG/2021/14086												
2. Application No.:		21-4/6997/MH/INF/2021					3. Category: (GWRE 2020)		Safe					
4. Project Status:		Existing Project					5. NOC Type:		New					
6. <b>Valid from:</b>		20/12/2021					7. <b>Valid up to:</b>		19/12/2026					
8. Ground Water Abstraction Permitted:														
Fresh Water			Saline Water			Dewatering			Total					
m³/day		m³/year		m³/day		m³/year		m³/day		m³/year				
90.00		32850.00												
9. Details of ground water abstraction /Dewatering structures														
Total Existing No.:1							Total Proposed No.:1							
			DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu
Abstraction Structure*			0	0	1	0	0	0	0	0	1	0	0	0
*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps														
10. Ground Water Abstraction/Restoration Charges paid (Rs.):								68580.00						
11. Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.						No. of Piezometers		Monitoring Mechanism						
								Manual	DWLR**	DWLR With Telemetry				
**DWLR - Digital Water Level Recorder						1		0	1	0				

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011

Phone: (011) 23383561 Fax: 23382051, 23386743

Website: cgwa-noc.gov.in

पानी बचाये - जीवन बचाये  
SAVE WATER - SAVE LIFE

**Validity of this NOC shall be subject to compliance of the following conditions:**

**Mandatory conditions:**

- 1) Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate.
- 2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.
- 3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines.
- 4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.
- 5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.
- 6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab.
- 7) The firm shall report compliance of the NOC conditions online in the website ([www.cgwa-noc.gov.in](http://www.cgwa-noc.gov.in)) within one year from the date of issue of this NOC.
- 8) Industries abstracting ground water in excess of 100 m<sup>3</sup>/d shall undertake annual water audit through certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.
- 9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.
- 10) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

**General conditions:**

- 11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).
- 12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).
- 13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.
- 14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.
- 15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.
- 16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.
- 17) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.
- 18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.
- 19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.
- 20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.
- 21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.
- 22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.
- 23) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.
- 24) Proponents, who have installed/constructed artificial recharge structures in compliance of the NOC granted to them previously and have availed rebate of upto 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, shall continue to regularly maintain artificial recharge structures.
- 25) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the guidelines.
- 26) In case of new infrastructure projects having ground water abstraction of more than 20 m<sup>3</sup>/day, the firm/entity shall ensure implementation of dual water supply system in the projects.
- 27) In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.
- 28) In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.
- 29) The NOC issued is conditional subject to the conditions mentioned in the Public notice dated 27.01.2021 failing which penalty/EC/cancellation of NOC shall be imposed as the case may be.
- 30) This NOC is issued subject to the clearance of Expert Appraisal Committee (EAC) (if applicable).

**(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)**

# **"ENVIRONMENTAL MONITORING REPORT"**

## **FOR**

# **DIGHI PORT LTD.**

**AT&PO: DIGHI, TA: SHRIVARDHAN**

**DIST: RAIGADH, MAHARASTRA**

**OCTOBER-2021 TO MARCH-2022**

**PREPARED BY:**



**M/s POLLUCON LABORATORIES PVT.LTD.**

**PLOT NO.5/6 "POLLUCON HOUSE",**

**OPP. BALAJI INDUSTRIAL SOCIETY,**

**OLD SHANTINATH MILL LANE,**

**NEAR GAYTRI FARSAN, NAVJIVAN CIRCLE,**

**UDHANA MAGDALLA ROAD, SURAT-395007**

**PHONE/FAX – (+91 261) 263 5750, 263 5751.**

**E-mail: [pollucon@gmail.com](mailto:pollucon@gmail.com)**

**Web: [www.polluconlab.com](http://www.polluconlab.com)**



**TC-5945**



**ISO 9001:2015**



**ISO 14001:2015**



**ISO45001:2018**



# **"ENVIRONMENT MONITORING REPORT"**

**FOR**

# **DIGHI PORT LTD.**

**AT&PO: DIGHI, TA: SHRIVARDHAN**

**DIST: RAIGADH, MAHARASTRA**

For and on behalf of Pollucon Laboratories Pvt. Ltd., Surat

Approved by : Dr. Arun Kumar Bajpai

Signed : 

Designation : Lab Manager (Q)



This report has been prepared by Pollucon laboratories Pvt. Ltd. with all reasonable skills, care and diligence, incorporating our General Terms and Conditions of Business and taking account of the resources devoted, flow chart, diagram etc. is provided by the client itself.

## **CONTENTS**

<b>Sr. No.</b>	<b>Title</b>	<b>Page No.</b>
<b>1</b>	<b>AMBIENT AIR QUALITY MONITORING</b>	<b>4</b>
<b>2</b>	<b>SEA WATER &amp; SEDIMENTS MONITORING</b>	<b>11</b>
<b>3</b>	<b>GROUND WATER MONITORING</b>	<b>22</b>
<b>4</b>	<b>DRINKING WATER MONITORING</b>	<b>29</b>
<b>5</b>	<b>NOISE LEVEL MONITORING</b>	<b>42</b>
<b>6</b>	<b>WEATHER DATA MONITORING</b>	<b>49</b>

**CHAPTER – 1**  
**AMBIENT AIR QUALITY MONITORING**  
**MONITORING PERIOD: OCTOBER-2021 TO MARCH-2022**

**Results of AAQM for Near Main Gate Office Area – South Side [OCTOBER-2021 TO MARCH-2022]**

Sr. No.	Date of sampling	Respirable Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Oxides of Nitrogen	Carbon Monoxide as CO	Hydrocarbon as CH <sub>4</sub>
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>
1	04/10/2021	71.84	35.72	12.69	27.25	0.32	ND*
2	07/10/2021	80.63	41.52	15.48	31.63	0.40	ND*
3	11/10/2021	59.43	26.35	7.24	13.82	0.19	ND*
4	14/10/2021	68.24	31.12	10.14	21.62	0.24	ND*
5	18/10/2021	84.12	45.25	16.44	34.12	0.58	ND*
6	21/10/2021	70.34	32.44	11.57	23.34	0.27	ND*
7	25/10/2021	81.52	42.64	18.75	32.52	0.52	ND*
8	28/10/2021	62.73	30.87	8.98	15.74	0.21	ND*
9	01/11/2021	66.15	24.28	8.91	23.26	0.29	ND*
10	04/11/2021	52.94	20.26	12.65	19.42	0.19	ND*
11	08/11/2021	74.53	35.47	16.19	30.53	0.36	ND*
12	11/11/2021	68.76	30.29	13.43	26.22	0.32	ND*
13	15/11/2021	83.94	44.58	19.58	34.73	0.58	ND*
14	18/11/2021	72.24	34.39	15.68	29.53	0.44	ND*
15	22/11/2021	63.44	24.53	7.62	21.32	0.21	ND*
16	25/11/2021	73.63	33.27	11.26	31.14	0.32	ND*
17	29/11/2021	81.87	38.58	18.27	33.77	0.29	ND*
18	02/12/2021	58.32	24.61	6.72	18.46	0.19	ND*
19	06/12/2021	73.52	38.45	15.13	30.62	0.49	ND*
20	09/12/2021	62.45	26.52	7.63	20.33	0.23	ND*
21	13/12/2021	82.92	43.17	18.57	33.76	0.60	ND*
22	16/12/2021	71.22	36.34	13.86	28.52	0.41	ND*
23	20/12/2021	65.13	30.87	8.93	22.26	0.29	ND*
24	23/12/2021	72.64	37.79	14.44	29.17	0.45	ND*
25	27/12/2021	80.82	42.93	17.27	32.76	0.53	ND*
26	30/12/2021	67.72	32.28	11.33	26.85	0.19	ND*
27	03/01/2022	65.13	30.83	10.35	22.26	0.25	ND*
28	06/01/2022	58.33	24.70	6.75	18.44	0.19	ND*
29	10/01/2022	73.52	37.50	15.16	30.62	0.44	ND*
30	13/01/2022	67.72	32.24	11.34	27.87	0.30	ND*
31	17/01/2022	82.91	43.13	18.60	34.74	0.58	ND*
32	20/01/2022	71.23	36.38	13.86	28.55	0.33	ND*
33	24/01/2022	62.42	26.60	8.47	20.35	0.22	ND*
34	27/01/2022	72.62	37.79	14.47	30.16	0.38	ND*
35	31/01/2022	80.81	42.97	17.24	33.65	0.52	ND*
36	03/02/2022	67.13	32.86	12.33	24.25	0.27	ND*



<b>37</b>	<b>07/02/2022</b>	60.30	26.64	8.74	20.47	0.21	ND*
<b>38</b>	<b>10/02/2022</b>	75.51	39.45	17.13	32.67	0.45	ND*
<b>39</b>	<b>14/02/2022</b>	69.71	34.22	13.32	29.85	0.32	ND*
<b>40</b>	<b>17/02/2022</b>	84.92	45.12	19.52	34.74	0.60	ND*
<b>41</b>	<b>21/02/2022</b>	73.22	38.33	15.83	30.55	0.36	ND*
<b>42</b>	<b>24/02/2022</b>	64.41	28.55	10.46	22.35	0.24	ND*
<b>43</b>	<b>28/02/2022</b>	74.62	39.74	16.45	32.18	0.40	ND*
<b>44</b>	<b>03/03/2022</b>	74.14	35.26	14.93	26.83	0.32	ND*
<b>45</b>	<b>07/03/2022</b>	81.32	43.42	18.76	32.66	0.53	ND*
<b>46</b>	<b>10/03/2022</b>	77.53	36.63	15.13	27.47	0.37	ND*
<b>47</b>	<b>14/03/2022</b>	65.74	29.83	10.53	20.26	0.23	ND*
<b>48</b>	<b>17/03/2022</b>	72.91	34.14	13.34	24.75	0.30	ND*
<b>49</b>	<b>21/03/2022</b>	79.21	39.32	16.86	29.55	0.44	ND*
<b>50</b>	<b>24/03/2022</b>	83.41	44.54	19.63	34.37	0.58	ND*
<b>51</b>	<b>28/03/2022</b>	59.62	28.76	9.46	19.93	0.19	ND*
<b>52</b>	<b>31/03/2022</b>	69.84	33.93	12.26	23.15	0.26	ND*

ND\*: - Not Detected; Detection Limit: Hydrocarbon as CH<sub>4</sub> (µg/m<sup>3</sup>): 50

**Results of AAQM for Near Jetty (Berth No. - 1) – South Side [OCTOBER-2021 TO MARCH-2022]**

Sr. No.	Date of sampling	Respirable Particulate Matter (PM10)	Particulate Matter (PM 2.5)	Sulphur Dioxide (SO <sub>2</sub> )	Oxides of Nitrogen	Carbon Monoxide as CO	Hydrocarbon as CH <sub>4</sub>
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>
1	04/10/2021	58.24	27.59	8.94	17.23	0.22	ND*
2	07/10/2021	73.43	38.79	18.56	27.64	0.52	ND*
3	11/10/2021	64.69	29.84	15.74	19.84	0.27	ND*
4	14/10/2021	77.83	39.25	18.35	29.42	0.56	ND*
5	18/10/2021	53.39	23.47	7.29	16.72	0.19	ND*
6	21/10/2021	65.74	36.83	16.46	20.92	0.36	ND*
7	25/10/2021	47.13	20.27	6.84	14.52	0.15	ND*
8	28/10/2021	69.92	37.63	17.13	22.35	0.42	ND*
9	01/11/2021	76.84	35.13	19.25	29.91	0.33	ND*
10	04/11/2021	58.62	24.26	14.44	26.74	0.48	ND*
11	08/11/2021	61.43	27.51	12.65	22.18	0.19	ND*
12	11/11/2021	54.24	21.73	10.88	14.33	0.24	ND*
13	15/11/2021	65.13	29.93	13.74	25.51	0.47	ND*
14	18/11/2021	60.35	26.55	11.56	20.84	0.37	ND*
15	22/11/2021	74.53	34.42	18.38	28.64	0.42	ND*
16	25/11/2021	52.75	17.52	7.14	11.45	0.23	ND*
17	29/11/2021	58.96	24.89	9.75	17.29	0.29	ND*
18	02/12/2021	53.22	23.72	9.84	13.35	0.17	ND*
19	06/12/2021	64.15	30.92	12.79	24.54	0.34	ND*
20	09/12/2021	51.73	20.64	6.37	10.43	0.13	ND*
21	13/12/2021	75.82	37.13	18.25	28.94	0.53	ND*
22	16/12/2021	57.93	26.85	8.79	16.23	0.22	ND*
23	20/12/2021	73.52	36.54	17.33	27.64	0.47	ND*
24	23/12/2021	59.33	27.22	10.54	19.85	0.26	ND*
25	27/12/2021	66.62	31.34	13.44	25.75	0.40	ND*
26	30/12/2021	60.42	28.51	11.64	21.18	0.19	ND*
27	03/01/2022	75.82	37.17	18.23	28.93	0.55	ND*
28	06/01/2022	66.63	31.34	13.44	25.77	0.49	ND*
29	10/01/2022	60.42	28.55	11.66	21.14	0.41	ND*
30	13/01/2022	53.22	23.72	9.84	13.34	0.19	ND*
31	17/01/2022	64.12	30.97	12.74	24.56	0.44	ND*
32	20/01/2022	59.32	27.30	10.56	19.82	0.34	ND*
33	24/01/2022	73.52	36.50	17.39	27.65	0.50	ND*
34	27/01/2022	51.73	20.69	6.18	10.45	0.11	ND*
35	31/01/2022	57.91	26.89	8.76	16.24	0.25	ND*
36	03/02/2022	76.81	38.12	19.24	29.96	0.56	ND*

<b>37</b>	<b>07/02/2022</b>	67.63	32.34	14.46	26.77	0.50	ND*
<b>38</b>	<b>10/02/2022</b>	61.43	29.55	12.63	22.15	0.42	ND*
<b>39</b>	<b>14/02/2022</b>	54.23	24.72	10.86	14.36	0.21	ND*
<b>40</b>	<b>17/02/2022</b>	65.12	31.92	13.75	25.56	0.45	ND*
<b>41</b>	<b>21/02/2022</b>	60.33	28.26	11.53	20.85	0.36	ND*
<b>42</b>	<b>24/02/2022</b>	74.54	37.46	18.36	28.65	0.52	ND*
<b>43</b>	<b>28/02/2022</b>	52.71	21.64	7.15	11.48	0.13	ND*
<b>44</b>	<b>03/03/2022</b>	67.30	30.45	12.26	22.17	0.42	ND*
<b>45</b>	<b>07/03/2022</b>	59.12	26.24	9.42	19.35	0.29	ND*
<b>46</b>	<b>10/03/2022</b>	70.73	32.83	13.66	24.56	0.48	ND*
<b>47</b>	<b>14/03/2022</b>	77.52	36.66	18.83	29.73	0.54	ND*
<b>48</b>	<b>17/03/2022</b>	65.24	31.33	11.13	21.94	0.39	ND*
<b>49</b>	<b>21/03/2022</b>	57.93	25.16	8.36	17.25	0.22	ND*
<b>50</b>	<b>24/03/2022</b>	73.84	34.95	16.53	26.43	0.50	ND*
<b>51</b>	<b>28/03/2022</b>	53.42	22.54	7.74	16.66	0.15	ND*
<b>52</b>	<b>31/03/2022</b>	64.61	28.74	10.95	20.85	0.32	ND*

ND\*: - Not Detected; Detection Limit: Hydrocarbon as CH<sub>4</sub> (µg/m<sup>3</sup>): 50

**Results of AAQM for Security Main Gate No. 1 – North Side [OCTOBER-2021 TO MARCH-2022]**

Sr. No.	Date of sampling	Respirable Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Oxides of Nitrogen	Carbon Monoxide as CO	Hydrocarbon as CH <sub>4</sub>
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>
1	04/10/2021	76.42	39.34	17.23	29.54	0.52	ND*
2	07/10/2021	63.66	30.73	12.83	20.96	0.32	ND*
3	11/10/2021	72.84	34.95	19.62	31.75	0.58	ND*
4	14/10/2021	53.24	25.55	8.53	17.34	0.22	ND*
5	18/10/2021	71.53	36.25	14.38	26.42	0.44	ND*
6	21/10/2021	57.92	27.84	9.77	18.63	0.29	ND*
7	25/10/2021	68.76	33.15	13.94	23.83	0.36	ND*
8	28/10/2021	85.36	42.48	21.57	32.25	0.62	ND*
9	01/11/2021	61.24	31.57	11.83	20.13	0.18	ND*
10	04/11/2021	70.55	32.53	18.66	30.32	0.44	ND*
11	08/11/2021	82.43	37.67	20.49	34.54	0.45	ND*
12	11/11/2021	62.85	27.34	14.24	23.73	0.37	ND*
13	15/11/2021	77.73	36.21	17.14	31.93	0.52	ND*
14	18/11/2021	83.43	43.52	21.34	35.23	0.62	ND*
15	22/11/2021	68.36	30.23	15.56	24.46	0.38	ND*
16	25/11/2021	59.17	24.46	9.76	18.67	0.26	ND*
17	29/11/2021	76.75	35.45	16.96	29.48	0.32	ND*
18	02/12/2021	73.42	36.75	17.64	29.32	0.40	ND*
19	06/12/2021	60.22	27.93	10.84	19.13	0.25	ND*
20	09/12/2021	78.63	40.14	19.43	33.51	0.56	ND*
21	13/12/2021	78.03	41.85	20.31	34.26	0.61	ND*
22	16/12/2021	76.72	39.55	16.12	30.97	0.46	ND*
23	20/12/2021	58.11	26.47	8.76	17.62	0.19	ND*
24	23/12/2021	75.76	38.26	15.94	29.82	0.38	ND*
25	27/12/2021	61.81	29.39	13.27	22.74	0.29	ND*
26	30/12/2021	67.32	30.73	14.55	23.48	0.31	ND*
27	03/01/2022	60.22	27.97	10.83	19.14	0.24	ND*
28	06/01/2022	73.41	36.79	17.66	29.35	0.38	ND*
29	10/01/2022	78.62	40.18	19.46	33.56	0.54	ND*
30	13/01/2022	61.83	29.35	13.24	22.74	0.26	ND*
31	17/01/2022	76.73	39.59	16.14	30.95	0.50	ND*
32	20/01/2022	81.52	41.89	20.35	34.26	0.61	ND*
33	24/01/2022	67.31	30.69	14.60	23.45	0.32	ND*
34	27/01/2022	58.11	26.47	8.75	17.62	0.19	ND*
35	31/01/2022	75.73	38.26	15.93	29.83	0.42	ND*
36	03/02/2022	63.22	30.94	11.85	20.15	0.26	ND*



<b>37</b>	<b>07/02/2022</b>	76.42	39.76	18.64	30.37	0.40	ND*
<b>38</b>	<b>10/02/2022</b>	81.61	43.15	20.43	34.55	0.56	ND*
<b>39</b>	<b>14/02/2022</b>	64.83	32.36	14.26	23.78	0.27	ND*
<b>40</b>	<b>17/02/2022</b>	78.72	41.22	16.95	30.84	0.52	ND*
<b>41</b>	<b>21/02/2022</b>	84.52	44.86	21.36	35.24	0.63	ND*
<b>42</b>	<b>24/02/2022</b>	70.34	33.66	15.53	24.44	0.34	ND*
<b>43</b>	<b>28/02/2022</b>	61.11	29.43	9.73	18.67	0.22	ND*
<b>44</b>	<b>03/03/2022</b>	80.83	42.93	20.46	34.36	0.58	ND*
<b>45</b>	<b>07/03/2022</b>	75.64	35.75	16.23	28.17	0.46	ND*
<b>46</b>	<b>10/03/2022</b>	63.44	29.12	10.86	22.73	0.25	ND*
<b>47</b>	<b>14/03/2022</b>	71.22	33.54	15.66	27.56	0.42	ND*
<b>48</b>	<b>17/03/2022</b>	82.74	43.35	21.34	35.27	0.60	ND*
<b>49</b>	<b>21/03/2022</b>	66.51	32.83	14.13	26.98	0.36	ND*
<b>50</b>	<b>24/03/2022</b>	59.34	26.66	8.95	20.85	0.21	ND*
<b>51</b>	<b>28/03/2022</b>	65.91	31.46	12.56	25.46	0.30	ND*
<b>52</b>	<b>31/03/2022</b>	78.14	36.26	19.75	31.67	0.52	ND*

ND\*: - Not Detected; Detection Limit: Hydrocarbon as CH<sub>4</sub> (µg/m<sup>3</sup>): 50

## **CHAPTER – 2**

### **SEA WATER AND SEA SEDIMENTS MONITORING MONITORING PERIOD: OCTOBER-2021 TO MARCH-2022**

## Results of Sea water Monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			(Near South Jetty) – South Side					
GPS Location			18°16'34.8384" N 72°58'11.7516" E					
Date of sampling			28/10/2021		26/11/2021		20/12/2021	
			Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	7.99	7.90	7.45	7.85	7.92	7.87
2	Temperature	°C	29.5	29.3	29.6	29.5	29.0	29.2
3	Total Suspended Solids	mg/L	49	41	39	34	43	36
4	BOD (3 Days @ 27 °C)	mg/L	2.40	Not Detected	2.60	Not Detected	2.34	Not Detected
5	Dissolved Oxygen	mg/L	5.95	5.80	6.00	5.80	5.95	5.80
6	Salinity	ppt	26.42	27.53	26.85	27.64	27.28	28.64
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
8	Nitrate as NO <sub>3</sub>	μmol/L	2.97	2.70	2.89	2.63	2.64	2.51
9	Nitrite as NO <sub>2</sub>	μmol/L	0.73	0.56	0.93	0.81	0.83	0.70
10	Ammonical Nitrogen as NH <sub>3</sub>	μmol/L	2.39	2.27	2.47	2.32	2.24	2.18
11	Phosphates as PO <sub>4</sub>	μmol/L	2.17	2.06	2.28	2.19	2.18	2.06
12	Total Nitrogen	μmol/L	6.09	5.53	6.29	5.79	5.71	5.39
13	Petroleum Hydrocarbon	μg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
14	Total Dissolved Solids	mg/L	28074	29126	28502	29236	28780	30214
15	COD	mg/L	10.5	Not Detected	13.2	9.3	11.5	8.4
16	Phytoplankton							
16.1	Chlorophyll	mg/m <sup>3</sup>	2.51	2.20	2.54	2.09	2.44	2.18
16.2	Phaeophytin	mg/m <sup>3</sup>	0.42	0.25	0.38	0.44	0.47	0.34
16.3	Cell Count	No,x 10 <sup>3</sup> /L	129	102	156	98	170	106
16.4	Name of Group Number and name of group species of each group	--	Nitzchaia sp. Chaetoveros a sp. Thallasione ma sp. Skeletonem a sp. Amphiprora sp.	Pleurosigma sp. Peridinium sp. Navicula sp. Synedra sp.	Thalassiosira sp. Coscinodiscus sp. Cyclotella sp. Skeletonema sp.	Nitzchaia sp. Gymnodium sp. Peridinium sp.	Coscinodiscus sp. Cyclotella sp. Thallasiosira sp. Synedra sp. Skeletonema sp.	Nitzschia sp. Gymnodium sp. Navicula sp. Guinardia sp.
17	Zooplanktons							
17.1	Abundance (Population)	Nox10 <sup>3</sup> /100m <sup>3</sup>	29		34		28	
17.2	Name of Group Number and name of group species of each group	--	Copepods Gastropods Decapods		Copepods Polychaetes Bivalves		Mysids Isopods Polychaetes Gastropods	
17.3	Total Biomass	mL/100 m <sup>3</sup>	2.85		3.35		2.55	
18	Microbiological Parameters							

18.1	Total Bacterial Count	CFU/mL	$2.1 \times 10^6$	$1.7 \times 10^5$	$2.1 \times 10^4$	$1.7 \times 10^5$	$3.6 \times 10^4$	$5.8 \times 10^5$
18.2	Total Coliform	/mL	Present	Present	Present	Present	Present	Present
18.3	E.coli	/mL	Present	Present	Present	Present	Present	Present
18.4	Enterococcus species	/mL	$5.1 \times 10^2$	$4.8 \times 10^2$	$5.7 \times 10^2$	$6.2 \times 10^2$	$3.8 \times 10^3$	$1.9 \times 10^4$
18.5	Salmonella species	/mL	Present	Present	Present	Present	Present	Present
18.6	Shigella species	/mL	Present	Present	Present	Present	Present	Present
18.7	Vibrio species	/mL	Present	Present	Present	Present	Present	Present



## Results of Sea water Monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			(Near South Jetty) – South Side					
GPS Location			18°16'34.8384" N 72°58'11.7516" E					
Date of sampling			21/01/2022		28/02/2022		24/03/2022	
			Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	7.96	7.87	8.12	8.06	7.98	7.91
2	Temperature	°C	28.8	28.6	29.7	29.8	30.2	30.0
3	Total Suspended Solids	mg/L	42	34	42	37	48	39
4	BOD (3 Days @ 27 °C)	mg/L	2.20	Not Detected	2.90	Not Detected	3.32	Not Detected
5	Dissolved Oxygen	mg/L	5.95	5.85	6.00	5.95	5.90	5.80
6	Salinity	ppt	26.48	26.94	27.36	28.12	27.62	27.94
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
8	Nitrate as NO <sub>3</sub>	μmol/L	2.43	2.35	2.27	2.19	2.97	2.8
9	Nitrite as NO <sub>2</sub>	μmol/L	0.58	0.49	0.68	0.53	0.83	0.75
10	Ammonical Nitrogen as NH <sub>3</sub>	μmol/L	2.38	2.29	2.31	2.25	2.54	2.39
11	Phosphates as PO <sub>4</sub>	μmol/L	1.87	1.75	2.07	1.88	2.29	2.16
12	Total Nitrogen	μmol/L	5.39	5.13	5.26	4.97	6.34	5.94
13	Petroleum Hydrocarbon	μg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
14	Total Dissolved Solids	mg/L	27814	28210	28584	29246	28769	29078
15	COD	mg/L	9.84	Not Detected	11.30	Not Detected	15.13	9.1
16	Phytoplankton							
16.1	Chlorophyll	mg/m <sup>3</sup>	2.34	2.18	2.32	2.12	2.42	2.26
16.2	Phaeophytin	mg/m <sup>3</sup>	0.69	0.21	0.59	0.41	0.66	0.37
16.3	Cell Count	No,x 10 <sup>3</sup> /L	190	116	178	116	152	102
16.4	Name of Group Number and name of group species of each group	--	Coscinodiscus sp. Skeletonema sp. Thalassiosira sp. Scenedesmus sp.	Navicula sp. Synedra sp. Guinardia sp. Nitzschia sp.	Thalassiosira sp. Cheatocerous sp. Coscinodiscus sp. Skeletonema sp.	Navicula sp. Pleurosigma sp. Synedra sp. Nitzschia sp.	Thalassiosira sp. Guinardia sp. Coscinodiscus sp. Peridinium sp.	Skeletonema sp. Synedra sp. Pleurosigma sp. Nitzschia sp.
17	Zooplanktons							
17.1	Abundance (Population)	Nox10 <sup>3</sup> /100m <sup>3</sup>	26		24		20	
17.2	Name of Group Number and name of group species of each group	--	Gastropods Copepods Chaetognathes Copepods		Gastropods Chaetognathes Decapods		Gastropods Decapods Polychaetes Isopods	
17.3	Total Biomass	mL/100 m <sup>3</sup>	2.55		2.25		2.05	
18	Microbiological Parameters							

18.1	Total Bacterial Count	CFU/mL	$2.9 \times 10^6$	$1.8 \times 10^6$	$1.4 \times 10^5$	$3.7 \times 10^4$	$2.7 \times 10^5$	$1.9 \times 10^4$
18.2	Total Coliform	/mL	Present	Present	Present	Present	Present	Present
18.3	E.coli	/mL	Present	Present	Present	Present	Present	Present
18.4	Enterococcus species	/mL	$7.3 \times 10^2$	$9.0 \times 10^2$	$9.1 \times 10^2$	$7.4 \times 10^2$	$9.3 \times 10^2$	$6.7 \times 10^2$
18.5	Salmonella species	/mL	Present	Present	Present	Present	Present	Present
18.6	Shigella species	/mL	Present	Present	Present	Present	Present	Present
18.7	Vibrio species	/mL	Present	Present	Present	Present	Present	Present

## Results of Sea water Monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			(Near North Jetty) –North Side					
GPS Location			18°16'54.6276" N 72°59'0.0816" E					
Date of sampling			28/10/2021		26/11/2021		20/12/2021	
			Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	7.93	7.89	7.95	7.90	7.97	7.91
2	Temperature	°C	29.5	29.4	29.6	29.4	29.3	29.4
3	Total Suspended Solids	mg/L	47	42	43	37	51	45
4	BOD (3 Days @ 27 °C)	mg/L	2.5	Not Detected	2.4	Not Detected	2.29	Not Detected
5	Dissolved Oxygen	mg/L	5.95	5.75	5.95	5.75	5.95	5.85
6	Salinity	ppt	23.64	27.16	24.86	26.94	27.4	28.92
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
8	Nitrate as NO <sub>3</sub>	μmol/L	2.87	2.79	2.67	2.51	2.57	2.48
9	Nitrite as NO <sub>2</sub>	μmol/L	0.75	0.63	0.86	0.79	0.91	0.86
10	Ammonical Nitrogen as NH <sub>3</sub>	μmol/L	2.48	2.39	2.31	2.20	2.17	2.08
11	Phosphates as PO <sub>4</sub>	μmol/L	2.57	2.45	2.19	2.03	1.99	1.92
12	Total Nitrogen	μmol/L	6.10	5.81	5.84	5.50	5.65	5.42
13	Petroleum Hydrocarbon	μg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
14	Total Dissolved Solids	mg/L	25398	28782	26589	28603	28560	30446
15	COD	mg/L	10.64	Not Detected	12.30	8.70	11.68	8.14
16	<b>Phytoplankton</b>							
16.1	Chlorophyll	mg/m <sup>3</sup>	2.34	2.28	2.42	2.21	2.58	2.25
16.2	Phaeophytin	mg/m <sup>3</sup>	0.69	0.12	0.61	0.19	0.45	0.15
16.3	Cell Count	No.x 10 <sup>3</sup> /L	142	106	138	92	178	110
16.4	Name of Group Number and name of group species of each group	--	Nitzschia sp. Thalassione ma sp. Skeletonema sp. Coscinodiscus sp. Cyclotella sp.	Pleurosigma sp. Synedra sp. Peridinium sp. Navicula sp.	Peridinium sp. Thalassiosira sp. Asterionella sp. Biddulphia sp. Guinardia sp.	Navicula sp. Nitzschia sp. Synedra sp. Pleurosigma sp.	Cyclotella sp. Skeletonema sp. Chaetoceros sp. Thalassione ma sp.	Nitzschia sp. Navicula sp. Pleurosigma sp. Thalassiosira sp.
17	<b>Zooplanktons</b>							
17.1	Abundance (Population)	Nox10 <sup>3</sup> /100m <sup>3</sup>	32		35		29	
17.2	Name of Group Number and name of group species of each group	--	Chaetognathes Gastropods Copepods		Polychaetes Copepods Lucifer Siphonophores		Polychaetes Gastropods Isopods Copepods	
17.3	Total Biomass	mL/100 m <sup>3</sup>	3.10		3.40		2.85	

18	<b>Microbiological Parameters</b>							
18.1	Total Bacterial Count	CFU/mL	$2.6 \times 10^6$	$1.5 \times 10^5$	$1.9 \times 10^6$	$2.1 \times 10^5$	$2.1 \times 10^6$	$2.6 \times 10^6$
18.2	Total Coliform	/mL	Present	Present	Present	Present	Present	Present
18.3	E.coli	/mL	Present	Present	Present	Present	Present	Present
18.4	Enterococcus species	/mL	$5.2 \times 10^2$	$4.5 \times 10^2$	$6.1 \times 10^2$	$6.7 \times 10^2$	$8.2 \times 10^2$	$4.4 \times 10^4$
18.5	Salmonella species	/mL	Present	Present	Present	Present	Present	Present
18.6	Shigella species	/mL	Present	Present	Present	Present	Present	Present
18.7	Vibrio species	/mL	Present	Present	Present	Present	Present	Present



## Results of Sea water Monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			(Near North Jetty) –North Side					
GPS Location			18°16'54.6276" N 72°59'0.0816" E					
Date of sampling			21/01/2022		28/02/2022		24/03/2022	
			Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	7.96	7.87	8.09	8.01	7.92	7.9
2	Temperature	°C	28.8	28.6	29.5	29.3	30.3	30.0
3	Total Suspended Solids	mg/L	42	34	47	31	38	34
4	BOD (3 Days @ 27 °C)	mg/L	2.20	Not Detected	2.96	Not Detected	3.18	Not Detected
5	Dissolved Oxygen	mg/L	5.95	5.85	5.95	5.80	5.95	5.80
6	Salinity	ppt	26.48	26.94	27.18	27.56	27.56	27.99
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
8	Nitrate as NO <sub>3</sub>	μmol/L	2.43	2.35	2.34	2.28	2.83	2.69
9	Nitrite as NO <sub>2</sub>	μmol/L	0.58	0.49	0.61	0.53	0.75	0.71
10	Ammonical Nitrogen as NH <sub>3</sub>	μmol/L	2.38	2.29	2.79	2.64	2.54	2.38
11	Phosphates as PO <sub>4</sub>	μmol/L	1.87	1.75	2.28	2.17	2.31	2.24
12	Total Nitrogen	μmol/L	5.39	5.13	5.74	5.45	6.16	5.78
13	Petroleum Hydrocarbon	μg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
14	Total Dissolved Solids	mg/L	27814	28210	28810	29213	28739	29120
15	COD	mg/L	9.84	Not Detected	13.68	Not Detected	14.83	9.37
16	<b>Phytoplankton</b>							
16.1	Chlorophyll	mg/m <sup>3</sup>	2.34	2.18	2.24	2.17	2.52	2.34
16.2	Phaeophytin	mg/m <sup>3</sup>	0.69	0.21	0.79	0.23	0.49	0.63
16.3	Cell Count	No.x 10 <sup>3</sup> /L	190	116	184	122	170	108
16.4	Name of Group Number and name of group species of each group	--	Coscinodiscus sp. Skeletonema sp. Thallasiosira sp. Scenedesmus sp.	Navicula sp. Synedra sp. Guinardia sp. Nitzschia sp.	Cheatoceous sp. Thallasiosira sp. Skeletonema sp. Coscinodiscus sp.	Rhizosolenia sp. Navicula sp. Nitzschia sp. Synedra sp.	Chaetognathus sp. Skeletonema sp. Coscinodiscus sp. Nitzschia sp. Thallasiosira sp.	Rhizosolenia sp. Pleurosigma sp. Nitzschia sp. Synedra sp.
17	<b>Zooplanktons</b>							
17.1	Abundance (Population)	Nox10 <sup>3</sup> /100m <sup>3</sup>	26		23		23	
17.2	Name of Group Number and name of group species of each group	--	Gastropods Copepods Chaetognathes Copepods		Decapods Copepods Ctenophores		Polychaetes Gastropods Amphipods Copepods	
17.3	Total Biomass	mL/100 m <sup>3</sup>	2.55		2.15		2.20	

18	<b>Microbiological Parameters</b>							
18.1	Total Bacterial Count	CFU/mL	$2.9 \times 10^6$	$1.8 \times 10^6$	$3.1 \times 10^6$	$1.7 \times 10^5$	$1.7 \times 10^6$	$2.4 \times 10^5$
18.2	Total Coliform	/mL	Present	Present	Present	Present	Present	Present
18.3	E.coli	/mL	Present	Present	Present	Present	Present	Present
18.4	Enterococcus species	/mL	$7.3 \times 10^2$	$9.0 \times 10^2$	$8.2 \times 10^2$	$6.8 \times 10^2$	$7.8 \times 10^2$	$6.1 \times 10^2$
18.5	Salmonella species	/mL	Present	Present	Present	Present	Present	Present
18.6	Shigella species	/mL	Present	Present	Present	Present	Present	Present
18.7	Vibrio species	/mL	Present	Present	Present	Present	Present	Present

## Results of Sea Sediment Monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			(Near South Jetty) – South Side					
GPS Location			18°16'34.8384" N 72°58'11.7516" E					
Date of sampling			28/10/2021	26/11/2021	20/12/2021	21/01/2022	28/02/2022	24/03/2022
1	Organic Matter	%	1.52	1.38	1.58	1.45	1.54	1.39
2	Phosphorus as P	µg/g	0.36	0.27	0.25	0.29	0.31	0.27
3	Texture	--	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
5	<b>Heavy Metals</b>							
5.1	Aluminum as Al	%	6.73	6.42	6.32	6.74	6.82	6.58
5.2	Total Chromium as Cr+3	µg/g	59.24	41.93	55.64	63.81	72.96	61.90
5.3	Manganese as Mn	µg/g	918	876	907	859	903	813
5.4	Iron as Fe	%	6.28	6.47	6.52	6.84	6.54	6.69
5.5	Nickel as Ni	µg/g	37.19	29.8	33.81	27.56	32.78	21.37
5.6	Copper as Cu	µg/g	81.24	73.5	67.49	78.29	83.46	70.93
5.7	Zinc as Zn	µg/g	93.40	82.37	72.50	69.47	72.39	78.59
5.8	Lead as Pb	µg/g	1.36	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	<b>Benthic Organisms</b>							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Gastropods Crustaceans Polychaetes	Gastropods Polychaetes Decapods	Gastropods Amphipoda Bivalves	Gastropods Polychaetes Amphipods	Gastropods Polychaetes Crustaceans	Amphiods Polychaetes Crustaceans
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	Nematodes	Nematodes	Nematodes Foraminifera ns	Nematodes	Nematodes	Foraminifera ns
6.3	Population	no/m <sup>2</sup>	382	353	324	380	439	441

## Results of Sea Sediment Monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			(Near North Jetty) –North Side					
GPS Location			18°16'54.6276" N 72°59'0.0816" E					
Date of sampling			28/10/2021	26/11/2021	20/12/2021	21/01/2022	28/02/2022	24/03/2022
1	Organic Matter	%	1.64	1.53	1.76	1.63	1.73	1.90
2	Phosphorus as P	µg/g	0.29	0.32	0.29	0.35	0.32	0.36
3	Texture	--	Clay	Clay	Clay	Clay	Clay	Clay
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
5	<b>Heavy Metals</b>							
5.1	Aluminum as Al	%	6.69	6.52	6.48	6.62	6.13	6.49
5.2	Total Chromium as Cr+3	µg/g	57.42	45.73	51.24	59.73	43.79	47.83
5.3	Manganese as Mn	µg/g	890	847	903	864	918	834
5.4	Iron as Fe	%	6.34	6.29	6.54	6.75	6.52	6.67
5.5	Nickel as Ni	µg/g	31.25	25.6	29.28	32.68	37.94	27.56
5.6	Copper as Cu	µg/g	73.98	68.24	77.4	79.41	85.29	59.84
5.7	Zinc as Zn	µg/g	89.26	79.53	61.32	66.32	73.15	58.26
5.8	Lead as Pb	µg/g	2.14	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	<b>Benthic Organisms</b>							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Gastropods Decapods Crustaceans	Gastropods Crustaceans Bivalves Ostracods	Gastropods Amphipoda Polychaetes	Polychaetes Amphipods Ostracodes	Gastropods Polychaetes Crustaceans Amphiods	Gastropods Amphiods Polychaetes
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	Nematodes	----	Nematodes	----	Foraminifera ns	Nematodes
6.3	Population	no/m <sup>2</sup>	324	380	294	352	412	439



## **CHAPTER – 3**

### **GROUND WATER QUALITY MONITORING**

**MONITORING PERIOD: OCTOBER-2021 TO MARCH-2022**

## Results of Ground Water Quality Monitoring

Sr. No.	Parameters	Unit	Result		
Sampling Location			Main Borewell-South Side		
Date of sampling			28/10/2021	26/11/2021	20/12/2021
1	Colour	Hazen	2	2	3
2	Odour	--	Agreeable	Agreeable	Agreeable
3	Taste	--	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.10	0.12	0.06
5	pH	--	7.73	7.62	7.79
6	Total Hardness	mg/L	70	53	65
7	Iron	mg/L	<0.05	<0.05	<0.05
8	Chloride as Cl	mg/L	24	21	24
9	Fluorides as F	mg/L	<0.05	<0.05	<0.05
10	Total Dissolved Solids	mg/L	186	173	185
11	Calcium as Ca	mg/L	22.4	15.2	16.8
12	Magnesium as Mg	mg/L	3.36	3.60	5.52
13	Copper	mg/L	<0.02	<0.02	<0.02
14	Manganese as Mn	mg/L	< 0.01	< 0.01	< 0.01
15	Sulphate as SO4	mg/L	7.62	6.94	8.60
16	Nitrate Nitrogen as NO3	mg/L	<0.01	<0.01	<0.01
17	Mercury as Hg	mg/L	< 0.0006	< 0.0006	< 0.0006
18	Cadmium as Cd	mg/L	< 0.002	< 0.002	< 0.002
19	Selenium as Se	mg/L	< 0.002	< 0.002	< 0.002
20	Arsenic as As	mg/L	< 0.005	< 0.005	< 0.005
21	Cyanide as CN	mg/L	< 0.01	< 0.01	< 0.01
22	Lead as Pb	mg/L	< 0.005	< 0.005	< 0.005
23	Zinc as Zn	mg/L	< 0.05	< 0.05	< 0.05
24	Anionic Detergents as MBAS	mg/L	< 0.1	< 0.1	< 0.1
25	Hexavalent Chromium as Cr+6	mg/L	< 0.05	< 0.05	< 0.05
26	Oil & Grease (Mineral Oil)	mg/L	<0.1	<0.1	<0.1

27	Alkalinity	mg/L	103	110	105
28	Aluminum	mg/L	< 0.01	< 0.01	< 0.01
29	Boron	mg/L	< 0.1	< 0.1	< 0.1

**A Microbiological Parameters**

30	Coliforms	/100 ml	Absent	Absent	Absent
31	Escherichia coli	/100 ml	Absent	Absent	Absent

**B Pesticides**

32.1	Alachlor	µg/L	<0.1	<0.1	<0.1
32.2	Atrazine	µg/L	<0.1	<0.1	<0.1
32.3	Aldrin	µg/L	<0.01	<0.01	<0.01
32.4	Dieldrin	µg/L	<0.01	<0.01	<0.01
32.5	Alpha HCH	µg/L	<0.001	<0.001	<0.001
32.6	Beta HCH	µg/L	<0.01	<0.01	<0.01
32.7	Butachlor	µg/L	<0.1	<0.1	<0.1
32.8	Chlorpyrifos	µg/L	<0.1	<0.1	<0.1
32.9	Delta HCH	µg/L	<0.01	<0.01	<0.01
32.10	2,4- D	µg/L	<0.1	<0.1	<0.1
32.11	o,p DDT	µg/L	<0.1	<0.1	<0.1
32.12	p,p DDT	µg/L	<0.1	<0.1	<0.1
32.13	o,p DDE	µg/L	<0.1	<0.1	<0.1
32.14	p,p DDE	µg/L	<0.1	<0.1	<0.1
32.15	o,p DDD	µg/L	<0.1	<0.1	<0.1
32.16	p,p DDD	µg/L	<0.1	<0.1	<0.1
32.17	Alpha Endosulfan	µg/L	<0.1	<0.1	<0.1
32.18	Beta Endosulfan	µg/L	<0.1	<0.1	<0.1
32.19	Endosulfansulphate	µg/L	<0.1	<0.1	<0.1
32.20	Ethion	µg/L	<0.1	<0.1	<0.1
32.21	Gamma – HCH (Lindane)	µg/L	<0.1	<0.1	<0.1
32.22	Isoproturon	µg/L	<0.1	<0.1	<0.1
32.23	Malathion	µg/L	<0.1	<0.1	<0.1

32.24	Methyl parathion	µg/L	<0.1	<0.1	<0.1
32.25	Monocrotophos	µg/L	<0.1	<0.1	<0.1
32.26	Phorate	µg/L	<0.1	<0.1	<0.1
33	Phenolic compounds	mg/L	< 0.0005	< 0.0005	< 0.0005
34	Residual Chlorine	mg/L	< 0.1	< 0.1	< 0.1



## Results of Ground Water Quality Monitoring

SR. NO.	PARAMETERS	UNIT	RESULT		
Sampling Location			Main Borewell-South Side		
Date of sampling			21/01/2022	28/02/2022	24/03/2022
1	Colour	Hazen	4	3	4
2	Odour	--	Agreeable	Agreeable	Agreeable
3	Taste	--	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.09	0.12	0.13
5	pH	--	7.53	7.69	7.78
6	Total Hardness	mg/L	54	62	71
7	Iron	mg/L	<0.05	<0.05	<0.05
8	Chloride as Cl	mg/L	21.49	24.90	27.00
9	Fluorides as F	mg/L	<0.05	<0.05	<0.05
10	Total Dissolved Solids	mg/L	164	172	183
11	Calcium as Ca	mg/L	14	15.2	17.6
12	Magnesium as Mg	mg/L	4.56	5.76	6.48
13	Copper	mg/L	<0.02	<0.02	<0.02
14	Manganese as Mn	mg/L	< 0.01	< 0.01	< 0.01
15	Sulphate as SO4	mg/L	7.74	6.82	7.28
16	Nitrate Nitrogen as NO3	mg/L	<0.01	<0.01	<0.01
17	Mercury as Hg	mg/L	< 0.0006	< 0.0006	< 0.0006
18	Cadmium as Cd	mg/L	< 0.002	< 0.002	< 0.002
19	Selenium as Se	mg/L	< 0.002	< 0.002	< 0.002
20	Arsenic as As	mg/L	< 0.005	< 0.005	< 0.005
21	Cyanide as CN	mg/L	< 0.01	< 0.01	< 0.01
22	Lead as Pb	mg/L	< 0.005	< 0.005	< 0.005
23	Zinc as Zn	mg/L	< 0.05	< 0.05	< 0.05
24	Anionic Detergents as MBAS	mg/L	< 0.1	< 0.1	< 0.1
25	Hexavalent Chromium as Cr+6	mg/L	< 0.05	< 0.05	< 0.05
26	Oil & Grease (Mineral Oil)	mg/L	<0.1	<0.1	<0.1

27	Alkalinity	mg/L	98	109	113
28	Aluminum	mg/L	< 0.01	< 0.01	< 0.01
29	Boron	mg/L	< 0.1	< 0.1	< 0.1

**A Microbiological Parameters**

30	Coliforms	/100 ml	Absent	Absent	Absent
31	Escherichia coli	/100 ml	Absent	Absent	Absent

**B Pesticides**

32.1	Alachlor	µg/L	<0.1	<0.1	<0.1
32.2	Atrazine	µg/L	<0.1	<0.1	<0.1
32.3	Aldrin	µg/L	<0.01	<0.01	<0.01
32.4	Dieldrin	µg/L	<0.01	<0.01	<0.01
32.5	Alpha HCH	µg/L	<0.001	<0.001	<0.001
32.6	Beta HCH	µg/L	<0.01	<0.01	<0.01
32.7	Butachlor	µg/L	<0.1	<0.1	<0.1
32.8	Chlorpyrifos	µg/L	<0.1	<0.1	<0.1
32.9	Delta HCH	µg/L	<0.01	<0.01	<0.01
32.10	2,4- D	µg/L	<0.1	<0.1	<0.1
32.11	o,p DDT	µg/L	<0.1	<0.1	<0.1
32.12	p,p DDT	µg/L	<0.1	<0.1	<0.1
32.13	o,p DDE	µg/L	<0.1	<0.1	<0.1
32.14	p,p DDE	µg/L	<0.1	<0.1	<0.1
32.15	o,p DDD	µg/L	<0.1	<0.1	<0.1
32.16	p,p DDD	µg/L	<0.1	<0.1	<0.1
32.17	Alpha Endosulfan	µg/L	<0.1	<0.1	<0.1
32.18	Beta Endosulfan	µg/L	<0.1	<0.1	<0.1
32.19	Endosulfansulphate	µg/L	<0.1	<0.1	<0.1
32.20	Ethion	µg/L	<0.1	<0.1	<0.1
32.21	Gamma – HCH (Lindane)	µg/L	<0.1	<0.1	<0.1
32.22	Isoproturon	µg/L	<0.1	<0.1	<0.1
32.23	Malathion	µg/L	<0.1	<0.1	<0.1

32.24	Methyl parathion	µg/L	<0.1	<0.1	<0.1
32.25	Monocrotophos	µg/L	<0.1	<0.1	<0.1
32.26	Phorate	µg/L	<0.1	<0.1	<0.1
33	Phenolic compounds	mg/L	< 0.0005	< 0.0005	< 0.0005
34	Residual Chlorine	mg/L	< 0.1	< 0.1	< 0.1

## **CHAPTER – 4**

### **DRINKING WATER MONITORING**

**MONITORING PERIOD: OCTOBER-2021 TO MARCH-2022**



## Results of Drinking Water quality monitoring

SR. NO.	PARAMETERS	UNIT	RESULT		
Sampling Location		South Side -Office Kitchen Cooler Water			
Date of sampling		28/10/2021	26/11/2021	20/12/2021	
1	Colour	Hazen	3	2	2
2	Odour	--	Agreeable	Agreeable	Agreeable
3	Taste	--	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.13	0.11	0.08
5	pH	--	7.61	7.40	7.49
6	Total Hardness	mg/L	29	30	26
7	Iron	mg/L	<0.05	<0.05	<0.05
8	Chloride as Cl	mg/L	4.0	3.2	2.0
9	Fluorides as F	mg/L	<0.05	<0.05	<0.05
10	Total Dissolved Solids	mg/L	78	69	57
11	Calcium as Ca	mg/L	7.6	4.8	6.0
12	Magnesium as Mg	mg/L	2.40	3.12	2.64
13	Copper	mg/L	<0.03	<0.02	<0.02
14	Manganese as Mn	mg/L	< 0.02	< 0.01	< 0.01
15	Sulphate as SO4	mg/L	2.86	2.54	2.10
16	Nitrate Nitrogen as NO3	mg/L	<0.01	<0.01	<0.01
17	Mercury as Hg	mg/L	< 0.0006	< 0.0006	< 0.0006
18	Cadmium as Cd	mg/L	< 0.002	< 0.002	< 0.002
19	Selenium as Se	mg/L	< 0.002	< 0.002	< 0.002
20	Arsenic as As	mg/L	< 0.005	< 0.005	< 0.005
21	Cyanide as CN	mg/L	< 0.01	< 0.01	< 0.01
22	Lead as Pb	mg/L	< 0.005	< 0.005	< 0.005
23	Zinc as Zn	mg/L	0.37	0.12	0.073
24	Anionic Detergents as MBAS	mg/L	< 0.1	< 0.1	< 0.1
25	Hexavalent Chromium as Cr+6	mg/L	< 0.05	< 0.05	< 0.05
26	Oil & Grease (Mineral Oil)	mg/L	<0.1	<0.1	<0.1

27	Alkalinity	mg/L	24	16	21
28	Aluminum	mg/L	< 0.01	< 0.01	< 0.01
29	Boron	mg/L	< 0.1	< 0.1	< 0.1

**A Microbiological Parameters**

30	Coliforms	/100 ml	Absent	Absent	Absent
31	Escherichia coli	/100 ml	Absent	Absent	Absent

**B Pesticides**

32.1	Alachlor	µg/L	<0.1	<0.1	<0.1
32.2	Atrazine	µg/L	<0.1	<0.1	<0.1
32.3	Aldrin	µg/L	<0.01	<0.01	<0.01
32.4	Dieldrin	µg/L	<0.01	<0.01	<0.01
32.5	Alpha HCH	µg/L	<0.001	<0.001	<0.001
32.6	Beta HCH	µg/L	<0.01	<0.01	<0.01
32.7	Butachlor	µg/L	<0.1	<0.1	<0.1
32.8	Chlorpyrifos	µg/L	<0.1	<0.1	<0.1
32.9	Delta HCH	µg/L	<0.01	<0.01	<0.01
32.10	2,4- D	µg/L	<0.1	<0.1	<0.1
32.11	o,p DDT	µg/L	<0.1	<0.1	<0.1
32.12	p,p DDT	µg/L	<0.1	<0.1	<0.1
32.13	o,p DDE	µg/L	<0.1	<0.1	<0.1
32.14	p,p DDE	µg/L	<0.1	<0.1	<0.1
32.15	o,p DDD	µg/L	<0.1	<0.1	<0.1
32.16	p,p DDD	µg/L	<0.1	<0.1	<0.1
32.17	Alpha Endosulfan	µg/L	<0.1	<0.1	<0.1
32.18	Beta Endosulfan	µg/L	<0.1	<0.1	<0.1
32.19	Endosulfansulphate	µg/L	<0.1	<0.1	<0.1
32.20	Ethion	µg/L	<0.1	<0.1	<0.1
32.21	Gamma – HCH (Lindane)	µg/L	<0.1	<0.1	<0.1
32.22	Isoproturon	µg/L	<0.1	<0.1	<0.1
32.23	Malathion	µg/L	<0.1	<0.1	<0.1

32.24	Methyl parathion	µg/L	<0.1	<0.1	<0.1
32.25	Monocrotophos	µg/L	<0.1	<0.1	<0.1
32.26	Phorate	µg/L	<0.1	<0.1	<0.1
33	Phenolic compounds	mg/L	< 0.0005	< 0.0005	< 0.0005
34	Residual Chlorine	mg/L	< 0.1	< 0.1	< 0.1

## Results of Drinking Water quality monitoring

Sr. No.	Parameters	Unit	Result		
Sampling Location		South Side -Office Kitchen Cooler Water			
Date of sampling		21/01/2022	28/02/2022	24/03/2022	
1	Colour	Hazen	2	3	3
2	Odour	--	Agreeable	Agreeable	Agreeable
3	Taste	--	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.09	0.12	0.08
5	pH	--	7.37	7.54	7.41
6	Total Hardness	mg/L	24	21	18
7	Iron	mg/L	<0.05	<0.05	<0.05
8	Chloride as Cl	mg/L	3.00	4.99	2.99
9	Fluorides as F	mg/L	<0.05	<0.05	<0.05
10	Total Dissolved Solids	mg/L	51	58	60
11	Calcium as Ca	mg/L	4.4	3.6	4.0
12	Magnesium as Mg	mg/L	3.12	2.88	1.92
13	Copper	mg/L	<0.02	<0.02	<0.02
14	Manganese as Mn	mg/L	< 0.01	< 0.01	< 0.01
15	Sulphate as SO4	mg/L	2.28	3.19	2.79
16	Nitrate Nitrogen as NO3	mg/L	<0.01	<0.01	<0.01
17	Mercury as Hg	mg/L	< 0.0006	< 0.0006	< 0.0006
18	Cadmium as Cd	mg/L	< 0.002	< 0.002	< 0.002
19	Selenium as Se	mg/L	< 0.002	< 0.002	< 0.002
20	Arsenic as As	mg/L	< 0.005	< 0.005	< 0.005
21	Cyanide as CN	mg/L	< 0.01	< 0.01	< 0.01
22	Lead as Pb	mg/L	< 0.005	< 0.005	< 0.005
23	Zinc as Zn	mg/L	< 0.05	< 0.05	< 0.05
24	Anionic Detergents as MBAS	mg/L	< 0.1	< 0.1	< 0.1
25	Hexavalent Chromium as Cr+6	mg/L	< 0.05	< 0.05	< 0.05
26	Oil & Grease (Mineral Oil)	mg/L	<0.1	<0.1	<0.1

27	Alkalinity	mg/L	19	23	21
28	Aluminum	mg/L	< 0.01	< 0.01	< 0.01
29	Boron	mg/L	< 0.1	< 0.1	< 0.1

**A Microbiological Parameters**

30	Coliforms	/100 ml	Absent	Absent	Absent
31	Escherichia coli	/100 ml	Absent	Absent	Absent

**B Pesticides**

32.1	Alachlor	µg/L	<0.1	<0.1	<0.1
32.2	Atrazine	µg/L	<0.1	<0.1	<0.1
32.3	Aldrin	µg/L	<0.01	<0.01	<0.01
32.4	Dieldrin	µg/L	<0.01	<0.01	<0.01
32.5	Alpha HCH	µg/L	<0.001	<0.001	<0.001
32.6	Beta HCH	µg/L	<0.01	<0.01	<0.01
32.7	Butachlor	µg/L	<0.1	<0.1	<0.1
32.8	Chlorpyrifos	µg/L	<0.1	<0.1	<0.1
32.9	Delta HCH	µg/L	<0.01	<0.01	<0.01
32.10	2,4- D	µg/L	<0.1	<0.1	<0.1
32.11	o,p DDT	µg/L	<0.1	<0.1	<0.1
32.12	p,p DDT	µg/L	<0.1	<0.1	<0.1
32.13	o,p DDE	µg/L	<0.1	<0.1	<0.1
32.14	p,p DDE	µg/L	<0.1	<0.1	<0.1
32.15	o,p DDD	µg/L	<0.1	<0.1	<0.1
32.16	p,p DDD	µg/L	<0.1	<0.1	<0.1
32.17	Alpha Endosulfan	µg/L	<0.1	<0.1	<0.1
32.18	Beta Endosulfan	µg/L	<0.1	<0.1	<0.1
32.19	Endosulfansulphate	µg/L	<0.1	<0.1	<0.1
32.20	Ethion	µg/L	<0.1	<0.1	<0.1
32.21	Gamma – HCH (Lindane)	µg/L	<0.1	<0.1	<0.1
32.22	Isoproturon	µg/L	<0.1	<0.1	<0.1
32.23	Malathion	µg/L	<0.1	<0.1	<0.1



32.24	Methyl parathion	µg/L	<0.1	<0.1	<0.1
32.25	Monocrotophos	µg/L	<0.1	<0.1	<0.1
32.26	Phorate	µg/L	<0.1	<0.1	<0.1
33	Phenolic compounds	mg/L	< 0.0005	< 0.0005	< 0.0005
34	Residual Chlorine	mg/L	< 0.1	< 0.1	< 0.1

## Results of Drinking Water quality monitoring

Sr. No.	Parameters	Unit	Result		
Sampling Location		North Side - Office Kitchen Cooler Water			
Date of sampling		28/10/2021	26/11/2021	20/12/2021	
1	Colour	Hazen	2	3	2
2	Odour	--	Agreeable	Agreeable	Agreeable
3	Taste	--	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.12	0.09	0.07
5	pH	--	7.46	7.36	7.53
6	Total Hardness	mg/L	31	24	32
7	Iron	mg/L	<0.05	<0.05	<0.05
8	Chloride as Cl	mg/L	13.0	5.8	3.0
9	Fluorides as F	mg/L	<0.05	<0.05	<0.05
10	Total Dissolved Solids	mg/L	82	73	63
11	Calcium as Ca	mg/L	7.6	5.2	5.6
12	Magnesium as Mg	mg/L	2.88	2.64	4.32
13	Copper	mg/L	<0.02	<0.02	<0.02
14	Manganese as Mn	mg/L	< 0.01	< 0.01	< 0.01
15	Sulphate as SO4	mg/L	<1.0	2.10	2.64
16	Nitrate Nitrogen as NO3	mg/L	<0.01	<0.01	<0.01
17	Mercury as Hg	mg/L	< 0.0006	< 0.0006	< 0.0006
18	Cadmium as Cd	mg/L	< 0.002	< 0.002	< 0.002
19	Selenium as Se	mg/L	< 0.002	< 0.002	< 0.002
20	Arsenic as As	mg/L	< 0.001	< 0.001	< 0.001
21	Cyanide as CN	mg/L	< 0.0001	< 0.0001	< 0.0001
22	Lead as Pb	mg/L	< 0.005	< 0.005	< 0.005
23	Zinc as Zn	mg/L	0.29	0.130	0.068
24	Anionic Detergents as MBAS	mg/L	< 0.1	< 0.1	< 0.1
25	Hexavalent Chromium as Cr+6	mg/L	< 0.05	< 0.05	< 0.05
26	Oil & Grease (Mineral Oil)	mg/L	<0.1	<0.1	<0.1

27	Alkalinity	mg/L	20	14	19
28	Aluminum	mg/L	< 0.01	< 0.01	< 0.01
29	Boron	mg/L	< 0.1	< 0.1	< 0.1

**A Microbiological Parameters**

30	Coliforms	/100 ml	Absent	Absent	Absent
31	Escherichia coli	/100 ml	Absent	Absent	Absent

**B Pesticides**

32.1	Alachlor	µg/L	<0.1	<0.1	<0.1
32.2	Atrazine	µg/L	<0.1	<0.1	<0.1
32.3	Aldrin	µg/L	<0.01	<0.01	<0.01
32.4	Dieldrin	µg/L	<0.01	<0.01	<0.01
32.5	Alpha HCH	µg/L	<0.001	<0.001	<0.001
32.6	Beta HCH	µg/L	<0.01	<0.01	<0.01
32.7	Butachlor	µg/L	<0.1	<0.1	<0.1
32.8	Chlorpyrifos	µg/L	<0.1	<0.1	<0.1
32.9	Delta HCH	µg/L	<0.01	<0.01	<0.01
32.10	2,4- D	µg/L	<0.1	<0.1	<0.1
32.11	o,p DDT	µg/L	<0.1	<0.1	<0.1
32.12	p,p DDT	µg/L	<0.1	<0.1	<0.1
32.13	o,p DDE	µg/L	<0.1	<0.1	<0.1
32.14	p,p DDE	µg/L	<0.1	<0.1	<0.1
32.15	o,p DDD	µg/L	<0.1	<0.1	<0.1
32.16	p,p DDD	µg/L	<0.1	<0.1	<0.1
32.17	Alpha Endosulfan	µg/L	<0.1	<0.1	<0.1
32.18	Beta Endosulfan	µg/L	<0.1	<0.1	<0.1
32.19	Endosulfansulphate	µg/L	<0.1	<0.1	<0.1
32.20	Ethion	µg/L	<0.1	<0.1	<0.1
32.21	Gamma – HCH (Lindane)	µg/L	<0.1	<0.1	<0.1
32.22	Isoproturon	µg/L	<0.1	<0.1	<0.1
32.23	Malathion	µg/L	<0.1	<0.1	<0.1

32.24	Methyl parathion	µg/L	<0.1	<0.1	<0.1
32.25	Monocrotophos	µg/L	<0.1	<0.1	<0.1
32.26	Phorate	µg/L	<0.1	<0.1	<0.1
33	Phenolic compounds	mg/L	< 0.0005	< 0.0005	< 0.0005
34	Residual Chlorine	mg/L	< 0.1	< 0.1	< 0.1

## Results of Drinking Water quality monitoring

Sr. No.	Parameters	Unit	Result		
Sampling Location		North Side - Office Kitchen Cooler Water			
Date of sampling		21/01/2022	28/02/2022	24/03/2022	
1	Colour	Hazen	2	3	3
2	Odour	--	Agreeable	Agreeable	Agreeable
3	Taste	--	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.08	0.11	0.09
5	pH	--	7.40	7.49	7.43
6	Total Hardness	mg/L	29	25	20
7	Iron	mg/L	<0.05	<0.05	<0.05
8	Chloride as Cl	mg/L	2.49	3.99	4.00
9	Fluorides as F	mg/L	<0.05	<0.05	<0.05
10	Total Dissolved Solids	mg/L	54	56	58
11	Calcium as Ca	mg/L	4.8	4.4	4.0
12	Magnesium as Mg	mg/L	4.08	3.36	2.40
13	Copper	mg/L	<0.02	<0.02	<0.02
14	Manganese as Mn	mg/L	< 0.01	< 0.01	< 0.01
15	Sulphate as SO4	mg/L	2.94	3.12	2.7
16	Nitrate Nitrogen as NO3	mg/L	<0.01	<0.01	<0.01
17	Mercury as Hg	mg/L	< 0.0006	< 0.0006	< 0.0006
18	Cadmium as Cd	mg/L	< 0.002	< 0.002	< 0.002
19	Selenium as Se	mg/L	< 0.002	< 0.002	< 0.002
20	Arsenic as As	mg/L	< 0.001	< 0.001	< 0.001
21	Cyanide as CN	mg/L	< 0.0001	< 0.0001	< 0.0001
22	Lead as Pb	mg/L	< 0.005	< 0.005	< 0.005
23	Zinc as Zn	mg/L	< 0.05	< 0.05	< 0.05
24	Anionic Detergents as MBAS	mg/L	< 0.1	< 0.1	< 0.1
25	Hexavalent Chromium as Cr+6	mg/L	< 0.05	< 0.05	< 0.05
26	Oil & Grease (Mineral Oil)	mg/L	<0.1	<0.1	<0.1



27	Alkalinity	mg/L	21	24	22
28	Aluminum	mg/L	< 0.01	< 0.01	< 0.01
29	Boron	mg/L	< 0.1	< 0.1	< 0.1

**A Microbiological Parameters**

30	Coliforms	/100 ml	Absent	Absent	Absent
31	Escherichia coli	/100 ml	Absent	Absent	Absent

**B Pesticides**

32.1	Alachlor	µg/L	<0.1	<0.1	<0.1
32.2	Atrazine	µg/L	<0.1	<0.1	<0.1
32.3	Aldrin	µg/L	<0.01	<0.01	<0.01
32.4	Dieldrin	µg/L	<0.01	<0.01	<0.01
32.5	Alpha HCH	µg/L	<0.001	<0.001	<0.001
32.6	Beta HCH	µg/L	<0.01	<0.01	<0.01
32.7	Butachlor	µg/L	<0.1	<0.1	<0.1
32.8	Chlorpyrifos	µg/L	<0.1	<0.1	<0.1
32.9	Delta HCH	µg/L	<0.01	<0.01	<0.01
32.10	2,4- D	µg/L	<0.1	<0.1	<0.1
32.11	o,p DDT	µg/L	<0.1	<0.1	<0.1
32.12	p,p DDT	µg/L	<0.1	<0.1	<0.1
32.13	o,p DDE	µg/L	<0.1	<0.1	<0.1
32.14	p,p DDE	µg/L	<0.1	<0.1	<0.1
32.15	o,p DDD	µg/L	<0.1	<0.1	<0.1
32.16	p,p DDD	µg/L	<0.1	<0.1	<0.1
32.17	Alpha Endosulfan	µg/L	<0.1	<0.1	<0.1
32.18	Beta Endosulfan	µg/L	<0.1	<0.1	<0.1
32.19	Endosulfansulphate	µg/L	<0.1	<0.1	<0.1
32.20	Ethion	µg/L	<0.1	<0.1	<0.1
32.21	Gamma – HCH (Lindane)	µg/L	<0.1	<0.1	<0.1
32.22	Isoproturon	µg/L	<0.1	<0.1	<0.1
32.23	Malathion	µg/L	<0.1	<0.1	<0.1

32.24	Methyl parathion	µg/L	<0.1	<0.1	<0.1
32.25	Monocrotophos	µg/L	<0.1	<0.1	<0.1
32.26	Phorate	µg/L	<0.1	<0.1	<0.1
33	Phenolic compounds	mg/L	< 0.0005	< 0.0005	< 0.0005
34	Residual Chlorine	mg/L	< 0.1	< 0.1	< 0.1

## **CHAPTER – 5**

### **NOISE LEVEL MONITORING**

**MONITORING PERIOD: OCTOBER-2021 TO MARCH-2022**

**Results of Day Time Noise level monitoring**

<b>October-2021</b>				
<b>Day Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>14/10/2021</b>	<b>14/10/2021</b>	<b>14/10/2021</b>
<b>1</b>	6:00-7:00	51.9	56.9	54.4
<b>2</b>	7:00-8:00	57.5	58.2	54.0
<b>3</b>	8:00-9:00	49.1	61.4	53.5
<b>4</b>	9:00-10:00	57.2	61.1	49.7
<b>5</b>	10:00-11:00	47.0	60.5	57.8
<b>6</b>	11:00-12:00	46.6	60.3	55.4
<b>7</b>	12:00-13:00	55.7	60.7	51.5
<b>8</b>	13:00-14:00	58.7	61.7	49.2
<b>9</b>	14:00-15:00	47.7	60.4	53.2
<b>10</b>	15:00-16:00	51.1	58.5	52.2
<b>11</b>	16:00-17:00	52.8	62.4	53.7
<b>12</b>	17:00-18:00	53.4	59.9	56.6
<b>13</b>	18:00-19:00	46.7	56.5	58.0
<b>14</b>	19:00-20:00	58.4	62.5	54.1
<b>15</b>	20:00-21:00	50.1	58.1	51.3
<b>16</b>	21:00-22:00	54.3	59.1	56.4
<b>Day Time Limit<sup>#</sup></b>		<b>75 dB(A)Leq</b>		

**Results of Night Time Noise level monitoring**

<b>October-2021</b>				
<b>Night Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>14/10/2021 &amp; 15/10/2021</b>	<b>14/10/2021 &amp; 15/10/2021</b>	<b>14/10/2021 &amp; 15/10/2021</b>
<b>1</b>	22:00-23:00	43.1	54.6	46.1
<b>2</b>	23:00-00:00	45.2	52.2	46.9
<b>3</b>	00:00-01:00	43.2	54.5	51.4
<b>4</b>	01:00-02:00	47.0	53.8	48.6
<b>5</b>	02:00-03:00	43.9	52.9	46.6
<b>6</b>	03:00-04:00	43.6	55.6	51.5
<b>7</b>	04:00-05:00	45.0	54.3	51.1
<b>8</b>	05:00-06:00	45.9	54.1	44.6
<b>Night Time Limit<sup>#</sup></b>		<b>70 dB(A)Leq</b>		

Limit<sup>#</sup>: The specified norms as per The Noise Pollution (Regulation and Control) Rules 2000.

**Results of Day Time Noise level monitoring**

<b>November-2021</b>				
<b>Day Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>11/11/2021</b>	<b>11/11/2021</b>	<b>11/11/2021</b>
<b>1</b>	6:00-7:00	53.6	58.5	56.2
<b>2</b>	7:00-8:00	60.4	57.1	55.5
<b>3</b>	8:00-9:00	51.3	63.6	52.1
<b>4</b>	9:00-10:00	58.1	62.5	51.9
<b>5</b>	10:00-11:00	49.2	59.3	59.7
<b>6</b>	11:00-12:00	48.5	58.6	54.3
<b>7</b>	12:00-13:00	58.9	62.3	52.2
<b>8</b>	13:00-14:00	57.2	63.8	51.6
<b>9</b>	14:00-15:00	48.6	62.2	54.5
<b>10</b>	15:00-16:00	53.4	57.7	51.4
<b>11</b>	16:00-17:00	51.8	64.5	55.4
<b>12</b>	17:00-18:00	55.6	60.3	58.7
<b>13</b>	18:00-19:00	49.8	58.4	62.4
<b>14</b>	19:00-20:00	58.2	63.4	53.2
<b>15</b>	20:00-21:00	51.2	61.3	50.5
<b>16</b>	21:00-22:00	56.7	59.8	55.2
<b>Day Time Limit<sup>#</sup></b>		<b>75 dB(A)Leq</b>		

**Results of Night Time Noise level monitoring**

<b>November-2021</b>				
<b>Night Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>11/11/2021 &amp; 12/11/2021</b>	<b>11/11/2021 &amp; 12/11/2021</b>	<b>11/11/2021 &amp; 12/11/2021</b>
<b>1</b>	22:00-23:00	45.6	56.3	48.3
<b>2</b>	23:00-00:00	47.8	54.2	45.4
<b>3</b>	00:00-01:00	44.5	56.6	53.6
<b>4</b>	01:00-02:00	49.4	52.1	50.2
<b>5</b>	02:00-03:00	42.3	53.7	48.4
<b>6</b>	03:00-04:00	45.7	57.3	52.2
<b>7</b>	04:00-05:00	47.3	55.2	54.6
<b>8</b>	05:00-06:00	48.5	53.4	46.7
<b>Night Time Limit<sup>#</sup></b>		<b>70 dB(A)Leq</b>		

Limit<sup>#</sup>: The specified norms as per The Noise Pollution (Regulation and Control) Rules 2000.



**Results of Day Time Noise level monitoring**

<b>December-2021</b>				
<b>Day Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>16/12/2021</b>	<b>16/12/2021</b>	<b>16/12/2021</b>
<b>1</b>	6:00-7:00	61.8	57.7	67.7
<b>2</b>	7:00-8:00	56.5	59.5	55.7
<b>3</b>	8:00-9:00	60.4	57.3	56.1
<b>4</b>	9:00-10:00	60.5	57.9	65.4
<b>5</b>	10:00-11:00	65.9	64.1	64.9
<b>6</b>	11:00-12:00	59.8	65.1	56.9
<b>7</b>	12:00-13:00	63.0	67.1	60.3
<b>8</b>	13:00-14:00	65.6	60.2	66.3
<b>9</b>	14:00-15:00	62.6	58.0	60.8
<b>10</b>	15:00-16:00	59.0	65.3	52.6
<b>11</b>	16:00-17:00	61.6	61.9	68.0
<b>12</b>	17:00-18:00	60.6	68.8	63.1
<b>13</b>	18:00-19:00	62.2	61.5	65.0
<b>14</b>	19:00-20:00	62.4	58.6	63.5
<b>15</b>	20:00-21:00	57.6	62.3	51.8
<b>16</b>	21:00-22:00	57.5	64.5	53.6
<b>Day Time Limit<sup>#</sup></b>		<b>75 dB(A)Leq</b>		

**Results of Night Time Noise level monitoring**

<b>December-2021</b>				
<b>Night Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>16/12/2021 &amp; 17/12/2021</b>	<b>16/12/2021 &amp; 17/12/2021</b>	<b>16/12/2021 &amp; 17/12/2021</b>
<b>1</b>	22:00-23:00	43.4	46.9	46.4
<b>2</b>	23:00-00:00	47.8	46.6	46.7
<b>3</b>	00:00-01:00	44.5	45.3	51.8
<b>4</b>	01:00-02:00	49.4	46.3	44.4
<b>5</b>	02:00-03:00	42.3	47.7	52.0
<b>6</b>	03:00-04:00	45.7	47.2	43.6
<b>7</b>	04:00-05:00	47.3	44.3	50.1
<b>8</b>	05:00-06:00	48.5	46.0	46.2
<b>Night Time Limit<sup>#</sup></b>		<b>70 dB(A)Leq</b>		

Limit<sup>#</sup>: The specified norms as per The Noise Pollution (Regulation and Control) Rules 2000.

**Results of Day Time Noise level monitoring**

<b>January-2022</b>				
<b>Day Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>17/01/2022</b>	<b>17/01/2022</b>	<b>17/01/2022</b>
<b>1</b>	6:00-7:00	59.6	59.5	70.6
<b>2</b>	7:00-8:00	57.3	61.6	58.4
<b>3</b>	8:00-9:00	63.1	53.8	57.5
<b>4</b>	9:00-10:00	58.2	54.1	63.7
<b>5</b>	10:00-11:00	67.8	62.5	66.3
<b>6</b>	11:00-12:00	61.4	62.0	59.1
<b>7</b>	12:00-13:00	63.6	69.3	63.5
<b>8</b>	13:00-14:00	67.4	60.2	67.7
<b>9</b>	14:00-15:00	62.9	56.6	60.8
<b>10</b>	15:00-16:00	57.1	63.2	51.4
<b>11</b>	16:00-17:00	65.7	59.4	71.3
<b>12</b>	17:00-18:00	58.3	70.5	62.6
<b>13</b>	18:00-19:00	60.6	63.8	69.5
<b>14</b>	19:00-20:00	63.4	57.2	65.1
<b>15</b>	20:00-21:00	59.8	64.5	50.3
<b>16</b>	21:00-22:00	61.3	66.4	52.4
<b>Day Time Limit<sup>#</sup></b>		<b>75 dB(A)Leq</b>		

**Results of Night Time Noise level monitoring**

<b>January-2022</b>				
<b>Night Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>17/01/2022 &amp; 18/01/2022</b>	<b>17/01/2022 &amp; 18/01/2022</b>	<b>17/01/2022 &amp; 18/01/2022</b>
<b>1</b>	22:00-23:00	45.2	48.3	45.6
<b>2</b>	23:00-00:00	50.7	45.1	48.5
<b>3</b>	00:00-01:00	42.6	47.8	53.7
<b>4</b>	01:00-02:00	51.3	49.6	46.8
<b>5</b>	02:00-03:00	48.3	51.5	54.3
<b>6</b>	03:00-04:00	45.1	46.3	45.0
<b>7</b>	04:00-05:00	47.8	45.8	52.7
<b>8</b>	05:00-06:00	49.6	47.2	47.4
<b>Night Time Limit<sup>#</sup></b>		<b>70 dB(A)Leq</b>		

Limit<sup>#</sup>: The specified norms as per The Noise Pollution (Regulation and Control) Rules 2000.

**Results of Day Time Noise level monitoring**

<b>February-2022</b>				
<b>Day Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>14/02/2022</b>	<b>14/02/2022</b>	<b>14/02/2022</b>
<b>1</b>	6:00-7:00	63.6	58.9	66.2
<b>2</b>	7:00-8:00	54.1	62.4	60.4
<b>3</b>	8:00-9:00	61.5	55.3	51.6
<b>4</b>	9:00-10:00	57.6	52.1	68.5
<b>5</b>	10:00-11:00	71.8	66.8	70.1
<b>6</b>	11:00-12:00	60.3	61.4	57.4
<b>7</b>	12:00-13:00	65.7	68.3	61.0
<b>8</b>	13:00-14:00	69.4	58.1	69.2
<b>9</b>	14:00-15:00	60.2	55.0	58.4
<b>10</b>	15:00-16:00	58.3	61.7	54.6
<b>11</b>	16:00-17:00	63.0	60.5	66.9
<b>12</b>	17:00-18:00	59.1	65.4	59.8
<b>13</b>	18:00-19:00	57.3	59.9	69.3
<b>14</b>	19:00-20:00	61.6	57.2	61.1
<b>15</b>	20:00-21:00	62.3	66.0	54.7
<b>16</b>	21:00-22:00	55.1	69.6	56.8
<b>Day Time Limit<sup>#</sup></b>		<b>75 dB(A)Leq</b>		

**Results of Night Time Noise level monitoring**

<b>February-2022</b>				
<b>Night Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>14/02/2022 &amp; 15/02/2022</b>	<b>14/02/2022 &amp; 15/02/2022</b>	<b>14/02/2022 &amp; 15/02/2022</b>
<b>1</b>	22:00-23:00	48.5	44.2	50.6
<b>2</b>	23:00-00:00	45.3	41.7	47.8
<b>3</b>	00:00-01:00	41.1	50.3	56.4
<b>4</b>	01:00-02:00	47.4	46.0	45.4
<b>5</b>	02:00-03:00	43.2	54.5	53.7
<b>6</b>	03:00-04:00	50.0	42.4	44.2
<b>7</b>	04:00-05:00	53.6	48.9	56.8
<b>8</b>	05:00-06:00	49.3	51.3	53.4
<b>Night Time Limit<sup>#</sup></b>		<b>70 dB(A)Leq</b>		

Limit<sup>#</sup>: The specified norms as per The Noise Pollution (Regulation and Control) Rules 2000.

**Results of Day Time Noise level monitoring**

<b>March-2022</b>				
<b>Day Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>17/03/2022</b>	<b>17/03/2022</b>	<b>17/03/2022</b>
<b>1</b>	6:00-7:00	57.3	56.4	63.2
<b>2</b>	7:00-8:00	58.4	60.5	54.0
<b>3</b>	8:00-9:00	55.3	51.3	53.6
<b>4</b>	9:00-10:00	59.6	56.9	64.5
<b>5</b>	10:00-11:00	54.1	56.0	63.8
<b>6</b>	11:00-12:00	57.4	60.6	58.7
<b>7</b>	12:00-13:00	56.3	59.1	61.8
<b>8</b>	13:00-14:00	57.0	54.3	61.6
<b>9</b>	14:00-15:00	56.5	51.8	63.9
<b>10</b>	15:00-16:00	53.8	58.3	57.5
<b>11</b>	16:00-17:00	54.2	56.2	65.5
<b>12</b>	17:00-18:00	55.2	60.3	62.8
<b>13</b>	18:00-19:00	55.4	54.4	64.2
<b>14</b>	19:00-20:00	59.5	51.6	61.9
<b>15</b>	20:00-21:00	57.2	58.1	60.9
<b>16</b>	21:00-22:00	59.4	54.8	54.5
<b>Day Time Limit<sup>#</sup></b>		<b>75 dB(A)Leq</b>		

**Results of Night Time Noise level monitoring**

<b>March-2022</b>				
<b>Night Time dB(A)</b>				
<b>SR. NO.</b>	<b>Sampling Time</b>	<b>Near Main Gate Office Area – South Side</b>	<b>Near Jetty (Berth No. - 1) – South Side</b>	<b>Security Main Gate No. 1 – North Side</b>
		<b>17/03/2022 &amp; 18/03/2022</b>	<b>17/03/2022 &amp; 18/03/2022</b>	<b>17/03/2022 &amp; 18/03/2022</b>
<b>1</b>	22:00-23:00	51.5	54.4	47.9
<b>2</b>	23:00-00:00	49.3	50.1	52.5
<b>3</b>	00:00-01:00	48.6	56.8	60.4
<b>4</b>	01:00-02:00	44.2	51.3	53.8
<b>5</b>	02:00-03:00	47.9	53.5	49.7
<b>6</b>	03:00-04:00	55.4	49.8	50.6
<b>7</b>	04:00-05:00	48.1	52.2	60.5
<b>8</b>	05:00-06:00	56.2	45.4	48.1
<b>Night Time Limit<sup>#</sup></b>		<b>70 dB(A)Leq</b>		

Limit<sup>#</sup>: The specified norms as per The Noise Pollution (Regulation and Control) Rules 2000.

**CHAPTER – 6**  
**WEATHER DATA MONITORING**  
**MONITORING PERIOD: OCTOBER-2021 TO MARCH-2022**



Date	Avg wind Speed (m/s)	Temperature (°C)	RH %	Precip. (mm)
01/10/2021	1.58	28.5	79.6	0.25
02/10/2021	1.49	28.9	81.4	0.00
03/10/2021	1.19	29.3	80.9	0.00
04/10/2021	1.80	29.0	81.1	0.00
05/10/2021	1.71	27.5	83.6	0.00
06/10/2021	1.70	28.8	77.1	5.59
07/10/2021	1.78	28.4	79.1	0.00
08/10/2021	1.91	28.9	78.8	0.00
09/10/2021	1.78	29.0	78.0	0.00
10/10/2021	2.01	29.0	75.6	0.00
11/10/2021	1.82	27.8	81.3	6.35
12/10/2021	1.53	28.2	81.7	0.00
13/10/2021	1.55	29.3	79.5	0.00
14/10/2021	1.57	29.6	80.7	0.00
15/10/2021	1.68	30.3	74.0	0.00
16/10/2021	1.62	29.4	71.0	0.00
17/10/2021	1.55	28.9	75.1	0.00
20/10/2021	1.54	29.1	70.8	0.00
21/10/2021	1.08	28.8	69.2	0.00
22/10/2021	1.50	28.7	73.8	0.00
23/10/2021	1.43	28.2	77.1	0.00
24/10/2021	1.08	27.9	75.7	0.00
25/10/2021	1.21	27.9	74.7	0.00
26/10/2021	1.31	28.2	74.3	0.00
27/10/2021	2.51	28.1	68.2	0.00
25/11/2021	1.33	31.1	68.5	1.27
26/11/2021	1.91	28.9	74.3	0.00
27/11/2021	2.02	28.3	73.7	0.00
28/11/2021	2.46	27.7	64.4	0.00
29/11/2021	2.30	27.3	63.5	0.00
30/11/2021	2.08	28.1	66.2	0.00
01/12/2021	2.23	23.9	79.5	37.86
02/12/2021	4.16	24.5	84.0	7.63
03/12/2021	1.26	26.2	81.7	0.00
04/12/2021	1.60	26.6	81.5	0.00
05/12/2021	1.84	26.2	77.9	0.00
06/12/2021	1.88	25.7	74.6	0.00
07/12/2021	2.28	26.8	73.3	0.00
08/12/2021	2.35	26.9	71.3	0.00
09/12/2021	1.89	26.9	71.7	0.00
10/12/2021	2.01	27.2	73.7	0.00
11/12/2021	1.88	27.0	73.2	0.00
12/12/2021	1.74	27.0	72.0	0.00
13/12/2021	1.63	26.7	69.2	0.00
14/12/2021	1.60	25.2	69.2	0.00
15/12/2021	1.60	24.7	74.3	0.00
16/12/2021	1.53	24.7	77.7	0.00
17/12/2021	1.44	25.2	78.4	0.00
18/12/2021	1.77	25.5	73.3	0.00
19/12/2021	2.04	25.4	69.8	0.00

20/12/2021	1.97	25.0	69.7	0.00
21/12/2021	2.06	24.8	71.1	0.00
22/12/2021	1.87	24.5	75.5	0.00
23/12/2021	1.48	24.3	78.2	0.00
24/12/2021	1.46	23.7	80.2	0.00
25/12/2021	1.51	23.6	80.1	0.00
26/12/2021	1.75	23.9	78.1	0.00
27/12/2021	1.68	24.5	78.3	0.00
28/12/2021	1.92	24.2	78.3	0.00
29/12/2021	1.57	23.7	76.3	0.00
30/12/2021	2.38	24.8	71.4	0.00
31/12/2021	2.48	26.3	67.1	0.00
01/01/2022	2.37	26.0	69.2	0.00
02/01/2022	2.19	26.5	71.7	0.00
06/01/2022	1.76	27.8	68.1	0.00
07/01/2022	1.72	24.8	78.5	0.00
08/01/2022	1.64	23.9	82.8	0.00
09/01/2022	1.40	23.2	71.4	0.00
10/01/2022	1.40	21.3	64.0	0.00
11/01/2022	1.83	21.6	73.9	0.00
12/01/2022	1.28	19.7	86.1	0.00
21/01/2022	1.53	25.8	75.9	0.00
22/01/2022	1.79	24.7	78.4	0.00
23/01/2022	1.72	23.5	65.6	0.00
24/01/2022	1.97	20.6	55.6	0.00
25/01/2022	1.74	21.1	62.5	0.00
26/01/2022	1.95	22.6	68.3	0.00
27/01/2022	2.46	23.5	68.3	0.00
28/01/2022	2.74	24.9	59.4	0.00
29/01/2022	2.49	25.1	59.1	0.00
03/02/2022	1.61	26.1	68.2	0.00
04/02/2022	1.59	23.2	73.1	0.00
05/02/2022	1.86	22.7	70.9	0.00
06/02/2022	1.68	24.4	71.6	0.00
07/02/2022	1.74	23.5	79.5	0.00
08/02/2022	1.38	23.3	75.7	1.02
09/02/2022	1.80	23.2	75.3	0.00
10/02/2022	1.98	24.0	73.5	0.00
11/02/2022	3.02	26.4	60.2	0.00
12/02/2022	2.00	25.8	61.6	0.00
13/02/2022	2.06	25.0	69.7	0.00
14/02/2022	2.15	25.3	63.9	0.00
15/02/2022	1.96	23.8	69.5	0.00
16/02/2022	2.16	23.3	75.2	0.51
17/02/2022	1.33	24.4	68.8	0.00
18/02/2022	1.80	24.3	68.5	0.00
19/02/2022	2.27	24.7	69.9	0.00
20/02/2022	1.71	25.2	72.3	0.00
21/02/2022	2.40	24.1	72.2	0.00
22/02/2022	2.33	24.7	70.6	0.00
23/02/2022	2.28	25.1	74.9	0.00
24/02/2022	2.05	25.2	74.5	0.00

<b>25/02/2022</b>	2.19	25.5	71.6	0.00
<b>26/02/2022</b>	2.51	25.5	68.7	0.00
<b>27/02/2022</b>	1.95	25.6	67.6	0.00
<b>28/02/2022</b>	2.31	25.7	66.6	0.00
<b>01/03/2022</b>	2.28	25.9	65.7	0.00
<b>02/03/2022</b>	2.32	26.2	68.3	0.00
<b>03/03/2022</b>	2.18	27.2	65.7	0.00
<b>04/03/2022</b>	2.34	27.5	59.7	0.00
<b>05/03/2022</b>	2.40	27.2	62.6	0.00
<b>06/03/2022</b>	2.14	27.6	64.2	0.00
<b>07/03/2022</b>	1.61	25.5	76.1	0.00
<b>08/03/2022</b>	1.66	31.7	56.7	0.00
<b>09/03/2022</b>	1.99	28.6	68.3	0.00
<b>10/03/2022</b>	2.15	28.5	65.6	0.00
<b>11/03/2022</b>	2.26	29.1	61.7	0.00
<b>12/03/2022</b>	2.30	29.8	56.5	0.00
<b>13/02/2022</b>	2.52	30.2	56.1	0.00
<b>14/03/2022</b>	2.68	30.6	49.3	0.00
<b>15/03/2022</b>	2.33	28.9	62.0	0.00
<b>16/03/2022</b>	2.19	28.8	70.5	0.00
<b>17/03/2022</b>	2.02	28.7	71.8	0.00
<b>18/03/2022</b>	1.60	29.0	76.0	0.00
<b>19/03/2022</b>	1.79	29.5	76.8	0.00
<b>21/03/2022</b>	2.62	29.6	71.1	0.00
<b>22/03/2022</b>	1.80	28.5	71.8	0.00
<b>23/03/2022</b>	2.06	28.6	69.7	0.00
<b>24/03/2022</b>	1.58	28.7	79.0	0.00
<b>25/03/2022</b>	1.48	28.9	78.3	0.00
<b>26/03/2022</b>	1.39	29.2	76.3	0.00
<b>27/03/2022</b>	1.78	28.6	76.1	0.00
<b>28/03/2022</b>	1.69	28.7	80.0	0.00
<b>29/03/2022</b>	2.21	29.4	77.6	0.51
<b>30/03/2022</b>	2.00	29.0	76.3	0.00
<b>31/03/2022</b>	1.84	28.1	78.7	0.00

NOTE: Instrument was not in operation during 27<sup>th</sup> October, 2021 to 25<sup>th</sup> November, 2021 due to censor fault and 29<sup>th</sup> January, 2022 to 03<sup>rd</sup> February, 2022 due to maintenance work.



Ports and  
Logistics

DPL/ENV/2021/34

Date: 25-05-2021

**The Director (IA-III Division),  
Ministry of Environment, Forest & Climate Change,  
Indira Paryavaran Bhawan, Jor Bagh Road,  
New Delhi – 110003**

Dear Sir,

**Sub: Intimation regarding Acquisition of Dighi Port Limited by Adani Ports and Special Economic Zone Limited (APSEZ).**

**Ref:** 1. Environment Clearance for Dighi Port Limited (Phase I) dated 30.09.2005 (File No: 10-8/2005-IA- III)  
2. Corrigendum dated 26.12.2005: Dighi Port Development Project 1<sup>st</sup> Phase, Dighi, District Raigarh, Maharashtra-Environment Clearance –Regarding ((F.No. 10-8/2005-IA-III)  
3. MoEF Letter dated 25.06.2012 "Handling of LNG Cargo at Dighi Port, Maharashtra, by M/s Dighi Port Regarding" (F.No. 10-8/2005-IA-III)

The Environment Clearance for Dighi Port Limited (Phase I) was granted by Ministry of Environment and Forests (MoEF) vide letter dated 30.9.2005 (**Reference 1**). EC Corrigendum was issued vide a MoEF letter dated 26.12.2004 (**Reference 2**) and Permission for Handling of LPG Cargo was given by MoEF vide its letter dated 25.06.2012 (**Reference 3**).

With reference to the captioned subject; this is to inform you that, National Company Law Tribunal (NCLT), has approved the resolution plan of Adani Ports and Special Economic Zone (APSEZ) to acquire the Dighi Port Limited (DPL) under the Insolvency and Bankruptcy Code 2016, (IBC). Pursuant to the approval of APSEZ's Resolution Plan by the NCLT, in accordance with the terms and conditions therein, APSEZ has completed the acquisition of the DPL on 15<sup>th</sup> February 2021.

This is for your kind information and record please.

Thanking you,

Yours Sincerely,

For, **Dighi Port Limited,**

**Ganesh Poojary**  
**Authorised Signatory**

Dighi Port Limited  
At & Po Dighi  
Taluka-Shrivardhan  
Dist:Raigad Maharashtra-402402  
CIN: U35110MH2000PLC127953



[info@adani.com](mailto:info@adani.com)  
[www.adaniports.com](http://www.adaniports.com)

Registered Office: New Excelsior Building, A. K. Nayak Marg, Fort Mumbai, Maharashtra - 400001



Ports and  
Logistics

**Encl:**

1. Environment Clearance for Dighi Port Limited (Dated 30.09.2005)
2. EC Corrigendum dated 26.12.2005
3. MoEF Letter dated 25.06.2012 "Handling of LNG Cargo at Dighi Port"

**Copy to:**

1. Deputy Director General of Forest (c) Ministry of Environment, Forest & Climate Change, Integrated Regional Office, Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur – 440001 (Email : [apccfcentral-ngp-mef@gov.in](mailto:apccfcentral-ngp-mef@gov.in))
2. Zonal Office, Central Pollution Control Board, Parivesh Bhawan, Opp. Ward No. 10 VMC Office Subhanpura, Vadodara – 390 023, Gujarat (Email: [westzonepcb@yahoo.com](mailto:westzonepcb@yahoo.com))
3. The Member Secretary, Maharashtra Pollution Control Board, Kalpataru Point, 3<sup>rd</sup> Floor, Road No. 8, Sion Circle, Mumbai-400022 (Email : [ms@mpcb.gov.in](mailto:ms@mpcb.gov.in))
4. Member Secretary, Maharashtra Coastal Zone Management Authority, Director, Environment Department, 15<sup>th</sup> Floor, New Administrative Building, Opp. Mantralaya, Mumbai – 400032 ((Email : [dir1.mev-mh@nic.in](mailto:dir1.mev-mh@nic.in))
5. Regional Officer- Raigad, Maharashtra Pollution Control Board, Raigad Bhavan, 6th floor, Sector - 11, C.B.D Belapur, Navi Mumbai- 400 614 (Email : [roraigad@mpcb.gov.in](mailto:roraigad@mpcb.gov.in), [mpcbraigad@mpcb.gov.in](mailto:mpcbraigad@mpcb.gov.in))
6. S.R.O. Mahad, Maharashtra Pollution Control Board, Samaik Suvidha Kendra Building, MIDC - Mahad, District Raigad - 402 309 (Email : [sromahad@mpcb.gov.in](mailto:sromahad@mpcb.gov.in))

Dighi Port Limited  
At & Po Dighi  
Taluka- Shrivardhan  
Dist:Raigad Maharashtra-402402  
CIN: U35110MH2000PLC127953

[info@adani.com](mailto:info@adani.com)  
[www.adaniports.com](http://www.adaniports.com)

Registered Office: New Excelsior Building, A. K. Nayak Marg, Fort Mumbai, Maharashtra - 400001



**No.10-8/2005-IA-III**  
 Government of India  
 Ministry of Environment and Forests  
 (IA-III Division)

Paryavaran Bhavan,  
 C.G.O. Complex, Lodi Road,  
 New Delhi-110003

Dated the 30<sup>th</sup> September, 2005

**Sub: Dighi Port development project 1<sup>st</sup> phase, Dighi, District Raigarh, Maharashtra – Environmental Clearance –regarding.**

\*\*\*\*

Reference is invited to the letters No.MCZMA/131, dated 23.6.2005 from Maharashtra State Coastal Zone Management Authority, Government of Maharashtra letter No... regarding the subject mentioned. Further letters from M/s Dighi Port Limited received vide letter No. Nil, dated 20.1.2005, dated 21.3.2005, dated 5.4.2005, dated 23.4.2005, dated 10.5.2005, dated 27.5.2005, dated 4.7.2005, dated have also been considered. The Maharashtra Pollution Control Board has accorded NOC for the project vide their Consent No.BO/Raigad-65/CE/CC-65, dated 7.4.2005. Public hearing for the project has been done on 2.11.2004

The proposed project with consists of berthing, docking and handling facilities. At present, there is one berth at one berth of 80 X 23 mts which is being utilized for export of bulk cargo. The above project is proposed to be taken up in two phases:-

In Phase I, two new multipurpose berths to cater to, break bulk and liquid cargoes and strengthening upgrading the existing berth. All the berths will be of 300 X 20 mts. Dimensions with approach of 100 X 12 mts, second berth will be developed simultaneously to handle break bulk and liquid cargo, ships of 45000 to 50000 DWT are expected to dock at these berths and necessary back-up facilities such as land for storage, warehouse, handling equipment shall be developed and deployed.

Accordingly, environmental clearance from Coastal Regulation Zone Notification, 1991 as amended from time to time is hereby accorded the phase I of the project subject to effective implementation of the following conditions:-

**(A) Specific Conditions:**

- (i) The company must take up and earmark adequate funds for the socio-economic development and welfare measures in the area including drinking water supply, vocational training, fishery related development programmes (like cold storages).
- (ii) The fishing activities by the fishermen living in the settlement along the creek should not be hindered and a mechanism may be evolved for the movement of fishing boats *vis-a-vis* shipping activities.
- (iii) Company should take up green belt programme in the project area including an ecological park and a plan may be submitted to the Ministry within one year.
- (iv) The company may suitably modify the alignment of channel entrance including its width, turning circle, taking into consideration the wave traversal, its intensity etc. to facilitate smoother navigation of ships.



- (v) The breakwater alignment and its design should be further modified based on relevant model studies, bore hole data etc. keeping in view the tranquility condition required for berthing and maneuvering of ships and subsequent cargo handling operations.
- (vi) The height of dumping in the dumping site should be restricted to 30 cm as against 90 cm proposed.
- (vii) The project proponent will not undertake any destruction of mangroves during construction and operation of the project.
- (viii) All the conditions stipulated by the Maharashtra Pollution Control Board in their Consent No.BO/Raigad-65/CE/CC-65, dated 7.4.2005 should be effectively implemented.
- (ix) Sewage arising in the port area should be disposed off through septic tank – soak pit system or shall be treated alongwith the industrial effluents to conform to the standards stipulated by Maharashtra Pollution Control Board and should be utilized/re-cycled for gardening, plantation and irrigation.
- (x) Adequate plantation should be carried out along the roads of the Port premises and a green belt shall be developed.
- (xi) PL should prepare and regularly update the Disaster Management Plan from time to time.
- (xii) Fire Fighting arrangements are examined to the new proposal.
- (xiii) There should be no withdrawal of ground water in CRZ area, for this project. The proponent shall ensure that as a result of the proposed constructions, ingress of saline water into ground water does not take place. Piezometers shall be installed for regular monitoring for this purpose at appropriate locations on the project site.
- (xiv) The project should not be commissioned till the requisite water supply and electricity to the project are provided by the PWD/Electricity Department.
- (xv) Specific arrangements for rainwater harvesting should be made in the project design and the rain water so harvested should be optimally utilized. Details in this regard should be furnished to this Ministry's Regional Office at Bhopal within 3 months.
- (xvi) The facilities to be constructed in the CRZ area as part of this project should be strictly in conformity with the provisions of the CRZ Notification, 1991 as amended subsequently.
- (xvii) No land reclamation should be carried out for this project.
- (xviii) Green buffer zone should be provided all around the project area in consultation with local forest department and the report submitted to this Ministry's Regional Office at Bhopal.
- (xix) No product other than those permissible in the Coastal Regulation Zone Notification, 1991 shall be stored in the Coastal Regulation Zone area.

**B. General Conditions :**


- (i) Construction of the proposed structures should be undertaken meticulously conforming to the existing Central/local rules and regulations including Coastal Regulation Zone Notification 1991 & its amendments. All the construction designs / drawings relating to the proposed construction activities must have approvals of the concerned State Government Departments / Agencies.

- (ii) Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. should be ensured for construction workers during the construction phase of the project so as to avoid felling of trees/mangroves and pollution of water and the surroundings.
- (iii) The project authorities must make necessary arrangements for disposal of solid wastes and for the treatment of effluents by providing a proper wastewater treatment plant outside the CRZ area. The quality of treated effluents, solid wastes and noise level etc. must conform to the standards laid down by the competent authorities including the Central/State Pollution Control Board and the Union Ministry of Environment and Forests under the Environment (Protection) Act, 1986, whichever are more stringent.
- (iv) The proponent shall obtain the requisite consents for discharge of effluents and emissions under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (prevention and Control of Pollution) Act, 1981 from the Maharashtra Pollution Control Board before commissioning of the project and a copy of each of these shall be sent to this Ministry.
- (v) The proponents shall provide for a regular monitoring mechanism so as to ensure that the treated effluents conform to the prescribed standards. The records of analysis reports must be properly maintained and made available for inspection to the concerned State/Central officials during their visits.
- (vi) In order to carry out the environmental monitoring during the operational phase of the project, the project authorities should provide an environmental laboratory well equipped with standard equipment and facilities and qualified manpower to carry out the testing of various environmental parameters.
- (vii) The sand dunes and mangroves, if any, on the site should not be disturbed in any way.
- (viii) A copy of the clearance letter will be marked to the concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (ix) The Maharashtra Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/Tehsildar's Office for 30 days.
- (x) The funds earmarked for environment protection measures should be maintained, in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry's Regional Office at Bhopal and the State Pollution Control Board.
- (xi) Full support should be extended to the officers of this Ministry's Regional Office at Bhopal and the officers of the Central and State Pollution Control Boards by the project proponents during their inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.
- (xii) In case of deviation or alteration in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection.
- (xiii) This Ministry reserve the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.
- (xiv) This Ministry or any other competent authority may stipulate any other additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.

(xv) The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment & Forests at <http://www.envfornic.in>. The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bhopal.

(xvi) The Project proponents should inform the Regional Office at Bhopal as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of start of Land Development Work.


The above mentioned stipulations will be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (protection) Act, 1986, the Hazardous Chemicals (Manufacture, Storage and Import) Rules, 1989, the Coastal Regulation Zone Notification, 1991 and its subsequent amendments and the Public Liability Insurance Act, 1991 and the Rules made thereunder from time to time. The project proponents should also ensure that the proposal complies with the provisions of the approved Coastal Zone Management Plan of Maharashtra State and the Supreme Court's order dated 18<sup>th</sup> April, 1996 in the Writ Petition No.664 of 1993 to the extent the same are applicable to this proposal.

  
(A. Senthil Vel)  
Additional Director

✓ To  
Shri Vishal Kalantri,  
Director,  
M/s Dighi Port Limited,  
71/73, Botawala Building,  
Bombay Samachar Marg,  
Mumbai – 400023.

**Copy to:**

1. Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office, Western Region, "Kendriya Paryavaran Bhavan", Link Road No.3, Ravishankar Road, Bhopal –462016 (M.P.).
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 110032.
3. DIG (SU), Regional Office Cell, Ministry of Environment & Forests, New Delhi.
4. The Chairman, Maharashtra State Pollution Control Board, Kalpataru Point, 3<sup>rd</sup> and 4<sup>th</sup> Floor, Sion Matunga Scheme Road No.8, Opposite Cine Planet Cinema, Near Sion Circle, Sion (East), Mumbai – 400022.
5. Guard File.
6. Monitoring Cell.
7. Direct (EI), Ministry of Environment & Forests, New Delhi.

  
(A. Senthil Vel)  
Additional Director



**No.10-8/2005-IA-III**  
Government of India  
Ministry of Environment and Forests  
(IA-III Division)

Paryavaran Bhavan,  
C.G.O. Complex, Lodi Road,  
New Delhi-110003

Dated the 26<sup>th</sup> December, 2005

**CORRIGENDUM**


**Sub: Dighi Port Development Project 1<sup>st</sup> Phase, Dighi, District Raigarh, Maharashtra  
– Environmental Clearance –regarding.**

-----

With reference to letter from M/s Dighi Port Limited, Mumbai vide their letter No.DPL/MOEF/253/2005/32/154 dated November, 2005 regarding the above subject, the environment clearance letter issued to the above project vide this Ministry's letter of even number dated 30<sup>th</sup> September, 2005 is amended as follows:

- (a) In para 1, the words "letter No....." occurring between the words "Government of Maharashtra" and "regarding the subject mentioned" is deleted.
- (b) In para 3 the sentence "In Phase-I, two new ..... the existing berth" is substituted as "The Phase-I involves construction of 4 new multi-purpose berths to cater to break bulk and liquid cargoes and strengthening and upgrading of the existing (one number) berth."
- (c) The item No. (xvii) under "Specific Conditions" is substituted as follows:

(xvii) Reclamation within the Port area shall be carried out (+) 5 metre level from the existing ground level. The material for reclamation shall be mainly from the dredged material and the rest should be sourced from approved government areas in the vicinity. Further, the details pertaining to reclamation in the inter-tidal area should be provided to this Ministry within 3 months from the date of receipt of the letter."


  
(A. Senthil Vel)  
Additional Director

**To**

**Shri Vishal Kalantri,**  
Director,  
M/s Dighi Port Limited,  
71/73, Botawala Building,  
Bombay Samachar Marg,  
Mumbai – 400 023.

**Copy to:**

1. The Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office, Western Region, "Kendriya Paryavaran Bhavan", Link Road No.3, Ravishankar Road, Bhopal -462 016 (M.P.).
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110 032.
3. Direct (EI), Ministry of Environment & Forests, New Delhi.
4. DIG (SU), Regional Office Cell, Ministry of Environment & Forests, New Delhi.
5. The Chairman, Maharashtra State Pollution Control Board, Kalpataru Point, 3<sup>rd</sup> and 4<sup>th</sup> Floor, Sion Matunga Scheme Road No.8, Opposite Cine Planet Cinema, Near Sion Circle, Sion (East), Mumbai - 400 022.
6. Guard File.
7. Monitoring Cell.

  
(A. Senthil Vel)  
Additional Director

**F. No. 10-8/2005-IA -III**  
**Government of India**  
**Ministry of Environment & Forests**  
**(IA-III Division)**

Paryavaran Bhawan,  
 CGO Complex, Lodhi Road,  
 New Delhi - 110 003,  
 Dated: 25<sup>th</sup> June, 2012

**To**  
**M/s Dighi Port Ltd,**  
**New Excelsion Building, 6<sup>th</sup> Floor,**  
**A.K. Nayak Marg, Fort,**  
**Mumbai 400 001.**

**Subject: Handling of LNG Cargo at Dighi Port, Maharashtra by M/s Dighi Port -Reg.**


This has reference to your letter No. DPL.MoEF/2012/790 dated 12.04.2012 and DPL/2012/828 dated 15.05.2012 seeking clarification /permission to handle LPG under the clearance dated 30.09.2005 .

The proposal was examined by the Expert Appraisal Committee in its meeting held on 9th - 10<sup>th</sup> February, 2012.

The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, have recommended to treat the clearance as EC and CRZ. Accordingly, the clearance dated 30.09.2005 is treated Environmental and CRZ clearance.

Based on the documents and the affidavit submitted on stamp paper vide letter No.DPL/2012/828 dated 15.05.2012, Ministry hereby clarifies that under the liquid cargo the LPG can be handled.

All the conditions stipulated in the clearance dated 30.09.2005 shall remain unchanged.

  
**(E. Thirunavukkarasu)**  
**Deputy Director (IA-III)**

**Copy to**

1. The Secretary, Department of Environment, Govt. of Maharashtra, Mantralaya, Mumbai - 400 032.
2. The Chairman, CPCB, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32.
3. The Chairman, Maharashtra Coastal Zone Management Authority, Room No.217 (Annexe), Mantralaya, Mumbai - 400 032.
4. The Chairman, Maharashtra Pollution Control Board, Kalpataru Points, 3<sup>rd</sup> & 4<sup>th</sup> floor, Opp. Cine Planet, Sion Circle, Sion (E), Mumbai-400 022.
5. The Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link, Road No. 3, Ravishankar Nagar, Bhopal - 462016(M.P.)
6. Guard File.
7. Monitoring Cell.