



Ref: AMPTPL/2022/980A

Date: 29.05.2023

To

**Additional Chief Conservator of Forests (C),**  
Ministry of Environment, Forest and Climate Change,  
Regional Office (SZ), Kendriya Sadan,  
4<sup>th</sup> Floor, E&F Wings, 17<sup>th</sup> Main Road,  
Koramangala II Block, Bangalore-560034 (Karnataka)  
[rosz.bng-mefcc@gov.in](mailto:rosz.bng-mefcc@gov.in)

Dear Sir,

**Sub : Half yearly Compliance report of Environment and CRZ clearance for modernization and operation of Berth - 07 in M/s Mormugao Port for the period of October 2022 to March 2023 - Reg.**

**Ref :** Environment and CRZ clearance for modernization of Berth No. - 07 for coal handling granted to M/s Mormugao Port Trust vide letter dated 30<sup>th</sup> December 2013 bearing F. No. 10-39/2009-IA.III.

Adani Mormugao Port Terminal Private Limited is concessionaire of M/s Mormugao Port Trust for Berth No-7. Please find enclosed herewith the compliance report to the conditions stipulated in the cited reference for the Half Yearly period **October 2022 to March 2023** in soft copy for your kind reference.

Thanking You

Yours Faithfully,

For **M/s Adani Mormugao Port Terminal Private Limited**

  
Authorized Signatory

Copy to:

1. **The Director (Monitoring-IA-III Division)**, Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh, New Delhi - 110003.
2. **The Zonal Officer**, Central Pollution Control Board, 1<sup>st</sup> & 2<sup>nd</sup> Floor, Nisaraga Bhawan, A Block, Thimmaiah Main Road, 7<sup>th</sup> D Cross, Shivanagar, opposite Pushpanjali theatre, Bengaluru - 560010
3. **The Member Secretary**, Goa State Pollution Control Board, Nr. Pilerne Industrial Estate, Opp. Saligao Seminary, Saligao - Bardez, Goa - 403511
4. **The Member Secretary**, Goa Coastal Zone Management Authority (GCZMA) 1<sup>st</sup> Floor, Pt. Deendayal Upadhyay Bhavan, Behind Pundalik Devasthan, Parvorim.
5. **The Chairman**, Mormugao Port Trust, Administrative Office, Headland Sada, Mormugao, Goa - 403804.

Adani Mormugao Port Terminal Pvt Ltd.  
Sub Station Building,  
Near Gate No. 2 of Mormugao Port Trust,  
Mormugao, 403 803,  
Goa, India

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[www.adani.com](http://www.adani.com)

Registered Office: Adani Corporate House, Shantigram, Near Vaishno Devi Circle, S. G.Highway, Khodiyar, Ahmedabad-382421, Gujarat

**EC & CRZ  
Clearance  
Compliance  
Report**

# Environmental Clearance Compliance Report



**Adani Mormugao Port Terminal Private  
Limited, Goa**

**of**

**Adani Ports and Special Economic  
Zone Limited**

**For the Period of:**

**October-2022 to March-2023**

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Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Marmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013

Sr. No.	Conditions	Compliance						
6	<b>Specific Conditions</b>							
i	<p>"Consent for Establishment" shall be obtained from Goa Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.</p>	<p><b>Complied,</b> Copy of Consent for Establishment (CFE) submitted in six monthly compliance report dated 25<sup>th</sup> November, 2014 (CTE copy attached below). All construction works completed and terminal is in operation with valid Consent from GSPCB (No.12/2019-PCB/347405/R0002737 dated 24/03/2020 valid up to 31/01/2025).</p> <div data-bbox="842 878 1481 1545" style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><b>GOA STATE POLLUTION CONTROL BOARD</b> गोंय राज्य प्रदुशण नियंत्रण मंडळ</p> <p>Phone Nos. : 91-832-2438667, 2438628 2438663, 2438660 Tel / Fax No. : 0832-2438628 Email : gspcb@rediffmail.com</p> <p style="text-align: right;">Dempo Towers, 1st Floor, EDC Porto Plaza, Panaji, Goa 403 001.</p> <p style="text-align: center;">GSPCB Logo</p> <p>No. 5/356/10-PCB/ Vol. IV 8/3 6/3 <span style="float: right;">Date: 22/03/12</span></p> <p style="text-align: center;"><b>Consent to Establish under Section 26 of the Water (Prevention &amp; Control of Pollution) Act, 1974 &amp; under Section 21 of the Air (Prevention &amp; Control of Pollution) Act, 1981 and Authorisation under Rule 5 of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules 2009</b> [To be referred as Water Act, Air Act and HW (M.H &amp; T) Rules respectively]</p> <p style="text-align: center;">Consent to Establish is hereby granted to:</p> <p style="text-align: center;"><b>MORMUGAO PORT TRUST</b> (Red Category)</p> <p style="text-align: center;">Development of Mechanised Coal handling terminal at berth no. 7, Headland Sada, Vaseo-dn-Gama, Gon</p> <p>Located in the area declared under the provisions of the Water Act, Air Act and Authorisation under the provisions of HW (M.H &amp; T) Rules, subject to the provisions of the Act and the Rules and the Orders that may be made further and subject to the following terms and conditions:</p> <ol style="list-style-type: none"> <li>The Consent to Establish is valid upto Commissioning of the unit or 3 years which ever is earlier.</li> <li>This Consent to Establish is valid for the manufacture/ production/ extraction/ installation/ servicing/ trade/ activity as mentioned below:</li> </ol> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sr. No</th> <th>Description</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td>Development of Mechanised Coal handling terminal at berth no. 7</td> <td style="text-align: center;">5.2 million tons</td> </tr> </tbody> </table> <ol style="list-style-type: none"> <li><b>CONDITIONS UNDER WATER ACT:</b> <ol style="list-style-type: none"> <li>The daily quantity of industrial effluent from the factory shall not exceed <b>NIL</b>.</li> <li>The daily quantity of domestic effluent generated during the construction stage shall not exceed <b>40 KLD</b>.</li> <li><b>Domestic Effluent treatment and Disposal:-</b> Soak pit shall not be constructed for the disposal of sewage. It should be connected into the existing STP of the Port.</li> </ol> </li> </ol> </div>	Sr. No	Description	Quantity	1.	Development of Mechanised Coal handling terminal at berth no. 7	5.2 million tons
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1.	Development of Mechanised Coal handling terminal at berth no. 7	5.2 million tons						

**Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013**

Sr. No.	Conditions	Compliance
ii	The project proponent shall provide lining for collection of run off from coal stockyard and the leachate shall be treated before disposal.	<p><b>Complied,</b>                      Runoff from Coal Stock Yard is being collected in RCC dump pond provided with proper lining. Settled water from dump pond is being reused for dust suppression and settled coal solid particles are sent back to coal stock piles. Dump pond water quality is also monitored. Report of the same is attached as part of Six monthly monitoring report (<b>Annexure 1</b>)</p>  

iii The project proponent shall provide dry fog and sprinkling systems for effective dust suppression.

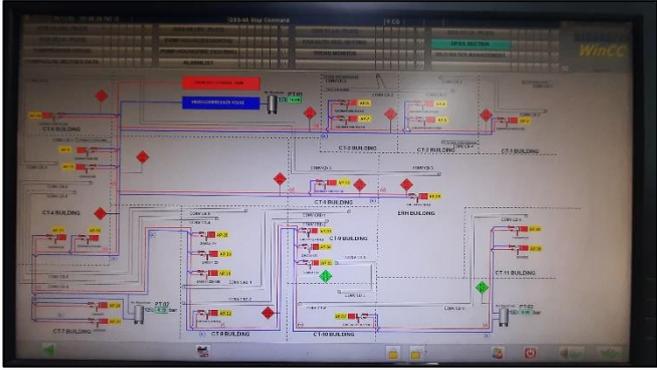
**Complied**

For effective dust suppression following measures are provided:

- 224 Nos. of dry fog dust suppression system have been provided in conveyor system and at all transfer points.
- 43 Nos. Automatic Water Sprinklers have been provided at coal stock yard for dust suppression.
- 02 Nos. Mist Canon provided (one is mobile canon and other one tyre mounted)



Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Marmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013

Sr. No.	Conditions	Compliance
		 <p>Layout of DFDS system installed at all transfer and other locations.</p>   <p>DSS system installed at yards</p> 

**Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Marmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013**

Sr. No.	Conditions	Compliance
iv	Entire transportation of coal shall be in closed conveyer.	<p><b>Complied.</b> The coal is being transported through covered conveyer from jetty to silo/ stock yard. AMPTPL has provided 2700 meters long covered conveyer system from jetty to silo including 11 closed Transfer Points provided with Dry Fog Dust Suppression (DFDS) nozzles.</p>  
v	There shall be no washing of conveyer belt	<p><b>Complied</b> No washing of Conveyor belt is done.</p>

<p>vi</p>	<p>The project proponent shall provide wind screen min 15 m height fabric HDPE all along the periphery. The height shall be designed taking into account the wind velocity modelling etc. Also explore creepers in consultation with forest department.</p>	<p><b>Complied</b> Wind screen of MS structure along with HDPE fabric/ perforated sheet of 15 metres height has been provided along the coal stacking yard facility taking into account the wind velocity. Wind screen has been covered with agronet.</p>  <p>Plantation has also been done all along the wind screens to ensure better wind breaking.</p>  
<p>vii</p>	<p>Coal shall be kept under moist conditions using water sprinklers. Transportation shall be in closed conveyors with water spray.</p>	<p><b>Complied</b> The coal is being stored under the moist condition. Jet Sprinklers are provided for the same. Coal is being transported through</p>

Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Marmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013

Sr. No.	Conditions	Compliance
		<p>covered conveyors with inbuilt dry fog dust suppression system.</p>  

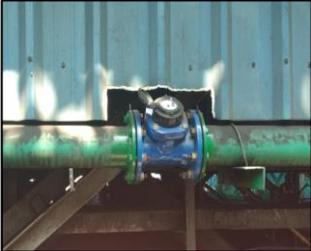
**Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Marmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013**

Sr. No.	Conditions	Compliance
viii	All the conditions stipulated by Goa Coastal Zone Management Authority (GCZMA) vide letter No. GCZMA/S/13-14/09/360 dated 07.06.2013, shall be complied with.	<p><b>Complied.</b> No specific conditions stipulated by GCZMA. NOC letter is attached below:</p> <div data-bbox="836 622 1493 1621" style="border: 1px solid black; padding: 5px;"> <p align="center"><b>GOA COASTAL ZONE MANAGEMENT AUTHORITY</b> C/o Department of Science, Technology &amp; Environment, (Govt. of Goa) Opp. Saligao Seminary, P.O. Saligao, Bardez, Goa - 403 511 Phone: (0832) 2407580, 2407187, 2407189 Fax: (0832) 2407176 <small>e-mail: d-stem.goa@govt.goa.in</small></p> <hr/> <p>Ref. No. GCZMA/S/13-14/09 / 360 Dated: 7 /06/2013</p> <p>To, The Chairman, Mormugao Port Trust, Administrative Office, Headland Sada, Goa. 403803</p> <p>Sub : Development of Coal Handling Terminal at Berth No. 7 of Mormugao Port, Goa on DBFOT basis- CRZ Clearance/recommendation Reg.</p> <p>Ref : 1) The Minutes of the 76<sup>th</sup> Meeting of the Expert Appraisal Committee for Coastal Regulation Zone, Infrastructure Development and Miscellaneous Projects held on 20<sup>th</sup> to 22<sup>nd</sup> July 2009 at Van Vigyan Bhavan, Sector - V, R. K. Puram, New Delhi</p> <p>2) Your application no. CE/PC-3/3355 dated 17.08.2009 and subsequent submissions of "Consent to Establish" no. S/356/10-PCB/Vol. IV/8363 dated 02/03/2012 issued by GSPCB, Comprehensive EIA Report prepared by WAPCOS and Comprehensive Hydrodynamic Study Report prepared by CWPRS vide CE/PC-3/7972 dated 06.03.2012 for the grant of CRZ clearance/recommendations for the subject project.</p> <p>Sir,</p> <p>With reference to the above mentioned subject, it is hereby conveyed that Goa Coastal Zone Management Authority (GCZMA) has examined your application during its 84<sup>th</sup> Board Meeting held on 06<sup>th</sup> June 2013 at Goa in line with the Minutes of the 76<sup>th</sup> Meeting of the Expert Appraisal Committee (EAC) for Coastal Regulation Zone, Infrastructure Development and Miscellaneous Projects held on 20<sup>th</sup> to 22<sup>nd</sup> July 2009 at New Delhi and subsequently accorded clearance for the subject project.</p> <p>It is further clarified that this development and modernization project is located within the existing port area of Vasco-da-Gama City and Water front as well as Foreshore facilities are situated within the jurisdiction of Mormugao Port Trust, which is zoned as CRZ-II.</p> <p>In accordance with the provisions of the clause 4 (i) (f) of the Coastal Regulation Zone Notification of 2011, the Goa Coastal Zone Management Authority, Government of Goa has no objection to the said project provided prior Environmental Clearance is obtained from the Ministry of Environment and Forests, Government of India.</p> <p>Grant of CRZ clearance for the subject project is conveyed herewith and accordingly recommended for Environmental Clearance.</p> <p align="right">Yours faithfully,  (Levinson J. Martins) Member Secretary (GCZMA) &amp; Director/Ex-Officio, Joint Secretary (STE)</p> </div>
ix	Periodical study on shore line changes shall be conducted and mitigation carried out if necessary. The details shall be submitted along with the six monthly monitoring reports.	<p><b>Complied.</b> M/s MPT did shore line study in 2016. AMPTPL is only one of the terminal operator. This is an old berth within the existing premises of MPT and only modernization activity has been done.</p>

**Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Marmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013**

Sr. No.	Conditions	Compliance																																																																																								
x	Oil spills if any shall be properly collected and disposed as per the Rules. Proper Oil Contingency Management Plan shall be put in place.	<p><b>Complied.,</b> AMPTPL is abiding by the Oil Spill Contingency Management Plan of M/s MPT (Attached below). No such incident occurred during the compliance period.</p> <table border="1" data-bbox="847 741 1477 1375"> <thead> <tr> <th colspan="4" data-bbox="847 741 1477 792">  <b>MORMUGAO PORT TRUST DISASTER MANAGEMENT PLAN</b> </th> </tr> <tr> <th data-bbox="847 792 938 815">PART-1</th> <th data-bbox="938 792 1262 815">CONTENTS</th> <th data-bbox="1262 792 1337 815">PAGE NO</th> <th data-bbox="1337 792 1477 815">REV REF/DATE</th> </tr> </thead> <tbody> <tr> <td data-bbox="847 815 938 837">SECTION</td> <td data-bbox="938 815 1262 837">Framework</td> <td data-bbox="1262 815 1337 837"></td> <td data-bbox="1337 815 1477 837"></td> </tr> <tr> <td data-bbox="847 837 938 860"></td> <td data-bbox="938 837 1262 860" style="text-align: center;"><b>SECTION - 5 Preparedness</b></td> <td data-bbox="1262 837 1337 860"></td> <td data-bbox="1337 837 1477 860"></td> </tr> <tr> <td data-bbox="847 860 938 882">5.11</td> <td data-bbox="938 860 1262 882">Communication Systems</td> <td data-bbox="1262 860 1337 882">21</td> <td data-bbox="1337 860 1477 882"></td> </tr> <tr> <td data-bbox="847 882 938 904">5.12</td> <td data-bbox="938 882 1262 904">Communication-Command And Response Structure</td> <td data-bbox="1262 882 1337 904">22</td> <td data-bbox="1337 882 1477 904"></td> </tr> <tr> <td data-bbox="847 904 938 927">5.13</td> <td data-bbox="938 904 1262 927">Drills And Exercises</td> <td data-bbox="1262 904 1337 927"></td> <td data-bbox="1337 904 1477 927"></td> </tr> <tr> <td data-bbox="847 927 938 949"></td> <td data-bbox="938 927 1262 949" style="text-align: center;"><b>SECTION - 6 Response</b></td> <td data-bbox="1262 927 1337 949"></td> <td data-bbox="1337 927 1477 949"></td> </tr> <tr> <td data-bbox="847 949 938 972">6.1</td> <td data-bbox="938 949 1262 972">Mormugao Port Disaster Management Conceptual Plan Framework</td> <td data-bbox="1262 949 1337 972">23</td> <td data-bbox="1337 949 1477 972"></td> </tr> <tr> <td data-bbox="847 972 938 994">6.2</td> <td data-bbox="938 972 1262 994">On Site MPT Disaster Management</td> <td data-bbox="1262 972 1337 994">24</td> <td data-bbox="1337 972 1477 994"></td> </tr> <tr> <td data-bbox="847 994 938 1016">6.3</td> <td data-bbox="938 994 1262 1016">Central Disaster Management Group- Basic Functions</td> <td data-bbox="1262 994 1337 1016">25</td> <td data-bbox="1337 994 1477 1016"></td> </tr> <tr> <td data-bbox="847 1016 938 1039">6.4</td> <td data-bbox="938 1016 1262 1039">On Site Action Group - Basic Responsibilities</td> <td data-bbox="1262 1016 1337 1039"></td> <td data-bbox="1337 1016 1477 1039"></td> </tr> <tr> <td data-bbox="847 1039 938 1061">6.5</td> <td data-bbox="938 1039 1262 1061">Emergency Classification</td> <td data-bbox="1262 1039 1337 1061">26</td> <td data-bbox="1337 1039 1477 1061"></td> </tr> <tr> <td data-bbox="847 1061 938 1084">6.6</td> <td data-bbox="938 1061 1262 1084">Central Disaster Management Group – Responsibilities</td> <td data-bbox="1262 1061 1337 1084">27</td> <td data-bbox="1337 1061 1477 1084"></td> </tr> <tr> <td data-bbox="847 1084 938 1106">6.7</td> <td data-bbox="938 1084 1262 1106">Disaster Management On Site Action Group- Organization Responsibilities</td> <td data-bbox="1262 1084 1337 1106">32</td> <td data-bbox="1337 1084 1477 1106"></td> </tr> <tr> <td data-bbox="847 1106 938 1128">6.8</td> <td data-bbox="938 1106 1262 1128">Disaster Management On Site Action Group - 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5 Preparedness</b>			5.11	Communication Systems	21		5.12	Communication-Command And Response Structure	22		5.13	Drills And Exercises				<b>SECTION - 6 Response</b>			6.1	Mormugao Port Disaster Management Conceptual Plan Framework	23		6.2	On Site MPT Disaster Management	24		6.3	Central Disaster Management Group- Basic Functions	25		6.4	On Site Action Group - Basic Responsibilities			6.5	Emergency Classification	26		6.6	Central Disaster Management Group – Responsibilities	27		6.7	Disaster Management On Site Action Group- Organization Responsibilities	32		6.8	Disaster Management On Site Action Group - Responsibilities	33			<b>SECTION-7 Emergency Facilities</b>			7.1	Emergency Control Centre At Port Control Station	36		7.2	Port Fire Fighting Resources	37		7.3	Port Oil Spill Response Equipment	38		7.4	Mutual Aid	39			<b>SECTION-8 Disaster Recovery</b>		
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xi	All the conditions stipulated in the earlier Clearances including the recommendations of Environment Management Plan, Disaster Management Plan shall be strictly complied with	<p><b>Noted and being complied.</b> Compliance of earlier clearance is being submitted by M/s MPT.</p> <p>All recommendations made in the Environment Management Plan as contained in the Environment Impact Assessment of the project are effectively implemented and being followed. EMP Compliance status is attached as <b>Annexure 2.</b></p>																																																																																								

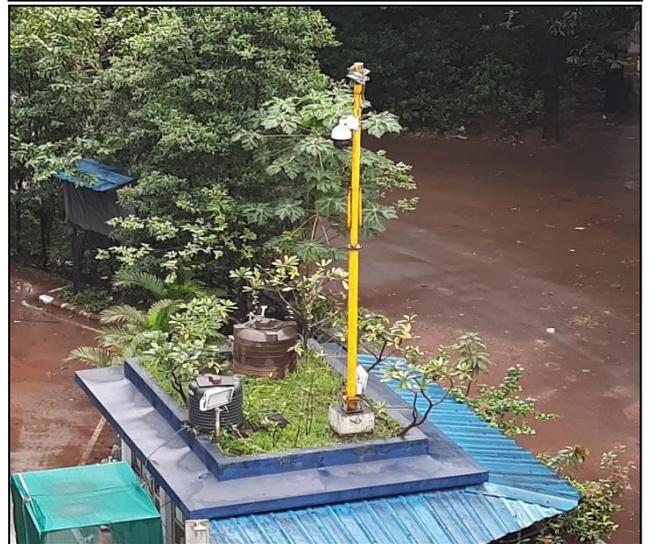
**Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013**

Sr. No.	Conditions	Compliance																					
xii	<p>Cargo shall be unloaded directly into hopper from the ship and transported to the stack yards through closed conveyor system only. Inbuilt dust suppression systems shall be provided at hoppers and all the transfer points / storage yards. Cargo shall not be unloaded directly onto the Berth. Water meters shall be provided at different locations to record the consumption of water used for dust suppression and daily log shall be maintained.</p>	<p><b>Complied,</b>                      Coal is being unloaded directly into hopper from the ship and transported to the stack yards through closed conveyor system. Inbuilt dust suppression system has been provided in hoppers, transfer towers and storage yards to avoid fugitive emissions. Coal cargo is not being unloaded directly onto the berth.</p> <p>AMPTPL has installed water flow meters and log sheet is being maintained to record water consumption in dust suppression system.</p> <table border="1" data-bbox="836 954 1441 1294"> <thead> <tr> <th>S.No.</th> <th>Month</th> <th>Consumption (KL)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Oct - 22</td> <td>5747</td> </tr> <tr> <td>2</td> <td>Nov - 22</td> <td>4105</td> </tr> <tr> <td>3</td> <td>Dec - 22</td> <td>4630</td> </tr> <tr> <td>4</td> <td>Jan - 23</td> <td>4249</td> </tr> <tr> <td>5</td> <td>Feb - 23</td> <td>5451</td> </tr> <tr> <td>6</td> <td>Mar - 23</td> <td>8404</td> </tr> </tbody> </table>   	S.No.	Month	Consumption (KL)	1	Oct - 22	5747	2	Nov - 22	4105	3	Dec - 22	4630	4	Jan - 23	4249	5	Feb - 23	5451	6	Mar - 23	8404
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3	Dec - 22	4630																					
4	Jan - 23	4249																					
5	Feb - 23	5451																					
6	Mar - 23	8404																					

xiii At least 15 m width of green belt along the periphery and 15 m width along the stockyard shall be undertaken including plantation of mangroves in consultation with Forest Department.

**Complied/Being Complied**

Green belt with suitable native species has been developed, along the periphery and coal stock yard. About **29,595** nos. plants have been planted in port premises and survival rate is well maintained. Additionally, AMPTPL has also developed vertical gardens. The plant species includes Conocarpus, Coconut, Palm, etc. There are no mangroves in the vicinity of Berth No. 7.



Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Marmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013

Sr. No.	Conditions	Compliance
		
iv	<p>The dredge material shall be reused for low level rising wherever possible and excess shall be dumped into sea at the designated dumping areas identified based on mathematical model studies.</p>	<p><b>Complied,</b> Construction of the project already completed and currently terminal is in operation. There was no dredging during the compliance period.</p>

xv To prevent discharge of sewage and other liquid wastes including ballast into marine environment, adequate system for collection, treatment and disposal of liquid wastes must be provided.

**Complied**

There is no discharge of sewage and other liquid waste into marine environment. The domestic sewage is being collected in septic tanks provided within the premises of AMPTPL and sent to Sewage Treatment Plant of PWD at Baina for further treatment.



MPT is complying with MARPOL conditions.

DC/S-(21)2016/23

Date: 24/05/2016

**HARBOUR NOTICE NO. 23 (TEMP) 2016**

Sub: Removal of sludge, bilge water, waste oil, etc. from ships/barges/crafts etc. at Mormugao Port

The following three companies at present are doing the work of reception of sludge, bilge water, waste oil etc. in Mormugao Port Trust.

Sr. No.	Name of the company and address	Contact persons	Contact No. (Mobile)	Email address
1	M/s Shiva Petro-Synth Specialities Limited, Sastech Associates, Karma Plaza, 1 <sup>st</sup> floor, Shop No. 11, Vasco-Da-Gama, 403 802	Mr. Umesh Bhagat	9552545733	sludgeoilgoa.shiva@yahoo.com
		Mr. Krishna Kamulkar	9552569044	
2	M/s Canacona Hydrocarbons, Flat No. 5B, 3rd floor, Lotus Apartment, F.L.Gomes Road, Vasco da gama, Goa	Mr. Vikram P. Nayak	9823108823	canaconahydrocarbon@yahoo.com
		Mr. Peter Arputha Jothy	9445708888	
		Mr. Dominic Savio	8390457969	
3	M/s Shree Pooshphans Chemicals, 403/404, Dev Krupa Premises Co-op. Society Ltd., 4 <sup>th</sup> Floor, 28, Raichur Street, Dana Bundar, Mumbai 400 008.	Mr. Suleman A. Makandar	9370180355	info@slopsreception.com operations@slopsreception.com
		Mr. Alishbaksh M. Fakir	9370180355	
		Jayant M. Jadhav	9890787983	

Sd/-  
DY. CONSERVATOR (i/c)

- To,
- 1) All Shipping Agents
  - 2) The President, Mormugao Fishing Trawlers Association
  - 3) The President, Mormugao Barge Owners Association
  - 4) The President, Mormugao Passenger Launches Owners Association
  - 5) Fisheries Survey of India, Abo-Jetty, Near Police Station, Bogla, Mormugao

c.c. to: Communication Officer  
Please advise Signal/cum-RTD to inform the above message to all the Ships calling at this Port and proper entries should be made in the Shipping Log Book.

c.c. to: Dy. Chairman/Chairman's table  
c.c. to: DCDirector (P&MS)/FAS&AO/Commander CIB/FC/ECME/TW/Secretary/CMO  
All Pilots/HM/CO/SS/Port Signal Station/Plot Room/MS/CO/PR/SE/M/ISO/M

**Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013**

Sr. No.	Conditions	Compliance
xvi	<p>Necessary arrangements for the treatment of the effluents and solid wastes must be made and it must be ensured that the untreated effluents and solid wastes are not discharged into the water or on the beach; and no effluent or solid wastes shall be discharged on the beach.</p>	<p><b>Complied</b>            The domestic sewage is being collected in septic tanks provided within the premises of AMPTPL and sent to Sewage Treatment Plant of PWD at Baina for further treatment. STP inlet characteristic of water is regularly analyzed by NABL accredited laboratory. The monitoring results for the period Oct 22 – Mar 23 is enclosed as <b>Annexure 1</b>. Solid waste generated is properly segregated, stored and disposed to Goa Waste Management Corporation (GSPCB) in line to Solid Waste Management Rules 2016 as amended. Food waste is recycled in an OWC and used as manure. No effluent or solid wastes is being discharged into the water or on the beach.</p> 

**Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013**

Sr. No.	Conditions	Compliance
xvii	<p>The quality of treated effluents, solid wastes, emissions and noise levels and the like, from project area must conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board under the Environment (Protection) Act 1986</p>	<p><b>Complied</b> Regular Environmental Monitoring is carried out, to assess the quality of treated effluents from STP, Ambient Air Quality, Ambient Noise level, DG set emissions through NABL accredited and MoEF&amp;CC recognized laboratory. In addition, AMPTPL has also installed one CAAQMS at Sada village and the realtime data is connected with GSPCB server. Results for all the monitoring parameters are within the prescribed limit. Summary of the monitoring report for the period Oct 22 – Mar 23 is enclosed as <b>Annexure-1</b>.</p> <div style="display: flex; flex-direction: column; align-items: center;">   </div>
xviii	<p>All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to MoEF along with half yearly compliance report to MoEF-RO.</p>	<p><b>Complied</b> All the mitigation measures/EMP submitted in EIA are being followed. EMP Compliance in matrix format is enclosed as <b>Annexure - 2</b>. The same is being submitted as part of Six monthly compliance report to all the concerned authorities</p>

**Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013**

Sr. No.	Conditions	Compliance																					
xix	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purpose.	<p><b>Complied,</b> Separate budget for implementation of Environment Management Plan is in place and it is not diverted for any other purpose. A brief summary of environmental expenditure during the compliance period is given below.</p> <table border="1" data-bbox="831 757 1492 1641"> <thead> <tr> <th data-bbox="831 757 965 907">S. No.</th> <th data-bbox="965 757 1326 907">Description of Work</th> <th data-bbox="1326 757 1492 907">Amount lakhs (Rs.) (Approx)</th> </tr> </thead> <tbody> <tr> <td data-bbox="831 907 965 1048">1</td> <td data-bbox="965 907 1326 1048">Environment Quality Monitoring &amp; Control (Pollucon, CAAQMS, Camera)</td> <td data-bbox="1326 907 1492 1048">11.31</td> </tr> <tr> <td data-bbox="831 1048 965 1144">2</td> <td data-bbox="965 1048 1326 1144">GSPCB Monitoring &amp; Statuary Payments</td> <td data-bbox="1326 1048 1492 1144">1.09</td> </tr> <tr> <td data-bbox="831 1144 965 1267">3</td> <td data-bbox="965 1144 1326 1267">Tarpaulin and other waste disposal</td> <td data-bbox="1326 1144 1492 1267">0.15</td> </tr> <tr> <td data-bbox="831 1267 965 1375">4</td> <td data-bbox="965 1267 1326 1375">Green belt Maintenance &amp; Development</td> <td data-bbox="1326 1267 1492 1375">3.46</td> </tr> <tr> <td data-bbox="831 1375 965 1516">5</td> <td data-bbox="965 1375 1326 1516">Environment Monitoring Cell, Training and Awareness</td> <td data-bbox="1326 1375 1492 1516">11.095</td> </tr> <tr> <td colspan="2" data-bbox="831 1516 1326 1641">Total</td> <td data-bbox="1326 1516 1492 1641">27.105</td> </tr> </tbody> </table>	S. No.	Description of Work	Amount lakhs (Rs.) (Approx)	1	Environment Quality Monitoring & Control (Pollucon, CAAQMS, Camera)	11.31	2	GSPCB Monitoring & Statuary Payments	1.09	3	Tarpaulin and other waste disposal	0.15	4	Green belt Maintenance & Development	3.46	5	Environment Monitoring Cell, Training and Awareness	11.095	Total		27.105
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xx	The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive	<p><b>Complied</b> AMPTPL is having well structured Environment Management Cell staffed with qualified manpower and well supported by team at regional office (Chennai) as well as Head Office in Ahmedabad for effective implementation of the stipulated environmental safeguards under the supervision Unit/Business Head AMPTPL.</p>																					

**7. General Conditions**

	<b>Adani Mormugao Port Terminal Pvt. Ltd.</b>	<b>From : October 2022</b> <b>To : March 2023</b>
<b>Compliance to the conditions stipulated in Environment and CRZ clearance.</b>		

<b>Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Mormugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013</b>		
<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance</b>
i	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	<b>Complied,</b> There was no digging activity during the compliance period. Construction activity is completed and project is in operational phase.
ii	Full support shall be extended to the officers of this Ministry/Regional Office at Bangalore by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation 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.
iii	A six-monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bangalore regarding the implementation of the stipulated conditions.	<b>Complied</b> Six monthly EC & CRZ clearance Compliance reports of the stipulated conditions are regularly submitted to Regional Office of Ministry at Bengaluru, and other authorities (CPCB, GSPCB, MoEF&CC, GCZMA, MPT etc.). Last Compliance report for the period April 2022 – September 2022 was submitted vide letter no. AMPTPL/2022/900 dated 30.11.2022.
iv	Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.	<b>Noted for Compliance.</b>
v	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.	<b>Noted.</b>
vi	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.	<b>Noted.</b> There is no change in project profile or implementation agency.
vii	The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	<b>Complied</b> Financial Closure Date: 14 <sup>th</sup> May, 2010 Concession agreement date with MPT: 22 <sup>nd</sup> September, 2009
viii	A copy of the clearance letter shall be marked to concern Panchayat/local NGO, if any, from whom any suggestion/representation have been made, received while processing the proposal.	<b>Complied</b> Complied by Mormugao Port Trust (MPT).

	<b>Adani Marmugao Port Terminal Pvt. Ltd.</b>	<b>From : October 2022</b> <b>To : March 2023</b>
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<b>Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Marmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013</b>		
<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance</b>
ix	Goa State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's Office/Tehsildar's office for 30 days.	<b>Noted.</b> This condition does not pertain to project proponent. However, it is learnt that Goa State Pollution Control Board has complied with the same.
8.	These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.	<b>Noted for Compliance.</b>

**Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Marmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013**

Sr. No.	Conditions	Compliance																			
9.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	<p><b>Complied</b> All applicable clearances from the concerned statutory authorities have been obtained. (This is for kattupalli, to be updated for Goa)</p> <table border="1" data-bbox="831 651 1490 1729"> <thead> <tr> <th data-bbox="831 651 963 719">Permis sion</th> <th data-bbox="963 651 1289 719">Ref.No.</th> <th data-bbox="1289 651 1490 719">Date</th> </tr> </thead> <tbody> <tr> <td data-bbox="831 719 963 1637" rowspan="6">GSPCB CTO</td> <td data-bbox="963 719 1289 842">1. No.12/2019-PCB/347405/ROO 02737 dt. 24.03.2020,</td> <td data-bbox="1289 719 1490 842">1. 24.03.2020</td> </tr> <tr> <td data-bbox="963 842 1289 1003">2. Amendment 1 - 12/2019-PCB/347405/HF/T ech/14377 dt. 16.11.2020,</td> <td data-bbox="1289 842 1490 1003">2. 16.11.2020</td> </tr> <tr> <td data-bbox="963 1003 1289 1155">3. Amendment 2- 12/2019-PCB/347405/HF/T ech/22761 dt. 31.03.2022.</td> <td data-bbox="1289 1003 1490 1155">3. 31.03.2022</td> </tr> <tr> <td data-bbox="963 1155 1289 1317">4. Amendment 3 - 12/2019-PCB/34705/HF/Te ch-3815 07.06.2022</td> <td data-bbox="1289 1155 1490 1317">4. 07.06.2022</td> </tr> <tr> <td data-bbox="963 1317 1289 1469">5. Amendment 4 - 12/2019-PCB/34705/HF/Te ch/5776 - dt. 04.07.2022</td> <td data-bbox="1289 1317 1490 1469">5. 04.07.2022</td> </tr> <tr> <td data-bbox="963 1469 1289 1637">6. Amendment 5 - 12/2019-PCB/34705/HF/Te ch/15763 - dt. 23.11.2022</td> <td data-bbox="1289 1469 1490 1637">6. 23.11.2022</td> </tr> <tr> <td data-bbox="831 1637 963 1729">NOC Fire &amp; Safety</td> <td data-bbox="963 1637 1289 1729">DFES/FPNA/2022/113</td> <td data-bbox="1289 1637 1490 1729">1. 22.11.2022</td> </tr> </tbody> </table>	Permis sion	Ref.No.	Date	GSPCB CTO	1. No.12/2019-PCB/347405/ROO 02737 dt. 24.03.2020,	1. 24.03.2020	2. Amendment 1 - 12/2019-PCB/347405/HF/T ech/14377 dt. 16.11.2020,	2. 16.11.2020	3. Amendment 2- 12/2019-PCB/347405/HF/T ech/22761 dt. 31.03.2022.	3. 31.03.2022	4. Amendment 3 - 12/2019-PCB/34705/HF/Te ch-3815 07.06.2022	4. 07.06.2022	5. Amendment 4 - 12/2019-PCB/34705/HF/Te ch/5776 - dt. 04.07.2022	5. 04.07.2022	6. Amendment 5 - 12/2019-PCB/34705/HF/Te ch/15763 - dt. 23.11.2022	6. 23.11.2022	NOC Fire & Safety	DFES/FPNA/2022/113	1. 22.11.2022
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Sr. No.	Conditions	Compliance																								
10.	The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental and CRZ Clearance and copies of clearance letters are available with the Goa State Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a> . The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bangalore.	<p><b>Complied</b> MPT has given advertisement on 11<sup>th</sup> January, 2014 in the newspapers mentioned below.</p> <ol style="list-style-type: none"> <li>1) Sunaparant</li> <li>2) Times of India, Goa.</li> </ol> <p>Copy of the same has already been submitted to RO-MoEF&amp;CC (Bangalore).</p> <ul style="list-style-type: none"> <li>• The details of the past six Half yearly compliance reports are as tabulated below for reference.</li> </ul> <table border="1"> <thead> <tr> <th>S.No.</th> <th>Compliance period</th> <th>Date of submission</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Apr'19 to Sep'19</td> <td>26.11.2019</td> </tr> <tr> <td>2.</td> <td>Oct'19 to Mar'20</td> <td>20.05.2020</td> </tr> <tr> <td>3.</td> <td>Apr'20 to Sep'20</td> <td>28.11.2020</td> </tr> <tr> <td>4.</td> <td>Oct'20 to Mar'21</td> <td>27.05.2021</td> </tr> <tr> <td>5.</td> <td>Apr'21 to Sep'21</td> <td>26.11.2021</td> </tr> <tr> <td>6.</td> <td>Oct'21 to Mar'22</td> <td>24.05.2022</td> </tr> <tr> <td>7.</td> <td>Apr'22 to Sep'22</td> <td>30.11.2022</td> </tr> </tbody> </table>	S.No.	Compliance period	Date of submission	1.	Apr'19 to Sep'19	26.11.2019	2.	Oct'19 to Mar'20	20.05.2020	3.	Apr'20 to Sep'20	28.11.2020	4.	Oct'20 to Mar'21	27.05.2021	5.	Apr'21 to Sep'21	26.11.2021	6.	Oct'21 to Mar'22	24.05.2022	7.	Apr'22 to Sep'22	30.11.2022
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11.	This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004 as may be applicable to this project.	<b>Noted.</b>																								
12.	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.	<p><b>Complied</b> Copy of six monthly EC&amp;CRZ compliance report is being regularly uploaded by AMPTPL on company website at <a href="https://www.adaniports.com/ports-downloads?port=Murmugao-Terminal">https://www.adaniports.com/ports-downloads?port=Murmugao-Terminal</a></p>																								
13.	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	<b>Noted.</b>																								
14.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisaad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any were received while processing the proposal. The clearance letter shall also be put on the website of the company by proponent.	<p><b>Complied</b> The same has been Complied by Marmugao Port Trust.</p>																								

	Adani Marmugao Port Terminal Pvt. Ltd.	From : October 2022 To : March 2023
<b>Compliance to the conditions stipulated in Environment and CRZ clearance.</b>		

<b>Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Marmugao Port, Goa vide F No. 10-39/2009-IA.III dt. 30.12.2013</b>		
Sr. No.	Conditions	Compliance
15.	The proponent shall upload the status of compliance of the stipulated Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	<p><b>Complied</b> AMPTPL is regularly uploading the status of compliance of the stipulated clearance condition including results of monitored data in the company website. The same can be viewed at <a href="https://www.adaniports.com/ports-downloads?port=Murmugao-Terminal">https://www.adaniports.com/ports-downloads?port=Murmugao-Terminal</a> Six monthly compliance report is regularly submitted to Regional office of MoEF&amp;CC at Bangalore, CPCB Zonal office, SPCB and other authorities. Last compliance report for the period April 2022 - Sept 2022 was submitted vide letter no. AMPTPL/2022/900 dated 30.11.2022.</p>
16.	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of Clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	<p><b>Complied</b> Environment Statement in Form V is submitted to Goa State Pollution Control Board as well as MoEF Regional office Bangalore for each financial year. Environment Statement for the year FY 2021-22 has been submitted online on 28.09.2022 vide Application No. 1470909 and has also been uploaded on company website. Copy of the same is enclosed as <b>Annexure-3</b>. Copy of the same is available on company website at <a href="https://www.adaniports.com/ports-downloads?port=Murmugao-Terminal">https://www.adaniports.com/ports-downloads?port=Murmugao-Terminal</a></p>

**Enclosures:**

Annexure Number	Details of Annexure
Annexure 1:	Environmental Monitoring reports for the period October'22 to March'23
Annexure 2:	EMP Compliance report.
Annexure 3:	Environment statement in Form V for FY 21-22

# Annexure 1

# "ENVIRONMENTAL MONITORING REPORT" FOR



**ADANI MURMUGAO PORT TERMINAL PVT. LTD. (AMPTPL),  
GROUND FLOOR, PORT USERS COMPLEX, NEAR STATE BANK OF INDIA,  
MORMUGAO HARBOUR, GOA 403802 INDIA – TEL 0832 2594253**

**OCTOBER-2022 TO MARCH-2023**

**PREPARED BY:**



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**TC-5945**



**ISO 9001:2015**



**ISO 14001:2015**



**ISO45001:2018**

# "ENVIRONMENT MONITORING REPORT"

FOR



**ADANI MURMUGAO PORT TERMINAL PVT. LTD. (AMPTPL),  
GROUND FLOOR, PORT USERS COMPLEX, NEAR STATE BANK OF INDIA,  
MORMUGAO HARBOUR, GOA 403802 INDIA – TEL 0832 2594253**

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.

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**CHAPTER – 1**  
**AMBIENT AIR QUALITY MONITORING**  
**MONITORING PERIOD: OCTOBER-2022 TO MARCH-2023**

**Results of AAQM for Sada Village [OCTOBER-2022 TO MARCH-2023]**

Sr. No.	Date of sampling	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Lead as Pb	Benzo (a) Pyrene (BaP)-particulate phase only	Arsenic as As	Nickel as Ni	Carbon Monoxide as CO	Benzenes as C <sub>6</sub> H <sub>6</sub>	Ammonia (NH <sub>3</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Oxides of Nitrogen (NO <sub>2</sub> )	Ozone (O <sub>3</sub> )
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ng/m <sup>3</sup>	ng/m <sup>3</sup>	ng/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
1	03/10/2022	52.63	23.64	ND*	ND*	ND*	ND*	0.40	ND*	11.68	12.66	22.43	13.55
2	06/10/2022	71.56	32.35	ND*	ND*	ND*	ND*	0.14	ND*	13.58	6.91	15.69	21.26
3	10/10/2022	56.37	26.36	ND*	ND*	ND*	ND*	0.21	ND*	18.68	8.51	19.58	10.23
4	13/10/2022	74.56	35.67	ND*	ND*	ND*	ND*	0.53	ND*	16.54	13.25	24.63	17.35
5	17/10/2022	40.22	18.65	ND*	ND*	ND*	ND*	0.42	ND*	23.68	7.56	13.25	11.55
6	20/10/2022	49.58	21.75	ND*	ND*	ND*	ND*	0.27	ND*	12.66	11.25	18.64	15.36
7	24/10/2022	65.25	30.30	ND*	ND*	ND*	ND*	0.41	ND*	20.23	14.54	25.44	20.63
8	27/10/2022	72.76	36.46	ND*	ND*	ND*	ND*	0.63	ND*	22.34	16.53	28.65	18.58
9	31/10/2022	64.52	33.53	ND*	ND*	ND*	ND*	0.55	ND*	10.22	9.56	16.36	12.44
10	03/11/2022	44.25	16.33	ND*	ND*	ND*	ND*	0.38	ND*	14.53	16.52	26.51	15.56
11	07/11/2022	61.32	29.53	ND*	ND*	ND*	ND*	0.47	ND*	11.56	13.66	22.47	12.53
12	10/11/2022	52.48	24.35	ND*	ND*	ND*	ND*	0.11	ND*	16.56	9.53	18.66	17.56
13	14/11/2022	40.75	14.79	ND*	ND*	ND*	ND*	0.44	ND*	12.28	7.56	16.56	11.57
14	17/11/2022	54.25	23.81	ND*	ND*	ND*	ND*	0.29	ND*	20.64	12.14	21.61	18.54
15	21/11/2022	67.53	28.65	ND*	ND*	ND*	ND*	0.33	ND*	13.23	10.20	25.37	10.67
16	24/11/2022	47.56	32.87	ND*	ND*	ND*	ND*	0.16	ND*	15.65	8.98	23.56	13.65
17	28/11/2022	51.36	26.82	ND*	ND*	ND*	ND*	0.30	ND*	17.12	14.60	17.68	19.53
18	01/12/2022	56.33	25.44	ND*	ND*	ND*	ND*	0.60	ND*	10.32	8.63	23.48	14.54
19	05/12/2022	49.43	22.18	ND*	ND*	ND*	ND*	0.53	ND*	17.42	15.59	27.53	18.89
20	08/12/2022	57.62	30.24	ND*	ND*	ND*	ND*	0.36	ND*	14.96	6.22	22.54	13.55
21	12/12/2022	62.49	24.35	ND*	ND*	ND*	ND*	0.18	ND*	11.55	11.58	17.52	16.38
22	15/12/2022	48.62	27.23	ND*	ND*	ND*	ND*	0.33	ND*	13.48	14.34	20.41	20.28
23	19/12/2022	40.36	16.50	ND*	ND*	ND*	ND*	0.40	ND*	22.67	12.42	15.65	11.66
24	22/12/2022	65.36	31.37	ND*	ND*	ND*	ND*	0.24	ND*	16.88	10.63	26.52	15.53
25	26/12/2022	58.23	23.77	ND*	ND*	ND*	ND*	0.21	ND*	12.55	7.54	14.82	21.93
26	29/12/2022	63.55	29.53	ND*	ND*	ND*	ND*	0.11	ND*	15.96	13.57	25.04	10.56
27	02/01/2023	65.27	28.36	ND*	ND*	ND*	ND*	0.16	ND*	16.82	12.54	24.39	17.60
28	05/01/2023	58.34	24.94	ND*	ND*	ND*	ND*	0.36	ND*	13.76	16.20	19.49	11.50
29	09/01/2023	49.66	20.55	ND*	ND*	ND*	ND*	0.23	ND*	10.54	7.21	15.49	15.60
30	12/01/2023	64.23	30.87	ND*	ND*	ND*	ND*	0.27	ND*	18.25	10.47	18.59	10.20
31	16/01/2023	50.34	25.65	ND*	ND*	ND*	ND*	0.42	ND*	14.96	6.48	13.51	19.20
32	19/01/2023	63.27	31.58	ND*	ND*	ND*	ND*	0.56	ND*	12.86	13.30	23.10	21.61

33	23/01/2023	47.63	18.67	ND*	ND*	ND*	ND*	0.37	ND*	21.18	9.63	17.50	16.51
34	26/01/2023	56.22	22.35	ND*	ND*	ND*	ND*	0.44	ND*	11.38	11.57	25.29	13.50
35	30/01/2023	61.28	29.66	ND*	ND*	ND*	ND*	0.30	ND*	23.84	15.78	28.31	12.61
36	02/02/2023	53.97	22.39	ND*	ND*	ND*	ND*	0.25	ND*	22.78	9.44	13.85	13.45
37	06/02/2023	59.37	25.65	ND*	ND*	ND*	ND*	0.42	ND*	12.66	11.11	17.14	15.36
38	09/02/2023	65.96	29.37	ND*	ND*	ND*	ND*	0.18	ND*	21.23	8.63	10.87	18.26
39	13/02/2023	56.28	23.64	ND*	ND*	ND*	ND*	0.39	ND*	15.68	13.29	19.23	12.43
40	16/02/2023	68.32	34.59	ND*	ND*	ND*	ND*	0.17	ND*	19.38	15.21	25.65	17.43
41	20/02/2023	57.53	24.31	ND*	ND*	ND*	ND*	0.29	ND*	11.33	6.31	21.59	14.23
42	23/02/2023	64.24	27.65	ND*	ND*	ND*	ND*	0.44	ND*	14.14	17.34	28.47	11.24
43	27/02/2023	50.27	31.54	ND*	ND*	ND*	ND*	0.15	ND*	10.27	10.41	22.44	16.25
44	02/03/2023	54.98	25.65	ND*	ND*	ND*	ND*	0.30	ND*	10.63	7.67	18.52	20.28
45	06/03/2023	43.66	18.67	ND*	ND*	ND*	ND*	0.23	ND*	15.68	9.62	23.69	22.39
46	09/03/2023	53.38	23.43	ND*	ND*	ND*	ND*	0.46	ND*	14.38	6.57	20.23	16.22
47	13/03/2023	67.94	31.29	ND*	ND*	ND*	ND*	0.18	ND*	17.48	12.66	25.65	18.72
48	16/03/2023	49.35	21.93	ND*	ND*	ND*	ND*	0.26	ND*	11.66	8.30	28.23	15.54
49	20/03/2023	56.23	29.45	ND*	ND*	ND*	ND*	0.19	ND*	16.57	11.63	22.68	13.49
50	23/03/2023	47.57	22.77	ND*	ND*	ND*	ND*	0.29	ND*	20.65	10.62	19.32	17.53
51	27/03/2023	65.34	28.28	ND*	ND*	ND*	ND*	0.32	ND*	12.38	15.17	15.68	12.66
52	30/03/2023	72.58	33.29	ND*	ND*	ND*	ND*	0.48	ND*	18.54	13.49	21.29	10.19

ND\*: - Not Detected; Detection Limit: Ozone as O<sub>3</sub> (µg/m<sup>3</sup>): 10

ND\*: - Not Detected; Detection Limit - Lead as Pb (µg/m<sup>3</sup>): 0.5

ND\*: - Not Detected; Detection Limit - Carbon Monoxide as CO (mg/m<sup>3</sup>): 0.01

ND\*: - Not Detected; Detection Limit - Ammonia NH<sub>3</sub> (µg/m<sup>3</sup>): 10

ND\*: - Not Detected; Detection Limit - Benzene as C<sub>6</sub>H<sub>6</sub> (µg/m<sup>3</sup>): 2

ND\*: - Not Detected; Detection Limit - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m<sup>3</sup>): 0.5

ND\*: - Not Detected; Detection Limit - Arsenic as As (ng/m<sup>3</sup>): 2

ND\*: - Not Detected; Detection Limit - Nickel as Ni (ng/m<sup>3</sup>): 10

## **CHAPTER – 2**

### **SEA WATER AND SEA SEDIMENTS MONITORING MONITORING PERIOD: OCTOBER-2022 TO MARCH-2023**

**Results of Sea water Monitoring**

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			Near Jetty					
GPS Location			15° 24.748'N, 73° 47.938'E					
Date of sampling			13/10/2022		14/11/2022		15/12/2022	
			Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	8.13	8.09	8.27	8.21	8.15	8.09
2	Temperature	°C	28.7	28.6	29.3	29	29.7	29.6
3	Total Suspended Solids	mg/L	37	31	43	38	40	31
4	BOD (3 Days @ 27 °C)	mg/L	3.5	2.9	3.6	2.7	4.8	3.7
5	Dissolved Oxygen	mg/L	5.85	5.7	6	5.9	5.9	5.7
6	Salinity	ppt	36.31	36.78	36.58	36.96	36.74	37.46
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	3.27	3.15	3.61	3.52	3.75	3.6
9	Nitrite as NO <sub>2</sub>	µmol/L	0.36	0.27	0.29	0.23	0.69	0.57
10	Ammonical Nitrogen as NH <sub>3</sub>	µmol/L	2.29	2.18	2.47	2.35	2.27	2.16
11	Phosphates as PO <sub>4</sub>	µmol/L	2.53	2.45	1.99	1.87	2.18	2.04
12	Total Nitrogen	µmol/L	5.92	5.6	6.37	6.1	6.71	6.33
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
14	Total Dissolved Solids	mg/L	37293	37728	37594	37884	37684	38395
15	COD	mg/L	16	12	14	10	20	15
17								
17.1	Primary Productivity	mgC/L/day	51.75		49.50		<b>45.00</b>	
18								
18.1	Chlorophyll	mg/m <sup>3</sup>	2.64	2.56	2.5	2.34	2.72	2.58
18.2	Phaeophytin	mg/m <sup>3</sup>	1.88	0.28	0.26	0.49	0.29	0.96
18.3	Cell Count	No <sub>x</sub> × 10 <sup>3</sup> /L	263	221	242	220	285	260
18.4	Name of Group Number and name of group species of each group	--	Cyclotella sp. Tricodesmium sp. Sketetone ma sp. Leptocylin drus sp. Coscinodis cus sp. Fragillaria sp.	Synedra sp. Nitzschia sp. Navicula sp. Pleurosigm a sp.	Coscinodis cus sp. Cyclotella sp. Cocolitfosh ore sp. Thallassione ma sp. Sketetone ma sp. Rhizosoleni a sp.	Nitzschia sp. Ceratum sp Cymbella sp. Pleurosigm a sp. Cheatocero us sp. Odentella sp.	Coscinodis cus sp. Sketetone ma sp. Biddulphia sp. Cymbella sp. Leptocylin drus sp.	Nitzschia sp. Cymbella sp. Pleurosigm a sp. Tricodes mium sp. Synedra sp.
19								
19.1	Abundance (Population)	Nox10 <sup>3</sup> /100m <sup>3</sup>	48		53		42	
19.2	Name of Group Number and name of group	--	Copepods Foraminiferans		Cyclopoida Calanoida		Cyclopoida Polychaetes	

	species of each group		Polychaetes Gastropods	Polychaetes Gastropods	Gastropods Mysids
19.3	Total Biomass	mL/100 m <sup>3</sup>	4.30	4.90	4.45
20	<b>Microbiological Parameters</b>				
20.1	Total Bacterial Count	CFU/mL	2290	2640	2610
20.2	Total Coliform	/mL	Present	Present	Present
20.3	E.coli	/mL	Absent	Absent	Absent
20.4	Enterococcus species	/mL	Present	Present	Present
20.5	Salmonella species	/mL	Absent	Absent	Absent
20.6	Shigella species	/mL	Absent	Absent	Absent
20.7	Vibrio species	/mL	Absent	Absent	Absent

**Results of Sea water Monitoring**

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			Near Jetty					
GPS Location			15° 24.748' N, 73° 47.938' E					
Date of sampling			12/01/2023		13/02/2023		13/03/2023	
			Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	5.6	4.1	4.9	4.5	4.3	3.6
2	Temperature	°C	5.8	5.65	5.85	5.8	6	5.9
3	Total Suspended Solids	mg/L	36.42	37.54	36.74	37.16	36.42	36.92
4	BOD (3 Days @ 27 °C)	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
5	Dissolved Oxygen	mg/L	4.17	3.92	3.29	3.14	4.09	3.76
6	Salinity	ppt	0.46	0.27	0.75	0.63	0.47	0.41
7	Oil & Grease	mg/L	2.53	2.4	2.31	2.27	2.56	2.52
8	Nitrate as NO <sub>3</sub>	µmol/L	2.31	2.18	2.16	2.04	2.39	2.28
9	Nitrite as NO <sub>2</sub>	µmol/L	8.93	7.52	6.75	6.32	7.4	7.16
10	Ammonical Nitrogen as NH <sub>3</sub>	µmol/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
11	Phosphates as PO <sub>4</sub>	µmol/L	37416	38520	37129	37498	37516	37902
12	Total Nitrogen	µmol/L	25	21	20.4	18.2	19	16
13	Petroleum Hydrocarbon	µg/L	5.6	4.1	4.9	4.5	4.3	3.6
14	Total Dissolved Solids	mg/L	5.8	5.65	5.85	5.8	6	5.9
15	COD	mg/L	36.42	37.54	36.74	37.16	36.42	36.92
17								
17.1	Primary Productivity	mgC/L/day	42.75		47.25		53.10	
18								
18.1	Chlorophyll	mg/m <sup>3</sup>	3.07	2.8	2.93	2.75	2.85	2.48
18.2	Phaeophytin	mg/m <sup>3</sup>	0.14	0.15	0.28	0.2	0.41	0.66
18.3	Cell Count	No.x 10 <sup>3</sup> /L	312	274	326	298	396	369
18.4	Name of Group Number and name of group species of each group	--	Coscinodiscus sp. Cymbella sp. Spirulina sp. Biddulphia sp. Melosira sp. odontella sp.	Navicula sp. Nitzschia sp. Rhizosolenia sp. Synedra sp.	Rhizosolenia sp. Skeletone ma sp. Thalassiosira sp. Coscinodiscus sp. Leptocylin drus sp Cyclotella sp.	Nitzschia sp. Synedra sp. Navicula sp. Melosira sp. Triceratium	Coscinodiscus sp. Nitzschia sp. Leptocylin drus sp. Pleurosigm a sp. Melosira sp. Synedra sp.	Rhizosolenia sp. Skeletone ma sp. Navicula sp. Thalassiosira sp. Odontella sp.
19								
19.1	Abundance (Population)	Nox10 <sup>3</sup> /100m <sup>3</sup>	31		28		35	
19.2	Name of Group Number and name of group species of each group	--	Polychaetes Mysids Amphipods		Polychaetes Gastropods Foraminiferans		Foraminiferans Polychaetes Nematodes	

				Bivalves	Mysids
19.3	Total Biomass	mL/100 m <sup>3</sup>	2.90	2.55	2.25
20	<b>Microbiological Parameters</b>				
20.1	Total Bacterial Count	CFU/mL	2530	2640	2370
20.2	Total Coliform	/mL	Present	Present	Present
20.3	E.coli	/mL	Absent	Absent	Absent
20.4	Enterococcus species	/mL	Present	Present	Present
20.5	Salmonella species	/mL	Absent	Absent	Absent
20.6	Shigella species	/mL	Absent	Absent	Absent
20.7	Vibrio species	/mL	Absent	Absent	Absent

## Results of Sea Sediment Monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			Near Jetty					
GPS Location			N 15° 24.748', E 73° 47.938'					
Date of sampling			13/10/2022	14/11/2022	15/12/2022	12/01/2023	13/02/2023	13/03/2023
1	Organic Matter	%	0.395	0.395	0.336	0.416	0.384	0.418
2	Phosphorus as P	µg/g	668	736	614	720	672	729
3	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
5	<b>Heavy Metals</b>							
5.1	Aluminum as Al	%	5.1	4.98	4.82	4.95	5.7	5.26
5.2	Total Chromium as Cr+3	µg/g	132	170	137	156	129	143
5.3	Manganese as Mn	µg/g	619	798	656	693	713	610
5.4	Iron as Fe	%	4.93	5.26	5.1	5.04	4.92	5.13
5.5	Nickel as Ni	µg/g	43.56	5243	39.75	42.95	38.17	49.2
5.6	Copper as Cu	µg/g	37.91	49.63	41.87	53.76	42.93	37.69
5.7	Zinc as Zn	µg/g	87.36	119	95.29	108	94.75	89.15
5.8	Lead as Pb	µg/g	1.94	2.13	1.73	2.14	1.68	1.23
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)	--	Amphipods Bivalves Gastropods  Crustacean s	Polychaetes  Crustacean s Bivalves	Polychaetes  Crustacean s Amphipods Bivalves	Crustacean s Polychaetes Bivalves	Polychaetes Crustacean s Gastropods	Amphipods Bivalves Gastropods Polychaetes
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	---	Foraminifer ans Nematodes	--	----	Nematodes Foraminifer ans	Nematodes Decapods
6.3	Population	no/m <sup>2</sup>	525	625	550	616	528	704

## **CHAPTER – 3**

### **STP WATER MONITORING**

**MONITORING PERIOD: OCTOBER-2022 TO MARCH-2023**

**Results of STP water quality monitoring**

SR. NO.	PARAMETERS	UNIT	RESULTS					
			Baina Sewerage Plant STP Inlet					
Sampling Location								
Date of sampling			14/10/2022	14/11/2022	15/12/2022	16/01/2023	13/02/2023	09/03/2023
1	pH	--	7.81	7.87	7.73	7.96	7.72	7.63
2	Total Suspended Solids	mg/L	124	139	109	127	103	129
3	BOD (3 Days @ 27 °C)	mg/L	56	74	67	78	47	71
4	COD	mg/L	210	293	205	274	193	254
5	Oil & Grease	mg/L	6.8	7.9	6.2	8.2	5.2	6.1
6	Residual Free Chlorine	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

## **CHAPTER – 4**

### **DUMP POND WATER QUALITY MONITORING MONITORING PERIOD: OCTOBER-2022 TO MARCH-2023**

### Results of Dump Pond Water quality monitoring

SR. NO.	PARAMETERS	UNIT	RESULT				
			Dump Pond-1 Near CT 08		Dump Pond-2 Near Pump House		Dump Pond-3 - Nr. Jetty
Sampling Location							
Date of sampling			15/12/2022	13/03/2023	15/12/2022	13/03/2023	15/12/2022
1	pH	--	6.82	7.09	7.32	7.68	7.03
2	Total Dissolved Solids	mg/L	270	318	283	326	372
3	Total Suspended Solids	mg/L	21	32	25	34	37
4	Turbidity	NTU	4.92	5.24	4.97	5.36	6.12
5	BOD (3 Days @ 27 °C)	mg/L	18	29	27	26	17
6	Dissolved Oxygen	mg/L	5.9	6	5.7	5.8	5.7
7	COD	mg/L	97	108	128	116	82
8	Salinity	ppt	0.152	0.176	0.48	0.187	0.131
9	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
10	Total Hardness as CaCO <sub>3</sub>	mg/L	93	144	175	149	89
11	Fluoride as F	mg/L	0.21	0.42	0.38	0.45	0.27
12	Chloride as Cl	mg/L	84	99	82	104	73
13	Zinc as Zn	mg/L	0.068	0.075	0.069	0.052	0.064
14	Cadmium as Cd	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
15	Lead as Pb	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
16	Mercury as Hg	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

## **CHAPTER – 5**

### **DRINKING WATER QUALITY MONITORING**

**MONITORING PERIOD: OCTOBER-2022 TO MARCH-2023**

### Results of Drinking Water Quality Monitoring

SR. NO.	PARAMETERS	UNIT	RESULT			
			Sub Station Building Canteen		Near AMPTPL Exit Gate	
Sampling Location						
Date of sampling			15/12/2022	27/03/2023	15/12/2022	27/03/2023
1	Colour	Hazen	2	2	2	2
2	Turbidity	NTU	0.09	0.08	0.06	0.07
3	Conductivity	µmho/cm	86	107	35	111
4	pH	--	6.04	7.04	5.28	7.06
5	Chloride as Cl	mg/L	5.98	8.99	1.98	9.9
6	Total Dissolved Solids	mg/L	62	68	25	71
7	Total Hardness as CaCO <sub>3</sub>	mg/L	12	18	5	20
8	Iron as Fe	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
9	Sulphate as SO <sub>4</sub>	mg/L	2.18	3.6	1.24	3.82
10	Calcium as Ca	mg/L	1.6	4	1.6	4
11	Magnesium as Mg	mg/L	1.68	1.92	0.24	2.4
12	Fluoride as F	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
13	Nitrate as NO <sub>3</sub>	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
14	Manganese as Mn	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
15	Copper as Cu	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
16	Cadmium as Cd	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
17	Arsenic as As	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
18	Mercury as Hg	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
19	Lead as Pb	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
20	Zinc as Zn	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
21	Coliform	/100 mL	Absent	Absent	Absent	Absent
22	E-Coli	/100 mL	Absent	Absent	Absent	Absent
23	Residual Free Chlorine	mg/L	Not Detected	Not Detected	Not Detected	Not Detected

### Results of Drinking Water Quality Monitoring

SR. NO.	PARAMETERS	UNIT	RESULT			
			Near Workshop Area		Near Amenity Building	
Sampling Location						
Date of sampling			15/12/2022	27/03/2023	15/12/2022	27/03/2023
1	Colour	Hazen	3	2	3	2
2	Turbidity	NTU	0.15	0.09	0.19	0.07
3	Conductivity	µmho/cm	312	106	331	110
4	pH	--	6.59	7.03	6.61	7.01
5	Chloride as Cl	mg/L	24.98	9.7	26.49	9.8
6	Total Dissolved Solids	mg/L	226	70	238	72
7	Total Hardness as CaCO <sub>3</sub>	mg/L	57	19	51	18
8	Iron as Fe	mg/L	0.064	Not Detected	0.076	Not Detected
9	Sulphate as SO <sub>4</sub>	mg/L	7.93	3.99	8.43	3.85
10	Calcium as Ca	mg/L	13.6	4	14.4	4
11	Magnesium as Mg	mg/L	5.52	2.16	3.6	1.92
12	Fluoride as F	mg/L	0.076	Not Detected	0.07	Not Detected
13	Nitrate as NO <sub>3</sub>	mg/L	0.63	Not Detected	0.84	Not Detected
14	Manganese as Mn	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
15	Copper as Cu	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
16	Cadmium as Cd	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
17	Arsenic as As	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
18	Mercury as Hg	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
19	Lead as Pb	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
20	Zinc as Zn	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
21	Coliform	/100 mL	Absent	Absent	Absent	Absent
22	E-Coli	/100 mL	Absent	Absent	Absent	Absent
23	Residual Free Chlorine	mg/L	Not Detected	Not Detected	Not Detected	Not Detected

## **CHAPTER – 6**

### **SOIL QUALITY MONITORING**

**MONITORING PERIOD: OCTOBER-2022 TO MARCH-2023**

**Results of Soil quality monitoring**

SR. NO.	PARAMETERS	UNIT	RESULTS			
			NEAR CT-1		NEAR ADANI SITE	
Sampling Location						
Date of sampling			15/12/2022	13/03/2023	15/12/2022	13/03/2023
1	Type	--	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam
2	Gravel	%	0.3	0.4	0.6	0.4
3	Coarse Sand	%	2.7	3.6	2.4	2.6
4	Medium Sand	%	17	18	42	39
5	Fine Sand	%	45	43	19	20
6	Total Sand	%	65	65	64	60
7	Silt & Clay	%	35	35	36	38
8	pH (1:5)	--	8.29	8.41	8.73	8.82
9	Electricity Conductivity	µmho/cm	913	894	829	856
10	Alkali matter	mg/kg	378	360	356	340
11	Cation Exchange Capacity	meq/100 g	10.26	10.1	10.18	10.4
12	Sodium Absorption Ratio	--	8.49	8.25	9.2	8.9
13	Organic Matter	mg/kg	0.37	0.46	0.46	0.52
14	Available Nitrogen	meq/100 g	0.6	0.44	0.72	0.64
15	Available Potassium	mg/kg	6.3	5.9	5.4	4
16	Available Phosphorus	mg/kg	5.8	6	4.73	4.6
17	Available Sodium	%	3.72	3.84	5.26	5
18	Permeability	%	0.58 X 10 <sup>-6</sup>	0.60 X 10 <sup>-6</sup>	0.60 X 10 <sup>-6</sup>	0.52 X 10 <sup>-6</sup>

## **CHAPTER – 7**

### **NOISE LEVEL MONITORING**

**MONITORING PERIOD: OCTOBER-2022 TO MARCH-2023**

## Results of Day Time Noise level monitoring

October-2022					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village
		21/10/2022	18/10/2022	10/10/2022	05/10/2022
1	6:00-7:00	50.1	52.2	50.6	48.0
2	7:00-8:00	49.5	50.2	50.7	49.4
3	8:00-9:00	52.2	51.9	52.6	50.6
4	9:00-10:00	52.4	54.8	55.2	50.6
5	10:00-11:00	55.9	55.5	56.6	48.9
6	11:00-12:00	55.0	56.1	54.1	54.2
7	12:00-13:00	56.4	57.9	56.9	53.7
8	13:00-14:00	57.1	56.2	56.7	53.1
9	14:00-15:00	57.6	56.8	58.7	54.3
10	15:00-16:00	60.1	59.7	57.1	53.6
11	16:00-17:00	55.8	58.6	56.8	53.8
12	17:00-18:00	58.3	56.7	55.4	54.1
13	18:00-19:00	55.3	57.2	53.3	53.5
14	19:00-20:00	56.1	55.7	54.5	53.0
15	20:00-21:00	53.3	53.8	53.1	51.0
16	21:00-22:00	52.7	52.9	53.8	51.3
<b>Day Time Limit</b>		<b>75 dB(A)Leq</b>			<b>55 dB(A) Leq</b>

## Results of Night Time Noise level monitoring

October-2022					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village
		21/10/2022 & 22/10/2022	18/10/2022 & 19/10/2022	10/10/2022 & 11/10/2022	05/10/2022 & 06/10/2022
1	22:00-23:00	54.9	56.5	55.1	44.3
2	23:00-00:00	53.6	52.7	55.6	43.5
3	00:00-01:00	53.5	52.9	52.0	42.7
4	01:00-02:00	53.9	53.7	52.1	43.8
5	02:00-03:00	49.8	50.3	51.8	44.4
6	03:00-04:00	49.2	52.2	53.1	42.8
7	04:00-05:00	50.2	53.0	49.3	42.1
8	05:00-06:00	49.5	50.2	50.1	42.5
<b>Night Time Limit</b>		<b>70 dB(A)Leq</b>			<b>45 dB(A) Leq</b>

\*\*Limit as per CTO No. is 12/2019-PCB/347405/R0002737 dated 24.03.2020 valid up to 31/01/2025.

## Results of Day Time Noise level monitoring

November-2022					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village
		22/11/2022	08/11/2022	17/11/2022	02/11/2022
1	6:00-7:00	51.6	53.9	52.3	46.5
2	7:00-8:00	51.3	51.7	52.5	47.8
3	8:00-9:00	53.8	54.8	54.1	50
4	9:00-10:00	54.2	56.6	57	50.8
5	10:00-11:00	57.4	57.1	58.6	50.4
6	11:00-12:00	56.7	58.1	56	52.3
7	12:00-13:00	57.9	59.9	58.5	54.3
8	13:00-14:00	58.7	58	58.4	51.9
9	14:00-15:00	59.4	58.8	60.6	52.6
10	15:00-16:00	61.6	61.4	58.7	52.4
11	16:00-17:00	57.7	60.6	58.3	52.2
12	17:00-18:00	60.2	58.2	57.4	52.1
13	18:00-19:00	57.2	58.9	55	51.5
14	19:00-20:00	55.3	57.3	56.5	51.3
15	20:00-21:00	54.8	55.6	54.7	49.3
16	21:00-22:00	54.5	54.7	55.5	49.8
<b>Day Time Limit</b>		<b>75 dB(A)Leq</b>			<b>55 dB(A) Leq</b>

## Results of Night Time Noise level monitoring

November-2022					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village
		22/11/2022 & 23/11/2022	08/11/2022 & 09/11/2022	17/11/2022 & 18/11/2022	02/11/2022 & 03/11/2022
1	22:00-23:00	56.2	58.3	56.8	43.5
2	23:00-00:00	55.2	54.4	57.6	41.5
3	00:00-01:00	55.5	54.5	53.9	42.6
4	01:00-02:00	55.7	55.2	54.0	41.8
5	02:00-03:00	51.6	52.3	53.4	44.1
6	03:00-04:00	50.9	54.1	54.7	41.3
7	04:00-05:00	51.8	54.6	51.1	40.2
8	05:00-06:00	51.1	51.9	51.8	40.6
<b>Night Time Limit</b>		<b>70 dB(A)Leq</b>			<b>45 dB(A) Leq</b>

\*\*Limit as per CTO No. is 12/2019-PCB/347405/R0002737 dated 24.03.2020 valid up to 31/01/2025.

## Results of Day Time Noise level monitoring

December-2022					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village
		09/12/2022	05/12/2022	12/12/2022	07/12/2022
1	6:00-7:00	52.6	55.3	52.1	46.1
2	7:00-8:00	52.2	49.9	53.8	49
3	8:00-9:00	51.9	53.9	52.9	51.1
4	9:00-10:00	54.9	58.5	57.5	49.9
5	10:00-11:00	58.6	57.5	57.0	50.6
6	11:00-12:00	56	57.4	54.1	51.3
7	12:00-13:00	56.9	59.2	58.6	53.7
8	13:00-14:00	58.9	56.8	56.7	50.5
9	14:00-15:00	61.3	60.8	59.8	53.8
10	15:00-16:00	61	59.4	58.3	53.4
11	16:00-17:00	59	58.6	58.4	51.5
12	17:00-18:00	61.8	58.1	55.7	52.7
13	18:00-19:00	58.3	59.7	56.5	51.4
14	19:00-20:00	55.5	57.2	56.4	52.6
15	20:00-21:00	55.8	55.9	53	50.2
16	21:00-22:00	52.5	56.2	55.8	51.2
<b>Day Time Limit</b>		<b>75 dB(A)Leq</b>			<b>55 dB(A) Leq</b>

## Results of Night Time Noise level monitoring

December-2022					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village
		09/12/2022 & 10/12/2022	05/12/2022 & 06/12/2022	12/12/2022 & 13/12/2022	07/12/2022 & 08/12/2022
1	22:00-23:00	56.4	57.6	55	44.2
2	23:00-00:00	54	53.1	56.8	40.2
3	00:00-01:00	54.8	55.1	53.8	44.1
4	01:00-02:00	55.3	54.7	55.1	42.2
5	02:00-03:00	50.2	51.9	53	43.2
6	03:00-04:00	49.9	55.4	54.2	42.9
7	04:00-05:00	53	53.3	53.1	41.6
8	05:00-06:00	50.8	53.4	51.6	40
<b>Night Time Limit</b>		<b>70 dB(A)Leq</b>			<b>45 dB(A) Leq</b>

\*\*Limit as per CTO No. is 12/2019-PCB/347405/R0002737 dated 24.03.2020 valid up to 31/01/2025.

### Results of Day Time Noise level monitoring

January-2023					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village
		06/01/2023	10/01/2023	19/01/2023	24/01/2023
1	6:00-7:00	49.6	56.6	49.8	46.2
2	7:00-8:00	50.4	52.1	54.9	49.2
3	8:00-9:00	53.2	53.3	55.3	51.3
4	9:00-10:00	57.3	56.9	56.7	51.1
5	10:00-11:00	60.1	59.7	57.9	49.1
6	11:00-12:00	55.9	56.5	51.2	51.6
7	12:00-13:00	59.1	60.2	60.3	55.2
8	13:00-14:00	58.2	54.2	56.4	50.1
9	14:00-15:00	62.6	62.8	57.4	53.1
10	15:00-16:00	59.5	60.4	59.8	54.3
11	16:00-17:00	57.2	59.4	56.8	50.8
12	17:00-18:00	61.6	60.7	57.8	54.6
13	18:00-19:00	60.5	61.9	57.7	49.9
14	19:00-20:00	57.1	58.3	54.7	52.5
15	20:00-21:00	54.4	57.6	54.8	49.5
16	21:00-22:00	52.4	57.5	53.7	51.7
<b>Day Time Limit</b>		<b>75 dB(A)Leq</b>			<b>55 dB(A) Leq</b>

### Results of Night Time Noise level monitoring

January-2023					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village
		06/01/2023 & 07/01/2023	10/01/2023 & 11/01/2023	19/01/2023 & 20/01/2023	24/01/2023 & 25/01/2023
1	22:00-23:00	56.8	60.1	56.2	44.4
2	23:00-00:00	52.9	53.9	54.6	41.3
3	00:00-01:00	52.8	54.5	50.9	43.5
4	01:00-02:00	56.1	53.5	53.2	42.6
5	02:00-03:00	53.1	49.7	50.1	44.2
6	03:00-04:00	47.6	56.3	56.4	41.9
7	04:00-05:00	53.3	54.3	55.2	42.5
8	05:00-06:00	52.5	54.4	49.5	41.7
<b>Night Time Limit</b>		<b>70 dB(A)Leq</b>			<b>45 dB(A) Leq</b>

\*\*Limit as per CTO No. is 12/2019-PCB/347405/R0002737 dated 24.03.2020 valid up to 31/01/2025.

### Results of Day Time Noise level monitoring

February-2023						
Day Time dB(A)						
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village	
		21/02/2023	17/02/2023	06/02/2023	04/02/2023	
1	6:00-7:00	52.8	59.6	54.5	48.2	
2	7:00-8:00	53.8	56.8	59.7	50.6	
3	8:00-9:00	57.7	56.9	58.6	51.6	
4	9:00-10:00	60.1	61.7	59.4	53.2	
5	10:00-11:00	64.1	62.5	61.6	50.9	
6	11:00-12:00	60.8	60.9	54.4	52.2	
7	12:00-13:00	63.3	63.5	64.3	54.1	
8	13:00-14:00	62.7	58.1	60.3	50.3	
9	14:00-15:00	66.2	67.5	61.5	53.5	
10	15:00-16:00	64.2	64.4	62.4	54.2	
11	16:00-17:00	62.1	62.9	60.2	52.6	
12	17:00-18:00	65.7	65.5	62.8	54.3	
13	18:00-19:00	65.4	66.4	60.6	51.8	
14	19:00-20:00	59.9	62.3	57.3	52.7	
15	20:00-21:00	57.8	62.6	59.3	50.5	
16	21:00-22:00	55.9	60.7	56.3	53.9	
<b>Day Time Limit</b>		<b>75 dB(A)Leq</b>			<b>55 dB(A) Leq</b>	

### Results of Night Time Noise level monitoring

February-2023						
Night Time dB(A)						
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village	
		21/02/2023 & 22/02/2023	17/02/2023 & 18/02/2023	06/02/2023 & 07/02/2023	04/02/2023 & 05/02/2023	
1	22:00-23:00	59.9	62.7	58.9	44.5	
2	23:00-00:00	56.9	58.4	57.8	43.3	
3	00:00-01:00	56.1	57.2	54.7	44.4	
4	01:00-02:00	60.3	57.7	56.8	43.6	
5	02:00-03:00	56.7	53.2	53.7	41.2	
6	03:00-04:00	50.9	57.3	61.1	44.1	
7	04:00-05:00	56.5	58.3	59.7	43.1	
8	05:00-06:00	56.4	59.3	52.8	42.2	
<b>Night Time Limit</b>		<b>70 dB(A)Leq</b>			<b>45 dB(A) Leq</b>	

\*\*Limit as per CTO No. is 12/2019-PCB/347405/R0002737 dated 24.03.2020 valid up to 31/01/2025.

## Results of Day Time Noise level monitoring

March-2023					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village
		10/03/2023	21/03/2023	24/03/2023	03/03/2023
1	6:00-7:00	50.7	57.7	54.7	49.5
2	7:00-8:00	53.7	54.2	60.8	52.3
3	8:00-9:00	56.1	57.8	60.4	53.1
4	9:00-10:00	59.3	61.4	58.6	52.1
5	10:00-11:00	62.7	60.2	59.9	51.1
6	11:00-12:00	63.1	62.8	56.3	52.8
7	12:00-13:00	64.2	62.4	64.8	51.7
8	13:00-14:00	61.7	58.2	59.1	48.7
9	14:00-15:00	64.4	66.7	61.2	54.1
10	15:00-16:00	64.3	63.2	60.6	53.9
11	16:00-17:00	63.6	65.3	60.1	51.5
12	17:00-18:00	66.5	67.4	64.9	51.8
13	18:00-19:00	64.1	65.5	63.4	53.4
14	19:00-20:00	61.1	59.8	59.2	54.3
15	20:00-21:00	58.4	63.5	57.3	49.7
16	21:00-22:00	56.5	60.5	56.7	52.7
<b>Day Time Limit</b>		<b>75 dB(A)Leq</b>			<b>55 dB(A) Leq</b>

## Results of Night Time Noise level monitoring

March-2023					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Adani Site Office Near Gate No.02	Sada village
		10/03/2023 & 11/03/2023	21/03/2023 & 22/03/2023	24/03/2023 & 25/03/2023	03/03/2023 & 04/03/2023
1	22:00-23:00	60.1	61.3	60.8	42.4
2	23:00-00:00	58.8	56.5	60.3	41.6
3	00:00-01:00	57.6	55.7	56.6	44.2
4	01:00-02:00	59.2	59.4	57.7	41.1
5	02:00-03:00	57.4	53.6	53.9	42.7
6	03:00-04:00	52.9	55.5	61.2	43.9
7	04:00-05:00	56.4	56.7	57.8	42.6
8	05:00-06:00	57.3	61.4	54.8	42.1
<b>Night Time Limit</b>		<b>70 dB(A)Leq</b>			<b>45 dB(A) Leq</b>

\*\*Limit as per CTO No. is 12/2019-PCB/347405/R0002737 dated 24.03.2020 valid up to 31/01/2025.

## **CHAPTER – 8**

### **D.G. STACK & D.G. STACK NOISE MONITORING**

**MONITORING PERIOD: OCTOBER-2022 TO MARCH-2023**

**D.G. Stack Monitoring Results**

SR. NO.	TEST PARAMETER	UNIT	DG Stack - 1 (2000 KVA) Make Cummins Sr. No.:25388675		LIMIT#
			19/12/2022	16/03/2023	
			RESULTS	RESULTS	
1	Particulate Matter	mg/Nm <sup>3</sup>	30.42	32.58	<b>75</b>
2	Sulfur Dioxide as SO <sub>2</sub>	Kg/hr	0.013	0.012	--
3	Oxides of Nitrogen as NOX	ppm	34.5	31.8	<b>710</b>
4	Non Methyl Hydro Carbon (NMHC)	mg/Nm <sup>3</sup>	Not Detected	Not Detected	<b>100</b>
5	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	27.48	25.31	<b>150</b>
6	Sulfur Content in fuel	%	0.028	0.028	<b>&lt; 2.0</b>

#: Details Provided by Customer.

Results on 15 % O2 Correction when Oxygen is greater than 15 %

SR. NO.	TEST PARAMETER	UNIT	DG Stack - 2 (2000 KVA) Make Cummins Sr. No.: 25390869		LIMIT#
			19/12/2022	16/03/2023	
			RESULTS	RESULTS	
1	Particulate Matter	mg/Nm <sup>3</sup>	26.35	21.84	<b>75</b>
2	Sulfur Dioxide as SO <sub>2</sub>	Kg/hr	0.012	0.01	--
3	Oxides of Nitrogen as NOX	ppm	32.32	30.45	<b>710</b>
4	Non Methyl Hydro Carbon (NMHC)	mg/Nm <sup>3</sup>	Not Detected	Not Detected	<b>100</b>
5	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	25.31	22.51	<b>150</b>
6	Sulfur Content in fuel	%	0.026	0.026	<b>&lt; 2.0</b>

#: Details Provided by Customer.

Results on 15 % O2 Correction when Oxygen is greater than 15 %

SR. NO.	TEST PARAMETER	UNIT	DG Stack - 3 (380 KVA) Make Cummins Sr. No.: 25386499		LIMIT#
			19/12/2022	16/03/2023	
			RESULTS	RESULTS	
1	Particulate Matter	g/kw-hr	0.0025	0.0023	<b>0.3</b>
2	Sulfur Dioxide (SO <sub>2</sub> )	Kg/hr	0.0007	0.0005	<b>1.8</b>
3	Oxides of Nitrogen as NOX	g/kw-hr	0.0058	0.0068	<b>9.2</b>
4	Hydro Carbon (HC)	g/kw-hr	Not Detected	Not Detected	<b>1.3</b>
5	Carbon Monoxide (CO)	g/kw-hr	0.0023	0.0023	<b>3.5</b>

#: Details Provided by Customer.

Results on 15 % O2 Correction when Oxygen is greater than 15 %

### D.G. Stack Noise Level Monitoring Results

SR. NO.	SAMPLING LOCATION	Outside DG Room 1 m distance	
		19/12/2022	16/03/2023
		RESULTS	RESULTS
1	DG Stack - 1 (2000 KVA) Cummins Sr. No.:25388675	70.6	71.9
2	DG Stack - 2 (2000 KVA) Cummins Sr. No.: 25390869	73.5	73.2
3	DG Stack - 3 (380 KVA)Cummins Sr. No.: 25386499	71.1	70.8
<b>LIMIT**</b>		<b>75 dB(A)</b>	

\*\*as per Noise limit for diesel generator sets (upto 1000 KVA) manufactured on or after the 1<sup>st</sup> January, 2005

**CHAPTER – 9**  
**WEATHER DATA MONITORING**  
**MONITORING PERIOD: OCTOBER-2022 TO MARCH-2023**

Date	Avg Wind Speed (Km/hr)	Temperature (°C)	RH %	Precip. (mm)
01/10/2022	2.69	25.3	84.04	0.00
02/10/2022	2.10	25.3	81.86	0.00
03/10/2022	3.88	26.0	81.92	0.00
04/10/2022	3.75	25.9	81.61	0.00
05/10/2022	3.35	25.5	80.29	0.00
06/10/2022	1.78	25.3	84.10	0.51
07/10/2022	5.57	24.7	85.37	0.00
08/10/2022	6.14	24.7	77.41	0.00
09/10/2022	2.04	25.8	80.12	0.00
10/10/2022	1.70	25.8	83.83	0.00
11/10/2022	2.50	25.3	85.61	0.00
12/10/2022	4.98	24.4	88.89	0.00
13/10/2022	4.29	26.5	80.47	0.00
14/10/2022	3.54	25.7	84.32	0.00
15/10/2022	2.38	26.4	82.93	0.00
16/10/2022	3.20	25.9	79.50	0.00
17/10/2022	3.94	26.5	82.37	0.00
18/10/2022	4.72	26.4	79.99	0.00
19/10/2022	4.23	26.5	82.13	0.00
20/10/2022	2.48	26.8	80.14	0.00
21/10/2022	2.60	26.2	79.51	2.03
22/10/2022	2.81	26.3	74.07	0.76
23/10/2022	1.80	26.1	63.90	0.00
24/10/2022	1.86	25.5	59.44	0.00
25/10/2022	1.59	24.2	69.72	0.00
26/10/2022	1.82	25.4	65.08	0.00
27/10/2022	2.47	25.9	59.86	0.00
28/10/2022	1.57	26.6	56.98	0.00
29/10/2022	1.89	26.8	60.15	0.00
30/10/2022	1.75	26.6	58.53	0.00
31/10/2022	2.07	25.8	59.07	0.00
01/11/2022	2.01	26.3	58.00	0.00
02/11/2022	3.43	26.1	70.89	0.00
03/11/2022	1.78	26.6	66.29	0.00
04/11/2022	2.37	27.7	59.98	0.00
05/11/2022	----	----	----	----
06/11/2022	----	----	----	----
07/11/2022	3.76	28.7	54.56	0.00
08/11/2022	2.11	26.7	60.77	0.00
09/11/2022	1.67	26.2	56.73	0.00
10/11/2022	1.62	26.0	53.38	0.00
11/11/2022	2.21	26.6	56.48	0.00
12/11/2022	1.96	26.3	50.66	0.00
13/11/2022	2.61	27.3	59.94	0.00
14/11/2022	3.51	27.9	65.98	0.00

15/11/2022	2.93	27.1	66.84	0.00
16/11/2022	1.71	26.1	64.68	0.00
17/11/2022	1.84	25.8	53.82	0.00
18/11/2022	2.19	25.4	50.09	0.00
19/11/2022	2.34	25.1	50.37	0.00
20/11/2022	2.46	24.2	49.05	0.00
21/11/2022	1.88	24.0	41.32	0.00
22/11/2022	1.65	24.9	51.64	0.00
23/11/2022	----	----	----	----
24/11/2022	3.17	27.7	62.67	0.00
25/11/2022	3.72	27.2	68.56	0.00
26/11/2022	2.65	26.6	75.07	0.00
27/11/2022	1.89	26.1	75.16	0.00
28/11/2022	3.26	25.9	77.80	0.00
29/11/2022	1.98	25.2	74.71	0.00
30/11/2022	1.97	26.2	65.19	0.00
01/12/2022	2.76	25.6	52.22	0.00
02/12/2022	3.56	25.9	61.24	0.00
03/12/2022	2.70	26.4	69.06	0.00
04/12/2022	1.55	27.0	68.17	0.00
05/12/2022	2.08	28.0	61.66	0.00
06/12/2022	1.76	27.1	56.71	0.00
07/12/2022	1.63	25.7	48.03	0.00
08/12/2022	2.21	25.4	54.73	0.00
09/12/2022	2.38	24.8	44.66	0.00
10/12/2022	2.24	24.6	45.53	0.00
11/12/2022	1.88	25.2	62.64	1.78
12/12/2022	2.46	25.3	75.99	1.02
13/12/2022	3.50	26.9	66.16	0.00
14/12/2022	5.37	26.5	65.96	0.00
15/12/2022	3.45	25.9	67.66	0.00
16/12/2022	3.17	25.8	58.03	0.00
17/12/2022	2.15	26.3	62.26	0.00
18/12/2022	1.92	26.1	64.84	0.00
19/12/2022	2.45	26.1	54.99	0.00
20/12/2022	2.17	25.4	52.74	0.00
21/12/2022	2.25	26.3	52.47	0.00
22/12/2022	2.30	25.7	50.60	0.00
23/12/2022	2.85	25.5	61.38	0.00
24/12/2022	2.87	24.7	57.86	0.00
25/12/2022	2.96	24.0	56.66	0.00
26/12/2022	3.54	24.9	61.60	0.00
27/12/2022	1.84	26.7	67.07	0.00
28/12/2022	---	---	---	0.00
29/12/2022	5.01	27.8	67.52	0.00
30/12/2022	2.12	25.9	63.72	0.00
31/12/2022	3.36	26.0	60.05	0.00
01/01/2023	3.53	24.7	64.72	0.00

02/01/2023	2.22	24.3	63.67	0.00
03/01/2023	3.75	25.2	63.81	0.00
04/01/2023	3.19	25.0	65.45	0.00
05/01/2023	2.67	24.6	56.82	0.00
06/01/2023	3.03	26.0	52.87	0.00
07/01/2023	2.60	26.0	56.46	0.00
08/01/2023	2.22	25.8	53.21	0.00
09/01/2023	2.43	24.7	37.65	0.00
10/01/2023	2.34	24.1	36.26	0.00
11/01/2023	2.09	24.0	45.52	0.00
12/01/2023	3.00	24.4	47.69	0.00
13/01/2023	7.53	23.4	55.18	0.00
14/01/2023	8.85	22.1	68.11	0.00
15/01/2023	4.15	23.0	69.14	0.00
16/01/2023	3.64	22.7	71.43	0.00
17/01/2023	2.93	23.1	70.33	0.00
18/01/2023	2.23	24.4	67.05	0.00
19/01/2023	2.67	24.6	54.35	0.00
20/01/2023	3.30	24.7	51.13	0.00
21/01/2023	3.29	23.9	53.34	0.00
22/01/2023	4.71	23.1	64.08	0.00
23/01/2023	7.34	22.8	60.93	0.00
24/01/2023	10.49	23.0	70.58	0.00
25/01/2023	10.44	23.0	69.08	0.00
26/01/2023	4.32	24.2	64.42	0.00
27/01/2023	4.21	24.9	61.52	0.00
28/01/2023	3.47	24.8	54.80	0.00
29/01/2023	3.97	24.1	65.57	0.00
30/01/2023	5.65	24.5	73.51	0.00
31/01/2023	3.61	24.8	71.38	0.00
01/02/2023	2.18	26.0	58.76	0.00
02/02/2023	2.41	26.9	48.30	0.00
03/02/2023	2.95	26.6	43.36	0.00
04/02/2023	2.84	26.7	46.43	0.00
05/02/2023	2.58	26.3	52.20	0.00
06/02/2023	3.18	26.1	54.88	0.00
07/02/2023	4.67	24.8	59.38	0.00
08/02/2023	2.40	24.7	63.94	0.00
09/02/2023	4.36	26.0	64.03	0.00
10/02/2023	2.73	25.5	69.37	0.00
11/02/2023	2.47	26.1	65.41	0.00
12/02/2023	3.93	26.2	63.88	0.00
13/02/2023	2.69	27.3	47.41	0.00
14/02/2023	3.53	26.9	41.90	0.00
15/02/2023	2.37	26.0	45.44	0.00
16/02/2023	2.44	27.1	38.05	0.00
17/02/2023	3.81	26.9	40.54	0.00
18/02/2023	4.35	26.3	59.61	0.00

19/02/2023	2.95	25.9	72.49	0.00
20/02/2023	2.15	26.1	67.58	0.00
21/02/2023	3.30	26.2	70.37	0.00
22/02/2023	4.29	26.2	64.28	0.00
23/02/2023	4.00	26.7	62.29	0.00
24/02/2023	4.10	25.5	68.04	0.00
25/02/2023	3.12	26.6	66.20	0.00
26/02/2023	3.75	27.4	61.74	0.00
27/02/2023	4.12	27.5	52.01	0.00
28/02/2023	3.54	26.7	54.47	0.00
01/03/2023	2.94	27.5	50.82	0.00
02/03/2023	3.78	27.9	44.94	0.00
03/03/2023	3.12	28.0	42.09	0.00
04/03/2023	2.87	28.7	39.49	0.00
05/03/2023	2.55	28.0	42.85	0.00
06/03/2023	3.94	27.9	44.81	0.00
07/03/2023	2.90	28.3	42.99	0.00
08/03/2023	3.57	28.2	38.09	0.00
09/03/2023	3.70	28.2	47.72	0.00
10/03/2023	2.96	28.0	43.83	0.00
11/03/2023	3.88	27.4	47.90	0.00
12/03/2023	2.94	28.0	46.41	0.00
13/03/2023	4.09	27.5	58.62	0.00
14/03/2023	2.97	27.6	69.56	0.00
15/03/2023	2.84	27.2	74.00	0.00
16/03/2023	3.69	27.2	70.16	0.00
17/03/2023	3.55	27.5	65.25	0.00
18/03/2023	3.46	27.3	64.26	0.00
19/03/2023	2.73	26.6	62.80	0.00
20/03/2023	3.10	25.5	58.39	0.00
21/03/2023	3.71	25.9	61.85	0.00
22/03/2023	9.50	26.0	65.83	0.00
23/03/2023	14.65	26.3	58.75	0.00
24/03/2023	11.54	26.4	63.68	0.00
25/03/2023	9.59	26.4	57.15	0.00
26/03/2023	11.63	24.9	57.43	0.00
27/03/2023	8.61	24.8	63.80	0.00
28/03/2023	8.35	25.0	64.95	0.00
29/03/2023	5.79	24.7	66.70	0.00
30/03/2023	3.90	25.5	66.22	0.00
31/03/2023	3.61	25.8	66.11	0.00

Note: Instrument was not in operation during 12th October, 2022 at 15:00 to 13th October, 2022 at 08:59, 25th October, 2022 at 03:00 to 25th October, 2022 at 18:59, 4th November, 2022 at 21:00 to 7th November, 2022 at 10:59, 15th November, 2022 at 02:00 to 05:59, 16th November, 2022 at 06:00 to 06:59; 16th November, 2022 at 11:00 to 11:59, 22nd November, 2022 at 19:00 to 24th November, 2022 at 11:59, 28th December, 2022 at 00:01 to 29th December, 2022 at 10:59, 9th February, 2023 at 21:01 to 22:59, 18th March, 2023 at 08:01 to 11:59, 21st March, 2023 at 15:01 to 16:59, 26th March, 2023 at 17:01 to 17:59 & 20:01 to 22:59 and 29th March, 2023 at 14:01 to 15:59 due to power failure.

ANNEXURE 2

EMP – COMPLIANCE STATUS

SI. NO	MEASURES	STATUS
1	Proposed roads in coal terminal shall be black topped to avoid entertainment of fugitive dust	<p><b>Complied.</b></p> <p>Both internal and external roads are paved with Cement Concrete and black top.</p>  <p>In addition, following is practised to control/minimise fugitive dust</p> <ul style="list-style-type: none"> <li>Facility is using road sweeping machines for house-keeping apart from manual labours.</li> </ul> 

**Compliance to the conditions stipulated in Environment and CRZ clearance.**



- Advanced Suction Type Road Sweeping machine is also deployed
- Regular house-keeping is carried out
- It is ensured that trucks remain covered with tarpaulin and properly fastened during transportation of cargo.



- There's speed restriction for vehicles entering the premises.
- Truck wheel washing arrangement is made inside the port to minimize dust emission.

**Compliance to the conditions stipulated in Environment and CRZ clearance.**



- PUC Certification for vehicles is ensure.



- Cargo is kept covered with tarpaulin all the time (Except during loading & unloading)



2

The Municipal waste generated at the terminal is to be disposed along with the solid waste being disposed at present by the MPT.

**Being complied.**

Municipal waste generated is properly segregated, stored and disposed along with Solid Waste to local authorities in line to Solid Waste Management Rules 2016 as amended Dispatch register is maintained. Food waste is being fed to OWC for composting.

**Compliance to the conditions stipulated in Environment and CRZ clearance.**

		
3	<p>Adequate numbers Toilets shall be constructed in terminal office and office area. The sewage shall be treated in septic tank. The treated sewage from septic tank shall be disposed into existing sewage network of MPT.</p>	<p><b>Complied.</b></p> <p>Toilet has been constructed at berth, office and workshop area. Sewage from the septic tank is transported by sewage tankers to STP located at PWD Baina. STP inlet &amp; outlet characteristic of water is regularly analyzed by NABL accredited laboratory. The monitoring results for the period October 22 - March 23 is enclosed as <b>Annexure 1</b></p>
4	<p>Drinking water facilities and waste disposal facilities shall be located away from each other.</p>	<p><b>Complied.</b></p>
5	<p>The water Effluent from coal stock yard to be settled in a settling tank</p>	<p><b>Complied.</b></p> <p>Port has constructed three water dump ponds. Water effluent from coal stock yard is collected &amp; settled in these dump ponds. Baffle walls have been constructed in all 3 dup ponds to enhance sedimentation of Cargo.</p> 
6	<p>Efficient pollution control technique for dust control to be utilized at open stock piles, conveyor transfer points, dump hopper loading points and other such dust generation locations.</p>	<p><b>Complied.</b></p> <p>A. Dry fog dust suppression system has been provided in conveyor and 224 no's of transfer points.</p>

**Compliance to the conditions stipulated in Environment and CRZ clearance.**

		<p>B. 43 Nos water sprinklers have been provided at coal stock yard for dust suppression.</p> <p>C. 2 Nos of Mist Canon systems are provided. (one is mobile canon and other one tire mounted)</p> <p>D. Covered conveyor belts are being used for transportation.</p> 
7	The stacker can operate from distance with boom to keep the stack pile surface to a minimum.	<b>Complied.</b>
8	All the regularly used roadways at site must be swept daily with a tank mounted road sweeper and washed by a truck mounted cart.	<p><b>Being Complied.</b></p> <p>Water tanker equipped with mist cannon arrangement is used to spray water on road to ensure the entrapment of fugitive emission. Also, vacuum sweeping machine and Bob cat have been deployed to remove dust from roads.</p>
, 9	All the transport shall be properly covered at the bottom and top with perfect sealing of plastic/tarpaulin sheets.	<p><b>Complied.</b></p> <p>It is ensured that trucks/ rakes remain covered with tarpaulin and properly fastened during transportation of cargo.</p>

**Compliance to the conditions stipulated in Environment and CRZ clearance.**

		 
<p>10</p>	<p>The stock yard should be covered with screens/ wall of height of at least 7 to 8 mtr.</p>	<p><b>Complied.</b></p> <p>Wind screen of MS structure along with HDPE fabric/ perforated sheet of 15 metres height has been provided along the coal stacking yard.</p> 
<p>11</p>	<p>The will be properly covered with tarpaulin and overloading will not allowed to avoid spillage of loose material on the roads. Regular maintenance and washing of wheel to be done.</p>	<p><b>Being complied.</b></p> <p>All the loaded trucks are covered with tarpaulin. Truck wheel washing arrangement is made inside the port to minimize dust emission.</p>
<p>12</p>	<p>Ambient noise level due to vehicular traffic to be controlled by developing green belt.</p>	<p><b>Complied.</b></p> <p>Green belt developed along the periphery and coal stock yard. Currently about 29,595 plants</p>

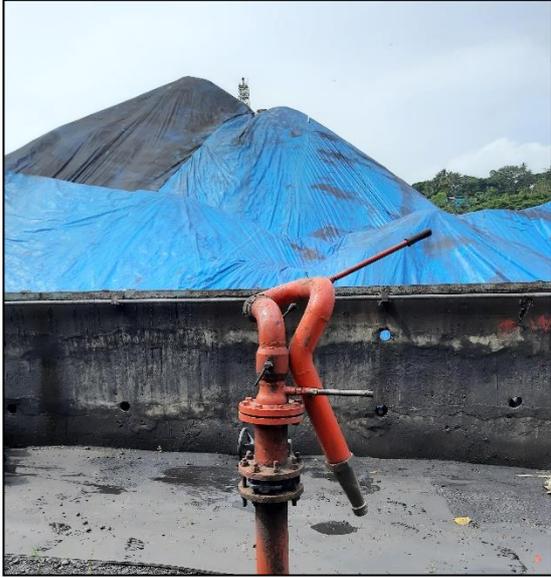
**Compliance to the conditions stipulated in Environment and CRZ clearance.**

		<p>are planted in port premises and are maintained well.</p> <p>Besides Ambient Noise levels are being monitored on a regular basis and reports of the same is being submitted to MoEF&amp;CC as part of Six monthly compliance report and to GSPCB on regular basis. Ambient Noise levels for the period October 22 - March 2322 is attached as <b>Annexure 1</b></p>
<p>13</p>	<p>Noise level from air compressor to be reduced by fitting exhaust muffler and intake mufflers</p>	<p><b>Complied.</b></p> <p>Air compressor is kept in an acoustic enclosure to minimize noise from these machines. Exposures of workers to high noise level are minimized by job rotation and use of ear muff.</p> 
<p>14</p>	<p>Green belt development.</p>	<p><b>Complied.</b></p> <p>Green belt developed along the periphery and coal stock yard. Currently about 29,595 plants are planted in port premises and are maintained well.</p> 

**Compliance to the conditions stipulated in Environment and CRZ clearance.**

		
<p>15</p>	<p>For controlling fire from coal stock following measures to be adopted.</p> <ol style="list-style-type: none"> <li>1. 3 No. of mobile fire tender to be placed at coal stack pile area.</li> <li>2. Autogenous combustion of coal stock to be prevented by limiting stock height not more than 6 M.</li> <li>3. Lump size of coal to be restricted to 20mm which will not lead to formation of air voids, eliminating the possibility of combustion</li> </ol>	<p><b>Complied.</b></p> <ol style="list-style-type: none"> <li>1. Installed fixed fire fighting system (49 fire hydrants &amp; 28 hose reels) at coal stack pile &amp; all CT's</li> </ol> 

**Compliance to the conditions stipulated in Environment and CRZ clearance.**

		 <p>2. Stack height is being maintained at 11 meters as per the current CTO. Regular sprinkling of water is carried out to control autogenous combustion.</p> <p><b>3. Being complied.</b></p> <p>Also there are 14 No. of water monitors (used for high water volume during fire) are provided around coal stock area.</p>
<p>16</p>	<p>Implementation of Environmental Monitoring Programme.</p>	<p><b>Being complied.</b></p> <p>Regular Environmental Monitoring is carried out to access the quality of treated effluents from STP, Ambient Air quality, Noise level are being monitored through NABL accredited laboratory M/s Pollucon Laboratories Pvt Ltd. regularly and confirming the standards. Also CAAQMS is installed &amp; running successfully. Monitoring reports is being submitted to MoEF&amp;CC as part of Six monthly compliance report and to GSPCB on regular basis. Environment Monitoring Report for the period October 22 - March 23 is attached as <b>Annexure 1.</b></p>

**Compliance to the conditions stipulated in Environment and CRZ clearance.**



Ref No: AMPTPL/2022/ 878

Date: 28.09.2022

To

Additional Chief Conservator of Forests (C),  
Ministry of Environment, Forest and Climate Change,  
Regional Office (SZ), Kendriya Sadan,  
4th Floor, E&F Wings, 17th Main Road,  
Koramangala II Block, Bangalore-560034 (Karnataka)  
rosz.bng-mefcc@gov.in

**Sub: Submission of Environmental Statement (Form-V) for the FY 2021-22.**

**Ref: Consent Order No. 12/2019-PCB/347405/R0002737 dated 24.03.2020**

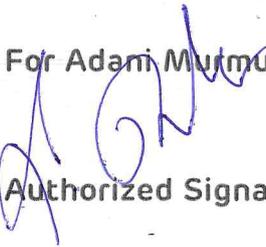
Respected Sir,

With reference to the captioned subject and cited references above, we submit herewith the Environmental Statement of **M/s Adani Mormugao Port Terminal Private Limited, Goa** in Form-V prescribed under Rule 14 of the Environment (Protection) Rules 1986 for the financial year ending 31<sup>st</sup> March 2022.

Submitted for your kind information and records.

Thanking You

For Adani Mormugao Port Terminal Private Limited,

  
Authorized Signatory

Adani Mormugao Port Terminal Pvt. Ltd.  
Sub Station Building  
Near Gate No.2 of MPT  
Mormugao, Goa-403803, India  
CIN No. U61100GJ2009PTC057727

Tel +91 832 2579200  
Fax +91 832 2579299  
info@adani.com  
www.adani.com

Registered Office: Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad 382421, Gujarat

## Vibhor Srivastava

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**From:** Vibhor Srivastava  
**Sent:** 30 September 2022 18:06  
**To:** Regional Office Bangalore  
**Subject:** Reg: Form V\_AMPTPL\_Goa\_FY 21-22  
**Attachments:** Form V - 2021\_22\_AMPTPL\_MoEF&CC.pdf

Respected Sir,

With reference to the captioned subject and cited references above, we submit herewith the Environmental Statement of **M/s Adani Mormugao Port Terminal Private Limited (Attached)**, in Form-V prescribed under Rule 14 of the Environment (Protection) Rules 1986 for the financial year ending 31<sup>st</sup> March 2022.

Submitted for your kind information and records.

Regards,

**Vibhor Srivastava**

Assistant Manager – Environment,

Address : Adani Mormugao Port Terminal Pvt. Ltd. Sub Station Building

Near Gate No. 2 of Mormugao Port Trust, Mormugao, Goa, 403803,India

Office: **+91 832 25 79326** | or Mob: **+916359897585** | Email: [Vibhor.Srivastava@adani.com](mailto:Vibhor.Srivastava@adani.com)

**adani**

Growth  
with  
Goodness

Our Values: Courage | Trust | Commitment



- ▶ Add Environment Statement
- ▶ Delete In-Progress Environment Statement

Send us your **feedback and suggestions**



click here for any kind **complaints or query** ↓



Welcome ADANI MURMUGAO PORT TERMINAL PVT. LTD Date : 28-9-2022

**Application No : 1470909**

You have successfully submitted Environmental Statement for this duration 2021-2022.

[View Environment Statement](#)



## GOA STATE POLLUTION CONTROL BOARD

### FORM V

(See Rule 14)

Environmental Statement for the financial year ending on 31st March on or before 30th of September every year.

#### PART A

- (i) Name and address of the owner/ occupier of the industry operation or process : ADANI MURMUGAO PORT TERMINAL PVT. LTD
- (ii) Industry category Primary-(STC Code) : RED, Ports and harbour, jetties and dredging operations  
Secondary-(STC Code)
- (iii) Production capacity : 5.2 Million Tonnes

Production Name	Production Capacity	Production Unit
Handling of Coal	5.2	Million Tonnes/Year

- (iv) Year of establishment : 2013
- (v) Date of the last environment statement submitted : 28/09/2022

#### PART B

##### 1. Water consumption m<sup>3</sup>/ d

Process :

Cooling :

Domestic :

Name of products	Process water consumption per unit of product output	
	During the previous financial year	During the current financial year
Handling of Coal	0.013 m <sup>3</sup> /MT	0.012 m <sup>3</sup> /MT

##### 2. Raw material consumption

Name of raw materials	Name of products	Consumption of raw material per unit	
		During the previous financial year	During the current financial year
Nil	Nil	Nil	Nil

\*Industry may use codes if disclosing details of raw materials would violate contractual obligations, otherwise all industries have to name the raw material used.

#### PART C

Pollution discharged to environment/ unit of output.

Pollution	Quantity of pollutants discharged(mass/day)	Concentration of pollutants in discharges(mass/volume)	Percentage of variation from prescribed standards with reasons
Water			
Water	No pollutant discharged to environment		
Air			
Air	DG sets are provided as standby power source and were used during power failure. The height of DG stacks are as per CPCB/GSPCB standards. All the monitored parameters are within standards.		
Air	DG STACK 1 (2000 KVA) - June 2021	PM - 24.56 mg/Nm <sup>3</sup> , NOx - 31.55 ppm, CO - 18.08 mg/Nm <sup>3</sup> , NMHC - BDL, Sulfur in fuel - 0.022%	
Air	DG STACK 1 (2000 KVA) - Sep 2021	PM - 22.42 mg/Nm <sup>3</sup> , NOx - 35.59 ppm, CO - 25.31 mg/Nm <sup>3</sup> , NMHC - BDL, Sulfur in fuel - 0.026%	
Air	DG STACK 1 (2000 KVA) - Dec 2021	PM - 25.61 mg/Nm <sup>3</sup> , NOx - 31.42 ppm, CO - 22.51 mg/Nm <sup>3</sup> , NMHC - BDL, Sulfur in fuel - 0.020%	
Air	DG STACK 1 (2000 KVA) - Mar 2022	PM - 27.81 mg/Nm <sup>3</sup> , NOx - 33.44 ppm, CO - 24.54 mg/Nm <sup>3</sup> , NMHC - BDL, Sulfur in fuel - 0.022%	
Air	DG STACK 2 (2000 KVA) - June 2021	PM - 20.42 mg/Nm <sup>3</sup> , NOx - 33.48 ppm, CO - 17.18 mg/Nm <sup>3</sup> , NMHC - BDL, Sulfur in fuel - 0.021%	
Air	DG STACK 2 (2000 KVA) - Dec 2021	PM - 23.33 mg/Nm <sup>3</sup> , NOx - 28.45 ppm, CO - 18.32 mg/Nm <sup>3</sup> , NMHC - BDL, Sulfur in fuel - 0.020%	

Air	DG STACK 2 (2000 KVA) - Mar 2022	PM - 25.62 mg/Nm <sup>3</sup> , NOx - 30.58 ppm, CO - 21.24 mg/Nm <sup>3</sup> , NMHC - BDL, Sulfur in fuel - 0.025%	-
Air	DG STACK 3 (380 KVA) - June 2021	PM - 0.0021 g/kw-hr, NOx - 0.0064 g/kw-hr, CO - 0.0015 g/kw-hr, NMHC - BDL, SO <sub>2</sub> - 0.0007 kg/hr	-
Air	DG STACK 3 (380 KVA) - Sep 2021	PM - 0.0022 g/kw-hr, NOx - 0.0054 g/kw-hr, CO - 0.0019 g/kw-hr, NMHC - BDL, SO <sub>2</sub> - 0.0008 kg/hr	-
Air	DG STACK 3 (380 KVA) - Dec 2021	PM - 0.0020 g/kw-hr, NOx - 0.0053 g/kw-hr, CO - 0.0017 g/kw-hr, NMHC - BDL, SO <sub>2</sub> - 0.0006 kg/hr	-
Air	DG STACK 3 (380 KVA) - Mar 2022	PM - 0.0025 g/kw-hr, NOx - 0.0057 g/kw-hr, CO - 0.0020 g/kw-hr, NMHC - BDL, SO <sub>2</sub> - 0.0006 kg/hr	-
Air	DG STACK 2 (2000 KVA) - Sep 2021	PM - 26.33 mg/Nm <sup>3</sup> , NOx - 28.45 ppm, CO - 18.32 mg/Nm <sup>3</sup> , NMHC - BDL, Sulfur in fuel - 0.020%	-

Name of Pollutants : .

#### PART D Hazardous Wastes

(as specified under Hazardous Wastes (Management and Handling) Rules, 1989)

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year	During the current financial year
(a) From process	A). Cat. 5.1 Used Oil – 2.95 MT B). Cat. 5.2 Cotton Waste contaminated with Oil – 1.08 MT	A). Cat. 5.1 Used Oil – 2.94 MT B). Cat. 5.2 Cotton Waste contaminated with Oil – 0.28 MT C). Cat 33.1 Empty Barrels – 0.26 MT
(b) From pollution control facilities	Nil	Nil

#### PART E Solid Wastes

	Total Quantity	
	During the previous financial year	During the current financial year
(a) From process	Nil	Nil
(b) From pollution control facility	Nil	Nil

(c)(1) Quantity recycled or re-utilised within the unit	Food Waste - 0.379 MT (In OWC)	Food Waste - 2.35 MT (In OWC)
(2) Sold	Nil	Nil
(3) Disposed	Food Waste - 1.203 MT	Nil

### PART F

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes • Hazardous waste includes used oil (Cat 5.1), Cotton waste contaminated with oil (Cat 5.2). & Empty Barrels (Cat 33.1). Used oil and the oil soaked cotton waste generated during various maintenance activities are collected in barrels kept in earmarked covered hazardous waste storage area as per the provisions of Hazardous Waste Management Rules, 2016 as amended & disposed of through GSPCB authorized / registered recycler.

- The used batteries and E -waste also stored in workshop storage area and disposed through approved vendor in line to E-waste Management Rules, 2016 as amended..
- Hazardous waste return in Form 4 was submitted in line with the Hazardous and Other Wastes (Management & Trans boundary Movement) Rules, 2016.
- E-waste return in Form 3 was submitted in line with the E-waste Management Rules 2016
- Solid Waste includes mainly domestic waste (office & kitchen waste) which is fed in Organic Waste Composter (In FY 21-22 – 2.35 MT of food waste was fed into OWC).

### PART G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production All the domestic waste water generated at site is treated at existing sewage treatment plant located at PWD Baina. Unit has developed adequate green belt within port premises. .

### PART H

Additional measures/ investment proposal for environmental protection abatement of pollution, prevention of pollution • Unit is undertaking Regular Environmental Monitoring at port & surrounding area through MoEF&CC recognized laboratory. All the monitored environmental parameters are found well within the standards prescribed & the details of monitored data is regularly submitted to GSPCB, CPCB, MoEF&CC and other concerned authorities.

- Unit has also installed Continuous Ambient Air Quality Monitoring System (CAAQMS) for the parameters CO, SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub> & PM<sub>2.5</sub> and the monitored real time data is connected with GSPCB server.
- Coal Stacks are kept covered with tarpaulin at all time, except during loading & unloading operations and adequate water Sprinkling is carried out regularly during loading and unloading operations.
- Unit has also provided dump pond and conveyance channel for collection of runoff generated from the coal yard.
- Unit has provided Sprinklers at coal yard & conveyor system and carrying out regular water sprinkling to control the fugitive dust. Wind screen covered with agronet/ jute cloth is provided around the periphery of coal yard.
- Unit has installed 2 cameras in coal stack yard and its online connectivity has been provided to GSPCB.
- As a precautionary measure an anemometer has been installed along with a hooter on Substation building and three different alert levels have been configured in PLC based on the Wind speed as follows:
  - For 25km/h to 27.99km/h - Hooter blows for 5 Seconds followed by a 1 Second Stop and the same repeats.
  - For 28km/h to 29.99km/h - The Hooter blows for 2 Seconds followed by a 1 second stop and the same repeats.

- For Above 30km/h - The Hooter continuously blows without any stop.
- Unit has taken continuous steps for developing green belt area within port premises. Vertical garden has also been developed as part of Environment Initiatives.

## PART I

Any other particulars for improving the quality of the environment • Handling of all types of wastes in line with 5R (Reduce, Reuse, Recycle, Recover and Reprocess )Principle.

- Integrated Management System (ISO 9001:2015, 14001:2015, 45001:2018, 27001:2013 and ISO 50001:2018) certified Port.
- Port has been certified as “Zero Waste to Landfill port” by CII Delhi.
- AMPTPL is 5S Certified Port by National Productivity Council (NPC).
- AMPTPL is bestowed with the top honors and the details of accolades received during the year 2021-22 are mentioned here under;
  - o “Gold Award” in services sector for outstanding achievement in Energy Efficiency 2021 by Apex India Foundation.
  - o “Platinum Award” in Service Sector for Outstanding Achievement in Environmental Excellence 2020” by Apex India Foundation.
  - o “Gold Award” in Service Sector for Outstanding Achievement in Environmental Excellence 2019” by Apex India Foundation.
  - o “Gold Award” in services sector for outstanding achievement in Environment preservation in 10th Exceed Environment Award and Conference 2021.
  - o “Gold Award” in services sector for outstanding achievement in Environment preservation in 12th Exceed Environment Award and Conference 2022.
- Baffle walls have been constructed in Dump ponds to increase sedimentation of Cargo.
- Community Development : AMPTPL provided two interactive study touch screen panels to local Goa school for students at a cost of Rs. 3.3 Lakhs.

Remarks : Nil .

AMPTPL Has been contributing towards the society. During reporting period, AMPTPL was involved in below mentioned activities:

**1. School children visit to AMPTPL:**

As a part of celebration to commemorate World Pollution Prevention Week 2022, AMPTPL organized a site visit for students from nearby Shree Susenashram Vidhyalay, Jetty Mormugao on 7th December 2022.

They were then taken to jetty in proper PPEs to witness fully mechanized cargo handling operations, including automatic cranes, mobile hoppers with water mist arrangement, covered conveyor belts to ensure zero fugitive emission.

Students were explained about the Central Control Room operations, from where only one person operates the full berth using most advanced equipment.

This acquainted young minds with best and state of art systems like - Automatic Wagon Loading and Tarpaulin covering station, Automatic truck loading system, Sprinkler systems, Wind screens, Dry Fog Dust Suppression (DFDS) systems, Mist Cannons, Concrete roads, Dump ponds with baffle walls, Efficient waste management including Organic Waste Convertor, Road sweeping machine, Continuous Ambient Air Quality Monitoring Stations (CAAQMS), Anemometers – for effective operation control during strong winds.

A presentation was made to the students and teachers to explain in detail the best practices adopted by industry to ensure efficient and sustainable operations.

Students and teachers found the visit very informative as they were introduced to the industry from within. Appreciated the efforts of industry while contributing to sustainable growth of the country.



**2. Contribution towards GSPCB organized international Conference:**

- a. AMPTPL participated in GSPCB organized 1st International Environment & Sustainability Summit Goa 2023.
- b. AMPTPL Stall at conference



- c. Hon'ble Union Minister for Environment and Climate Change Sh. Bhupendra Yadav welcomed by C.O.O. AMPTPL.



- d. Hon'ble CM Goa Dr. Pramod Sawant welcomed by O & M Head AMPTPL.

Compliance to the conditions stipulated in Environment and CRZ clearance.



e.