



AHPPL/MoEF&CC/2018-19/002

Date: 23/05/2018

To
Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan,
Arera Colony, Link Road-3, Ravishankar Nagar,
Bhopal - 462016 (Madhya Pradesh)
Tel. No.: 0755- 2465054, 2465496, 2466525
Email: rowz.bpl-mef@nic.in

Dear Sir,

Sub.: Six Monthly Compliance Report of conditions stipulated in Environment and CRZ Clearance for the development of Multi Cargo Port with Supporting Utilities and Infrastructure Facilities at Hazira, Surat, Gujarat for the period: Oct., 2017 to Mar., 2018.

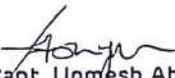
Ref.:

- 1). Amendment in CRZ/Environment Clearance issued by MoEF & CC, New Delhi vide letter No.: J-16011/11/2003-IA-III, dated 19th February, 2007.
- 2). CRZ Recommendations issued by Forests & Environment Department, Govt. of Gujarat to MoEF & CC, New Delhi vide letter No.: ENV-10-2006-128-P, dated 05th Feb., 2007.
- 3). Amendment in CRZ Clearance issued by MoEF & CC, New Delhi vide letter No.: J-16011/11/2003-IA-III, dated 12th November, 2003.
- 4). CRZ Clearance issued by MoEF & CC, New Delhi vide letter No.: J-16011/11/2003-IA.III dated 26th June, 2003.

Please find enclosed herewith point wise Compliance Reports (Hard copy as well as in a CD) of conditions stipulated in the above referred letters.

Thank you,

For, M/s. Adani Hazira Port Private Limited,


(Capt. Unmesh Abhyankar)
Authorised Signatory

Encl.: As above

Cc to:

1. The Director (Monitoring - IA Division), Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110 003.
2. The Director, Forests & Environment Department, Block - 14, 8th Floor, Sachivalaya, Gandhinagar, Gujarat - 382 010.
3. The Zonal Officer, Central Pollution Control Board, Zonal Office Vadodara, Parivesh Bhawan, Opp. VMC Ward Office No.:10, Subhanpura, Vadodra-390 023.
4. The Chairman, Gujarat Pollution Control Board, Parvayaran Bhawan, Sector - 10A, Gandhinagar-382 010 (Gujarat).
5. The Regional Officer, Gujarat Pollution Control Board, Belgium Square, Ring Road, Surat-395003, (Gujarat).

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LIST OF APPENDIXES

APPENDIX NO.	DETAILS
1.	Compliance To The Conditions Stipulated In CRZ Recommendations Issued By Forests And Environment Department, Government Of Gujarat Vide Letter No.: ENV-10-2003-29-P1 Dated 09 th July, 2003.
2.	Compliance To The Conditions Stipulated In Letter Dated 19 th February, 2007 For Amendment In Certain Conditions Of CRZ/Environmental Clearance vide letter No.: J-16011/11/2003-IA-III dated 26 th June, 2003.

LIST OF ANNEXURES

ANNEXURE NO.	DETAILS
1.	List of fire-fighting equipment's available as on 31.03.2018
2.	Details Of The CSR Activities Along With Budgetary Provisions And Expenditures For The Financial Year: 2017-18.
3.	Compliance Status Of Environmental Management Plan As Per Integrated EIA Report - September, 2012.
4.	Environmental Monitoring / Analysis Results For The Period From Oct., 2017 To Mar., 2018.
5.	Organogram Of AHPPL - Environment Management Cell.
6.	Details Of Environment Management Budget For The Financial Year: 2017-18.
7.	Compliance Report Of Conditions Stipulated in Consent To Establish (CTE-77767) issued By Gujarat Pollution Control Board, Gandhinagar (Gujarat) Vide Letter No.: GPCB/CCA-SRT-1314(6)/ID_35352/352537, Dated 16.04.2016.
8.	Detail of Wastes Collection & Disposed Off From Vessels By GPCB Approved Third Party During the period Oct., 2017 to Mar.2018.



Adani Hazira Port Private Limited

**From : Oct., 2017
To : Mar., 2018**

**SIX MONTHLY COMPLIANCE REPORT
OF
CRZ CLEARANCE ISSUED BY MOEF & CC, NEW DELHI
VIDE LETTER NO.: 160-11/11/2003-IA.III, DATED 26TH JUNE, 2003
FOR THE DEVELOPMENT OF MULTI CARGO PORT WITH SUPPORTING UTILITIES
AND
INFRASTRUCTURE FACILITIES AT HAZIRA, SURAT, GUJARAT**

A. Six Monthly Compliance Report for CRZ Clearance issued by MoEF & CC, New Delhi vide **letter No.: 160-11/11/2003-IA.III dated 26th June, 2003** for the development of Multi Cargo Port with supporting utilities and infrastructure facilities at Hazira, Surat, Gujarat: -

S. No.	Stipulated Conditions	Compliance Status															
A.	SPECIFIC CONDITIONS																
i.	All the conditions stipulated by the Gujarat Pollution Control Board vide their letter No.: PC NOC-SRT/1241/8995, dated 24 th March, 2003 shall be effectively implemented.	<p>Complied, AHPPL has obtained amendment in the Consent to Establish (NOC) from Gujarat Pollution Control Board as per the details given below: -</p> <table border="1"> <thead> <tr> <th>Consent No.</th><th>Issued On</th><th>Submitted To MoEF & CC On</th></tr> </thead> <tbody> <tr> <td>CTE_49766</td><td>05.10.2012</td><td>Along with Six Monthly Compliance Report dated 19.11.2014 & 19.05.2017.</td></tr> <tr> <td>CTE-64900</td><td>26.09.2014</td><td>Along with Six Monthly Compliance Report dated 12.05.2015 & 19.05.2017.</td></tr> <tr> <td>CTE-74330</td><td>13.01.2016</td><td>Along with Six Monthly Compliance Report dated 23.05.2016 & 19.05.2017.</td></tr> <tr> <td>CTE-77767</td><td>16.04.2016</td><td>Along with Six Monthly Compliance Report dated 21.11.2016 & 19.05.2017.</td></tr> </tbody> </table> <p>All conditions mentioned in the above mentioned consents are being effectively implemented. Please refer the Annexure-7 for compliance status of the latest CTE.</p>	Consent No.	Issued On	Submitted To MoEF & CC On	CTE_49766	05.10.2012	Along with Six Monthly Compliance Report dated 19.11.2014 & 19.05.2017.	CTE-64900	26.09.2014	Along with Six Monthly Compliance Report dated 12.05.2015 & 19.05.2017.	CTE-74330	13.01.2016	Along with Six Monthly Compliance Report dated 23.05.2016 & 19.05.2017.	CTE-77767	16.04.2016	Along with Six Monthly Compliance Report dated 21.11.2016 & 19.05.2017.
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CTE-77767	16.04.2016	Along with Six Monthly Compliance Report dated 21.11.2016 & 19.05.2017.															
ii.	All conditions stipulated by the Forest and Environment Department, Government of Gujarat vide their letter No.: ENV.10.2003-29-P1, dated 10 th April, 2003 and letter No.: ENV-10-2003-29-P1, dated 29 th May, 2003 shall be effectively implemented.	<p>Complying with. Both the letter mentioned in the condition were sent by Forest and Environment Department to MoEF & CC. Conditions mentioned in these letters were communicated to HPPL vide a separate letter dated 09th July, 2003 letter bearing No.: ENV-10-2003-29-P1. All the stipulated conditions of the aforesaid letters issued by the Forest and Environment Department, Government of Gujarat are being complied. Compliance status of the same is enclosed at Appendix-1 (Part A and B).</p>															
iii.	All the conditions stipulated by Gujarat Maritime Board vide their No.: GMB/ N/Pvt/190(10)/9041, dated 31.12.2002 shall be effectively implemented.	<p>Complied. GMB granted the consent to construction through this letter. Port is being constructed as per the approvals received. Copy of the same is submitted to the MoEF & CC and other concerned authorities along with the six monthly compliance report dated 19.05.2017.</p>															
iv.	The proposals for infrastructure corridor (37 Km of rail line, 10 Km. of road, 3 Km of underground conveyor system and 22 MW CCGT for connectivity) are deferred for lack of adequate details. The proponents are requested to submit a separate, fresh proposal embodying various components of the infrastructure	<p>Closed, The infrastructure corridor was proposed initially is not pursued and there is no development in this regard.</p>															

S. No.	Stipulated Conditions	Compliance Status
	corridor with requisite details. However, the desalination facilities can be taken up. Brine concentrates produced as a result of desalination works should not be disposed of in the sea. Instead, their techno-commercial viability should be explored for optimal utilization.	
v.	No groundwater should be tapped.	Complied with. Ground water is not being used for any purpose in the Port. The entire water requirement is being met through tanker water. An agreement with M/s. KRIBHCO was also signed on 25.07.2014 to use treated waste water from M/s. KRIBHCO in to the Port Operation. Pipeline work from M/s. KRIBHCO to M/s. AHPPL is in progress.
vi.	The area of 22 ha. of the mangrove patch and 8 ha. of buffer area along the mangrove patch should be protected during construction and operation phase of the project. As an additional measure, the 50 ha. of land identified at Kadia Bet located in the vicinity of the project site should be taken up for afforestation and no developmental activity should be taken up in the above mangrove areas. A detailed plan for the afforestation of mangroves at Kadia Bet should be prepared within 3 months and submitted to this Ministry.	Complied. Condition is substituted with new conditions 6(a) and 6(b), as per communication from MoEF dated 19th February, 2007 bearing No.: J-16011/11/2003-IA-III. Compliance of the amended conditions is enclosed as Appendix-2 .
vii.	Dumping of dredged spoils should be done in the locations approved earlier.	Condition is modified as per communication from MoEF & CC dated 12th November, 2003 bearing letter No.: J-16011/11/2003-IA-III revised conditions states "dumping of dredged spoils should be dumped at the sites A & C as per the following coordinates": - (A) 21° 03' to 21° 05' N & 72° 28' to 72° 30' E (C) 21° 03' to 21° 05' N & 72° 30' to 72° 32' E No disposal has been done till date. All the dredged material is being utilized for level rising, reclamation and apart from the above activity, excess material (if any) generated will be disposed of at the location approved by the MoEF & CC.
viii.	Environmental Management Plan (EMP) with detailed break-up of item-wise budget as contained in your letter dated 18 th June, 2003 shall be strictly implemented. The amount earmarked for EMP should be kept separate and should not be diverted	Complied. <ul style="list-style-type: none"> Separate Budget has been allocated to Environment Management department. Please refer the Annexure-6 for details of budget for Environment Management for the FY: 2017-18. Environment budget is not being diverted to

S. No.	Stipulated Conditions	Compliance Status
	for any other extraneous purpose.	any other purpose.
ix.	Method of disposal of solid wastes and the sites of such disposal shall be intimated to Ministry of Environment & Forests.	<p>Complied.</p> <ul style="list-style-type: none"> All solid non-hazardous wastes are being disposed off through a local vendor. Hazardous wastes is being disposed to the GPCB authorized CHWIF/TSDf sites i.e.: <ol style="list-style-type: none"> (1). M/s. SEPPL, Bhachau, Kutch (Gujarat), (2). M/s. BEIL, Ankleshwar, Bharuch (Guj.), (3). M/s. GSPL, Palsana, Surat (Gujarat), and (4). M/s. RSPL, Panoli, Bharuch (Gujarat). Total 49.740 MT Hazardous Waste disposed during Oct., 2017 to Mar., 2018. Out of which 21.10 MT Hazardous Waste is sent for co-processing to M/s RSPL, Panoli, Bharuch (Gujarat) Out of which 14.15 MT Used oil is being recycled through registered recyclers during Oct., 2017 to Mar., 2018. Membership certificates of M/s. SEPPL & M/s. BEIL (CHWIF/TSDf sites) are submitted to the MoEF & CC and other concerned authorities along with the six monthly compliance report dated 19.05.2017. Copy of provisional membership certificate of M/s. RSPL, Panoli is submitted along with compliance report dated 20.11.2017.
x.	The project proponents should find ways to reuse the treated sewage for greenery or any other purpose rather than discharging these into the coastal waters.	<p>Complied.</p> <p>Domestic waste water is being treated in the STP's. Treated water confirming the GPCB standards is being used in the Horticulture purpose within the port premises.</p>
xi.	Proper navigational aids and leading lights should be provided.	<p>Complied.</p> <p>Proper navigational aids and leading lights have been provided.</p>
xii.	Air pollution due to handling of fertilizer, coal should be monitored and kept within permissible limits.	<p>Complied.</p> <p>Ambient air quality monitoring is being carried out through M/s. Pollucon Laboratories (a MoEF&CC recognized and NABL accredited laboratory) within port premises and during current monitoring period all the pollutants are found under the limit.</p> <p>Please refer the Annexure-4A for the Ambient air monitoring Reports for the period Oct., 2017 to Mar., 2018.</p>
xiii.	Forest clearances, as applicable, be obtained.	Not applicable under this approval.
xiv.	Construction labour camps should be located outside Coastal Regulation Zone areas and should be provided with adequate cooking and sanitation facilities,	<p>Complied.</p> <p>No labour camps are located in Coastal Regulation Zone area. Labours are managed through contractors and they are from surrounding villages and have been provided residential facilities in the surrounding villages.</p>
xv.	The developer shall provide pollution control facilities for dust separation while handling bulk coal, iron ore and	<p>Complied.</p> <p>Following control measures are in place and effectively working at port to control fugitive</p>

S. No.	Stipulated Conditions	Compliance Status
	sulphur. Spill boards shall be provided in the berth to prevent cargo spillage into the sea.	<p>dust: -</p> <ol style="list-style-type: none"> 1. Spill boards are being provided to prevent cargo spillage into the sea. 2. Transportation of coal from jetty to coal storage yard through 1.7 Km. long conveyor belt with hood. 3. Water sprinklers in to the coal yard, 4. Dust Suppression System / Spray Nozzles in Conveyor System and Discharge Chute, 5. Water spray through Water Browsers, 6. Water Mist Canon / Fog System, 7. Wind Brake Shield of 14 meters high and 1200 meters long, 8. Transportation of cargo from port to hinterland is being done through dumpers / trucks covered with tarpaulin, 9. Regular cleaning the roads through Road Sweeping Machines, and 10. Company has set up dedicated greenbelt area for plantation at periphery / avenue plantation / landscaping etc. Total greenbelt area developed so far is approx. 65.15 ha within the port premises.
xvi.	The project proponent should ensure that the surface run-off from the stockyard is not let out into the sea/open area causing seawater/groundwater pollution.	<p>Complied.</p> <ul style="list-style-type: none"> • Run off from stockyard is being collected into dump ponds and collected water is being reuse for dust suppression purpose in the coal yard. • Quality monitoring of the Sea Water, Ground Water and Dump Pond Water is being done through M/s. Pollucon Laboratories (MoEF & CC recognised and NABL accredited laboratory). No significant change is observed in the reports. • Please refer the <u>Annexure-4B, 4D & 4E</u> for the Ground, Sea and Dump pond water Quality Monitoring / Analysis Reports for the period Oct., 2017 to Mar, 2018.
xvii.	All pollution control facilities for handling ballast water and bilge as required under MARPOL convention for servicing ships shall be provided.	<p>Complied.</p> <ul style="list-style-type: none"> • AHPPL are providing the facility to collect the solid and liquid waste (ballast and bilge) from the vessel on call basis. • AHPPL arranges GPCB approved third party to collect the liquid waste from vessels on call basis and the agency collect the liquid waste from vessels and transport at their facility for further treatment and disposal purpose. • Detail of sludge / wastes collected & disposed off from Vessels through GPCB approved agencies during the Oct., 2017 to Mar., 2018 is enclosed as <u>Annexure-8</u>. • Solid and liquid wastes generated from our

S. No.	Stipulated Conditions	Compliance Status
		own tugs is being collected in secure manner and disposed of in environmentally sound manner.
xviii.	A specific oil spill response plan shall be prepared and submitted to the State Authority with a copy to Ministry of Environment & Forests, before commissioning the project.	Complied. Oil Spill Contingency Plan has been prepared and the same was approved / vetted by Indian Coast Guard (Letter No.: 7563, dated 09.01.2014).
xix.	The stacking height of sulphur shall not in any case exceed 5 m.	Complied. Sulphur stacking height is being maintained less than 5 m.
xx.	Adequate fire-fighting facilities as per National Fire Protection Code shall be provided in the port area and in the buildings.	Complied. All the fire-fighting facilities are at place according to the National Fire Protection Code. List of fire-fighting equipment's available as on 31.03.2018 is enclosed as Annexure-1 .
xxi.	All dredging operations should be restricted to bare minimum extent, the dredge material should be used for reclamation instead of dumping off-shore.	Condition modified as per communication from MoEF & CC dated 12 th November, 2003 bearing letter No.: J-16011/11/2003-IA-III revised conditions states "all dredging operations should be restricted to bare minimum extent, the maximum dredged material suitable for reclamation should be used for the said purpose and the remaining material may be used for dumping at the recommended sites mentioned in Para (vii)" Complying with. No disposal has been done till date. All the dredging material is being utilized for level raising, reclamation and apart from the above activity, excess material (if any) generated will be disposed of at the location approved by the MoEF & CC.
xxii.	The dredging operations shall be carried out in a controlled manner such that there is no increase in turbidity levels outside the port area.	Complied. <ul style="list-style-type: none"> Dredging whenever required is carried out within port limit and as per approved plan only. Marine, water quality is being monitored through M/s. Pollucon Laboratories, Surat (a MoEF&CC recognised and NABL accredited laboratory). Monitoring of turbidity is being done which shows no increase in the turbidity level. Please refer the Annexure-4D for the Sea Water Quality Monitoring / Analysis Reports for the period Oct., 17 to Mar., 18.
xxiii.	A comprehensive water supply and management plan for the multi cargo port without tapping groundwater shall be prepared, in consultation with State Government/ Irrigation Department with a view to make water available for ships calling at the Hazira Port.	Complying with. <ul style="list-style-type: none"> Ground water is not being used for any purpose in the Port. The entire water requirement is being met through tanker water. An agreement with M/s. KRIBHCO was also signed on 25.07.2014 to use treated waste water from M/s. KRIBHCO in to the port operation. Pipeline work from M/s. KRIBHCO

S. No.	Stipulated Conditions	Compliance Status
		to M/s. AHPPL is in progress. <ul style="list-style-type: none"> Current water requirement of port operation is approx. 1500 KLD.
xxiv.	During reclamation, setting ponds shall be provided to control silt discharge into the sea.	Complied. During project development phase bunds/ setting ponds were provided to control the dumped soil materials which ensure no discharge of silt into the Sea.
xxv.	A Regional Disaster Management Plan for the Hazira Peninsula, covering all major industries and the port shall be prepared in consultation with District Authorities and implemented.	Complied. <ul style="list-style-type: none"> Regional DMP for the Hazira Peninsula, covering all major industries and the port has been prepared in consultation with District Authorities and same is being implemented In addition, AHPPL has developed and implemented ER & DMP. Regular mock drill to ensure the compliance and preparedness is being done. <p>Last Mock Drill (On Site) was on : 23.03.2018 Last Update of ERP & DMP : 10.03.2017 DMP submission to Directorate Industrial Safety & Health (DISH) on 27.06.2017</p>
xxvi.	The tugs shall be equipped with fire-fighting facilities and booms to control oil spill in the port area.	Complied. All tugs have been well equipped with fire-fighting facilities and booms to control oil spill in the port area.
xxvii.	A comprehensive Environmental Impact Assessment report for the entire gamut of activities of the multi cargo port at Hazira shall be prepared and submitted within one year from date of receipt of this clearance letter. Any additional environmental safeguards brought out by this comprehensive Environmental Impact Assessment report shall be duly implemented.	Complied. Comprehensive EIA study report prepared by NEERI has been submitted to the Ministry of Environment and Forests & CC on 19 th July, 2004. EIA has been revised during the expansion of the project. Compliance of the recommendation given in the EIA report as EMP is enclosed as <u>Annexure-3</u> .
xxviii.	The project proponent shall engage National Institute of Oceanography, Goa for monitoring the biological parameters of the mangrove areas located within the project site and the additional area 50 ha. identified at Kadia Bet for mangrove afforestation. For the purpose of monitoring the water quality and to study the siltation pattern, National Environmental Engineering Research, Nagpur shall be engaged.	Complied in line with the substituted conditions 6(a) & 6(b) from MoEF & CC, dated 19 th February, 2007. Please refer <u>Appendix-2</u> for the status of compliances.
xxix.	The project proponent shall ensure that NIO and NEERI undertake monitoring as above once in thirty days during construction period. The	Complied in line with the substituted conditions 6(a) & 6(b) from MoEF & CC, dated 19 th February, 2007. Please refer <u>Appendix-2</u> for the status of compliances.

S. No.	Stipulated Conditions	Compliance Status
	monitoring schedule should be once in three months during the operational phase of the project. The monitoring reports furnished by NIO and NEERI shall be submitted to the Regional Office of Ministry of Environment & Forests, Bhopal and to Ministry of Environment & Forests, New Delhi.	
B.	GENERAL CONDITIONS	
i.	Construction of the proposed structure should be undertaken meticulously conforming to the existing Central/local rules and regulations including Coastal Regulation Zone Notification, 1991 and its amendments. All the construction designs/drawings relating to the proposed construction activities must have approvals of the concerned State Government Department / Agencies.	<p>Complied.</p> <p>Construction of the port is being done in compliance to the CRZ Notification, 1991 which was amended in 2011 and as per the approvals received.</p> <p>All the construction designs/drawings relating to the proposed construction activities have been approved by the concerned State Government Department / Agencies as given below:-</p> <ul style="list-style-type: none"> • Environmental and CRZ Clearance issued by MoEF & CC, New Delhi vide letter No.: 11-150/2010-IA.III dated 03rd May, 2013. • Amendment in CRZ/Environment Clearance issued by MoEF & CC, New Delhi vide letter No.: J-16011/11/2003-IA-III, dated 19th February, 2007. • Amendment in CRZ Clearance issued by MoEF & CC, New Delhi vide letter No.: J-16011/11/2003-IA-III, dated 12th Nov., 2003. • CRZ Clearance issued by MoEF & CC, New Delhi vide letter No.: J-16011/11/2003-IA.III dated 26th June, 2003. • Approval from GMB to commence work was obtained on 09th April, 2010 vide letter No.: GMB/N/PVT/923(10)/42 /458. • PESO license from Chief Controller of Explosive, Nagpur vide Order No.: P/HQ/GJ/15/5294 (P270337), Renewed on 31.12.2015 valid till 31.12.2018. • License to work a Factory Adani Hazira Port Pvt. Ltd. (Liquid Terminal) from Director of Industrial Safety and Health, Govt. of Gujarat their vide Registration No.: 3502 / 51410 / 2013 and License No.: 18757, Renewed on 21-01-2017, valid till 31st December, 2018.
ii.	The proponent shall ensure that as a result of the proposed constructions, ingress of the saline water into the groundwater does not take place. Piezometers shall be installed for regular monitoring for this purpose at appropriate locations on the project site.	<p>Complied.</p> <ul style="list-style-type: none"> • Proper care is being taken during construction activity to avoid salinity ingress and any degradation of water quality. • M/s. AHPPL is monitoring the Ground Water Quality at one location on monthly basis. Results show no significant change in the quality.

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		<ul style="list-style-type: none">Ground water quality is being monitored through M/s. Pollucon Laboratories, Surat (a MoEF&CC and NABL accredited laboratory).Please refer the Annexure-4B for the Environmental Monitoring / Analysis Reports for the period Oct., 17 to Mar., 18.																														
iii.	Handling, manufacturing, storage and transportation of all hazardous chemicals should be carried out in accordance with MSIHC rules, 1989 and subsequent amendments. All approvals from State and Central nodal agencies including OISD, Chief Controller of Explosives, Chief Inspectorate of Factories must be obtained. A comprehensive contingency plan in collaboration with the concerned authorities must be formulated before commissioning of the project to meet any eventuality in case of an accident.	<p>Complying with and all required statutory approvals has been obtained from the concerned authorities i.e.: -</p> <ol style="list-style-type: none">PESO License from Chief Controller of Explosive, Nagpur vides Order No.: P/HQ/GJ/15/5294 (P270337). Renewed on 31.12.2015 valid till 31.12.2018.License to work a Factory Adani Hazira Port Pvt. Ltd. (Liquid Terminal) from Director of Industrial Safety and Health, Govt. of Gujarat their vide Registration No.: 3502 / 51410 / 2013 and License No.: 18757, Renewed on 21-01-2017, valid till 31st December, 2018. Copy of the License to work a Factory is submitted to the MoEF & CC and other concerned authorities along with the six monthly compliance report dated 19.05.2017.																														
iv.	A well-equipped laboratory with suitable instruments to monitor the quality of air and water shall be set up as to ensure that the quality of ambient air and water conforms to the prescribed standards. The laboratory will also be equipped with qualified manpower including a marine biologist so that the marine water quality is regularly monitored in order to ensure that the marine life is not adversely affected as a result of implementation of the said project. The quality of ambient air and water shall be monitored periodically in all the seasons and the results should be properly maintained for inspection of the concerned pollution control agencies. The periodic monitoring reports at least once in 6 months must be send to this Ministry (Regional Office at Bhopal) and State Pollution Control Board.	<p>Complied.</p> <ul style="list-style-type: none">The environmental quality monitoring is being done by M/s. Pollucon Laboratories Pvt. Ltd., Surat a MoEF&CC (F. No. Q-15018/24/2014-CPW letter dated 19.10.2015 and NABL accredited laboratory (Accreditation No.: TC - 5945 (in lieu of T - 0820 & T - 0821) valid till 27.05.2019).Details of parameters monitored and frequency is given below: - <table><tr><td>Ambient Air Quality as per NAAQMS</td><td>Weekly Twice</td></tr><tr><td>Ambient Noise Level Monitoring</td><td>Monthly</td></tr><tr><td>Soil Quality Analysis</td><td>Quarterly</td></tr><tr><td>Ground Water Quality Analysis</td><td>Monthly</td></tr><tr><td>Surface Water Quality Analysis</td><td>Monthly</td></tr><tr><td>Sea Water Quality Analysis (Surface & Bottom)</td><td>Monthly</td></tr><tr><td>Sea Sediments Quality Analysis</td><td>Monthly</td></tr><tr><td>HWG Stack Emission Monitoring</td><td>Monthly</td></tr><tr><td>Meteorological Data Monitoring</td><td>Continuous</td></tr><tr><td>ETP Inlet - Quality Analysis</td><td>Weekly Twice</td></tr><tr><td>ETP Outlet - Quality Analysis</td><td>Weekly Twice</td></tr><tr><td>STP Inlet and Outlet - Quality Analysis</td><td>Weekly</td></tr><tr><td>DG Sets Stack Emission Monitoring</td><td>Quarterly</td></tr><tr><td>DG Sets Noise Level Monitoring</td><td>Quarterly</td></tr><tr><td>Dump Pond Water Quality Analysis</td><td>Quarterly</td></tr></table> <ul style="list-style-type: none">Please refer the Annexure-4A, 4B, 4C, & 4D	Ambient Air Quality as per NAAQMS	Weekly Twice	Ambient Noise Level Monitoring	Monthly	Soil Quality Analysis	Quarterly	Ground Water Quality Analysis	Monthly	Surface Water Quality Analysis	Monthly	Sea Water Quality Analysis (Surface & Bottom)	Monthly	Sea Sediments Quality Analysis	Monthly	HWG Stack Emission Monitoring	Monthly	Meteorological Data Monitoring	Continuous	ETP Inlet - Quality Analysis	Weekly Twice	ETP Outlet - Quality Analysis	Weekly Twice	STP Inlet and Outlet - Quality Analysis	Weekly	DG Sets Stack Emission Monitoring	Quarterly	DG Sets Noise Level Monitoring	Quarterly	Dump Pond Water Quality Analysis	Quarterly
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ETP Inlet - Quality Analysis	Weekly Twice																															
ETP Outlet - Quality Analysis	Weekly Twice																															
STP Inlet and Outlet - Quality Analysis	Weekly																															
DG Sets Stack Emission Monitoring	Quarterly																															
DG Sets Noise Level Monitoring	Quarterly																															
Dump Pond Water Quality Analysis	Quarterly																															

S. No.	Stipulated Conditions	Compliance Status
		<p>for Environmental Monitoring/Analysis Reports for the period Oct., 17 to Mar., 18.</p> <ul style="list-style-type: none"> Monitoring report confirms the compliance with standards wherever applicable. Reports are being submitted to MoEF&CC and other authorities along with six monthly compliance reports.
v.	Adequate provisions for infrastructure facilities such as water supply, fuel for cooking, sanitation etc. must be provided for the laborers during the construction period in order to avoid damage to the environment. Colonies for the laborers should not be located in Coastal Regulation Zone area. It should also be ensured that the construction workers do not cut trees including mangroves for fuel wood purpose.	<p>Complied.</p> <p>No labour camps are located in Coastal Regulation Zone area. Labours are managed through contractors and they are from surrounding villages and have been provided residential facilities in the surrounding villages.</p>
vi.	To prevent discharge of sewage and other liquid wastes into the water bodies, adequate system for collection and treatment of the wastes must be provided. No sewage and other liquid wastes without treatment should be allowed to enter into the water bodies.	<p>Complied.</p> <p>Adequate system for collection and treatment of sewage and liquid wastes are in place. Treated sewage water is being utilized for horticulture purpose within the premises.</p>
vii.	Appropriate facility should be created for the collection of solid and liquid wastes generated by the barges/ vessels and their safe treatment and disposal should be ensured to avoid possible contamination of the water bodies.	<p>Complied.</p> <ul style="list-style-type: none"> AHPPL are providing the facility to collect the solid and liquid waste from the vessel on call basis. Garbage collected from the vessels is disposed of in environment friendly manner by converting bio-compost and used the same in horticulture / gardening purpose. AHPPL arranges GPCB approved third party to collect the liquid waste from vessels on call basis and the agency collect the liquid waste from vessels and transport at their facility for further treatment and disposal purpose. Please refer the Annexure-8 for details of sludge/wastes collected & disposed off from Vessels through GPCB approved agencies during Oct., 2017 to Mar., 2018. Solid and liquid wastes generated from our own tugs is being collected in secure manner and disposed of in environmentally sound manner.
viii.	Necessary navigational aids such as channel markers should be provided to prevent accidents. Internationally recognized safety standards shall be applied in case of barge/vessel movements.	<p>Complied.</p> <p>Proper navigational aids and leading lights have been provided. Internationally recognized safety standards are being followed during vessel movement.</p>

S. No.	Stipulated Conditions	Compliance Status
ix.	The project authorities should take appropriate community development and welfare measures for villagers in the vicinity of the project site, including drinking water facilities. A separate fund should be allocated for this purpose.	<p>Complied.</p> <ul style="list-style-type: none"> CSR activities carried out by Adani Foundation in four verticals i.e.: - (1) Education, (2). Community Health, (3). Sustainable Livelihood and (4). Rural Infrastructure Development. Detail of the CSR activities along with budgetary provisions and progress are regularly submitted to MoEF & CC as part of six monthly compliance reports. Total budget allocated for CSR activities is Rs. 706.50/- Lakh for FY: 2017-18 and total expenditure is Rs. 701.95/- Lakh during FY: 2017-18. Please refer the Annexure-2 for the status of the CSR activities planned during the Financial Year: 2017-18.
x.	The quarrying material required for the construction purpose shall be obtained only from the approved quarries/ borrow areas. Adequate safeguard measures shall be taken to ensure that the overburden and rocks at the quarry site do not find their way into water bodies.	<p>Complied.</p> <p>No quarry material has been procured during Oct., 2017 to Mar., 2018.</p>
xi.	The dredging operations to be undertaken with the prior approval of this Ministry, shall be executed with appropriate safeguard measures to prevent turbidity conditions in consultation with the expert agencies such CWPRS/NIO.	<p>Condition deleted as per communication from MoEF & CC dated 12th November, 2003 bearing letter No.: J-16011/11/2003-IA-III.</p>
xii.	For employing unskilled, semi-skilled and skilled workers for the project, preference shall be given to local people.	<p>Complying with.</p> <p>AHPPL has always given employment priority to local qualified persons and in future the same will be continued. As on 31st Mar., 2018 total 182 out of 212 on roll employees are from Gujarat.</p>
xiii.	The recommendations made in the Environmental Management Plan and Disaster Management Plan, as contained in the Environmental Impact Assessment and Risk Analysis Reports of the project shall be effectively implemented.	<p>Complied.</p> <ul style="list-style-type: none"> Recommendation given in EMP is being complied in letter and spirit. Status of the same is enclosed as Annexure-3. AHPPL is an ISO 14001: 2015, ISO 9001: 2015 and OHSAS 18001: 2007 certified company. AHPPL has developed and implemented ER & DMP. Regular mock drill to ensure the compliance and preparedness is being done. Last Mock Drill (On Site) was on : 23.03.2018 Last Update of ERP/DMP: 10.03.2017 Last submission to Directorate Industrial Safety & Health (DISH) on 27.06.2017 Schematic of ER & DMP communication flow is submitted to the MoEF & CC and

S. No.	Stipulated Conditions	Compliance Status
		other concerned authorities along with the six monthly compliance report dated 19.05.2017.
xiv.	A separate Environmental Management Cell with suitable qualified staff to carry out various environment related functions should be set up under the charge of a Senior Executive who will report directly to the Chief Executive of the Company.	Complied. <ul style="list-style-type: none"> Environment Management Cell has been set up with qualified staff to ensure the effective implementation of environmental safe guards. In addition to the site Environment Management Cell a well-established corporate environment cell also ensures effective implementation of the environmental safeguards. Please refer the <u>Annexure-5</u> for Environment Management Cell Organogram.
xv.	The project-affected people, of any should be properly compensated and rehabilitated.	There is no R&R factors involve for development of Port. The entire port is being developed on reclaimed land allotted by Government.
xvi.	The funds earmarked for environment protection measures should be maintained in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry.	Complied. <ul style="list-style-type: none"> Separate Budget is allocated to HSE department. Please refer the <u>Annexure-6</u> for details of budget for Environment Management for the FY: 2017-18. No funds are diverted for any other purposes.
xvii.	Full support should be extended to the officers of this Ministry's Regional Office at Bhopal and the officers of the Central and State Pollution Control Boards by the project proponent during this inspection for monitoring purposes, by furnishing full details and action plans including the action plans including the action taken reports in respect if mitigative measures and other environmental protection activities.	Complying with. <ul style="list-style-type: none"> AHPPL is regularly submit six monthly compliance reports which comprises compliance to the conditions stipulated in Environment and CRZ Clearance, action taken report of Environment Management Plan, environment monitoring reports etc. Last two reports were submitted vide letter dated 19.05.2017 and 20.11.2017. Whenever any authorities such as MoEF&CC, GPCB and GMB etc. visit the AHPPL full support is extended and AHPPL provides all additional information seek by them during the inspection. Last visit of officials from MoEF & CC - RO, Bhopal was on 01 & 02.05.2017. Last visit by RO - GPCB, Surat was on 02.10.2017 and 03.03.2018.
xviii.	In case of deviation or alternation in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection. The project proponents should be responsible for implementing the suggested	Noted and Complied. There is no change in project profile / implementation agency, if any.

S. No.	Stipulated Conditions	Compliance Status
	safeguard measures.	
xix.	This Ministry reserves the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.	Noted and comply with the MoEF & CC directions, if any.
xx.	This Ministry or any other competent authority may stipulate any additional conditions subsequently, if deemed necessary for environmental protection, which shall be complied with.	Noted and comply with the additional conditions stipulated by the MoEF & CC, if any.
xxi.	The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment & Forests at http://www.envfornc.in . The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bangalore.	Closed, Advertisements were published in Gujarati News Paper "Gujarat Samachar" on 12/07/2003 and English News Paper "The Times Of India" on 10/07/2003.
xxii.	The project proponents should 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.	Closed, <ul style="list-style-type: none"> Financial Closure date is 29th September, 2011. Approval from GMB to commence work was obtained on 09th April, 2010 vide letter No.: GMB/N/PVT/923(10)/42/458. Copy of the same has been submitted to the MoEF & CC and other concerned authorities along with the six monthly compliance report dated 19.05.2017.



Adani Hazira Port Private Limited

**From : Oct., 2017
To : Mar., 2018**

APPENDIX-1:

**COMPLIANCE TO THE CONDITIONS STIPULATED IN CRZ RECOMMENDATIONS ISSUED BY
FORESTS AND ENVIRONMENT DEPARTMENT, GOVERNMENT OF GUJARAT VIDE LETTER
NO.: ENV-10.2003-29-P1 DATED 09TH JULY, 2003**

**(Comprising conditions of Letter dated 10th April, 2003 & 29th May 2003 in part A & B
respectively)**

APPENDIX-1: Compliance To The Conditions Stipulated In CRZ Recommendation Issued By Forest And Environment Department, Government Of Gujarat Vide Letter No.: ENV-10.2003-29-P1 Dated 09th July, 2003: -

Part A: Conditions specified in letter dated 10 th April, 2003 from Forest and Environment Dept. Government of Gujarat to the Ministry and Forests, Government of India		
S. No.	Conditions	Compliance Status
A.	Specific Condition	
1.	The provision of CRZ Notification, 1991 and its amendments issued from time to time shall be strictly complied with by the HPPL.	<p>Complied. CRZ Notification has been amended in 2011.</p> <ul style="list-style-type: none"> Construction activities are as per the provisions of CRZ Notification, 2011. No construction work other than those permitted in CRZ Notification has been done. Development of the port and other ancillary facility is being done as per the approval received under CRZ Notification, 2011 and EIA Notification, 2006 & subsequent amendments.
2.	The HPPL shall take up / develop only those activities proposed to be commissioned before the end of the year 2008 as mentioned in the Rapid EIA report and the bar chart submitted by HPPL. A separate clearance shall be obtained by HPPL for construction of the berths bearing nos. 2, 6, 7, 11, and 12 and its back up facilities as amended in the drawings submitted with the CRZ application after demonstrating the compliance of the conditions, ecological upliftment activities undertaken successfully and mitigative measures implemented while developing the other port facilities.	<ul style="list-style-type: none"> AHPPL has obtained amendment in the environment and CRZ clearance vide letter No.: 11-150/2010-IA.III dated 03rd May, 2013. Development of the port and other ancillary facility is being done as per the approval received under CRZ Notification, 2011 and EIA Notification, 2006. Detailed EMP has been proposed in the EIA-2012 for ecological upliftment and environment protection. Status of EMP is enclosed as <u>Annexure-3</u>.
3.	The ground water shall not be tapped in any case to meet with the water requirements during construction and / or operational phases.	<p>Complied with.</p> <p>Ground water is not being used for any purpose in the Port. The entire water requirement is being met through tanker water. An agreement with M/s. KRIBHCO was also signed on 25/07/2014 to use treated waste water from M/s. KRIBHCO in to the Port operation. Pipeline work from M/s. KRIBHCO to M/s. AHPPL is in progress.</p>
4.	Before commissioning of the construction activities the construction design for the port as well as the infrastructure corridor shall be validated / approved by the CWPRS, Pune to ensure that there is no negative impact on the costal morphology, hydrodynamic and ecological systems. The mitigative measures as may be suggested shall	<p>Complied with.</p> <p>CWPRS study has been completed for Multi-Cargo Port. No significant impact on morphology is envisaged.</p>

S. No.	Conditions	Compliance Status
	be implemented by the HPPL.	
5.	The HPPL shall ensure that the free flow of water in the intertidal area is not hampered due to proposed construction activities for infrastructure corridor. The corridor shall be developed away from the residential areas to ensure that the local inhabitants are not affected due to proposed development.	Complied. <ul style="list-style-type: none"> Port construction has been done in such a way that free flow of water in the intertidal area is not hampered. The infrastructure corridor was proposed initially is not pursued and there is no development in this regard.
6.	The HPPL shall take up massive plantation activities through the forests department in at least 200 ha. of areas suitable identified in consultation with the forests dept. as well as this dept. the HPPL shall bear the cost of the said land as well as cost of the plantation of mangroves up to its sustenance. The HPPL has also to ensure that the planted mangroves survive.	Complied. <ul style="list-style-type: none"> Total 1371 ha. of mangrove plantation has been achieved by the HPPL in Hazira area with support of local communities. Above mangrove plantation area has been verified by DCF and DILR. Supporting documents of the same submitted to MoEF & CC and other authorities along with the six monthly compliance report dated 19.05.2017.
7.	The HPPL shall also provide technical and financial assistance for development of ecological park for the purpose of Env. awareness and education at an appropriate site duly identified in consultation with this Dept.	Complied With. Initially Ecological and Mangrove Interpretation Centre was established to create awareness about mangroves is being done by NGO Nature Club in 5 villages of Hazira Penninsula.
8.	In addition to the mangrove plantation the HPPL shall also taken up massive green belt development in and around the project site in consultation with the Forest Dept.	Complying with. Company has set up dedicated green belt area for plantation at periphery / avenue plantation / landscaping etc. Total greenbelt area developed so far is approx. 65.15 ha within the port premises.
9.	The HPPL shall provide financial contribution as may be decided by this dept. for any common study like Regional Env. Assessment as well as for any common facilities including the Vessel Traffic Mgmt. System in the Gulf of Chambhat, for the purpose of the Env. protection/mgmt.	Agreed to comply. AHPPL will contribute reasonable cost for any common study as and when suitable proposal comes.
10.	The HPPL shall provide financial and technical support in implementation of the Functional Green Crops Scheme (being implemented) in Gujarat by the GEER Foundation in Surat District in consultation with this Dept.	Agreed to comply AHPPL will contribute reasonable cost as and when required by GEER.
11.	The HPPL shall bear the cost of the external agency that may be appointed by this Department for supervision/monitoring of their activities during construction and /or operational phases.	Agreed to comply. AHPPL will bear the cost of external agency, if any that may be appointed by this department.
12.	The HPPL shall not use any other port	Complied with.

S. No.	Conditions	Compliance Status
	facilities for transportation of quarrying material without prior EIA done and without permission of this department.	EIA has been done in 2012 and environment and CRZ clearance has been obtained vide letter No.: 11-150/2010-IA.III dated 03 rd May, 2013.
13.	The dredged material shall be disposed of at a location suitably identified in consultation with the NEERI/NIO after due consideration of various environmental aspects and ensuring no significant negative impact due to the same.	Condition is amended. Modified as per communication from MoEF&CC dated 12 th November, 2003 bearing letter No.: J-16011/11/2003-IA-III revised conditions states "dumping of dredged spoils should be dumped at the sites A & C as per the following coordinates: - (A) 21°03' to 21°05' N & 72°28' to 72°30' E (C) 21°03' to 21°05' N & 72°30' to 72°32' E No disposal has been done till date. All the dredging material is being utilized for level rising, reclamation and apart from the above activity, if any excess material generated will be disposed of at the location already approved by the MoEF&CC.
14.	No waste including construction debris, oily waste from construction equipments, untreated sewage would be disposed of into the sea/ river/ creek or in the CRZ areas. The treated sewage meeting with the norms fixed by the Gujarat Pollution Control Board and the reject water from the RO plant shall be disposed off at a point suggested by the NIO.	Complied. <ul style="list-style-type: none"> No waste including construction debris, oily waste from construction equipments, untreated sewage has been disposed of into the sea/river/creek or in the CRZ areas. The treated sewage meeting with the norms fixed by the Gujarat Pollution Control Board is being used in horticulture purpose. Desalination/RO plant is not yet installed.
15.	The Gujarat Maritime Board shall ensure that the Vessel Traffic Management System for safe navigation in the Gulf of Chambhat shall be established and commissioned before commissioning of the Hazira Port by the HPPL. The HPPL shall follow up for this with various stockholders and provide financial and Technical inputs for the same.	Vessel Traffic Management System is already in operation since 2010 at AHPPL, Hazira.
16.	A mutual aid scheme for the Hazira shall be developed to meet with any unforeseen circumstance or to meet with any accident at condition. The HPPL shall take a lead for this by involving other stakeholders.	Complying with. Regional DMP for the Hazira Peninsula, covering all major industries and the port has been prepared in consultation with District Authorities and same is being implemented.
17.	A detailed Risk Assessment and Disaster Management Plan shall be worked out before commissioning of the TFC and Multi Cargo Port by the HPPL and the mitigative measures shall be identified.	Complied. Disaster Management Plan has been prepared prior to the commissioning of multi cargo port. <ul style="list-style-type: none"> DMP has been submitted to GSDMA vide letter dated 20.10.2012. Comments were received from authority vide letter no. GSDMA /SM / Ind.safety/ 770560 dated 03.12.2012.

S. No.	Conditions	Compliance Status
		<ul style="list-style-type: none"> Suggestions were incorporated and revised plan was submitted to GSDMA on 23.05.2014. Regular mock drill to ensure the compliance and preparedness is being done. <p>Last Mock Drill (On Site) was on : 23.03.2018 Last Update of ERP & DMP : 10.03.2017 Last submission to Directorate Industrial Safety & Health (DISH) on 27.06.2017</p>
18.	Proper rehabilitation scheme shall be worked out for local fisherman communities in consultation with the District Contactor/ the Commissioner of Fisheries, GoG.	Complied with. The project has not displaced any person or interfered with little fishing that exists in the area. The project is on reclaimed land and entails no private land acquisition.
19.	The construction labour shall be provided amenities/facilities including water supply, sanitation and fuel to ensure that the existing environmental condition is not deteriorated by them. The camps for the construction labour shall be kept outside the CRZ areas. The HPPL shall ensure that there is no confrontation among the local villagers and construction labour.	Complied. No labour camps are located in Coastal Regulation Zone area. Labours are managed through contractors and they are from surrounding villages and have been provided residential facilities in the surrounding villages.
20.	All possible social and health impacts due to proposed development shall be assessed in detail in the comprehensive EIA and detailed management plan shall be developed to mitigate the same.	Complied with. EIA has been done and detail covering all possible social and health impacts due to proposed development. Management plan of the same has also been presented in the EIA.
21.	The HPPL shall work out a detailed socio-economic upliftment programme in consultation with the District Collector and District Development Office and shall implement the same. Separate budgetary provisions shall be earmarked for this purpose.	Complied. <ul style="list-style-type: none"> CSR activities carried out by Adani Foundation in four verticals i.e.: - (1) Education, (2). Community Health, (3). Sustainable Livelihood and (4). Rural Infrastructure Development. Detail of the CSR activities along with budgetary provisions and progress are regularly submitted to MoEF & CC as part of six monthly compliance reports. Total budget allocated for CSR activities is Rs. 706.50/- Lakh for FY: 2017-18 and total expenditure is Rs. 701.95/- Lakh during FY: 2017-18. Please refer the Annexure-2 for the status of the CSR activities planned during the Financial Year: 2017-18.
22.	An environmental Management Cell with persons having proper background shall be constituted. A separate budgetary provision shall be kept for implementation of the Environmental Management Plan.	Complied. <ul style="list-style-type: none"> Environment Management Cell has been set up with qualified staff to ensure the effective implementation of environmental safe guards. In addition to the site Environment

S. No.	Conditions	Compliance Status
		<p>Management Cell a well-established corporate environment cell also ensures effective implementation of the environmental safeguards.</p> <ul style="list-style-type: none"> • Please refer the Annexure-5 for Environment Management Cell Organogram. • Separate Budget has been allocated to HSE department for the Financial Year: 2017-18 is Rs. 276.62/- Lakhs. • Environment Budget is not being diverted to any other purpose. Details of the environment budget are enclosed. • Please refer the Annexure-6 for details of budget for Environment Management for the FY: 2017-18.
23.	Post project environmental monitoring shall be carried out through a reputed institute.	<p>Complied.</p> <p>Environmental Monitoring/Analysis are being done through M/s. Pollucon Laboratories, Surat (a MoEF&CC and NABL accredited laboratory) within port premises and during current monitoring period all the pollutants are found under the limit. Please refer the Annexure-4 for the Environmental Monitoring / Analysis Reports for the period Oct., 2017 to Mar., 2018.</p>
24.	No construction activities shall be carried out in any of the Forest areas without obtaining prior permission from the Forest Dept.	No construction activities will be done prior to obtaining Forest Land.
25.	All necessary clearances from different Government Department/Agencies shall be obtained before commissioning any construction activities.	<p>All statutory permissions from the concerned statutory authorities are obtained i.e.: -</p> <ol style="list-style-type: none"> 1. Environment and CRZ Clearance from MoEF & CC, GOI vide order No.: F.No.:11-150/2010-IA-III dated 03.05.2013. 2. PESO License from Chief Controller of Explosive, Nagpur vides order No.: P/HQ/GJ/15/5294 (P270337), Renewed on 31.12.2015 valid till 31.12.2018. 3. License to work a Factory Adani Hazira Port Pvt. Ltd. (Liquid Terminal) from Director of Industrial Safety and Health, GoG their vide Registration No.: 3502 / 51410 / 2013 and License No.: 18757, Renewed on 21-01-2017, valid till 31st December, 2018.
26.	A six monthly compliance report with respect to the above mentioned conditions as well as implementation of the suggestions/recommendations of the EIA report shall be furnished to this Department without fail at regular interval.	<ul style="list-style-type: none"> • Six monthly compliance reports are being submitted to the concerned authorities. • Last two reports were submitted vide letter dated 19.05.2017 & 20.11.2017.
27.	The HPPL shall also comply with any conditions as may be imposed by this Department from time to time.	Noted and agreed to comply with additional conditions stipulated or modify the existing ones by MoEF & CC, if any.

Part B: Conditions specified in letter dated 29 th May, 2003 from Forest and Environment Dept. Government of Gujarat to the Ministry and Forests, Government of India		
S. No.	Conditions	Compliance Status
1.	The revised proposal of changed land use / development plan furnished by the HPPL vide their letter dated 13-5-2003, may be studied in detail as how feasible is the same to achieve its objectives of avoiding / minimizing the impacts on the existing mangroves.	The revised design as per IAI 13 th May, 2003 was developed in consultation with NEERI/NIO and was presented before MoEF in May, 2003, based on which environmental clearance was granted. However condition related to mangroves is complied in line with the substituted condition 6(a) & 6(b) from MoEF, dated 19 th February, 2007.
2.	Inspite of submitting the revised land use/ development plan, the HPPL shall take up mangrove plantation activity through the Forest Department of Gujarat State in the areas not less than 200 ha.	Complied. Total 1371 ha. of mangrove plantation has been achieved by the HPPL in Hazira area with support of local communities. Above mangrove plantation area has been verified by DCF and DILR. Supporting documents of the same submitted to MoEF & CC and other authorities along with the six monthly compliance report dated 19.05.2017.
3.	All the conditions mentioned in our earlier letter dated 10-4-2003 addressed to the MoEF, Gol, shall be implemented by the HPPL.	Complied. Compliance report of stipulated conditions in the aforesaid letter is enclosed as <u>Appendix-1 (Part A)</u> .



Adani Hazira Port Private Limited

**From : Oct., 2017
To : Mar., 2018**

APPENDIX-2:

**COMPLIANCE TO THE CONDITIONS STIPULATED IN
LETTER DATED 19TH FEBRUARY, 2007
FOR AMENDMENT IN CERTAIN CONDITIONS OF CRZ / ENVIRONMENTAL CLEARANCE
ISSUED ON 03RD MAY, 2003**

Appendix - 2: Compliance to the conditions stipulated in letter dated 19th February, 2007 for amendment in certain conditions of CRZ / Environmental Clearance issued on 26th June, 2003: -

S. No.	Stipulated Conditions	Compliance Status
A.	SPECIFIC CONDITIONS	
6(a)	M/s. HPPL should undertake compensatory mangrove plantation in 200 ha. While 250 ha fresh mangrove plantation should be done by M/s Niko Resources Limited. The mangrove afforestation programme of 450 ha by the HPPL and Niko resources will be monitored by the sub-Committee constituted by the NCZMA and report to the Chairman periodically.	Complied. Total 1371 ha. of mangrove plantation has been achieved by the HPPL in Hazira area with support of local communities. Above mangrove plantation area has been verified by DCF and DILR. Supporting documents of the same submitted to MoEF & CC and other authorities along with the six monthly compliance report dated 19.05.2017.
6(b)	The yearly monitoring of the afforestation programme of mangrove will be also be carried out through time series satellite imagery in 1:25,000 scale by the respective units and submit a monitoring report to the NCZMA.	Complied. As the original clearance was granted to HPPL, the said condition is being compiled jointly by the two companies i.e.: Hazira LNG Private Limited (HLPL) and Hazira Port Private Limited (HPPL). As informed by them the information related to the condition; latest report on mangrove afforestation monitoring by using remote sensing techniques from November to December, 2016 satellite data images of Feb., 2016 was submitted to Principal Secretary, Forest and Environment Department, Gandhinagar vide letter No.: HLPL/HSE/ ECR/Port/2017/1 dated 10.02.2017.



Adani Hazira Port Private Limited

From : Oct., 2017
To : Mar., 2018

ANNEXURE-1 :

DETAIL OF FIRE-FIGHTING EQUIPMENTS

Annexure-1: List of fire-fighting equipment's available as on 31.03.2018

S. No.	Equipment	Quantity (NOS)
1	Fire Tender (HMT)	5
2	Fire Jeep (LMV)	1
3	Fire Water Pump House	4
4	Main Pumps	14
5	Jockey Pumps	8
6	Double Headed Hydrant	144
7	Single Headed Hydrant	142
8	Tower Monitor	9
9	Water Curtain	9
10	Under Jetty MVWS System	4
11	Deluge Valve	172
12	HVLR Monitor	67
13	International Fire Shore Connection	4
14	Foam Trolley	21
15	SCBA set	22
16	Emergency Life Saving Apparatus set	10
17	Fire Water tank	5
18	Fire Extinguisher	1230
19	Air line Trolley	2
20	Fire Proximity suit	10
21	Chemical Suit	10
22	PVC Suit	11
23	Aluminium Fire Suit	2
25	Hose Box	269
26	Fire Hose	500
27	Sand Bucket	220
28	Water Monitor	95
29	Foam monitor	17
30	Hose Reel	3
31	Foam Pourer System	52
32	Foam Bladder tank	4
33	Foam tank	6
34	Foam pumps	6
35	1000 litre capacity Foam trolley monitor	3
36	Water cum Foam monitor	15
38	Water sprinkler system	43
39	Hydraulic Cutter	1
40	Hydraulic Ram	1
41	NOVEC Fire Suppression system	2

ANNEXURE-2:

DETAILS OF THE CSR ACTIVITIES CARRIED OUT DURING THE FINANCIAL YEAR: 2017-18

DETAILS OF THE CSR ACTIVITIES CARRIED OUT DURING THE FINANCIAL YEAR: 2017-18
Annexure-2: Details of CSR Activities Carried Out By Adani Foundation, Hazira (CSR Wing) for M/s. Adani Hazira Port Pvt. Ltd. During Financial Year: 2017-18

Adani Foundation is the CSR arm of the Adani Group. Since its inception in 1996, the Foundation has been working in four core areas of Education, Community Health, Sustainable Livelihood Development and Rural Infrastructure Development to extend its support to communities. Working closely with the communities, we have been able to assume the role of a facilitator by creating an enabling environment for numerous families. Adani Foundation is currently operational in 13 states reaching out to 5 lac plus families from 1470 villages and towns of India with a human-centric approach to make the processes sustainable, transparent and replicable.

Adani Hazira Port Pvt. Ltd. through Adani Foundation has undertaken below CSR activities in 2017-18.

Education:

Adani Foundation believes that Education is the stepping stone to improve the quality of life, especially for the needy and the most vulnerable. The main objective behind the educational initiatives is to provide 'quality' education with a unique learning experience to young minds. With an objective to provide the quality education to the children and youth of the region, the company has contributed substantial amount of resources in its education programs.

VaGaLe Utsav: with the objective of increasing enrollment and retention of the students, bridging the need gaps in the existing education system and promoting girl child education Adani Foundation designed and launched "VaGaLe Utsav" program. The aim of the program is to enable children strengthen their basic skill of learning – Reading, basic Mathematics and writing by following the Praygna approach of teaching. The program was launched in the lower primary schools in the Hazira region of Gujarat and 1022 students of 10 schools from 8 villages were benefitted. The foundation achieved this by encouraging community participation, increasing teachers' effectiveness and improving the school environment.

Support to Govt. schools: "Praveshotsav" program is conducted with the sole objective to encourage parents to enroll their children in schools and to promote girl child education. Under the program the foundation provided 330 school bags equipped with all the basic stationary material. These education kits were distributed to all the newly enrolled students in 21 schools from 15 villages of Choryasi taluka of Hazira.

491 underprivileged students of Govt. schools attended 10 batches of English language & computer training provided by the foundation in the region. The aim of this training program was to bring about a positive change in the basic understanding and knowledge of student in subjects like English & Computer Skills, which will be beneficial to them in future. Career guidance seminars were jointly conducted with Adani Skill Development Centre (ASDC) which was attended by more than 800 students (above class 9) and their parents.

Navchetan Vidyalaya: The aim of the Navchetan Vidyalaya (situated at Junagam in Hazira – Gujarat) is to provide subsidized high-quality education to the children from nearby rural areas. To promote education amongst the regional populace, the school provides free food and academic material support such as uniforms, notebooks, workbooks, textbooks

and stationery to the students. The school is well-equipped with smart classrooms and laboratories and houses all facilities required for holistic development of its students. The school offers activity based education from class 3rd to 8th and has a total strength of 321 students in 2017-18, out of which 50% are girls.

Project UDAAN: Project Udaan, an inspirational exposure tour has benefitted 3541 students and teachers from 62 schools and colleges from the nearby area this year. The company supported project Udaan at Hazira location. These visits help students to understand the functioning of these businesses and specifically the role of ports in trade and economic growth of the country. The visits are aimed to facilitate young minds to get inspired so that they could become entrepreneurs, innovators and achievers of tomorrow. From inception till date, more than 2.5 lakh students have visited our business locations across India.

Project Utthan: Adani Foundation has initiated setting up of interactive libraries in 50 government primary schools in four blocks of Gandhinagar district of Gujarat. This project has been implemented in selected fifty schools in partnership with "Room to Read". The major objective of the program is to develop a habit of reading amongst the children. Six-day long induction training was organized for the library coaches, focussing on the various aspects of the library set up and upkeep. Other operational methodologies like register maintenance and book mark-up was also demonstrated and explained to the attendees of these interactive trainings.

Coaching classes for the Needy Students: Under Apna School initiative 223 students up to 5th standard from 5 villages of Godda district in Jharkhand received extra coaching classes. The students selected for this initiative were mainly from the areas where literacy rate is below 50%. Under Adani Gyan Jyoti Yojna, special coaching classes were conducted for 60 students of 9th & 10th standard from underprivileged backgrounds. These classes were conducted in Motia village. It was heartening to note that these students showed tremendous improvement in their board exam results.

Community Health:

The Company firmly believe that improving the health of its citizens can directly result in economic growth of the nation. Healthy people can utilise growth opportunities made available to them in a better way. Adani Foundation have committed itself to raising the standards of and strengthening healthcare systems in and around our operational locations in India to ensure healthy lives and promote well-being at all ages in alignment with Sustainable Development Goals of the UN.

De-addiction Programme: Taking the need into consideration, Adani Hazira Port Pvt. Ltd. supported a de-addiction campaign, which was organized for the people of the surrounding villages of Hazira - Gujarat. This programme started with general awareness campaigns about the life hazards of any kind of addictions. Posters with very strong appeal and messages were displayed in schools, colleges and community places. As a result of this campaign, a lot of people suffering from addictions came forward for their treatment and rehabilitation. Such cases were referred to the partner healthcare centre.

Health Camps: Adani Foundation regularly conducts various general and specialised medical camps for the benefit of local communities in and around its operational locations. Health camps were organized in villages of Hazira where services of gynaecologists, orthopaedic surgeons, heart specialists, skin specialists, paediatricians, ophthalmologist, ENT surgeons were provided to the community members at no cost. Around 1510 villagers from the nearby villages attended and received treatment in these camps. Free of cost follow-up services were also made available and referrals were provided in cases requiring surgery.

558 truck drivers availed the health check-up facility in specially conducted three camps. They were provided with **spectacles and medical first aid kit along with the information on AIDS and road safety.**

Project SuPoshan: SuPoshan is being implemented in the region for curbing malnutrition and anaemia, a common issue amongst children, adolescent girls and women of our country. SuPoshan Sanginis, village level health workers, take lead for implementing community based life cycle approach with a focus on behavioural change communication. Apart from spreading awareness regarding malnutrition amongst children, adolescent girls and women in Hazira – Gujarat, our SuPoshan Sanginis conducted 1856 Anthropometric Measurements, 2288 HB screenings and distributed IFA tablets to 1097 adolescent girls during the year. Special training sessions for these Sanginis, street plays for adolescent girls and SuPoshan mela were conducted under the SuPoshan initiative. During the last year 45 SAM and MAM category children were moved to healthy category, 7 adolescent girls moved from severe anaemic category to moderate and 26 adolescent girls moved from moderate anaemic category to normal category.

Healthcare: Adani Hazira Port Pvt. Ltd. supported a Mobile Health Care Unit in Godda - Jharkhand for providing primary health care services and medicine for general ailment for the local population. Three volunteers are providing services of guiding patients in Civil Hospital at Ahmedabad and also providing the support of medicines to the poor patients.

Sustainable Livelihood Development: Empowering people through sustainable livelihoods helps them to transform their lives and contribute to the growth of the nation. Adani Foundation aims at holistic growth and development of the marginalized sections of the society by providing necessary skill development training and alternative livelihood opportunities, hence reducing poverty and inequality.

Kamdhenu (Animal Husbandry): Cattles are an important source of income for the community members in rural villages. Most of the families in the villages in and around Hazira keep cows and buffaloes for milk as well as for manure. Majority of the animals in the area had low productivity due to non-descript maintenance and upkeep. Project Kamdhenu started with an objective of improving the breed of these animals through Artificial Insemination. A special cattle development center was introduced for a cluster of about 17 villages falling within a radius of 10 kms. This center provides services of Artificial Insemination (breeding) at the door steps of cattle owners. 4 special camps have been organized in the villages, where 150 animals have been treated for various breeding disorders. Early diagnosis and treatment of diseases has been a boon for the better health and production of cattle. Around 250 animals were covered under the artificial insemination programme. 7 farmers were selected and trained on calf rearing practices and fodder demonstration.

Women Self Help Groups: The foundation has been striving to revive and nurture women self-help groups (SHGs) in villages in and around Hazira - Gujarat. These groups are voluntarily formed basis their areas of common interests. These SHGs function on the basis of co-operative principles and provide a forum for members to extend their support to each other for a common cause of self-empowerment. A two day training programme was conducted for 131 SHG members. One day exposure visit was also organised for 6 SHG members to help them understand the Upahar cooking model.

Six widows from Junagam under the aegis of Jan Sahyog Sakhi Mandal took initiative to run "Upahar"- a meal service for truck drivers at AHPPL. This SHG later expanded to run a canteen at Adani House catering to our employees. These women were provided training and hand holding by the foundation, for planning, budgeting and risk management just like any other profitable enterprise. The SHG is now catering to more than 100 truckers on

a daily basis. This experiment has created a win-win situation for all, as truckers get home cooked nutritious food and each associated women earn around Rs. 6500 per month.

Rural Infrastructure Development:

Quality rural infrastructure bears a direct influence on living standard and the development of the rural population. Lack of it may push the rural populace towards poverty and deprivation. At Adani Foundation, we have committed ourselves to building sustainable rural infrastructure to overcome developmental challenges at the rural area keeping national goals in view. We are committed to making a long-term investment in rural infrastructure development as it will connect its dream with the progress of the nation. With the support of Adani Hazira Port Pvt. Ltd, Adani Foundation has worked towards improving the need-based Infrastructure in the Rural Areas for betterment of the under-privileged people of Hazira, Gujarat.

In the year 2017-18, Adani Foundation constructed community halls at Junagam, Suvali and Rajgiri villages benefitting a total of 12790 people of these villages and nearby areas. 800 street lights were installed at Damka village to ensure the safety of the villagers, specifically the women of the region. Construction of underground water tank of 8 lakh litres capacity has been undertaken by the foundation which will benefit the village population of Hazira.

Adani Foundation also developed rural roads in Kawai - Rajasthan and undertook water conservation activities through pond development and pond deepening projects. CC roads were constructed in 04 villages of Dadha Gram Panchayat. Earlier, the condition of these internal roads was bad and villagers suffered heavily in rainy season. Due to the newly constructed roads villagers now have better conveyance and connectivity in all seasons. This initiative has benefited around 1559 population of these villages. Water conservation activities such as, rejuvenation of old check dams and repairing & desilting of percolation tanks were undertaken to provide sustainable water conservation structures and source of potable water for around 1500 community members. Development of a pond in Haniheda village and construction of check dam in Bhanpur (under Mukhya Mantri Jal Swawlamban Abhiyan of GoR) will benefit around 2482 villagers of Kharkhada and Ramlothan panchayat villages of Kawai – Rajasthan.

Adani Hazira Port Pvt. Ltd. contributed Rs. 7,01,95,000 (Rs. 7.02 crores) towards the Community betterment and development works in Hazira - Gujarat, Godda - Jharkhand and Baran - Rajasthan.

Details of the Budget and Expenditure for the FY 2017-18 are given in the table below: -

S. No.	Activity	Budget Amount (INR In Lakh)	Expenditure Amount (INR In Lakh)
1.	Education	341.00	336.44
2.	Community Health	26.20	25.80
3.	Sustainable Livelihood Development	30.20	30.41
4.	Rural Infrastructure Development	309.10	309.31
Total Amount (INR In Lakh)		706.50	701.95



Adani Hazira Port Private Limited

From : Oct., 2017
To : Mar., 2018

ANNEXURE-3:

**COMPLIANCE STATUS OF ENVIRONMENTAL MANAGEMENT PLAN AS PER INTEGRATED EIA
REPORT, SEPTEMBER, 2012**

Annexure-3: Compliance Status of EMP as mentioned in the Integrated EIA Report, Sep., 2012:

S. No.	EMP Conditions	Compliance Status
I.	AS PER TERRESTRIAL ENVIRONMENTAL IMPACT ASSESSMENT REPORT: -	
A	CONSTRUCTION PHASE:-	
1.	Dredged Soils Management Plan: AHPPL has been permitted to dredge about 37 million cubic meter of soil, which shall be reused for backfilling in the project site. The dredged soil samples will be collected and analysed periodically for designated pollutants as per the recommendations of statutory authorities.	Complied. No disposal has been done till date. All the dredging material is being utilized for level raising, reclamation. Complied with. If any excess material generated will be disposed of at the location already approved by the MoEF&CC.
2.	Air Quality Management: Fugitive dust will be generated during construction phase of the project due to handling of wet dredged and excavated soils. Dust control program will be implemented to reduce the dust generation during construction at project site. Water sprinkling will be adopted on haulage roads and construction site.	Complying with. Water sprinkling is being done on haulage roads and construction site on regular basis.
3.	Noise Control Programs: 1. Onsite fabrication activities should be undertaken at a designated location, which should be located away from the office buildings and any other working areas. 2. In case noise emissions from the fabrication activities exceed a level of 85 dB (A) at the fence-line of the fabrication yard, temporary noise barrier can be installed. 3. Portable diesel engine generators and diesel engine driven compressors, if any, should be covered with noise enclosures.	Comply with. Fabrication activities have been done at a designated location away from the office buildings and working areas. Complied with. Noise level was below 85 dB(A) during the fabrication. Currently no fabrication activities are going on. Complied. In-built noise enclosures are available in portable diesel engine generators and diesel engine driven compressors to reduce the noise level.
4.	Sewage Management Program: Sewage generated from the construction site will be treated in modular STP and shall be used for green belt development / landscaping after achieving prescribed standards by GPCB.	Complied with. Sewage generated from the construction site is being treated in STP and treated water is being used for greenbelt development.
5.	Solid and Hazardous Waste Management Program: The solid waste generated should be segregated and categorized under various rules such as HWM 2008, SWM 2000, the Batteries Rules 2001 including processing of used oil by authorized recyclers should be carried out by the rules and procedures prescribed by CPCB and also meet the requirements of GPCB.	Complied with. All the wastes are being segregate at source and handled as per applicable rules/ guidelines and disposed off through GPCB approved agency.
6.	Construction Phase Storm Water Runoff: It has been recommended to adopt soil stabilization plans and storm water sedimentation basins to control the silt before discharging the storm water into sea.	Complied with. Separate storm water channels have been developed to discharge the storm water.

7. Sanitation:	The facilities presently available with the nearby villages will continued to be used during construction activities and no major sanitation problem is expected during construction period. The workers at the project site will be provided with proper sanitation arrangement.	Complied with. Proper sanitation arrangements are available for workers at project site.
B. OPERATION PHASE: -		
1. Air Quality Management:		
i. Cargo-Handling Equipment:	1. Retrofitting the old equipment to meet the vehicular emission standards. 2. All the vehicles and equipment will be certified with PUC norms shall be deployed.	Complied with. All the deployed vehicles and equipment are PUC certified.
ii. Standby Diesel Generators:	DG Sets will be operated on clean diesel fuel with sulphur content less than 0.5%. Minimum stack height of 30m will be provided to disperse the gases into the atmosphere as per the guidelines suggested by Central Pollution Control Board.	Complied with. DG Sets are being operated on clean diesel fuel with sulphur content less than 0.5% and provided the adequate stack height are being provided as per CPCB/GPCB norms to disperse the gases into the atmosphere.
iii. Fugitive Coal Dust Control Program:	The management of AHPPL has proposed to adopt the following fugitive coal dust control measures: - a. Dry Fog System - A new, proven and cost effective technique to control dust is "Dry Fog" system to suppress the dust from the air. The name fog is just what it implies small droplets of water injected into the air. Fogging works by releasing very small droplets of water into the air. Airborne dust particles adhere to the water droplet and agglomerate. If the fog is generated in the right way, by using pressurized water, the energy required can be very low between 2 to 3 kW for a system requiring hundreds of nozzles, e.g.: A large stockpile tripper conveyor - giving considerable operating cost savings when compared to other techniques, The sprinkler droplet sizes should be maintained less than 100 microns. b. Sprinklers: Once stockpiled, water can be sprayed on the stockpiles to keep them damped down. Swivelling sprinklers should be used along the lengths of the stockpile with caution, however, as the volume of water required can be significant, causing drainage and run-off treatment problems.	Complied. Following control measures are in place and effectively working at port to control fugitive dust: - 1. Spill boards are being provided to prevent cargo spillage into the sea. 2. Transportation of coal from jetty to coal storage yard through 1.7 Km. long conveyor belt with hood. 3. Water sprinklers in to the coal yard, 4. Dust Suppression System / Spray Nozzles in Conveyor System and Discharge Chute, 5. Water spray through Water Browsers, 6. Water Mist Canon / Fog System, 7. Wind Brake Shield of 14 meters high and 1200 meters long, 8. Transportation of cargo from port to hinterland is being done through dumpers / trucks covered with tarpaulin, 9. Regular cleaning the roads through Road Sweeping Machines, and 10. Company has set up dedicated greenbelt area for plantation at periphery / avenue plantation / landscaping etc. Total greenbelt area developed so far is approx. 65.15 ha within the port premises.
2. Noise Control Program:	The following source noise control plans have	Complied.

	<p>been suggested: -</p> <ul style="list-style-type: none"> ➤ Covering of sound intensive components with insulation. ➤ Using noise absorbing building materials if required for housing compressors and diesel generators etc. as per the guidelines suggested by Central Pollution Control Board. ➤ Adopting low noise driving (Eco-driving) ➤ Using silent exhaust pipes for major diesel engine vehicles and heavy trucks operated inside the port. ➤ Planting trees which act as barrier to arrest dispersion of noise levels. ➤ Using electricity powered equipment inside the port instead of diesel powered ones will be explored to the extent possible. 	<ul style="list-style-type: none"> • All the sound intensive components (DG Set and Compressor) are with acoustic enclosures. • Green belt development is in progress. • All RTGs and Quay Cranes are electricity operated.
3.	<p>Waste Water Management: Port handling operations would generate wastewater from the following sources: -</p> <ol style="list-style-type: none"> 1. Ship ballast water, 2. Ship deck wastewater including sewage, 3. Rejects from desalination plant, 4. Workshop and vehicle maintenance shop wastewater, 4. Leachate from coal stock yard, 6. Floor cleaning and tank cleaning wastewater from the liquid tank farm, 7. Sewage from port facilities. The proposed wastewater treatment and reuse program has been presented hereunder: - <p>A variety of vessels use the waters within the port, including bulk coal ships, tugs and line boats. Discharges from bulk ships are not expected to occur within the port because these large ships normally have on-board storage and sewage treatment plants, allowing discharge of treated effluent at sea as per the provision of MARPOL.</p> <ul style="list-style-type: none"> ➤ Except monsoon, leachate from coal stock yard is not envisaged. However small quantities, if any, will be treated in the effluent treatment plant. Wastewater from vehicle work-shops will also be treated in the proposed onsite effluent treatment plant. ➤ As far as possible all chemical spills at liquid handling facilities will be treated with dry spill absorbing material and water will not be used. Spillage if any occurs will be treated in a dedicated onsite wastewater treatment plant, which consists of an oil removal unit, 	<p>Complied with.</p> <ul style="list-style-type: none"> - AHPPL is not accepting Ballast/ Sewage water from Ships. - Desalination plant not yet installed. - There is no effluent generation from workshop. Vehicle maintenance has not done in port premises. - There is no leachate from dump pond. - Tank cleaning wastewater is being treated into ETP. - Domestic waste water is being treated in the STP and then used for horticulture purpose within the port premises. <p>Complied. Dedicated coal dump pond is being provided to collect the runoff (if any) from coal yard and it is further reused for dust suppression purpose into coal yard.</p> <p>Complied with. Till date there is no spill occurred. If, spills occurred, spilled material/chemical will be treated into ETP and treated waste water will be reused in greenbelt development / plantation purpose.</p>

	<p>primary chemical treatment unit and biological treatment units followed by activated carbon unit. Biologically treated wastewater will be further treated in the central sewage treatment plant. Treated wastewater will be used for dust suppression and horticulture applications at the facility. No treated wastewater will be discharged outside the port facilities.</p>	
4.	<p>Storm Water Management Plan:</p> <ul style="list-style-type: none"> ➤ Storm water from the coal stockpile area will be passed through a series of sediment traps to remove the majority of the coal sediment before discharging into the natural drains. It has been proposed to construct a garland drain for all bulk storage facilities to avoid silting into the marine eco-system. ➤ All liquid storage tanks will be provided with dykes to avoid any cross contamination of storm water from chemical spills. Storm water drains shall be designed in order to avoid any flooding of the coal stock yard and liquid chemical tank farm areas. 	<p>Complied. Garland drain for all bulk storage facilities are provided to avoid silting into the marine eco-system. Storm water from the coal stockpile area is collected into dump ponds to remove the coal sediment.</p> <p>Complied. All liquid storage tanks are provided with dykes to avoid any cross contamination of storm water from chemical spills. Storm water drains are separate drains and effluents drains are separate.</p>
5.	<p>Solid and Hazardous Waste Management:</p> <ul style="list-style-type: none"> ➤ Solid wastes generated from the port handling facilities consist of packaging waste such as wood, paper/carton, steel scrap etc. ➤ All the hazardous wastes and solid wastes such as Oil containing cargo residue, Chemical containing cargo residue and sludge, contaminated cotton waste, spent exchange resin and ETP Sludge, etc. shall be segregated at source and stored at the earmarked area. ➤ Recyclable wastes will be collected and disposed to waste recycling vendors through certified recyclers wherever applicable. ➤ Hazardous wastes include contaminated chemical spills, spent dry adsorbing spill absorbing material used for large marine and onshore chemical spills, used lubricating oils and greases. The chemicals spill inventories and spent dry absorbing material will be 	<p>Complied.</p> <ul style="list-style-type: none"> - Solid wastes generated during port development i.e.: construction & demolition wastes are reused for level rising of low lying area within the port premises. Kitchen/ Food, Horticulture/Garden wastes are being sent to Organic Waste Converter (OWC) to convert it into compost and reused as manure in greenbelt/plantation. - Packaging materials generated from the cargo handling i.e.: Wood, Paper/Carton, Steel Scrap, Plastic/Tarpaulin etc. are collected and sold out to recyclers. <p>Complied.</p> <p>All the wastes are segregated at source and stored at a dedicated Hazardous Waste storage shed/yard.</p> <p>Complied. Recyclable wastes is being collected and disposed of through CPCB/GPCB registered recyclers.</p> <p>Complied. Till date there is no spill occurred.</p>

	<p>stored in a dedicated onsite tank and will be disposed to authorized hazardous waste incinerators.</p> <ul style="list-style-type: none"> ➤ Spent lube oils and greases will be disposed to authorized used oil recycling vendors. ➤ A dedicated and completely enclosed shed will be identified to store the hazardous wastes in order to avoid any cross contamination from storm water. ➤ All the waste should be segregated, collected, categorized as per the HWM Rules 2008, SWM Rules 2000 and Batteries Rules 2001 prescribed by CPCB under Environmental Protection Act, 1986. 	<p>Complied. Recyclable wastes is being collected and disposed of through CPCB/GPCB registered recyclers.</p> <p>Complied. All the wastes are stored at a dedicated hazardous waste storage shed/yard.</p> <p>Complied with. All the wastes are being segregate at source and handled as per applicable rules/guidelines.</p>
6.	<p>Greenbelt and Plantation:</p> <ul style="list-style-type: none"> ➤ AHPPL will develop thick green belt plantation in and around the proposed project facility covering 81.27 Ha. Efforts will be taken to increase the green cover in and around the project boundary using local species with a view to ameliorating project related disturbances and enhancing the ecological value of the area. Greenbelt would be developed as per the CPCB guidelines. ➤ A capital cost of Rs. 1.62 Crore and an annual recurring budget of Rs. 0.65 Crore will be earmarked for this purpose. 	<p>Complying with.</p> <p>Company has set up dedicated greenbelt area for plantation at periphery / avenue plantation / landscaping etc. Total greenbelt area developed so far is approx. 65.15 ha till Mar., 2018.</p> <p>Horticulture budget for FY 2017-18 is Rs. 1.60 Crore.</p>
7.	<p>Community Development Plan:</p> <p>AHPPL has identified focused areas for community development and implement developmental program. The identified activities under CSR program are as follows: -</p> <ol style="list-style-type: none"> 1. Infrastructure development for educational facilities like building of schools, computer rooms, multipurpose activity halls 2. Supporting education through distribution of stationary, scholarships, science kits, bicycles to children, conducting education camps, competitions. 3. Strengthening the community health by arranging health camps, AID awareness camps, providing financial support to senior citizens and poor people, building dispensaries and mobile dispensaries. 4. Improvement of rural sanitation by conducting mass awareness campaign, helping villagers for constructing and maintaining household toilets, school toilets. 5. Improvement in animal husbandry and agriculture by arranging camps for farmers and cattle owners, conducting programs to use new irrigation technologies, organic farming, and free fodder supply. 6. Organizing need based skill development program to women and youth for their 	<p>Complied.</p> <ul style="list-style-type: none"> • CSR activities carried out by Adani Foundation in four verticals i.e.: - (1) Education, (2). Community Health, (3). Sustainable Livelihood and (4). Rural Infrastructure Development. • Detail of the CSR activities along with budgetary provisions and progress are regularly submitted to MoEF & CC as part of six monthly compliance reports. • Total budget allocated for CSR activities is Rs. 706.50/- Lakh for FY: 2017-18 and total expenditure is Rs. 701.95/- Lakh during FY: 2017-18. • Please refer the Annexure-2 for the status of the CSR activities planned during the Financial Year: 2017-18.

	<p>empowerment.</p> <p>7. Rural infrastructure development by construction of rainwater harvesting ponds, check dams, roads, bus stops, drainage systems, fish landing shed, solar street lamps.</p> <p>AHPPL has committed to spend about Rs. 8.21 Crore in the first five years of the operation towards various rural upliftment and community development programs and tentative budget has been presented in the below table - Budgeted Expenditure for CSR and Community Development Activities:-</p> <table border="1"> <thead> <tr> <th>S. No.</th><th>Descriptions</th><th>Budgeted Amount For 1st 5 year Period (Amount rupees in Crore)</th></tr> </thead> <tbody> <tr> <td>1</td><td>Education</td><td>2.29</td></tr> <tr> <td>2</td><td>Community Health</td><td>1.18</td></tr> <tr> <td>3</td><td>Sustainable Livelihood Activities</td><td>1.43</td></tr> <tr> <td>4</td><td>Rural Infrastructure Development</td><td>2.04</td></tr> <tr> <td>5</td><td>Entry Point Activities</td><td>1.27</td></tr> <tr> <td colspan="2">Total</td><td>8.21</td></tr> </tbody> </table>	S. No.	Descriptions	Budgeted Amount For 1 st 5 year Period (Amount rupees in Crore)	1	Education	2.29	2	Community Health	1.18	3	Sustainable Livelihood Activities	1.43	4	Rural Infrastructure Development	2.04	5	Entry Point Activities	1.27	Total		8.21	
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Total		8.21																					
II.	MARINE ENVIRONMENT MANAGEMENT PLAN:																						
A.	<p>CONSTRUCTION PHASE: -</p> <ul style="list-style-type: none"> ➤ The dredge spoil generated during capital dredging will be used for land reclamation for the port development and associated utilities. ➤ Unused dredged material will be disposed off at approved dump sites to the north of port area including dredged soil generated through maintenance dredging. ➤ Appropriate dredging methodology shall be adopted to control the generation of high levels of suspended solids. If the suspended solids concentration increases, the dredging operation should be stopped till the normal conditions are achieved. ➤ General clean up along the corridor used for construction related activities, adjacent intertidal areas, creeks etc. should be undertaken and all the discarded materials must be removed from the site and aesthetic quality of the surroundings to be restored, once the construction activities are completed. 	<p>Complied. No disposal has been done till date. All the dredging material is being utilized for level raising, reclamation.</p> <p>Complied with. If any excess material generated will be disposed of at the location already approved by the MoEF&CC.</p> <p>Noted & complying with. Monitoring of turbidity level in the sea water is being done and there is no abnormal increase observed.</p> <p>Noted & complied with. Cleanup of the area is regularly being done.</p>																					
B.	<p>OPERATION PHASE: -</p> <p>The following mitigation measures are recommended during port operation: -</p> <ul style="list-style-type: none"> ➤ Sewage generated from the port operations will be treated in sewage treatment plant and treated water shall be used for horticulture and green belt development. ➤ All the solid waste generated from the port 	<p>Complied. Sewage generated from the port operations is being treated in STP and treated water is being used for horticulture and green belt development.</p> <p>Complied. All the solid waste</p>																					

	<p>will be properly segregated, stored and disposed as per the applicable statutory requirement.</p> <ul style="list-style-type: none"> ➤ All the structures shall be designed in such a way that it should not restrict the prevailing tidal ingress in the creek and mangrove habitats in the vicinity to ensure good health condition. ➤ Coastline between Suwali Point and Tapti Estuary mouth and around the port area will be periodically surveyed to assess erosion and accretion. Should the need arises the corrective action in terms of shore stabilization shall be undertaken. <p>➤ All the minor and major spillages of chemicals will be effectively controlled with appropriate tools and equipments.</p> <p>➤ An oil/chemical spill management plan shall be evolved and be in place for tier-1 (100t) and tier-2 (700t) spills in consultation with Gujarat Maritime Board/Coast Guard.</p> <p>➤ All the marine outfall shall meet the Gujarat Pollution Control Board Effluent Discharge Criteria for Seawater Disposal Standards.</p> <p>➤ Monitoring of water area of the port and effluent disposal sited shall be studied for pH and Corg, Suspended Solids, DO, BOD in order to identify for deviations if any from the baseline environmental quality.</p> <p>➤ The mitigation measures suggested for effluent release and maintaining of effluent disposal sites should also be adopted for effluent release by NIKO should be implemented.</p>	<p>generated from the port is properly segregated, stored and disposed as per the applicable rules.</p> <p>Complied with. Free flow to the mangrove is not restricted by any of our activity.</p> <p>Complied. Shoreline change study was conducted by NIO, Vizag during the period from November, 2014 to December, 2015. Study confirms that there is no significant change in the nearby shoreline except for the approved layout of the AHPPL. The report did not warrant any mitigation measures.</p> <p>Noted and complied with. There is no oil spill till date.</p> <p>Complied. Oil Spill Contingency Plan has been prepared and the same was approved/vetted by Indian Coast Guard (Letter No.: 7563, dated 09.01.2014).</p> <p>Noted and complied with. No effluent is being discharged.</p> <p>Complied. Please refer the <u>Annexure-4D</u> for the Sea Water Quality Monitoring / Analysis Reports for the period Oct., 2017 to Mar., 2018.</p> <p>Noted, AHPPL is not discharging any effluent outside the port premises.</p>
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Adani Hazira Port Private Limited

From : Oct., 2017
To : Mar., 2018

ANNEXURE-4:

**ENVIRONMENTAL MONITORING / ANALYSIS RESULTS FOR THE
PERIOD: Oct., 2017 TO Mar., 2018**



Adani Hazira Port Private Limited

**From : Oct., 2017
To : Mar., 2018**

ANNEXURE-4A:

AMBIENT AIR QUALITY MONITORING RESULTS

PERIOD: Oct., 2017 TO Mar., 2018

4A. AMBIENT AIR QUALITY MONITORING: -

Table-1.1: Ambient Air Quality Monitoring Results At Near Port Gate No.: 2

Sr. No.	Date of Sampling	Location-1: Near Port Gate No.: 2 (N 21° 05.426'E 72° 37.739')											
		PM ₁₀	PM _{2.5}	Pb	BaP	As	Ni	CO	C ₆ H ₆	NH ₃	SO ₂	NO _x	O ₃
		µg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
1	02/10/2017	46.79	20.48	BDL*	BDL*	BDL*	BDL*	0.39	BDL*	24.71	17.66	32.41	29.56
2	05/10/2017	53.58	25.50	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	11.45	11.62	27.34	17.60
3	09/10/2017	69.28	29.68	0.54	BDL*	BDL*	BDL*	0.37	BDL*	53.63	18.48	22.75	24.51
4	12/10/2017	85.49	45.57	BDL*	BDL*	BDL*	BDL*	0.69	BDL*	32.84	13.39	33.49	21.52
5	16/10/2017	73.49	40.72	0.64	BDL*	BDL*	BDL*	0.94	BDL*	28.32	21.75	37.31	28.62
6	19/10/2017	63.38	37.62	BDL*	BDL*	BDL*	BDL*	0.78	BDL*	36.46	25.40	43.33	23.78
7	23/10/2017	57.58	31.35	BDL*	BDL*	BDL*	BDL*	0.50	BDL*	57.25	14.57	29.78	25.66
8	26/10/2017	78.62	35.53	0.60	BDL*	2.63	10.37	0.81	BDL*	49.41	23.47	38.40	19.43
9	30/10/2017	83.59	50.58	BDL*	BDL*	BDL*	BDL*	0.57	BDL*	52.43	10.49	34.53	30.61
10	02/11/2017	70.62	40.55	0.54	BDL*	2.24	10.58	0.60	BDL*	45.61	20.72	36.33	18.47
11	06/11/2017	61.51	29.68	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	52.43	15.57	21.52	28.21
12	09/11/2017	58.60	23.41	BDL*	BDL*	BDL*	BDL*	0.27	BDL*	21.62	17.64	30.17	27.41
13	13/11/2017	65.38	27.59	BDL*	BDL*	BDL*	BDL*	0.79	BDL*	33.47	21.83	39.34	17.62
14	16/11/2017	77.38	39.46	0.62	BDL*	2.08	10.43	0.50	BDL*	48.28	14.27	32.40	25.65
15	20/11/2017	68.43	32.61	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	10.37	19.74	42.35	20.26
16	23/11/2017	74.49	42.64	BDL*	BDL*	BDL*	BDL*	0.46	BDL*	30.51	11.45	34.20	24.77
17	27/11/2017	62.40	28.43	BDL*	BDL*	BDL*	BDL*	0.66	BDL*	25.47	18.61	37.25	22.79
18	30/11/2017	80.59	45.57	0.72	BDL*	2.54	10.76	0.36	BDL*	51.54	13.43	27.48	29.29
19	04/12/2017	48.38	18.56	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	19.58	15.37	28.30	24.20
20	07/12/2017	54.59	24.33	BDL*	BDL*	BDL*	BDL*	0.38	BDL*	38.57	12.59	35.44	21.56
21	11/12/2017	74.49	42.47	0.64	BDL*	2.24	10.54	0.60	BDL*	40.07	20.71	40.24	15.79
22	14/12/2017	66.78	28.80	BDL*	BDL*	BDL*	BDL*	0.15	BDL*	47.30	14.60	23.26	23.66
23	18/12/2017	85.41	45.38	0.78	BDL*	2.74	10.27	0.31	BDL*	45.80	11.46	29.29	29.46
24	21/12/2017	77.60	31.31	0.59	BDL*	2.14	10.37	0.53	BDL*	9.34	16.65	26.35	17.40
25	25/12/2017	68.92	40.30	BDL*	BDL*	BDL*	BDL*	0.71	BDL*	29.83	19.52	30.40	19.69
26	28/12/2017	82.38	49.41	BDL*	BDL*	BDL*	BDL*	0.40	BDL*	27.12	9.62	42.44	30.47
27	01/01/2018	79.71	34.15	BDL*	BDL*	BDL*	BDL*	0.85	BDL*	22.51	23.49	44.19	23.51
28	04/01/2018	90.29	46.53	0.81	BDL*	2.34	10.37	0.44	BDL*	51.24	14.49	31.53	29.36

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29	08/01/2018	64.33	28.26	BDL*	BDL*	BDL*	BDL*	0.38	BDL*	45.32	18.69	29.38	22.34
30	11/01/2018	83.92	35.41	0.63	BDL*	2.54	10.61	0.74	BDL*	10.37	22.43	32.44	30.36
31	15/01/2018	76.78	25.36	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	42.65	19.32	38.43	19.06
32	18/01/2018	67.28	29.85	BDL*	BDL*	BDL*	BDL*	0.81	BDL*	25.18	21.39	43.17	25.86
33	22/01/2018	78.58	39.21	0.56	BDL*	2.22	BDL*	0.57	BDL*	31.69	10.41	26.25	26.60
34	25/01/2018	88.28	51.84	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	52.43	16.69	30.29	21.28
35	29/01/2018	81.61	36.24	0.51	BDL*	2.45	10.48	0.44	BDL*	35.25	22.56	33.23	17.09
36	01/02/2018	75.49	39.09	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	38.51	19.56	31.33	19.60
37	05/02/2018	57.32	22.37	BDL*	BDL*	BDL*	BDL*	0.74	BDL*	40.88	15.63	33.44	25.61
38	08/02/2018	83.62	38.79	0.71	BDL*	2.16	10.37	0.66	BDL*	52.43	23.60	28.21	23.20
39	12/02/2018	76.52	44.40	BDL*	BDL*	BDL*	BDL*	0.89	BDL*	25.47	20.55	38.22	26.10
40	15/02/2018	60.29	33.42	BDL*	BDL*	BDL*	BDL*	0.61	BDL*	39.10	18.38	34.22	24.29
41	19/02/2018	72.72	37.42	0.60	BDL*	BDL*	BDL*	0.72	BDL*	29.32	9.70	23.20	29.29
42	22/02/2018	81.20	46.78	BDL*	BDL*	BDL*	BDL*	0.15	BDL*	46.21	14.39	30.25	21.39
43	26/02/2018	69.39	42.31	0.52	BDL*	2.35	10.49	0.54	BDL*	23.40	21.58	26.29	18.68
44	01/03/2018	54.30	33.44	BDL*	BDL*	BDL*	BDL*	0.47	BDL*	36.16	13.45	36.46	27.59
45	05/03/2018	68.31	30.89	BDL*	BDL*	BDL*	BDL*	0.83	BDL*	22.60	22.60	40.19	30.49
46	08/03/2018	74.32	42.85	BDL*	BDL*	2.34	BDL*	0.58	BDL*	37.36	16.51	35.44	28.68
47	12/03/2018	60.29	27.59	BDL*	BDL*	BDL*	BDL*	0.42	BDL*	20.79	23.73	27.64	20.50
48	15/03/2018	79.28	34.84	0.68	BDL*	BDL*	BDL*	0.78	BDL*	46.40	11.52	30.92	25.45
49	19/03/2018	88.41	49.33	0.56	BDL*	BDL*	BDL*	0.70	BDL*	34.65	20.63	33.69	22.48
50	22/03/2018	71.50	32.52	BDL*	BDL*	BDL*	BDL*	0.40	BDL*	42.48	15.66	28.37	24.71
51	26/03/2018	92.39	53.55	0.82	BDL*	2.54	BDL*	0.69	BDL*	38.27	18.76	37.63	26.83
52	29/03/2018	65.38	28.47	BDL*	BDL*	BDL*	BDL*	0.57	BDL*	27.42	10.59	24.48	29.46

Observation: Above given Result are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-I dt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values

BDL*: - Below Detection Limit: Ozone as O_3 ($\mu g/m^3$): 10

BDL*: - Below Detection Limit - Lead as Pb ($\mu g/m^3$): 0.5

BDL*: - Below Detection Limit - Carbon Monoxide as CO (mg/m^3): 0.01

BDL*: - Below Detection Limit - Ammonia NH_3 ($\mu g/m^3$): 10

BDL*: - Below Detection Limit - Benzene as C_6H_6 ($\mu g/m^3$): 2

BDL*: - Below Detection Limit - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5

BDL*: - Below Detection Limit - Arsenic as As (ng/m^3): 2

BDL*: - Below Detection Limit - Nickel as Ni (ng/m^3): 10

Authorized Signatory

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● GPCB approved
schedule II auditor

● ISO 14001

● OHSAS 18001

● ISO 9001

"Pollucon House", Plot No. 5 & 6, Opp. Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart,



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Table-1.2: Ambient Air Quality Monitoring Results At HSE Building Terrace

Sr. No.	Date of Sampling	Location-2: HSE Building Terrace (N 21° 05.043' E 72° 38.491')											
		PM ₁₀	PM _{2.5}	Pb	BaP	As	Ni	CO	C ₆ H ₆	NH ₃	SO ₂	NO _x	O ₃
		µg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
1	02/10/2017	50.49	21.71	BDL*	BDL*	BDL*	BDL*	0.24	BDL*	21.36	15.38	24.55	21.39
2	05/10/2017	41.51	17.53	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	18.35	6.68	18.32	15.59
3	09/10/2017	82.39	46.75	0.62	BDL*	2.49	10.57	0.44	BDL*	27.38	13.67	32.63	18.42
4	12/10/2017	70.61	35.48	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	40.31	18.67	26.38	23.46
5	16/10/2017	62.40	26.71	BDL*	BDL*	BDL*	BDL*	0.65	BDL*	32.49	16.68	30.31	19.51
6	19/10/2017	55.29	30.47	BDL*	BDL*	BDL*	BDL*	0.93	BDL*	45.73	22.57	41.52	25.76
7	23/10/2017	73.29	45.50	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	22.56	10.52	33.71	22.54
8	26/10/2017	65.69	25.46	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	28.28	20.69	29.27	27.61
9	30/10/2017	78.49	41.74	BDL*	BDL*	BDL*	BDL*	0.84	BDL*	38.51	12.35	23.45	20.79
10	02/11/2017	63.39	34.65	BDL*	BDL*	BDL*	BDL*	0.45	BDL*	25.73	18.54	26.34	29.64
11	06/11/2017	54.19	23.38	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	21.59	13.68	29.39	17.31
12	09/11/2017	46.27	26.71	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	18.34	15.59	22.76	19.39
13	13/11/2017	51.19	21.71	BDL*	BDL*	BDL*	BDL*	0.73	BDL*	38.15	19.36	36.51	22.68
14	16/11/2017	72.43	31.72	BDL*	BDL*	BDL*	BDL*	0.63	BDL*	23.66	10.64	20.85	21.21
15	20/11/2017	59.42	25.46	BDL*	BDL*	BDL*	BDL*	0.23	BDL*	15.68	7.59	16.29	28.30
16	23/11/2017	68.20	46.75	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	34.60	17.77	24.64	30.08
17	27/11/2017	56.32	19.62	BDL*	BDL*	BDL*	BDL*	0.76	BDL*	27.51	14.68	27.61	18.32
18	30/11/2017	73.60	32.56	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	20.70	9.28	33.39	27.55
19	04/12/2017	42.47	15.24	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	16.55	13.72	23.84	17.61
20	07/12/2017	51.71	21.54	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	20.16	8.74	21.50	19.51
21	11/12/2017	66.72	30.39	BDL*	BDL*	BDL*	BDL*	0.39	BDL*	22.26	18.35	29.24	25.67
22	14/12/2017	57.48	25.42	BDL*	BDL*	BDL*	BDL*	0.27	BDL*	19.25	11.62	33.42	15.46
23	18/12/2017	78.63	38.19	BDL*	BDL*	BDL*	BDL*	0.48	BDL*	18.05	9.62	36.20	23.38
24	21/12/2017	63.11	32.39	BDL*	BDL*	BDL*	BDL*	0.30	BDL*	13.54	6.64	18.55	27.48
25	25/12/2017	53.29	35.40	BDL*	BDL*	BDL*	BDL*	0.62	BDL*	32.49	16.66	40.18	21.35
26	28/12/2017	71.02	42.49	BDL*	BDL*	BDL*	BDL*	0.33	BDL*	29.48	5.42	26.66	26.85
27	01/01/2018	69.88	28.76	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	18.04	20.32	32.27	21.58
28	04/01/2018	84.83	50.59	BDL*	BDL*	BDL*	BDL*	0.68	BDL*	28.39	10.53	40.26	25.63
29	08/01/2018	76.50	36.40	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	23.36	16.70	26.29	15.44

30	11/01/2018	66.78	32.48	BDL*	BDL*	BDL*	BDL*	0.42	BDL*	15.38	9.65	20.43	23.50
31	15/01/2018	50.21	29.43	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	22.18	6.64	24.54	16.73
32	18/01/2018	61.32	24.46	BDL*	BDL*	BDL*	BDL*	0.45	BDL*	27.51	11.65	36.21	20.05
33	22/01/2018	70.42	31.31	BDL*	BDL*	BDL*	BDL*	0.48	BDL*	35.49	17.58	29.90	22.52
34	25/01/2018	64.59	35.40	BDL*	BDL*	BDL*	BDL*	0.38	BDL*	21.29	13.63	38.26	13.54
35	29/01/2018	56.39	26.38	BDL*	BDL*	BDL*	BDL*	0.53	BDL*	36.38	18.45	23.35	18.80
36	01/02/2018	52.38	30.47	BDL*	BDL*	BDL*	BDL*	0.64	BDL*	30.17	15.74	29.30	23.63
37	05/02/2018	70.21	28.43	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	22.48	13.65	26.35	17.77
38	08/02/2018	86.28	41.66	0.54	BDL*	BDL*	BDL*	0.49	BDL*	42.29	20.48	35.36	28.58
39	12/02/2018	64.29	39.53	BDL*	BDL*	BDL*	BDL*	0.13	BDL*	21.29	18.73	27.37	21.82
40	15/02/2018	82.40	47.63	BDL*	BDL*	BDL*	BDL*	0.37	BDL*	32.53	10.74	22.83	18.61
41	19/02/2018	68.42	31.68	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	26.32	16.51	32.71	25.59
42	22/02/2018	75.62	37.61	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	18.93	12.76	33.45	15.59
43	26/02/2018	62.48	29.26	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	12.42	8.45	18.58	27.61
44	01/03/2018	74.62	41.66	BDL*	BDL*	BDL*	BDL*	0.23	BDL*	29.78	11.52	23.83	18.44
45	05/03/2018	59.21	22.83	BDL*	BDL*	BDL*	BDL*	0.39	BDL*	19.25	19.41	30.40	23.47
46	08/03/2018	64.51	30.43	BDL*	BDL*	BDL*	BDL*	0.56	BDL*	35.50	13.69	25.34	19.31
47	12/03/2018	54.61	24.34	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	11.13	20.66	19.35	30.26
48	15/03/2018	83.80	42.33	0.78	BDL*	BDL*	BDL*	0.48	BDL*	38.51	21.45	37.55	28.31
49	19/03/2018	76.40	39.45	BDL*	BDL*	BDL*	BDL*	0.52	BDL*	21.36	7.57	28.58	26.76
50	22/03/2018	68.32	34.81	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	17.45	10.63	38.67	16.81
51	26/03/2018	82.58	50.34	BDL*	BDL*	2.16	BDL*	0.63	BDL*	18.65	5.46	21.54	20.34
52	29/03/2018	62.53	25.42	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	24.07	17.39	33.75	27.73

Observation: Above given Result are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-I dt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values

BDL*: - Below Detection Limit: Ozone as O_3 ($\mu g/m^3$): 10
 BDL*: - Below Detection Limit - Lead as Pb ($\mu g/m^3$): 0.5
 BDL*: - Below Detection Limit - Carbon Monoxide as CO (mg/m^3): 0.01
 BDL*: - Below Detection Limit - Ammonia NH_3 ($\mu g/m^3$): 10
 BDL*: - Below Detection Limit - Benzene as C_6H_6 ($\mu g/m^3$): 2
 BDL*: - Below Detection Limit - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5
 BDL*: - Below Detection Limit - Arsenic as As (ng/m^3): 2
 BDL*: - Below Detection Limit - Nickel as Ni (ng/m^3): 10



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Table-1.3: Ambient Air Quality Monitoring Results At Central Water Pump House

Sr. No.	Date of Sampling	Location-3: Central Water Pump House (N 21° 04.697'E 72° 38.420')											
		PM ₁₀	PM _{2.5}	Pb	BaP	As	Ni	CO	C ₆ H ₆	NH ₃	SO ₂	NO _x	O ₃
		µg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
1	02/10/2017	69.61	31.64	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	15.10	9.32	27.83	19.50
2	05/10/2017	48.49	20.35	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	21.74	13.67	31.63	20.32
3	09/10/2017	75.62	38.53	BDL*	BDL*	BDL*	BDL*	0.30	BDL*	38.96	21.54	29.42	22.61
4	12/10/2017	51.28	22.53	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	27.48	24.56	38.49	28.42
5	16/10/2017	68.60	30.46	BDL*	BDL*	BDL*	BDL*	0.74	BDL*	23.56	18.53	34.45	17.48
6	19/10/2017	87.51	52.59	BDL*	BDL*	BDL*	BDL*	0.63	BDL*	17.52	16.39	36.47	29.41
7	23/10/2017	61.48	26.41	BDL*	BDL*	BDL*	BDL*	0.76	BDL*	36.84	12.58	25.74	30.34
8	26/10/2017	55.63	21.65	BDL*	BDL*	BDL*	BDL*	0.87	BDL*	41.37	15.50	32.61	25.38
9	30/10/2017	64.32	45.75	BDL*	BDL*	BDL*	BDL*	0.72	BDL*	19.63	19.64	37.63	26.46
10	02/11/2017	51.55	28.65	BDL*	BDL*	BDL*	BDL*	0.62	BDL*	36.22	13.52	29.26	23.49
11	06/11/2017	71.59	31.61	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	28.50	5.49	18.32	27.56
12	09/11/2017	64.20	36.37	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	13.36	8.47	23.54	25.47
13	13/11/2017	80.23	25.46	BDL*	BDL*	BDL*	BDL*	0.47	BDL*	18.70	14.35	33.17	24.35
14	16/11/2017	59.18	27.54	BDL*	BDL*	BDL*	BDL*	0.33	BDL*	26.42	19.42	36.42	26.34
15	20/11/2017	44.60	19.67	BDL*	BDL*	BDL*	BDL*	0.38	BDL*	19.30	12.69	32.44	19.44
16	23/11/2017	52.31	34.64	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	23.45	21.25	37.23	22.66
17	27/11/2017	68.27	30.31	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	30.88	7.62	31.20	29.55
18	30/11/2017	56.70	23.52	BDL*	BDL*	BDL*	BDL*	0.58	BDL*	38.30	11.65	23.66	18.30
19	04/12/2017	38.31	22.32	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	11.17	7.52	21.59	22.65
20	07/12/2017	45.80	15.50	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	25.37	16.37	38.56	25.36
21	11/12/2017	52.60	34.20	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	30.80	11.66	32.44	20.46
22	14/12/2017	76.71	31.09	BDL*	BDL*	BDL*	BDL*	0.24	BDL*	24.76	5.75	19.75	26.24
23	18/12/2017	57.79	25.79	BDL*	BDL*	BDL*	BDL*	0.54	BDL*	33.22	14.72	25.41	16.39
24	21/12/2017	45.10	17.62	BDL*	BDL*	BDL*	BDL*	0.58	BDL*	16.31	10.56	34.24	30.61
25	25/12/2017	82.68	47.19	BDL*	BDL*	BDL*	BDL*	0.42	BDL*	15.70	12.77	27.58	23.56
26	28/12/2017	54.96	39.31	BDL*	BDL*	BDL*	BDL*	0.23	BDL*	19.93	18.50	30.15	19.32
27	01/01/2018	54.64	25.74	BDL*	BDL*	BDL*	BDL*	0.78	BDL*	12.47	12.30	36.36	18.20
28	04/01/2018	61.19	32.21	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	37.41	18.52	27.64	15.68
29	08/01/2018	70.19	39.35	BDL*	BDL*	BDL*	BDL*	0.30	BDL*	33.55	9.60	21.52	19.65


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30	11/01/2018	52.41	22.41	BDL*	BDL*	BDL*	BDL*	0.83	BDL*	21.67	19.75	37.49	27.78
31	15/01/2018	83.41	41.35	BDL*	BDL*	BDL*	BDL*	0.50	BDL*	29.09	11.35	42.48	23.09
32	18/01/2018	72.60	33.52	BDL*	BDL*	BDL*	BDL*	0.63	BDL*	34.44	7.48	39.82	26.16
33	22/01/2018	58.78	28.23	BDL*	BDL*	BDL*	BDL*	0.33	BDL*	22.27	21.47	33.64	17.22
34	25/01/2018	78.32	47.54	BDL*	BDL*	BDL*	BDL*	0.24	BDL*	27.91	6.67	22.36	24.33
35	29/01/2018	89.42	42.46	BDL*	BDL*	BDL*	BDL*	0.61	BDL*	17.22	14.71	30.25	21.66
36	01/02/2018	82.30	42.76	BDL*	BDL*	BDL*	BDL*	0.45	BDL*	15.44	11.64	27.56	24.49
37	05/02/2018	63.91	30.31	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	21.08	8.56	19.15	22.28
38	08/02/2018	56.28	38.53	BDL*	BDL*	BDL*	BDL*	0.17	BDL*	16.63	16.51	25.27	17.40
39	12/02/2018	48.22	26.37	BDL*	BDL*	BDL*	BDL*	0.57	BDL*	11.28	13.61	32.26	20.32
40	15/02/2018	65.40	36.47	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	18.70	6.70	17.45	27.24
41	19/02/2018	55.21	23.56	BDL*	BDL*	BDL*	BDL*	0.24	BDL*	33.55	19.61	29.41	18.70
42	22/02/2018	70.32	34.51	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	25.53	9.37	20.34	26.30
43	26/02/2018	50.18	31.52	BDL*	BDL*	BDL*	BDL*	0.62	BDL*	29.39	17.63	34.54	30.44
44	01/03/2018	60.48	32.58	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	17.52	7.56	18.27	16.40
45	05/03/2018	44.61	18.36	BDL*	BDL*	BDL*	BDL*	0.53	BDL*	15.70	14.35	33.44	21.50
46	08/03/2018	58.41	35.54	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	19.63	18.15	19.77	23.72
47	12/03/2018	65.20	21.45	BDL*	BDL*	BDL*	BDL*	0.71	BDL*	27.48	16.51	36.50	25.63
48	15/03/2018	53.19	25.71	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	30.20	17.73	25.79	18.69
49	19/03/2018	62.61	34.25	BDL*	BDL*	BDL*	BDL*	0.37	BDL*	10.27	12.66	23.24	29.57
50	22/03/2018	77.48	37.67	BDL*	BDL*	BDL*	BDL*	0.47	BDL*	24.16	8.41	31.45	27.29
51	26/03/2018	68.39	29.35	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	12.38	11.45	39.32	28.78
52	29/03/2018	52.05	20.57	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	29.60	20.36	29.29	20.29

Observation: Above given Result are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-I dt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values

BDL*: - Below Detection Limit: Ozone as O_3 ($\mu g/m^3$): 10
BDL*: - Below Detection Limit - Lead as Pb ($\mu g/m^3$): 0.5
BDL*: - Below Detection Limit - Carbon Monoxide as CO (mg/m^3): 0.01
BDL*: - Below Detection Limit - Ammonia NH_3 ($\mu g/m^3$): 10
BDL*: - Below Detection Limit - Benzene as C_6H_6 ($\mu g/m^3$): 2
BDL*: - Below Detection Limit - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5
BDL*: - Below Detection Limit - Arsenic as As (ng/m^3): 2
BDL*: - Below Detection Limit - Nickel as Ni (ng/m^3): 10

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Table-1.4: Ambient Air Quality Monitoring Results At Container Terminal

Sr. No.	Date of Sampling	Location-4: Container Terminal (N 21° 05.187'E 72° 37.774)											
		PM ₁₀	PM _{2.5}	Pb	BaP	As	Ni	CO	C ₆ H ₆	NH ₃	SO ₂	NO _x	O ₃
		µg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
1	02/10/2017	57.51	26.47	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	18.68	7.53	18.22	30.28
2	05/10/2017	65.57	29.49	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	15.36	16.73	26.41	24.59
3	09/10/2017	87.32	54.60	BDL*	BDL*	BDL*	BDL*	0.62	BDL*	41.57	11.71	36.38	19.39
4	12/10/2017	61.60	27.71	BDL*	BDL*	BDL*	BDL*	0.77	BDL*	16.57	21.69	30.45	29.48
5	16/10/2017	55.43	20.68	BDL*	BDL*	BDL*	BDL*	0.52	BDL*	20.48	24.53	44.51	23.46
6	19/10/2017	80.60	45.50	BDL*	BDL*	BDL*	BDL*	0.54	BDL*	28.32	14.48	25.68	20.21
7	23/10/2017	72.42	39.46	BDL*	BDL*	BDL*	BDL*	0.60	BDL*	47.60	22.48	31.39	25.65
8	26/10/2017	48.90	18.61	BDL*	BDL*	BDL*	BDL*	0.96	BDL*	33.44	17.66	22.38	21.28
9	30/10/2017	69.21	35.57	BDL*	BDL*	BDL*	BDL*	0.40	BDL*	44.28	13.60	28.49	28.68
10	02/11/2017	76.50	31.44	BDL*	BDL*	BDL*	BDL*	0.71	BDL*	29.32	16.33	20.48	20.42
11	06/11/2017	66.70	26.59	BDL*	BDL*	BDL*	BDL*	0.40	BDL*	37.31	18.60	32.74	30.70
12	09/11/2017	52.37	19.44	BDL*	BDL*	BDL*	BDL*	0.13	BDL*	16.88	6.69	16.54	29.26
13	13/11/2017	73.20	37.64	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	25.17	17.64	23.45	19.30
14	16/11/2017	64.31	34.33	BDL*	BDL*	BDL*	BDL*	0.17	BDL*	39.09	12.28	25.34	17.29
15	20/11/2017	78.42	39.71	BDL*	BDL*	BDL*	BDL*	0.15	BDL*	12.44	5.51	24.53	22.60
16	23/11/2017	58.31	30.74	BDL*	BDL*	BDL*	BDL*	0.48	BDL*	14.21	19.87	27.19	18.47
17	27/11/2017	49.30	24.41	BDL*	BDL*	BDL*	BDL*	0.39	BDL*	36.43	22.67	40.14	26.28
18	30/11/2017	68.34	28.54	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	41.46	20.58	29.55	24.29
19	04/12/2017	54.29	25.77	BDL*	BDL*	BDL*	BDL*	0.13	BDL*	13.25	5.72	17.47	26.83
20	07/12/2017	60.72	28.70	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	34.64	10.40	27.28	15.50
21	11/12/2017	79.63	48.40	0.56	BDL*	2.35	10.09	0.23	BDL*	25.91	14.70	21.80	18.50
22	14/12/2017	80.59	35.24	BDL*	BDL*	BDL*	BDL*	0.36	BDL*	33.44	16.64	36.37	28.42
23	18/12/2017	71.21	32.47	BDL*	BDL*	2.46	10.39	0.25	BDL*	36.15	19.75	31.47	21.59
24	21/12/2017	87.61	42.40	0.68	BDL*	2.58	10.45	0.45	BDL*	10.54	8.35	23.50	19.34
25	25/12/2017	76.32	43.62	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	22.29	17.72	32.05	17.29
26	28/12/2017	61.38	44.51	BDL*	BDL*	BDL*	BDL*	0.44	BDL*	12.35	11.34	29.53	22.30
27	01/01/2018	84.31	36.32	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	15.70	17.75	24.21	16.49
28	04/01/2018	74.52	43.70	BDL*	BDL*	BDL*	BDL*	0.36	BDL*	40.57	22.41	34.69	21.46
29	08/01/2018	58.49	23.45	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	29.32	7.47	19.55	23.50


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30	11/01/2018	88.60	39.54	0.74	BDL*	2.36	10.44	0.63	BDL*	12.44	12.74	25.64	24.26
31	15/01/2018	62.41	19.52	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	38.50	9.72	30.85	27.44
32	18/01/2018	55.86	21.39	BDL*	BDL*	BDL*	BDL*	0.74	BDL*	21.32	16.68	28.47	17.94
33	22/01/2018	63.64	25.55	BDL*	BDL*	BDL*	BDL*	0.62	BDL*	13.62	13.44	21.36	19.53
34	25/01/2018	83.18	38.47	BDL*	BDL*	BDL*	BDL*	0.50	BDL*	41.16	18.74	33.52	25.66
35	29/01/2018	71.51	30.40	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	25.47	11.46	36.27	15.45
36	01/02/2018	67.52	35.37	BDL*	BDL*	BDL*	BDL*	0.40	BDL*	23.69	9.35	19.45	17.71
37	05/02/2018	51.51	20.48	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	28.73	5.49	15.48	29.32
38	08/02/2018	62.39	26.72	BDL*	BDL*	BDL*	BDL*	0.33	BDL*	36.72	13.54	32.41	20.45
39	12/02/2018	81.59	49.47	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	18.36	6.39	22.45	18.21
40	15/02/2018	52.33	28.38	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	42.35	15.68	24.33	22.39
41	19/02/2018	60.41	27.67	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	12.73	11.67	18.48	16.77
42	22/02/2018	86.17	50.47	0.56	BDL*	BDL*	10.45	0.38	BDL*	37.61	7.59	29.17	28.11
43	26/02/2018	79.29	47.11	BDL*	BDL*	BDL*	BDL*	0.15	BDL*	45.31	10.56	20.35	26.51
44	01/03/2018	49.83	25.56	BDL*	BDL*	BDL*	BDL*	0.30	BDL*	37.66	16.50	25.61	23.27
45	05/03/2018	77.62	37.34	BDL*	BDL*	BDL*	BDL*	0.44	BDL*	16.27	6.73	23.42	18.49
46	08/03/2018	83.42	45.75	BDL*	BDL*	BDL*	10.28	0.54	BDL*	25.30	9.68	16.07	30.20
47	12/03/2018	73.20	32.68	BDL*	BDL*	BDL*	BDL*	0.37	BDL*	40.97	11.44	21.57	28.28
48	15/03/2018	58.79	29.41	BDL*	BDL*	BDL*	BDL*	0.27	BDL*	33.44	14.72	33.36	21.62
49	19/03/2018	70.62	44.38	BDL*	BDL*	BDL*	10.33	0.46	BDL*	19.58	10.56	20.94	20.43
50	22/03/2018	82.48	40.46	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	34.64	5.34	24.34	29.32
51	26/03/2018	75.30	35.41	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	29.52	8.45	28.49	22.56
52	29/03/2018	56.68	23.41	BDL*	BDL*	BDL*	BDL*	0.40	BDL*	11.45	12.44	19.72	17.79

Observation: Above given Result are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-I dt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values

BDL*:- Below Detection Limit: Ozone as O_3 ($\mu g/m^3$): 10
BDL*:- Below Detection Limit - Lead as Pb ($\mu g/m^3$): 0.5
BDL*:- Below Detection Limit - Carbon Monoxide as CO (mg/m^3): 0.01
BDL*:- Below Detection Limit - Ammonia NH_3 ($\mu g/m^3$): 10
BDL*:- Below Detection Limit - Benzene as C_6H_6 ($\mu g/m^3$): 2
BDL*:- Below Detection Limit - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5
BDL*:- Below Detection Limit - Arsenic as As (ng/m^3): 2
BDL*:- Below Detection Limit - Nickel as Ni (ng/m^3): 10



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Table-1.5: Ambient Air Quality Monitoring Results At Hazira Village

Sr. No.	Date of Sampling	Location-5: Hazira Village (N 21° 05.44' E 72° 38.44')											
		PM ₁₀	PM _{2.5}	Pb	BaP	As	Ni	CO	C ₆ H ₆	NH ₃	SO ₂	NO _x	O ₃
		µg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
1	02/10/2017	64.50	29.74	BDL*	BDL*	BDL*	BDL*	0.46	BDL*	29.38	12.39	29.71	15.40
2	05/10/2017	59.32	33.51	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	23.93	9.34	20.50	22.16
3	09/10/2017	93.48	50.69	0.72	BDL*	2.65	10.70	0.85	BDL*	52.71	26.46	39.49	28.50
4	12/10/2017	77.60	32.68	BDL*	BDL*	BDL*	BDL*	0.61	BDL*	35.75	16.46	42.52	18.61
5	16/10/2017	82.58	35.61	0.80	BDL*	BDL*	BDL*	1.03	BDL*	45.44	14.62	24.84	25.51
6	19/10/2017	72.48	40.64	BDL*	BDL*	BDL*	BDL*	0.88	BDL*	31.51	28.41	46.25	27.16
7	23/10/2017	65.32	22.62	BDL*	BDL*	BDL*	BDL*	0.97	BDL*	64.22	15.52	37.16	29.17
8	26/10/2017	84.60	45.66	0.65	BDL*	2.75	10.85	0.73	BDL*	24.23	21.77	41.24	23.32
9	30/10/2017	90.31	55.72	0.84	BDL*	2.95	10.41	0.64	BDL*	47.56	8.39	23.53	17.55
10	02/11/2017	92.49	54.46	0.64	BDL*	2.54	10.30	0.53	BDL*	31.27	9.73	44.21	21.59
11	06/11/2017	78.61	35.61	BDL*	BDL*	BDL*	BDL*	0.61	BDL*	47.65	23.29	37.45	25.27
12	09/11/2017	69.32	27.65	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	26.80	11.47	27.34	23.14
13	13/11/2017	58.41	33.51	BDL*	BDL*	BDL*	BDL*	0.68	BDL*	13.40	27.53	45.60	29.79
14	16/11/2017	86.18	36.45	0.76	BDL*	2.34	10.22	0.74	BDL*	42.29	7.67	18.61	18.38
15	20/11/2017	70.20	29.33	BDL*	BDL*	BDL*	BDL*	0.24	BDL*	21.14	17.49	36.18	24.58
16	23/11/2017	63.62	25.55	BDL*	BDL*	BDL*	BDL*	0.44	BDL*	52.12	14.49	39.67	19.35
17	27/11/2017	77.18	39.38	BDL*	BDL*	BDL*	BDL*	0.82	BDL*	40.20	12.48	23.58	28.51
18	30/11/2017	84.60	52.37	0.56	BDL*	2.21	10.52	0.72	BDL*	58.37	18.84	41.18	30.85
19	04/12/2017	59.58	27.57	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	23.33	10.69	32.23	20.49
20	07/12/2017	67.70	31.21	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	35.75	18.67	23.38	23.30
21	11/12/2017	90.41	55.38	0.82	BDL*	2.54	10.36	0.73	BDL*	19.39	8.44	35.26	19.77
22	14/12/2017	85.57	40.51	BDL*	BDL*	BDL*	10.10	0.46	BDL*	42.11	21.52	43.37	28.59
23	18/12/2017	64.29	29.41	0.58	BDL*	2.84	10.67	0.66	BDL*	52.71	17.63	39.38	27.49
24	21/12/2017	71.58	28.40	BDL*	BDL*	BDL*	BDL*	0.47	BDL*	18.18	14.67	31.18	22.48
25	25/12/2017	61.49	30.20	BDL*	BDL*	BDL*	BDL*	0.63	BDL*	11.81	23.58	45.28	30.43
26	28/12/2017	88.38	54.29	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	46.35	13.77	40.46	24.50
27	01/01/2018	89.32	40.38	BDL*	BDL*	BDL*	BDL*	0.89	BDL*	26.80	26.66	38.50	26.42
28	04/01/2018	68.18	37.33	0.62	BDL*	2.12	10.47	0.72	BDL*	57.48	20.77	43.42	28.39
29	08/01/2018	82.42	42.44	BDL*	BDL*	BDL*	BDL*	0.44	BDL*	22.04	12.38	33.41	17.37


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30	11/01/2018	75.28	29.33	BDL*	BDL*	BDL*	BDL*	0.71	BDL*	18.46	17.70	35.38	19.60
31	15/01/2018	69.33	35.48	BDL*	BDL*	BDL*	BDL*	0.30	BDL*	46.46	16.49	26.39	20.59
32	18/01/2018	80.68	45.58	BDL*	BDL*	BDL*	BDL*	0.87	BDL*	38.12	23.45	30.35	27.68
33	22/01/2018	91.20	52.53	0.68	BDL*	2.48	10.30	0.58	BDL*	52.41	15.58	37.38	21.51
34	25/01/2018	72.58	43.48	BDL*	BDL*	BDL*	BDL*	0.63	BDL*	47.05	21.42	41.50	29.42
35	29/01/2018	94.19	48.55	0.76	BDL*	2.64	10.78	0.87	BDL*	13.40	16.49	29.20	24.61
36	01/02/2018	87.88	45.58	BDL*	BDL*	BDL*	BDL*	0.71	BDL*	27.70	14.44	25.59	28.73
37	05/02/2018	77.73	35.61	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	19.36	10.76	29.57	19.11
38	08/02/2018	92.63	43.65	0.76	BDL*	2.42	10.70	0.58	BDL*	46.46	18.47	38.63	25.29
39	12/02/2018	89.40	51.53	BDL*	BDL*	BDL*	BDL*	0.69	BDL*	29.18	23.73	42.65	26.39
40	15/02/2018	75.31	41.60	BDL*	BDL*	BDL*	BDL*	0.87	BDL*	49.14	20.56	27.52	30.22
41	19/02/2018	86.91	47.46	0.68	BDL*	2.30	10.34	0.30	BDL*	36.33	13.48	35.56	23.64
42	22/02/2018	67.40	29.58	BDL*	BDL*	BDL*	BDL*	0.47	BDL*	41.10	19.67	39.35	18.76
43	26/02/2018	90.38	50.90	0.84	BDL*	2.76	10.46	0.53	BDL*	55.39	15.37	32.48	21.58
44	01/03/2018	66.70	36.70	BDL*	BDL*	BDL*	BDL*	0.62	BDL*	45.44	21.56	29.39	25.32
45	05/03/2018	80.28	33.43	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	27.87	24.71	37.83	26.30
46	08/03/2018	91.23	50.31	0.76	BDL*	2.56	10.58	0.76	BDL*	17.57	11.43	31.55	22.36
47	12/03/2018	78.58	35.23	BDL*	BDL*	BDL*	BDL*	0.36	BDL*	50.89	25.66	45.55	23.40
48	15/03/2018	87.51	45.62	0.54	BDL*	BDL*	BDL*	0.44	BDL*	41.20	19.67	42.24	27.56
49	19/03/2018	94.22	52.74	0.64	BDL*	BDL*	10.85	0.92	BDL*	25.14	14.37	38.45	18.46
50	22/03/2018	60.72	27.86	BDL*	BDL*	BDL*	BDL*	0.38	BDL*	37.87	17.42	34.53	28.25
51	26/03/2018	86.31	54.29	0.73	BDL*	2.84	10.47	0.82	BDL*	26.36	22.68	32.81	24.60
52	29/03/2018	78.39	30.62	BDL*	BDL*	BDL*	BDL*	0.65	BDL*	33.32	15.61	39.44	30.73

Observation: Above given Result are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-I dt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values,

BDL*: - Below Detection Limit: Ozone as O_3 ($\mu g/m^3$): 10
BDL*: - Below Detection Limit - Lead as Pb ($\mu g/m^3$): 0.5
BDL*: - Below Detection Limit - Carbon Monoxide as CO (mg/m^3): 0.01
BDL*: - Below Detection Limit - Ammonia NH_3 ($\mu g/m^3$): 10
BDL*: - Below Detection Limit - Benzene as C_6H_6 ($\mu g/m^3$): 2
BDL*: - Below Detection Limit - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5
BDL*: - Below Detection Limit - Arsenic as As (ng/m^3): 2
BDL*: - Below Detection Limit - Nickel as Ni (ng/m^3): 10


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ANNEXURE-4B:

GROUND WATER QUALITY MONITORING RESULTS

PERIOD: Oct., 2017 TO Mar., 2018

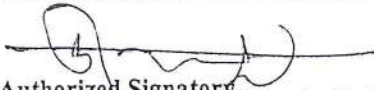


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4B. GROUND WATER QUALITY MONITORING: -

Table-1.6: Ground Water Quality Results for the period: Oct., 2017 to Mar., 2018

Sr. NO.	TEST PARAMETERS	UNIT	GROUND WATER OPEN WELL					
			OCT-17	NOV-17	DEC-17	JAN-18	FEB-18	MARCH-18
			30/10/2017	28/11/2017	29/12/2017	25/01/2018	21/02/2018	19/03/2018
1	Colour	Hazen	<1.0	<1.0	< 1.0	2	3	2
2	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.92	0.44	0.73	2.9	0.54	0.39
5	pH Value	--	7.82	7.28	8.01	7.46	7.76	7.5
6	Total Hardness as CaCO ₃	mg/L	412	420	450	472	411	398
7	Iron as Fe	mg/L	0.025	0.027	0.029	0.094	0.026	0.018
8	Chloride as Cl	mg/L	83.84	111	107	119	81.79	70.9
9	Residual Free Chlorine	mg/L	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
10	Fluoride as F	mg/L	0.507	0.17	0.16	0.4	0.56	0.45
11	Total Dissolved Solids	mg/L	710	760	666	696	698	612
12	Calcium as Ca	mg/L	111	100	95.2	100	95	118
13	Magnesium as Mg	mg/L	41.08	40.8	50.8	53.28	40.04	76.08
14	Copper as Cu	mg/L	0.019	0.019	0.018	0.016	0.022	0.011
15	Manganese as Mn	mg/L	BDL*	BDL*	BDL*	BDL*	0.016	BDL*
16	Sulphate as SO ₄	mg/L	39.86	28.2	37.89	44.6	40.79	60.2
17	Nitrate Nitrogen as NO ₃	mg/L	BDL*	BDL*	BDL*	BDL*	0.54	0.28
18	Phenolic compounds as C ₆ H ₅ OH	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
19	Mercury as Hg	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
20	Cadmium as Cd	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
21	Selenium as Se	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
22	Arsenic as As	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
23	Cyanide as CN	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
24	Lead as Pb	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
25	Zinc as Zn	mg/L	0.018	0.037	0.037	0.064	BDL*	BDL*
26	Anionic Detergents as MBAS	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
27	Chromium as Cr ⁺⁶	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
28	Mineral Oil	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
29	Alkalinity	mg/L	344	470	496	456	346	210
30	Aluminum as Al	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
31	Boron as B	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32	Pesticides							
32.1	Alachor	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.2	Atrazine	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.3	Aldrin/Dieldrine	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.4	Alpha HCH	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.5	Beta HCH	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.6	Butachlor	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*


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Sr. NO.	TEST PARAMETERS	UNIT	GROUND WATER OPEN WELL					
			OCT-17	NOV-17	DEC-17	JAN-18	FEB-18	MARCH-18
			30/10/2017	28/11/2017	29/12/2017	25/01/2018	21/02/2018	19/03/2018
32.7	Chlorpyrifos	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.8	Delta HCH	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.9	2,4- Dichlorophenoxy acetic acid	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.10	DDT (o,p & p,p-Isomers of DDT, DDE & DDD	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.11	Endosulfan (alpha, beta, and sulphate)	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.12	Ethion	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.13	Gamma – HCH (Lindane)	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.14	Isoproturon	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.15	Malathion	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.16	Methyl Parathion	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.17	Monocrotophos	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
32.18	Phorate	µg/l	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
33	Coliform	/100 ml	Absent	Absent	Absent	Absent	Absent	Absent
34	E-Coli	/100 ml	Absent	Absent	Absent	Absent	Absent	Absent

*Below detection limit.

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Ground Water.

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ANNEXURE-4C:

SURFACE WATER QUALITY MONITORING RESULTS

PERIOD: Oct., 2017 TO Mar., 2018

4C. SURFACE WATER QUALITY MONITORING: -

Table-1.7: Surface Water (Pond) Quality Results for the period: Oct., 2017 to Mar., 2018

Sr. No.	Parameters	Unit	At Mora Village (Surface Water – Pond)					
			OCT-17	NOV-17	DEC-17	JAN-18	FEB-18	MARCH-18
			30/10/17	28/11/17	29/12/17	25/01/18	21/02/18	19/03/18
1	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
2	Colour	Hazen	2	1	5	4	2	4
3	Taste	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	pH Value	--	8.02	8.08	7.99	8.15	8.43	8.48
5	Turbidity	NTU	0.84	4.39	9.34	16.2	0.96	2.1
6	Total Dissolved Solids	mg/L	494	536	484	496	472	741
7	Total Hardness as CaCO ₃	mg/L	171	156	142	158	206	350
8	Chloride as Cl	mg/L	124	135	122	129	48.98	72
9	Fluoride as F	mg/L	0.46	0.94	0.49	0.65	0.78	0.84
10	Iron as Fe	mg/L	0.53	0.52	0.41	0.36	0.22	0.29
11	Coliform	/100 ml	Present	Absent	Absent	Absent	Present	Present
12	E-Coli	/100 ml	Absent	Absent	Absent	Absent	Absent	Absent

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Surface Water.



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ANNEXURE-4D:

SEA WATER QUALITY MONITORING RESULTS

PERIOD: Oct., 2017 to Mar., 2018



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4D. SEA WATER QUALITY MONITORING: -

Table-1.8: Sea Water Quality Analysis Results of CB2 South End towards Landside from the Sea Basin for the period: Oct., 2017 to Mar., 2018

S. NO.	TEST PARAMETERS	UNIT	RESULTS OF SEA WATER QUALITY ANALYSIS CB2 SOUTH END TOWARDS LANDSIDE FROM SEA BASIN(N 21° 5'1.92", E 72°37'56.58")											
			OCTOBER-17		NOVEMBER-17		DECEMBER-17		JANUARY-18		FEBRUARY-18		MARCH-18	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	7.77	8.01	8.02	8.18	7.75	7.89	7.93	8.17	7.85	8.31	8.03	8.25
2	Temperature	°C	29	28	30	29	31	30	29	28	30	31	31	30
3	Total Suspended Solids	mg/L	320	350	340	410	310	322	394	338	412	352	290	252
4	BOD (3 Days @ 27 °C)	mg/L	5	4	6	5	5.6	4.2	6	5.4	8	6.4	4.4	3
5	Dissolved Oxygen	mg/L	6.2	5.8	6.1	5.6	6	5.4	5.7	5.2	4.8	5.8	6.5	6.2
6	Salinity	ppt	28.2	29.4	29.4	30.44	27.84	28.6	25.9	26.7	24.8	26	30.4	29.2
7	Oil & Grease	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
8	Nitrate as NO ₃	μmol/L	19	21	20.4	22.1	20.6	21.8	21.6	21.9	20.4	18.1	14.2	13.4
9	Nitrite as NO ₂	μmol/L	2.8	2.7	3.1	3	2.9	2.4	3.2	3	2.6	2.2	2.5	1.8
10	Ammonical Nitrogen as NH ₃	μmol/L	1.88	2.76	2.61	3.86	2.75	2.99	2.22	3.53	1.8	2.8	3.2	2.9
11	Phosphates as PO ₄	μmol/L	1.67	1.77	3.46	3.74	1.64	1.72	1.71	1.83	1.52	1.94	1.85	1.63
12	Total Nitrogen	μmol/L	23.68	26.46	26.11	28.96	5.77	5.63	5.63	6.73	24.8	23.1	19.9	18.1
13	Petroleum Hydrocarbon	μg/L	13	BDL*	14	BDL*	11	8	12	6	8	14	14	10
14	Total Dissolved Solids	mg/L	31480	32080	33240	33880	32040	32540	29440	30220	27820	28670	34840	34210
15	COD	mg/L	18	14	19	28	20	13	22	16	18	12	14	10
A Flora and Fauna														
16.1	Primary Productivity	mgC/L/day	1.26	0.68	1.46	0.45	1.75	0.22	1.98	0.68	2.01	0.72	1.8	0.55
B Phytoplankton														
17.1	Chlorophyll	mg/m ³	2.58	1.6	2.93	0.94	2.85	0.37	2.97	0.4	2.67	0.32	2.55	0.28
17.2	Phaeophytin	mg/m ³	0.98	0.72	BDL*	0.841	1.1	0.84	0.99	0.68	0.8	0.95	0.72	1.03
17.3	Cell Count	No.x 10 ³ /L	116	68	122	72	134	94	108	85	115	63	103	90

17.4	Name of Group Number and name of group species of each group	--	Bacillariophyceae Biddulphia sp. Coscinodiscus sp. Rhizosolenia sp. Navicula sp. Cymbella sp. Tabellaria sp. Fragillaria sp. Skeletonema sp. Cyanophyceae Anabaena sp.	Bacillariophyceae Rhizosolenia sp. Fragillaria sp. Coscinodiscus sp. Navicula sp. Thalassiosira sp. Surirella sp. Cyanophyceae Oscillatoria sp. Spirulina sp. Green Algae Spirogyra	Bacillariophyceae Biddulphia sp. Coscinodiscus sp. Rhizosolenia sp. Navicula sp. Cymbella sp. Tabellaria sp. Fragillaria sp. Skeletonema sp. Cyanophyceae Anabaena sp. Microcystis	Bacillariophyceae Rhizosolenia sp. Fragillaria sp. Coscinodiscus sp. Navicula sp. Thalassiosira sp. Surirella sp. Cyanophyceae Oscillatoria sp. Spirulina sp. Green Algae	Bacillariophyceae Nitzschia sp. Synedra sp. Coscinodiscus sp. Asterionella sp. Thalassiosira sp. Nema sp. Rhizosolenia sp. Pinnularia sp. Green Algae Scenedesmus	Bacillariophyceae Achnanthes sp. Navicula sp. Nitzschia sp. Synedra sp. Coscinodiscus sp. Thalassiosira sp. Rhizosolenia sp. Thalassiosira sp. Nema sp. Gomphonema sp. Cyanophyceae	Bacillariophyceae Fragillaria sp. Nitzschia sp. Gyrodinium sp. Cyanophyceae Anabaena sp. Green Algae Ankistrodesmus sp. Chlorella sp.	Bacillariophyceae Achnanthes sp. Gomphonema sp. Nitzschia sp. Cyanophyceae Thalassiosira sp. Nema sp. --	Bacillariophyceae Gyrodinium sp. Navicula sp. Thalassiosira sp. Nema sp. --	Bacillariophyceae Navicula sp. Nitzschia sp. Synedra sp. Rhizosolenia sp. Skeletonema sp. Cymbella sp. Desmids	Bacillariophyceae Navicula sp. Nitzschia sp. Fragillaria sp. Pinnularia sp. Cymbella sp.
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			Microcystis sp. Oscillatoria sp. Nostoc sp. Green Algae Chlorella sp. Ankistrodesmus sp.	a sp. Pediastrum sp.	tis sp. Oscillatoria sp. Nostoc sp. Green Algae Chlorella sp. Ankistrodesmus sp.	Spirogyra sp. Pediastrum sp. --	smus sp. Pediastrum sp. Oedogonium sp. Desmidsium sp. Cosmarium sp		Anabaena sp. Oscillatoria sp. Green Algae Ankistrodesmus sp. Chlorella sp.				
C Zooplanktons													
18.1	Abundance (Population)	Nox10 3/100 m3	18	20	26	19	22	20					
18.2	Name of Group Number and name of group species of each group	--	Copepods Decapods Isopods	Copepods Echinoderms Bivalves Crabs	Copepods Nematodes Gastropods Echinoderms	Copepods Polychaete worms Mysids Echinoderms	Copepods Mysids Polychaete worms Echinoderms	Polychaete worms Crustaceans Echinoderms Snail					
18.3	Total Biomass	ml/10 0 m ³	5.8	6.2	6.8	7	6.8	6.6					
D Microbiological Parameters													
19.1	Total Bacterial Count	CFU/ ml	2010	1980	1620	1730	1660	1440					
19.2	Total Coliform	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.3	E.coli	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.4	Enterococcus species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.5	Salmonella species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.6	Shigella species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.7	Vibrio species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					

BDL* - Below Detection Limit

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Water.

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Table-1.9: Sea Water Quality Analysis Results of MP1 West End towards Channel from the Sea Basin for the period: Oct., 2017 to Mar., 2018

S. NO.	TEST PARAMETERS	UNIT	RESULTS OF SEA WATER QUALITY ANALYSIS											
			MP1 WEST END TOWARDS CHANNEL FROM SEA BASIN(N 21° 5'9.78",E 72°37'24.48")											
			OCTOBER-17		NOVEMBER-17		DECEMBER-17		JANUARY-18		FEBRUARY-18		MARCH-18	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	7.88	8.13	8.17	8.37	7.96	8.12	7.97	8.03	7.72	8.21	7.98	8.12
2	Temperature	°C	29	28	31	30	30	29	30	29	29	28	32	31
3	Total Suspended Solids	mg/L	680	700	660	694	598	694	710	740	680	762	308	270
4	BOD (3 Days @ 27 °C)	mg/L	5	5.2	6	5	5.8	5.3	6.2	5.1	5.1	7.2	6.2	4.8
5	Dissolved Oxygen	mg/L	5.8	5	5.6	4.8	5.4	5	5	4.6	3.9	5.8	6.1	5.9
6	Salinity	ppt	37.72	38.06	35.3	36.21	35.54	36.32	34.9	35.5	28.6	32.4	29.2	28.4
7	Oil & Grease	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
8	Nitrate as NO ₃	µmo/L	27.5	27.9	26.8	27.3	25.9	26.6	28.1	28.8	24.3	25.9	16.4	16.1
9	Nitrite as NO ₂	µmo/L	3.2	3.4	3.6	2.8	3.3	3	3.4	3.1	2.8	1.8	2.9	2.2
10	Ammonical Nitrogen as NH ₃	µmo/L	2.8	2.6	2.6	2.4	2.9	2.1	3	2.3	2.1	3.2	2.85	2.5
11	Phosphates as PO ₄	µmo/L	2.2	1.4	2	1.2	2.7	1.9	2.9	1.7	3.6	2.8	1.92	1.75
12	Total Nitrogen	µmo/L	33.5	33.9	33	32.6	6.37	5.64	6.84	5.55	29.2	30.9	22.1	20.8
13	Petroleum Hydrocarbon	µg/L	11.7	10.3	13.6	11.4	14.5	13.6	12.8	11.3	15.6	13.2	16	8
14	Total Dissolved Solids	mg/L	31330	31840	29920	30440	30110	30870	31750	32220	30450	31870	33940	33610
15	COD	mg/L	20	21	24	28	18	20	16	18	22	34	18	16
A Flora and Fauna														
16.1	Primary Productivity	mgC/L/day	2.13	1.45	1.575	1.34	1.3	1.1	1.75	1.3	1.82	0.93	1.9	0.62
B Phytoplankton														
17.1	Chlorophyll	mg/m ³	2.21	1.42	2.59	1.5	2.32	1.6	2.67	1.47	3.05	1.56	2.9	0.4
17.2	Phaeophytin	mg/m ³	1.2	0.9	1.1	0.8	1.3	0.84	1.4	0.97	0.88	0.82	0.82	0.85
17.3	Cell Count	No. x 10 ³ /L	116	84	124	76	132	86	118	64	115	65	90	80
17.4	Name of Group Number and name of group species of each group	--	Bacillariophyceae Asterionella sp. Biddulphia sp. Fragillaria sp. Coscinodiscus sp. Thalassiosira sp. Melosira sp. Cyclotella sp. Cyanophyceae Oscillatoria sp. Green Algae Chlorella sp. Nostoc sp. Green Algae	Bacillariophyceae Fragillaria sp. Biddulphia sp. Pleurosigma sp. Pinnularia sp. Navicula sp. Cyanophyceae Oscillatoria sp. Anabaena sp. Microcystis sp. Green Algae Chlorella sp.	Bacillariophyceae Synedra sp. Coscinodiscus sp. Gomphonema sp. Rhizosolenia sp. Biddulphia sp. Cyanophyceae Oscillatoria sp. Anabaena sp. Microcystis sp. Green Algae Volvox sp. Chlorella sp.	Bacillariophyceae Pinnularia sp. Cymbella sp. Fragillaria sp. Nitzschia sp.	Bacillariophyceae Melosira sp. Coscinodiscus sp. Nitzschia sp. Navicula sp. Gomphonema sp. Cymbella sp. Rhizosolenia sp. Pinnularia sp. Cyanophyceae Oscillatoria sp. Spirulina sp. Green Algae	Bacillariophyceae Navicula sp. Synedra sp. Biddulphia sp. Cheatoceros sp. Tabellaria sp. Biddulphia sp. Cyclotella sp. Cyanophyceae Oscillatoria sp. Lyngbya sp.	Bacillariophyceae Navicula sp. Synedra sp. Biddulphia sp. Cheatoceros sp. Tabellaria sp. Biddulphia sp. Cyclotella sp. Cyanophyceae Oscillatoria sp. Lyngbya sp.	Bacillariophyceae Navicula sp. Synedra sp. Biddulphia sp. Cheatoceros sp. Tabellaria sp. Biddulphia sp. Cyclotella sp. Cyanophyceae Oscillatoria sp. Lyngbya sp.	Bacillariophyceae Navicula sp. Synedra sp. Biddulphia sp. Cheatoceros sp. Tabellaria sp. Biddulphia sp. Cyclotella sp. Cyanophyceae Oscillatoria sp. Lyngbya sp.	Bacillariophyceae Navicula sp. Synedra sp. Biddulphia sp. Cheatoceros sp. Tabellaria sp. Biddulphia sp. Cyclotella sp. Cyanophyceae Oscillatoria sp. Lyngbya sp.	Bacillariophyceae Pinnularia sp. Synedra sp. Asterionella sp. Gomphonema sp. Rhizosolenia sp. Biddulphia sp. Spirulina sp.	Bacillariophyceae Nitzschia sp. Thalassiosira sp. Navicula sp. Cocconeis sp. Fragillaria sp. Cymbella sp.

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			Hydrocarbon sp. Chlorella sp.			Pediastrum sp.		Chlorella sp.					
C	Zooplanktons												
18.1	Abundance (Population)	Nox10 3/100 m ³	15	17	19	22	21	24					
18.2	Name of Group Number and name of group species of each group	--	Ostracods Gastropods Foraminiferans Molluscs Snails	Polychaete worms Decapods Molluscs Gastropods	Molluscs Gastropods Crustaceans Polychaetes Worms	Copepods Gastropods Fish egg Nematodes	Copepods Fish egg Nematodes	Gastropods Ostracods Crustaceans					
19.3	Total Biomass	ml/10 0 m ³	9.1	8.8	7.3	9.5	8.6	7					
D	Microbiological Parameters												
19.1	Total Bacterial Count	CFU/ ml	1860	1840	1710	1660	1730	1610					
19.2	Total Coliform	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.3	E.coli	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.4	Enterococcus species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.5	Salmonella species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.6	Shigella species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.7	Vibrio species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					

BDL* - Below Detection Limit

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Water.


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● FSSAI Approved Lab

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

● GPCB approved
schedule II auditor

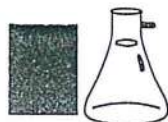
● ISO 14001

● OHSAS 18001

● ISO 9001

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Table-1.10: Sea Water Quality Analysis Results of CB1 End towards Channel from the Sea Basin for the period: Oct., 2017 to Mar., 2018

S. NO.	TEST PARAMETERS	UNIT	RESULTS OF SEA WATER QUALITY ANALYSIS CB1 END TOWARDS CHANNEL FROM SEA BASIN (N 21° 5'14.67" , E 72°37'40.14")											
			OCTOBER-17		NOVEMBER-17		DECEMBER-17		JANUARY-18		FEBRUARY-18		MARCH-18	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	7.91	8.07	7.73	7.92	7.76	7.83	7.55	7.66	7.32	7.81	8.07	8.15
2	Temperature	oC	29	30	30	29	29.4	28.9	28.6	28.1	29	29	31	30
3	Total Suspended Solids	mg/ L	568	634	510	630	570	690	550	620	482	740	310	272
4	BOD (3 Days @ 27 °C)	mg/ L	3.6	3.4	4	3.5	4.4	3.8	4.8	4	6	3.4	5	3
5	Dissolved Oxygen	mg/ L	5.4	4.6	5.4	4.8	5.4	4.8	5.4	4.8	7.2	5.4	6.2	5.5
6	Salinity	ppt	26.88	27.42	26.66	27.84	25.35	26.06	25.2	25.9	28.4	26.5	29.8	29.5
7	Oil & Grease	mg/ L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
8	Nitrate as NO ₃	µmo l/L	26.1	27.3	28.4	29.2	25.4	26.8	26.7	29.6	24.3	27.4	15.8	12.2
9	Nitrite as NO ₂	µmo l/L	2.3	1.8	2.2	1.7	2.3	1.9	2.4	1.6	2.8	1	2	1.6
10	Ammonical Nitrogenas NH ₃	µmo l/L	2.54	1.92	1.91	2.12	2.36	1.83	2.27	1.53	1.34	1.21	3.1	2.9
11	Phosphates as PO ₄	µmo l/L	1.5	1.7	2.05	3.66	1.87	1.93	1.77	1.85	1.21	1.48	2.4	1.9
12	Total Nitrogen	µmo l/L	30.94	31.02	30.33	33.02	4.72	3.85	4.76	3.41	28.44	29.61	20.9	16.7
13	Petroleum Hydrocarbon	µg/L	13.6	11.2	12.8	10.6	14.2	12.4	15.1	13.7	13.8	11.8	10	6
14	Total Dissolved Solids	mg/ L	30780	31130	45090	46410	27550	28230	26820	27210	24650	26480	33240	33090
15	COD	mg/ L	12	10	24	28	18	12	16	8	24	16	12	8
A Flora and Fauna														
16.1	Primary Productivity	mgC/L /day	1.65	1.1	1.665	0.563	1.1	0.51	1.55	0.81	1.56	0.72	1.75	0.52
B Phytoplankton														
17.1	Chlorophyll	mg/ m ³	2.48	1.53	2.109	0.587	2.45	0.56	2.93	0.64	2.75	0.59	2.45	0.28
17.2	Phaeophytin	mg/ m ³	1.1	0.96	BDL*	1.469	0.011	1.32	BDL*	1.24	0.2	1.36	0.8	0.7
17.3	Cell Count	No.x 10 ³ / L	106	68	96	58	108	92	115	86	115	86	85	72
17.4	Name of Group Number and name of group species of each group	--	Bacillari ophycea e Navicula sp. Rhizosol enia sp. Coscino discus sp. Cymbell a sp. Fragillari a sp. Skeleton ema sp. Pinnulari a sp. Coccone is sp. Cyanoph yceae Anabaen a sp. Oscillato ria sp.	Bacillario phyceae Navicula sp. Pinnulari a sp. Gompho nerna sp. Rhizosol enia sp. Coscino discus sp. Cyanoph yceae Oscillato ria sp. Microcys tis sp. Green Algae Pandorin a sp. Ankistro desmus	Bacillario phyceae Navicula sp. Nitzschia sp. Cyclotell a sp. Coscino discus sp. Skeleton ema sp. Pleurosi gma sp. Pinnulari a sp. Fragillari a sp. Cyanoph yceae Oscillato ria sp. Green Algae Chlorella	Bacillari ophycea e Nitzschia sp. Fragillari a sp. Coscino discus sp. Rhizosol enia sp. -- -- -- -- -- -- --	Bacillario phyceae Asterion ella sp. Coscino discus sp. Skeleton ema sp. Pinnulari a sp. Gyrosig ma sp. Thallasio sira sp. Biddulph ia sp. Synedra sp. Cyanoph yceae Anabaen a sp. Oscillato ria sp. Green	Bacillari ophycea e Amphor a sp. Navicula sp. Synedra sp. Coscino discus sp. Nitzschia sp. Rhizosol enia sp. Skeleton ema sp. Surirella sp. Coccone is sp. Synedra sp. -- -- --	Bacillario phyceae Navicula sp. Nitzschia sp. Fragillari a sp. Pleurosi gma sp. Pinnulari a sp. -- -- -- -- -- -- --	Bacillari ophycea e Coscino discus sp. Synedra sp. Nitzschia sp. Surirella sp. Cyanoph yceae Spirulina sp. Oscillato ria sp. Green Algae Ulothrix sp.	Bacillario phyceae Navicula sp. Nitzschia sp. Fragillari a sp. Pleurosi gma sp. Pinnulari a sp. -- -- -- -- -- -- --	Bacillari ophycea e Gyrosig ma sp. Coccone is sp. Skeleton ema Green Algae Pediastr um sp. Ankistro desmus sp. Scenede smus sp.	Bacillario phyceae Pinnulari a sp. Cymbell a sp. Synedra sp. Melosira sp. Biddulph ia sp. -- -- --	

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			Green Algae Chlorella sp. Pediastrum um sp.	sp. --	sp. Ankistro desmus sp		Algae Hydrodic tyon sp. Volvox sp.		Green Algae Ulothrix sp.				
C Zooplanktons													
18.1	Abundance (Population)	Nox10 3/100 m3	19	21	22	24	28	21					
18.2	Name of Group Number and name of group species of each group	--	Copepods Polychaete worms Krill Molluscans Crustaceans	Polychaete worms Decapods Gastropods	Copepods Decapods Mysids Molluscans Echinoderms	Copepods Decapods Mysids	Copepods Decapods Krill	Gastropods Polychaete worms Molluscans					
18.3	Total Biomass	ml/10 0 m ³	7.3	8.1	7.7	9.2	10.1	6.5					
D Microbiological Parameters													
19.1	Total Bacterial Count	CFU/ ml	2110	2050	1980	2020	1840	1570					
19.2	Total Coliform	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.3	E.coli	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.4	Enterococcus species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.5	Salmonella species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.6	Shigella species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					
19.7	Vibrio species	/ml	Absent	Absent	Absent	Absent	Absent	Absent					

BDL* - Below Detection Limit,

Minimum Detection Limit, BOD: 3.0 mg/L, Oil & Grease: 1.0mg/L, Petroleum Hydrocarbon: 10µg/L, Nitrite as NO₂: 0.002 mg/L, Pheophytin: 0.1 mg/m³

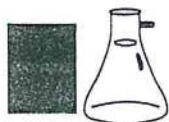
Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Water.


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ANNEXURE-4E:

DUMP POND DISCHARGE WATER QUALITY MONITORING RESULTS

PERIOD: Oct., 2017 to Mar., 2018

**POLLUCON** LABORATORIES PVT. LTD.**4E. DUMP POND DISCHARGE WATER QUALITY MONITORING: -****Table-1.11: Dump Pond Water Quality Analysis Results for the Period: Oct., 2017 to Mar., 2018**

Sr. No.	Parameters	Unit	29/12/17	29/12/17	29/12/17	21/02/18	21/02/18	21/02/18
			OLD COAL YARD	PET COCK	CORNER	OLD COAL YARD	NEW COAL YARD	PET COCK
1	pH	--	8.11	8.45	8.83	8.12	7.88	7.98
2	Total Dissolved Solids	mg/L	6992	1164	4412	1180	150	158
3	Total Suspended Solids	mg/L	82	56	38	48	188	176
4	Turbidity	NTU	37.2	25.4	1.93	118	12.88	9.8
5	BOD (3 Days @ 27 °C)	mg/L	28	36	18	38	5.2	6.4
6	Dissolved Oxygen	mg/L	5	4.6	5.4	6.5	6.4	4.2
7	COD	mg/L	116	164	82	146	36	36
8	Salinity	ppt	6.22	0.74	3.11	0.8	0.042	0.041
9	Oil & Grease	mg/L	BDL*	BDL*	BDL*	1.6	BDL*	BDL*
10	Total Hardness as CaCO ₃	mg/L	1300	228	280	88	62	38
11	Fluoride as F	mg/L	1.12	0.7	0.3	0.8	0.2	0.2
12	Chloride as Cl	mg/L	3449	412	1725	812	28.22	42.88
13	Zinc as Zn	mg/L	0.23	0.021	0.016	0.042	0.007	0.006
14	Cadmium as Cd	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
15	Lead as Pb	mg/L	0.057	0.063	0.014	BDL*	BDL*	BDL*
16	Mercury as Hg	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*

BDL*: Below Detection Limit, Minimum Detection Limit, Mercury as Hg: 0.00025 mg/L, Oil & Grease: 1.0 mg/L, Cadmium as Cd: 0.001 mg/L, Lead as Pb: 0.005 mg/L, Fluoride: 0.01 mg/L.

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Dump Pond Discharge Water.

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GPCB approved schedule II auditor

ISO 14001

OHSAS 18001

ISO 9001

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ANNEXURE-4F:

AMBIENT NOISE LEVEL MONITORING RESULTS

PERIOD: Oct., 2017 to Mar., 2018

4F. AMBIENT NOISE LEVEL MONITORING: -

Table-1.12: Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: Oct., 2017 to Mar., 2018 At Near Port Gate No.: 2

Sampling Location	1 - Near Port Gate No.: 2					
Longitude Latitude	N 21° 05.426'E 72°37.739'					
Date of Monitoring	02/10/2017	02/11/2017	04/12/2017	01/01/2018	01/02/2018	01/03/2018
6:00-7:00	57.8	62.3	65.7	69.2	73.2	73.5
7:00-8:00	65.9	60.2	55.3	56.3	62.3	67.2
8:00-9:00	62.3	66.5	59.3	70	69.3	65.3
9:00-10:00	64.5	68.5	71.2	73.2	67.3	64.3
10:00-11:00	71.8	73.3	74.5	64.2	70.3	66.8
11:00-12:00	65.8	70.2	64.3	66.2	71.9	70.8
12:00-13:00	68.9	67.5	70.2	58.3	61.2	60.3
13:00-14:00	70.2	68.3	72.3	74.7	66.3	55.3
14:00-15:00	50.7	54.6	57.3	61.2	63.2	68.2
15:00-16:00	70.1	72.2	73.2	57.4	59.6	57.3
16:00-17:00	67.4	71.6	69.3	72.6	57.3	61.2
17:00-18:00	61.3	64.8	60.3	63.5	65.7	69.2
18:00-19:00	71.5	66.3	68.2	60.2	55.3	62.3
19:00-20:00	68.8	72.5	63.2	67.3	64.6	53.9
20:00-21:00	66.2	69.9	67.2	68.3	72.3	54.3
21:00-22:00	60.9	63.7	61.2	65.1	68.5	71.2

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

Day Time shall mean from 6:00 am to 10:00 pm and Night Time shall mean from 10:00 pm to 06:00 am.

Table-1.13: Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: Oct., 2017 to Mar., 2018 At Near Port Gate No.: 2

Sampling Location	1 - Near Port Gate No.: 2					
Longitude Latitude	N 21° 05.426'E 72°37.739'					
Date of Monitoring	02/10/2017 & 03/10/2017	02/11/2017 & 03/11/2017	04/12/2017 & 05/12/2017	01/01/2018 & 02/01/2018	01/02/2018 & 02/02/2018	01/03/2018 & 02/03/2018
22:00-23:00	63.5	67.8	69.3	62.3	64.3	65.2
23:00-00:00	57.5	61.1	64.5	66.7	63.2	67.1
00:00-01:00	67.2	68.3	57.3	63.4	65.4	66.3
01:00-02:00	60.5	65.1	68.2	55.3	59.6	54.2
02:00-03:00	55.6	59.6	62.4	64.4	56.6	66.5
03:00-04:00	52.2	56.0	58.6	60.6	62.6	64.7
04:00-05:00	57.8	60.4	63.1	65.5	60.2	58.3
05:00-06:00	45.8	49.0	49.5	54.4	57.1	59.9

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

Day Time shall mean from 6:00 am to 10:00 pm and Night Time shall mean from 10:00 pm to 06:00 am.

Observation: Above given Results are within the specified norms as per The Noise Pollution (Regulation and Control) Rules 2000.





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Table-1.14: Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: Oct., 2017 to Mar., 2018 At HSE Building Terrace

Sampling Location	2 - HSE Building Terrace					
Longitude Latitude	N 21° 05.043' E 72° 38.491'					
Date of Monitoring	05/10/2017	06/11/2017	07/12/2017	04/01/2018	05/02/2018	05/03/2018
6:00-7:00	65.2	70.2	67.8	71.3	60.3	69.3
7:00-8:00	48.8	52.3	57.3	60.2	62.9	65.0
8:00-9:00	61.2	66.4	69.3	65.3	71.2	72.3
9:00-10:00	64.7	63.2	65.3	68.3	59.3	61.3
10:00-11:00	66.4	67.9	64.2	52.3	69.3	62.5
11:00-12:00	59.8	65.3	66.2	58.3	70.1	54.3
12:00-13:00	73.6	69.1	62.9	54.3	67.3	64.3
13:00-14:00	65.5	62.3	60.3	57.2	52.3	66.1
14:00-15:00	59.9	65.5	61.3	59.3	68.7	55.3
15:00-16:00	67.5	68.1	72.3	56.3	66.5	58.2
16:00-17:00	64.1	60.3	58.3	66.3	72.3	63.2
17:00-18:00	69.5	71.6	55.3	51.2	56.3	60.3
18:00-19:00	69.9	70.5	59.6	55.6	58.3	56.3
19:00-20:00	60.1	63.2	68	69.3	51.9	53.2
20:00-21:00	69.1	72.9	73.2	50.3	65.3	67.2
21:00-22:00	52.4	58.9	56.3	63.2	64.3	68.0

#dB(A) Leq. denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
Day Time shall mean from 6:00 am to 10:00 pm and Night Time shall mean from 10:00 pm to 06:00 am.

Table-1.15: Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: Oct., 2017 to Mar., 2018 At HSE Building Terrace

Sampling Location	2 - HSE Building Terrace					
Longitude Latitude	N 21° 05.043' E 72° 38.491'					
Date of Monitoring	05/10/2017 & 06/10/2017	06/11/2017 & 07/11/2017	07/12/2017 & 08/12/2017	04/01/2018 & 05/01/2018	05/02/2018 & 06/02/2018	05/03/2018 & 06/03/2018
22:00-23:00	66.4	65.3	55.5	69.3	61.8	63.2
23:00-00:00	64.5	67.2	61.2	62.3	68.3	56.3
00:00-01:00	64.8	61.3	63.6	65.8	58.7	57.9
01:00-02:00	53.2	55.7	58.3	60.9	63.5	65.9
02:00-03:00	59.7	62.6	62.7	67.3	60.3	53.6
03:00-04:00	60.4	63.3	60.9	68.2	59.3	58.4
04:00-05:00	57.2	59.7	64.2	64.8	67.6	51.3
05:00-06:00	52.3	54.8	57.4	59.4	62	64.1

#dB(A) Leq. denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
Day Time shall mean from 6:00 am to 10:00 pm and Night Time shall mean from 10:00 pm to 06:00 am.

Observation: Above given Results are within the specified norms as per The Noise Pollution (Regulation and Control) Rules 2000.

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Table-1.16: Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: Oct., 2017 to Mar., 2018 At Central Water Pump House

Sampling Location	3 - Central Water Pump House					
Longitude Latitude	N 21° 04.697' E 72° 38.420'					
Date of Monitoring	09/10/2017	09/11/2017	11/12/2017	08/01/2018	08/02/2018	19/03/2018
6:00-7:00	55.4	57.6	61.3	64.5	69.1	70.1
7:00-8:00	70.8	74.9	56.2	66.3	65.3	69.3
8:00-9:00	64.2	72.3	60.2	71.9	68.3	65.3
9:00-10:00	62.2	64.9	68.4	69.3	62.2	63.2
10:00-11:00	72.2	61.3	65.6	55.6	66.8	58.6
11:00-12:00	55.9	59.3	63.8	73.1	70.3	68.3
12:00-13:00	70.3	73.9	72.3	57.9	64.3	52.3
13:00-14:00	70.4	69.2	71.9	54.2	59.3	55.9
14:00-15:00	59.6	63.4	55.6	56.8	67.2	64.3
15:00-16:00	68.1	60.3	58.2	62.3	71.1	53.2
16:00-17:00	67.2	71.4	57.2	65.3	60.9	51.6
17:00-18:00	70.9	70.6	73.8	68.3	63.7	66.3
18:00-19:00	59.5	64	67.1	59.2	58.2	54.3
19:00-20:00	59.7	65.3	69.2	58.3	52.3	57.3
20:00-21:00	63.1	67.6	70.7	61.3	57.9	60.3
21:00-22:00	68.2	62.3	66.4	67.3	56.3	62.7

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

Day Time shall mean from 6:00 am to 10:00 pm and Night Time shall mean from 10:00 pm to 06:00 am.

Table-1.17: Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: Oct., 2017 to Mar., 2018 At Central Water Pump House

Sampling Location	3 - Central Water Pump House					
Longitude Latitude	N 21° 04.697' E 72° 38.420'					
Date of Monitoring	09/10/2017 & 10/10/2017	09/11/2017 & 10/11/2017	11/12/2017 & 12/12/2017	08/01/2018 & 09/01/2018	08/02/2018 & 09/02/2018	19/03/2018 & 20/03/2018
22:00-23:00	65.3	53.2	52.3	58.2	60.5	63.2
23:00-00:00	68.4	55.3	57.8	54.3	63.3	66.2
00:00-01:00	66.6	62.3	61.3	51.3	64.1	55.3
01:00-02:00	50.1	52.8	60.8	57.7	59.8	62.5
02:00-03:00	57.9	60.4	64.6	65.1	62.3	58.3
03:00-04:00	56.3	59.1	62.3	63.6	55.5	67.9
04:00-05:00	58.8	61.4	59.4	66	57.3	56.3
05:00-06:00	62.4	65	66.3	69.2	61.2	59.2

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

Day Time shall mean from 6:00 am to 10:00 pm and Night Time shall mean from 10:00 pm to 06:00 am.

Observation: Above given Results are within the specified norms as per The Noise Pollution (Regulation and Control) Rules 2000.

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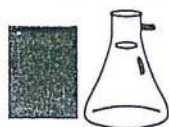
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Table-1.18: Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: Oct., 2017 to Mar., 2018 At Container Terminal

Sampling Location	4 - Container Terminal					
Longitude Latitude	N 21° 05.187' E 72° 37.774'					
Date of Monitoring	12/10/2017	13/11/2017	14/12/2017	11/01/2018	12/02/2018	12/03/2018
6:00-7:00	62.8	56.3	59.3	66.2	65.3	69.7
7:00-8:00	69.8	58.6	62.3	61.3	61.6	71.5
8:00-9:00	54.8	57.3	55.2	63.1	66.6	70.9
9:00-10:00	63.3	66.6	72.3	72.8	62.3	68.3
10:00-11:00	61.9	65.2	67.2	52.3	60.3	66.2
11:00-12:00	66.8	69.3	73.2	74.8	63.2	54.3
12:00-13:00	62.5	64.6	60.3	71.6	67.6	59.3
13:00-14:00	66.6	62.2	56.3	69.5	70.8	67.2
14:00-15:00	63.2	63.3	68.2	67.3	69.3	55.3
15:00-16:00	73.1	61.2	64.2	68.7	58.3	62.3
16:00-17:00	69.3	71.7	74.2	55.6	56.3	64.3
17:00-18:00	74.2	68.9	63.2	60.3	59.6	58.2
18:00-19:00	64.4	67.7	71.6	58.3	68.3	61.3
19:00-20:00	70.5	70.5	58.3	54.3	64.3	56.3
20:00-21:00	69.7	58.3	66.3	59.3	55.5	71.9
21:00-22:00	60.8	63.2	69.3	62.3	57.5	57.8

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

Day Time shall mean from 6:00 am to 10:00 pm and Night Time shall mean from 10:00 pm to 06:00 am.

Table-1.19: Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: Oct., 2017 to Mar., 2018 At Container Terminal

Sampling Location	4 - Container Terminal					
Longitude Latitude	N 21° 05.187' E 72° 37.774'					
Date of Monitoring	12/10/2017 & 13/10/2017	13/11/2017 & 14/11/2017	14/12/2017 & 15/12/2017	11/01/2018 & 12/01/2018	12/02/2018 & 13/02/2018	12/03/2018 & 13/03/2018
22:00-23:00	68.2	60.3	62.5	57.4	67.4	52.3
23:00-00:00	54.5	54.6	56.9	59.9	62.7	65.7
00:00-01:00	59.5	61.7	64.3	67.2	65.5	62
01:00-02:00	66.8	62.3	65.3	56.3	58.2	54.3
02:00-03:00	54.3	56.8	59.6	61.5	64.4	66.4
03:00-04:00	50.4	53.2	53.8	58	60.6	63.5
04:00-05:00	61.2	63.7	60.7	68.3	55.2	59.3
05:00-06:00	56.8	58.9	61.9	64.2	57.2	64.9

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

Day Time shall mean from 6:00 am to 10:00 pm and Night Time shall mean from 10:00 pm to 06:00 am.

Observation: Above given Results are within the specified norms as per The Noise Pollution (Regulation and Control) Rules 2000.

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Table-1.20: Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: Oct., 2017 to Mar., 2018 At Hazira Village

Sampling Location	5 - Hazira Village					
Longitude Latitude	N 21° 05.44' E 72° 38.44'					
Date of Monitoring	16/10/2017	16/11/2017	18/12/2017	15/01/2018	15/02/2018	15/03/2018
6:00-7:00	56.4	59.3	62.2	65.2	60.8	67.8
7:00-8:00	61.5	67.8	72.3	62.3	65.5	56.2
8:00-9:00	63.6	65.9	68.2	73.3	51.5	62.3
9:00-10:00	56.3	64.2	66.3	57.2	61.2	55.8
10:00-11:00	69.2	69.2	73.9	66.3	63.2	64.8
11:00-12:00	60.2	63.2	67.8	59.6	60.3	63.7
12:00-13:00	60.3	61.4	65.3	56.8	54.2	66.3
13:00-14:00	66.3	67.6	70.2	61.3	58.3	59.6
14:00-15:00	67.8	70.9	74.7	52.3	64.5	68.2
15:00-16:00	64.8	68	69.3	58.2	53.2	52.1
16:00-17:00	58.2	66.9	71.9	63.2	56.3	60.7
17:00-18:00	66.7	67.9	60.3	54.2	55.9	65.3
18:00-19:00	62.6	60.3	64.9	67.9	66.9	64.3
19:00-20:00	53.9	58.6	52.3	64.4	67.3	69.2
20:00-21:00	63.9	65.9	57.2	69.7	62.6	53.6
21:00-22:00	60.4	64.3	59.2	70.3	68.6	57.4

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

Day Time shall mean from 6:00 am to 10:00 pm and Night Time shall mean from 10:00 pm to 06:00 am.

Table-1.21: Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: Oct., 2017 to Mar., 2018 At Hazira Village

Sampling Location	5 - Hazira Village					
Longitude Latitude	N 21° 05.44' E 72° 38.44'					
Date of Monitoring	16/10/2017 & 17/10/2017	16/11/2017 & 17/11/2017	18/12/2017 & 19/12/2017	15/01/2018 & 16/01/2018	15/02/2018 & 16/02/2018	15/03/2018 & 16/03/2018
22:00-23:00	66.7	61.2	63.3	65.4	57.6	60.1
23:00-00:00	48.9	51.1	53.5	55.8	56.3	61.2
00:00-01:00	56.4	58.5	62.1	61.2	63.2	57.4
01:00-02:00	51.4	53.7	55.9	59.6	61.3	62.5
02:00-03:00	47.2	49.6	51.6	54.1	59.3	58.6
03:00-04:00	55.4	57.9	59.9	62.7	65.6	56.7
04:00-05:00	56.9	59.4	61.4	64.1	66.8	59.9
05:00-06:00	51.9	54	56.5	58.7	60.7	63.4

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

Day Time shall mean from 6:00 am to 10:00 pm and Night Time shall mean from 10:00 pm to 06:00 am.

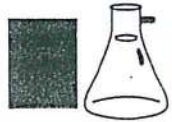
Observation: Above given Results are within the specified norms as per The Noise Pollution (Regulation and Control) Rules 2000

Note: The Noise Level of Hazira Village is compare with the Industrial area Norms as Hazira Village is Surround By Numbers of industries.

ANNEXURE-4G:

DG SETS & HWG STACK EMISSION AND NOISE LEVEL MONITORING RESULTS

PERIOD: Oct., 2017 to Mar., 2018

**POLLUCON** LABORATORIES PVT. LTD.**4G. DG SETS & HWG STACK EMISSION AND NOISE LEVEL MONITORING: -****Table-1.22: DG Sets Stack Monitoring Results for the period: Oct., 2017 to Mar., 2018**

Sr. No.	Parameters	Unit	DG SET TOYO DENKI -1		DG SET TOYO DENKI -2		DG SET TOYO DENKI -3	
			NOV-17	FEB-18	NOV-17	FEB-18	NOV-17	FEB-18
1	Particulate Matter	mg/Nm ³	17.33	13.36	24.79	17.83	15.55	19.83
2	Sulphur Dioxide	ppm	7.57	4.49	4.7	7.5	5.52	3.59
3	Oxide of Nitrogen	ppm	40.17	32.73	35.12	38.82	31.92	35.85
4	Carbon Monoxide (CO)	mg/m ³	7.05	4.91	3.27	7.23	5.15	3.35
5	Non Methyl Hydro Carbon (NMHC)	mg/m ³	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*

Table-1.23: DG Sets Noise Level Monitoring Results for the period: Oct., 2017 to Mar., 2018

Sr. No.	DG Set Average Noise Level In Leq. dB(A)		
	Sampling Location	At 1 M Distance From The Enclosure	
	Sampling Date	NOV-17	FEB-18
1.	DG SET TOYO DENKI -1	71.6	69.9
2.	DG SET TOYO DENKI -2	72.8	70.1
3.	DG SET TOYO DENKI -3	70.8	68.5

Table-1.24: Hot Water Generator (HWG) Stack Monitoring Results for the period: Oct., 2017 to Mar., 2018

S. No.	Parameters	Unit	Hot Water Generator Stack Monitoring					
			OCT-17	NOV-17	DEC-17	JAN-18	FEB-18	MAR-18
1	Particulate Matter	mg/Nm ³	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
2	Sulphur Dioxide	ppm	3.54	2.82	3.41	2.95	3.85	2.82
3	Oxide of Nitrogen	ppm	16.6	20.39	15.6	19.39	22.54	26.57

Note: BDL* - Below Detection Limit, Minimum Detection Limit of Particulate Matter - 10 mg/m³

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ANNEXURE-4H:

SEA SEDIMENT QUALITY MONITORING RESULTS

PERIOD: Oct., 2017 to Mar., 2018

4H. SEA SEDIMENT QUALITY MONITORING: -

Table-1.25: Sea Sediment Quality Results of CB2 South End towards Landside for the period: Oct., 2017 to Mar., 2018

S. NO.	PARAMETERS	UNIT	CB2 SOUTH END TOWARDS LANDSIDE FROM SEA BASIN (N 21° 5'1.92", E 72°37'56.58")					
			OCT-17	NOV-17	DEC-17	JAN-18	FEB-18	MAR-18
1	Organic Matter	%	0.64	0.64	0.552	0.56	0.32	0.28
2	Phosphorus as P	µg/g	460	140	710	705	620	710
3	Texture	--	Sandy	Sandy Silt	Sandy	Sandy Silt	Sandy Silt	Sandy Silt
4	Petroleum Hydrocarbon	µg/g	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
5	Heavy Metals							
5.1	Aluminum as Al	%	5.82	5.56	6.01	6.57	4.28	3.8
5.2	Total Chromium as Cr ⁺³	µg/g	140	72	220	210	192	160
5.3	Manganese as Mn	µg/g	986	513	1520	1590	1380	1720
5.4	Iron as Fe	%	5.2	2.63	4.8	4.26	3.82	3.9
5.5	Nickel as Ni	µg/g	40	48.4	54	54	38	56
5.6	Copper as Cu	µg/g	58.67	31.55	44	59.16	38.28	24.2
5.7	Zinc as Zn	µg/g	117	108	96	102	88	164
5.8	Lead as Pb	µg/g	16	1.16	18	13	26	21
5.9	Mercury as Hg	µg/g	0.53	BDL*	0.5	0.4	0.82	BDL*
6	Benthic Organisms							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Polychaete worms Echinoderms Crabs	Polychaete worms Crabs Isopods Mysids	Polychaete worms Echinoderms Crabs	Turbellaria Amphipods Mysids Corals	Turbellaria Amphipods Mysids	Polychaete worms Decapods Crabs
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	Nematodes Copepods	Ostracods Ciliates	Nematodes Copepods	Gastrotrichs	Copepods	Foraminiferans
6.3	Population	No./m ²	387	440	402	461	458	371

BDL* - Below Detection Limit

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Sediment.

Table-1.26: Sea Sediment Quality Results of MP1 West End towards Channel of Sea Basin for the period: Oct., 2017 to Mar., 2018

S. NO.	PARAMETERS	UNIT	MP1 WEST END TOWARDS CHANNEL OF SEA BASIN (N 21° 5'9.78", E 72°37'24.48")					
			OCT-17	NOV-17	DEC-17	JAN-18	FEB-18	MAR-18
1	Organic Matter	%	0.444	0.75	0.503	0.57	0.88	0.44
2	Phosphorus as P	µg/g	810	136	780	794	528	690
3	Texture	--	Sandy	Sandy Silt	Sandy	Sandy Silt	Sandy Silt	Sandy Silt
4	Petroleum Hydrocarbon	µg/g	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
5	Heavy Metals							
5.1	Aluminum as Al	%	6.14	5.72	5.49	6.33	7.88	4.6
5.2	Total Chromium as Cr ⁺³	µg/g	250	81.33	240	229	188	210
5.3	Manganese as Mn	µg/g	1890	444	1750	1606	1488	1410
5.4	Iron as Fe	%	5.5	2.72	5.1	4.44	6.11	3.7
5.5	Nickel as Ni	µg/g	44	46.67	48	42	56	44
5.6	Copper as Cu	µg/g	68	32.86	42	45.6	38.6	19.8
5.7	Zinc as Zn	µg/g	118	106	101	124	108	130
5.8	Lead as Pb	µg/g	22	1.22	24	15	28	18
5.9	Mercury as Hg	µg/g	0.7	BDL*	0.8	0.3	0.62	BDL*
6	Benthic Organisms							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Polychaete worms Bryozoans Isopods	Crustaceans Snails Polychaete worms	Polychaete worms Bryozoans Isopods	Echinoderms Decapods Polychaetes Worms Echinoderms	Echinoderms Decapods Polychaetes Worms	Chaetognaths Decapods Isopods
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	Nematodes	Nematodes Foraminiferans	Nematodes	Copepods Hydrozoa	Copepods Hydrozoa	Bryozoans Gastropods
6.3	Population	No./m ²	424	503	416	395	392	475

BDL* - Below Detection Limit

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Sediment.



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Table-1.27: Sea Sediment Quality Results of CB1 End towards Channel for the period: Oct., 2017 to Mar., 2018

S. NO.	PARAMETERS	UNIT	CB1 WEST END TOWARDS CHANNEL OF SEA BASIN (N 21° 5'14.67" , E 72°37'40.14")					
			OCT-17	NOV-17	DEC-17	JAN-18	FEB-18	MAR-18
1	Organic Matter	%	0.404	0.86	0.497	0.55	0.38	0.52
2	Phosphorus as P	µg/g	710	148	730	735	788	820
3	Texture	--	Sandy	Sandy Silt	Sandy	Sandy Silt	Sandy Silt	Sandy Silt
4	Petroleum Hydrocarbon	µg/g	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
5	Heavy Metals							
5.1	Aluminum as Al	%	6.24	5.83	6.37	6.45	5.88	5.2
5.2	Total Chromium as Cr ⁺³	µg/g	198	90.67	202	241	265	340
5.3	Manganese as Mn	µg/g	1696	408	1540	1512	1618	1520
5.4	Iron as Fe	%	5.18	3.4	5.33	4.39	3.64	4.1
5.5	Nickel as Ni	µg/g	56	46.6	46	51	42	72
5.6	Copper as Cu	µg/g	78	38.67	58	53.8	49.8	23.6
5.7	Zinc as Zn	µg/g	102	111	112	108	118	140
5.8	Lead as Pb	µg/g	12	1.14	17	22	16	24
5.9	Mercury as Hg	µg/g	0.6	BDL*	0.3	0.2	BDL*	BDL*
6	Benthic Organisms							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Polychaete worms Echinoderms Mysids	Polychaete worms Echinoderms Mysids	Mysids Echinoderms Polychaete worms	Polychaete worms Bivalves Isopods	Polychaete worms Bivalves Isopods	Echinoderms Amphipods Decapods
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	Ostracods Copepods Nematodes	Ostracods Copepods Nematodes	Ostracods Nematodes Copepods	Ostrapodes	Ostrapodes	Copepods
6.3	Population	No./m ²	420	433	438	429	435	420

BDL* - Below Detection Limit

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Sediment.

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

● GPCB approved schedule II auditor

● ISO 14001

● OHSAS 18001

● ISO 9001

"Pollucon House", Plot No. 5 & 6, Opp.Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart, Navjivan Circle,Udhana Magdalla Road, Surat-395007, Gujarat, India.

Ph: 022-2257750, 022-2257751, 022-2257752, 022-2257753, 022-2257754, 022-2257755, 022-2257756, 022-2257757, 022-2257758, 022-2257759, 022-2257760, 022-2257761, 022-2257762, 022-2257763, 022-2257764, 022-2257765, 022-2257766, 022-2257767, 022-2257768, 022-2257769, 022-2257770, 022-2257771, 022-2257772, 022-2257773, 022-2257774, 022-2257775, 022-2257776, 022-2257777, 022-2257778, 022-2257779, 022-2257780, 022-2257781, 022-2257782, 022-2257783, 022-2257784, 022-2257785, 022-2257786, 022-2257787, 022-2257788, 022-2257789, 022-2257790, 022-2257791, 022-2257792, 022-2257793, 022-2257794, 022-2257795, 022-2257796, 022-2257797, 022-2257798, 022-2257799, 022-2257800, 022-2257801, 022-2257802, 022-2257803, 022-2257804, 022-2257805, 022-2257806, 022-2257807, 022-2257808, 022-2257809, 022-2257810, 022-2257811, 022-2257812, 022-2257813, 022-2257814, 022-2257815, 022-2257816, 022-2257817, 022-2257818, 022-2257819, 022-2257820, 022-2257821, 022-2257822, 022-2257823, 022-2257824, 022-2257825, 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ANNEXURE-4I:

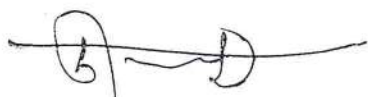
SOIL QUALITY MONITORING RESULTS

PERIOD: Oct., 2017 to Mar., 2018

4I. SOIL QUALITY MONITROING: -
Table-1.28: Soil Quality Testing Results for the period: Oct., 2017 to Mar., 2018

SR. NO.	PARAMETERS	UNIT	NEAR LT CANTEEN PARKING	NEAR PORT GATE NO. 2
			25/12/2017	25/12/2017
1	Type	--	Clay	Clay
Grain Size Analysis				
2	Gravel	%	4.4	3.2
3	Coarse Sand	%	5.6	4.4
4	Medium Sand	%	11.2	12.8
5	Fine Sand	%	58.8	59.6
6	Total Sand	%	19	22
7	Silt + Clay	%	81	78
8	pH (1:5)	--	9.55	9.13
9	Electricity Conductivity	µmho/cm	1965	1788
10	Alkali matter	mg/kg	760	696
11	Cation Exchange Capacity	meq/100 gm	50	48
12	Sodium Absorption Ratio	--	13.35	12.54
13	Organic Matter	mg/kg	0.6	0.7
14	Available Nitrogen	meq/100 gm	0.34	0.38
15	Available Potassium	mg/kg	2.7	3.1
16	Available Phosphorus	mg/kg	0.43	0.27
17	Available Sodium	mg/kg	0.85	1.06
18	Permeability	cm/sec	4.0×10^{-5}	4.1×10^{-5}

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Soil Quality.



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

● GPCB approved
schedule II auditor

● ISO 14001 ● OHSAS 18001 ● ISO 9001

"Pollucon House", Plot No. 5 & 6, Opp. Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart,
Navjivan Circle, Udhana Magdalla Road, Surat-395007, Gujarat, India.

Phone : 0261-2635750, 0261-2635751, 0261-2635775, 07016605174, WEB: www.polluconlab.com, E. mail: pollucon@gmail.com, info@polluconlab.com



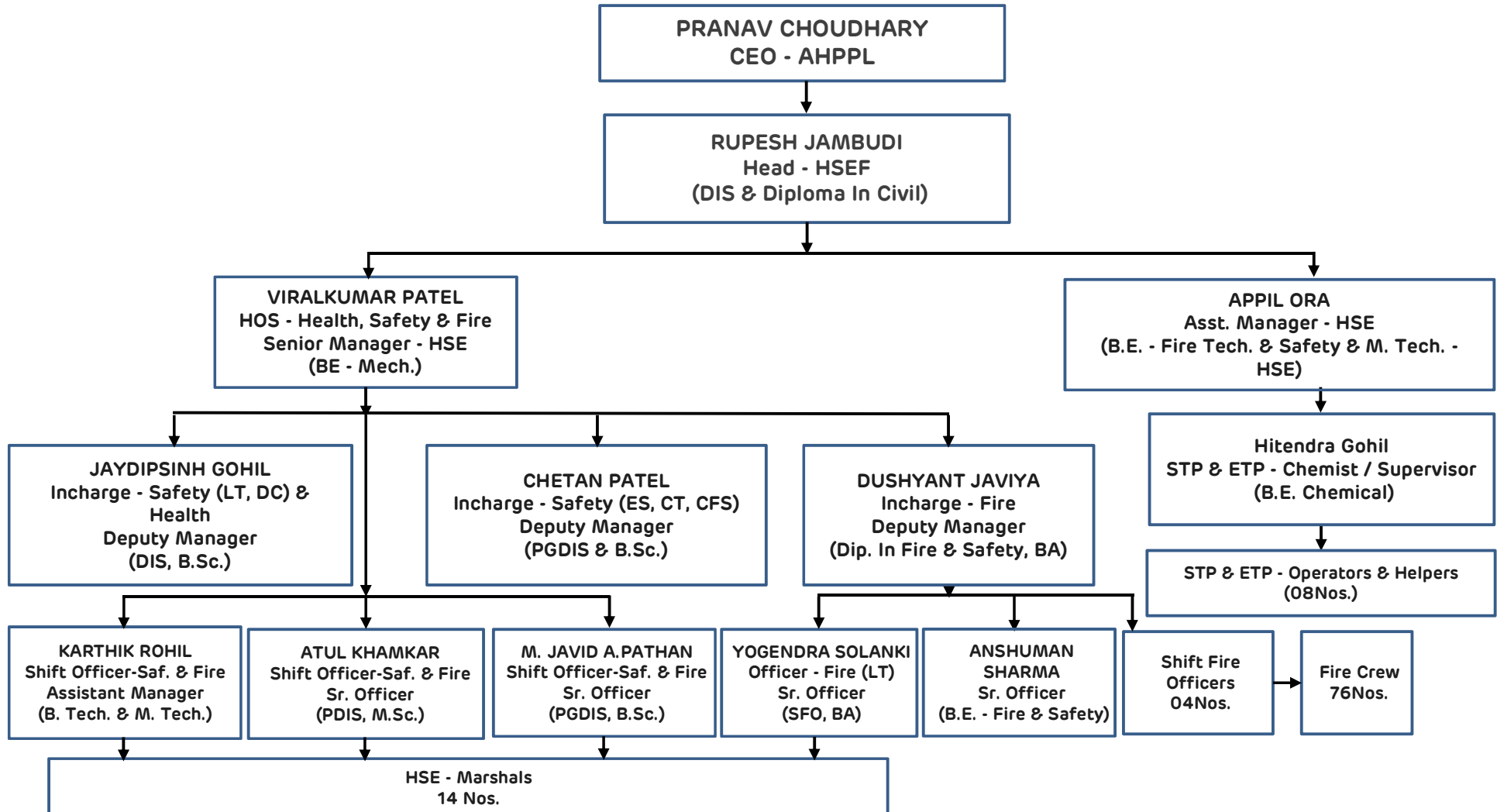
Adani Hazira Port Private Limited

From : Oct., 2017
To : Mar., 2018

ANNEXURE-5:

ORGANOGRAM OF AHPPL - ENVIRONMENT MANAGEMENT CELL

Annexure-5: Organogram Of AHPPL - Environment Management Cell: -



ANNEXURE-6:

DETAILS OF ENVIRONMENT MANAGEMENT BUDGET

FOR THE FINANCIAL YEAR: 2017-18

Annexure-6: Details of Environment Management Budget For The Financial Year: 2017-18

Details Of Budget For The FY: 2017-18			
S. No.	Activities	Budget Amount (In Lacs)	Expenditure (In Lacs)
1	Salary of Environmental Professionals	15.20	13.01
2	Environmental Study / Audit and Consultancy Services	15.00	1.91
3	Legal & Statutory Expenses	7.00	3.07
4	Environmental Monitoring Services	17.82	15.14
5	Mangrove Afforestation/Plantation & Bio-Shielding Pilot Project	12.50	2.02
6	Hazardous Waste Management & Disposal	5.00	7.85
7	Horticulture Development - Greenery and Plantation	160.00	139.64
8	O&M of Sewage Treatment Plants and Effluent Treatment Plant	38.29	20.93
9	Environment Day Celebration	2.50	1.44
10	Treatment and Disposal of Bio-Medical Waste	0.82	0.58
11	Environmental Initiatives & Others Miscellaneous	2.50	32.80
Total Amount (INR In Lacs)		276.62	238.40



Adani Hazira Port Private Limited

**From : Oct., 2017
To : Mar., 2018**

ANNEXURE-7:

**COMPLIANCE REPORT OF CONDITIONS STIPULATED IN CONSENT TO ESTABLISH
(CTE-77767) ISSUED BY GUJARAT POLLUTION CONTROL BOARD, GANDHINAGAR (GUJARAT)**

VIDE LETTER NO.: GPCB/CCA-SRT-1314(6)/ID_35352/352537, DATED 16/04/2016

Annexure-7: Compliance Report for Consent to Establish (CTE-77767) granted by **Gujarat Pollution Control Board** vide letter No.: **GPCB/CCA-SRT/1314(6)/ID_35352/352537**, dated **16/04/2016** to setting up of **DG Set (Stand by) of Capacity 750 KVA** located at **Near Hazira Pvt. Ltd., Hazira: 394270, Tal.: Chorasi, Dist.: Surat.**

S. No.	Conditions	Compliance Status						
SPECIFIC CONDITIONS:								
	<ul style="list-style-type: none"> The Validity period of the order will be Five years i.e. 30/03/2021 	Noted.						
	<ul style="list-style-type: none"> Unit shall provide arrangement for acoustic enclosure to keep Noise levels within Norms. 	Complied. All the sound intensive components (DG Sets and Compressor) are with acoustic enclosures. Noise level is being monitored through M/s. Pollucon Laboratories, Surat (a MoEF&CC recognized and NABL accredited laboratory). Monitoring reports show that noise level is well within the norms at project boundary. Please refer the noise level monitoring reports for the period Oct., 2017 to Mar., 2018 is enclosed as Annexure-4F .						
	<ul style="list-style-type: none"> Unit shall obtain CCA-amendment for D.G. Sets. 	Complied. AHPPL obtained the CC&A from Gujarat Pollution Control Board CCA Order No.: AWH-77379 vide letter No.: GPCB/CCA-SRT-1314(6)/ID_35352/352538 dated 16/04/2016.						
The Conditions under Air Act 1981 shall be read as:								
1.	The following shall be used as fuel only in D.G. Set (Stand By). <table border="1" data-bbox="321 1291 860 1360"> <thead> <tr> <th>Sr. No.</th><th>Fuel</th><th>Total Quantity</th></tr> </thead> <tbody> <tr> <td>1</td><td>Diesel</td><td>160 Lit./Hr.</td></tr> </tbody> </table>	Sr. No.	Fuel	Total Quantity	1	Diesel	160 Lit./Hr.	Complied with. Diesel is being used for DG set.
Sr. No.	Fuel	Total Quantity						
1	Diesel	160 Lit./Hr.						
2.	The applicant shall install & operate a comprehensive adequate air pollution control system in order to achieve prescribed norms.	Complied. AHPPL has installed & operate a comprehensive adequate air pollution control system in order to achieve prescribed norms. Following control measures are in place and effectively working at port to control fugitive dust: - <ol style="list-style-type: none"> Spill boards are being provided to prevent cargo spillage into the sea. Transportation of coal from jetty to coal storage yard through 1.7 Km. long conveyor belt with hood. Water sprinklers in to the coal yard, 						

		<div>4. Dust Suppression System / Spray Nozzles in Conveyor System and Discharge Chute,</div> <div>5. Water spray through Water Browsers,</div> <div>6. Water Mist Canon / Fog System,</div> <div>7. Wind Brake Shield of 14 meters high and 1200 meters long,</div> <div>8. Transportation of cargo from port to hinterland is being done through dumpers / trucks covered with tarpaulin,</div> <div>9. Regular cleaning the roads through Road Sweeping Machines, and</div> <div>10. Company has set up dedicated greenbelt area for plantation at periphery / avenue plantation / landscaping etc. Total greenbelt area developed so far is approx. 65.15 ha within the port premises.</div>																				
3.	<div>The flue gas emission through Proposed D.G. Sets stack shall conform to the following standards:</div> <table><tr><th>Stack No.</th><th>Stack attached to</th><th>Stack Height In Meter</th><th>Air Pollution Control System</th><th>Parameters</th><th>Permissible Limit</th></tr><tr><td>1.</td><td>D.G. Set (Stand By) 750 KVA</td><td>11</td><td>--</td><td>PM SO₂ NO_x</td><td>150 mg/NM³ 100 ppm 50 ppm</td></tr></table>	Stack No.	Stack attached to	Stack Height In Meter	Air Pollution Control System	Parameters	Permissible Limit	1.	D.G. Set (Stand By) 750 KVA	11	--	PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm	<div>Complied. Stack emission monitoring is being carried out through M/s. Pollucon Laboratories (a MoEF&CC recognized and NABL accredited laboratory) within port premises and during current monitoring period all the pollutants are found under the limit. Please refer the Annexure-4G for the DG Sets stack emission Monitoring / Analysis Reports for the period Oct., 2017 to Mar., 2018.</div>								
Stack No.	Stack attached to	Stack Height In Meter	Air Pollution Control System	Parameters	Permissible Limit																	
1.	D.G. Set (Stand By) 750 KVA	11	--	PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm																	
4.	<div>Stack monitoring facilities like port hole, platform/ladder etc., shall be provided with stacks/vents chimney in order to facilitate sampling of gases being emitted into the atmosphere.</div>	<div>Complied. AHPPL has provided the adequate stack monitoring facilities i.e.: Port hole, Platform/ladder etc. to facilitate the sampling of gases being emitted into the atmosphere.</div>																				
5.	<div>Ambient air quality within and outside the premises of the unit shall conform National Ambient Air Quality standards notified by MOEF vide notification dated 16/11/2009 and mainly to the following standards:-</div> <table><tr><th>Sr. No.</th><th>Pollutant</th><th>Time Weighted Average</th><th>Concentration in Ambient Air</th></tr><tr><td>1.</td><td>Sulphur Dioxide (SO₂), µg/M³</td><td>Annual 24 Hours</td><td>50 80</td></tr><tr><td>2.</td><td>Nitrogen Dioxide (NO₂), µg/M³</td><td>Annual 24 Hours</td><td>40 80</td></tr><tr><td>3.</td><td>Particulate Matter (Size less than 10 µm) OR PM₁₀ µg/M³</td><td>Annual 24 Hours</td><td>60 100</td></tr><tr><td>4.</td><td>Particulate matter</td><td>Annual</td><td>40</td></tr></table>	Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air	1.	Sulphur Dioxide (SO ₂), µg/M ³	Annual 24 Hours	50 80	2.	Nitrogen Dioxide (NO ₂), µg/M ³	Annual 24 Hours	40 80	3.	Particulate Matter (Size less than 10 µm) OR PM ₁₀ µg/M ³	Annual 24 Hours	60 100	4.	Particulate matter	Annual	40	<div>Complied.</div> <div>Ambient air quality monitoring is being carried out through M/s. Pollucon Laboratories (a MoEF&CC and NABL accredited laboratory) within port premises and during current monitoring period all the pollutants are found under the limit. Please refer the Annexure-4A for the Environmental Monitoring/Analysis Reports for the period Oct., 2017 to Mar., 2018.</div>
Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air																			
1.	Sulphur Dioxide (SO ₂), µg/M ³	Annual 24 Hours	50 80																			
2.	Nitrogen Dioxide (NO ₂), µg/M ³	Annual 24 Hours	40 80																			
3.	Particulate Matter (Size less than 10 µm) OR PM ₁₀ µg/M ³	Annual 24 Hours	60 100																			
4.	Particulate matter	Annual	40																			

		(Size less than 2.5 um) OR PM _{2.5} µg/M ³	24 Hours	60	
6.	The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75 dB(A) during day time and 70 dB(A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.				Complied. Ambient Noise Level Monitoring is being carried out through M/s. Pollucon Laboratories (a MoEF&CC recognized and NABL accredited laboratory) within port premises and during current monitoring period all the noise level are found under the norms. Please refer the Annexure-4F for the Ambient Noise Level Monitoring Reports for the period Oct., 2017 to Mar., 2018 .
7.	The applicant shall provide proper ventilation and exhaust facilities so as to maintain healthy working atmosphere within the factory premises.				Complied with. AHPPL has provided proper ventilation and exhaust facilities to maintained healthy working atmosphere within the port premises.
8.	The other conditions of the Consent Order No.: WH-47069 Dated: 21/05/2015 Valid up to Dated- 04/04/2017 shall remain unchanged.				Noted. The said consent has been renewed with consent order no. AWH-87176 on 17.07.2017 valid till 14.04.2022

ANNEXURE-8:

DETAIL OF WASTE COLLECTION AND DISPOSAL OFF FROM VESSELS

**Annexure-8: Detail of Liquid/Wastes Collection & Disposed Off From Vessels By GPCB
Approved Third Party During period Oct., 2017 To Mar., 2018**

S. No.	Vessel Name	Party Name	Quantity
1	PACIFIC VIXEN	UNITED SHIPPING COMPANY	9.29
2	MV THALASSIC	ATLAS ORGANICS PVT LTD	16.13
3	MT DIAMOND-T	UNITED SHIPPING COMPANY	22.33
4	MT SUMMER PLOEG	UNITED SHIPPING COMPANY	20.38
5	MV ATHANASSIOS G.O.	ATLAS ORGANICS PVT LTD	26.3
6	MV HHL VENICE	ATLAS ORGANICS PVT LTD	10.27
7	MT CHEM SINGAPORE	ATLAS ORGANICS PVT LTD	24.33
8	MV PERTH I	ATLAS ORGANICS PVT LTD	40.86
9	MV OCEANIS	ATLAS ORGANICS PVT LTD	10.83
10	MV PROPEL PROGRESS	UNITED SHIPPING COMPANY	13.26
		Total	193.98