

# adani

Ports and  
Logistics

APSEZL/EnvCell/2019-20/051

Date: 26.11.2019

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 No. - 3, Bhopal - 462 016.  
E-mail: [rowz.bpl-mef@nic.in](mailto:rowz.bpl-mef@nic.in)

**Sub :** Half yearly Compliance report for Environment and CRZ Clearance for the "Multi Product SEZ, Desalination, Sea Water Intake, Outfall Facility and Pipeline at Mundra, Dist. Kachchh, Gujarat of M/s. Adani Ports and SEZ Limited"

**Ref :** Environment and CRZ clearance granted to M/s Adani Ports and SEZ Limited vide letter dated 15<sup>th</sup> July, 2014 bearing MoEF letter No. 10-138/2008-IA,III.

Dear Sir,

Please refer to the above cited reference for the said subject matter. In connection to the same, it is to state that copy of the compliance report for the Environmental and CRZ Clearance for the period of April - 2019 to September - 2019 has been submitted through mail communication dated 26.11.2019 and acknowledge of the same with CD (Soft Copy of Compliance Report) is attached here for your records.

Thank you,

Yours Faithfully,

For, M/s Adani Ports and Special Economic Zone Limited



Avinash Rai  
Chief Executive Officer  
Mundra & Tuna Port

Encl: As above

Copy to:

- 1) The Director (IA Division), Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003
- 2) Zonal Officer, Regional Office, CPCB - Western Region, Parivesh Bhawan, Opp. VMC Ward Office No. 10, Subhanpura, Vadodra - 390 023
- 3) Member Secretary, GPCB - Head Office, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar - 382 010
- 4) Deputy Secretary, Forests & Environment Department, Block - 14, 8<sup>th</sup> floor, Sachivalaya, Gandhi Nagar - 382 010
- 5) Regional Officer, Regional Office GPCB (Kutch-East), Gandhidham, 370201

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Registered Office: Adani House, Nr Mithakhali Circle, Navrangpura, Ahmedabad 380 009, Gujarat, India

*Received*  
*Dewan*  
*28/11/19*  
**कार्यालय/OFFICE**

**पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय**  
**Ministry of Environment, Forests & Climate Change.**  
**क्षेत्रीय कार्यालय(पश्चिम क्षेत्र)/Regional Office(Western Zone)**  
**बोपाल (म.प्र.)/BHOPAL-462016**

# Environmental Clearance Compliance Report



Multi Product SEZ,  
Mundra, Dist. Kutch, Gujarat

Adani Ports and SEZ Limited

For the period of  
April–20 19 to September–20 19

<b>adani</b>	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

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	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

## **Copy of Environmental and CRZ Clearance**



**F. No. 10-138/2008-IA.III**  
**Government of India**  
**Ministry of Environment & Forests**

**Paryavaran Bhawan,  
CGO Complex, Lodhi Road,  
New Delhi - 110 003.**

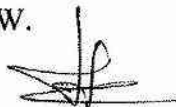
**Dated: July 15, 2014**

**To**  
**M/s Adani Port and SEZ Ltd**  
**Adani House, Near Mithakhali Six Roads,**  
**Navarangpura, Ahmedabad,**  
**Gujarat- 380 009.**

**Subject: EC for proposed Multi- Product SEZ and CRZ clearance for Desalination, sea water intake, outfall facility and pipeline, at Mundra by M/s Adani Port and SEZ Ltd. – Reg.**

This has reference to letter No. ENV-10-2010-1601-E dated 27.03.2012 of the Director (Environment) & Additional Secretary, Govt. of Gujarat and your subsequent letters dated 10.05.2012, 14.05.2012, 26.05.2012 and 29.04.2013 seeking prior Environmental and CRZ Clearance for the above project under the EIA Notification, 2006 and Coastal Regulation Zone Notification, 2011. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 and the Coastal Regulation Zone Notification, 2011 on the basis of the mandatory documents enclosed with the application viz., the Questionnaire, EIA, EMP, recommendations of the State Coastal Zone Management Authority and the additional clarifications furnished in response to the observations of the Expert Appraisal Committee constituted by the competent authority in its meetings held on 16<sup>th</sup> -17<sup>th</sup> April, 2012, 4<sup>th</sup> -5<sup>th</sup> June, 2012 and 9<sup>th</sup> -10<sup>th</sup> July, 2012.

2. It is, interalia, noted that the project involves development of multi product SEZ on a plot area of 18,000 ha. of which 6641.2784 ha. is presently notified under Special Economic Zone (SEZ). As per the proponent, the Multi product SEZ at Mundra comprising of various processing zones, non-processing zones, warehousing zones, Road Network (trunk as well as internal), Bridges or culverts over natural drains, Rail Network, IT-Telecommunication network, Electrical Network, Water supply, conservation & drainage Network, Effluent collection network, Desalination Plant with proposed intake & outfall locations, Common Effluent Treatment Plants & Sewage Treatment Plants, Natural Gas line network, Social Infrastructure, Existing Airstrip, Municipal Solid Waste Disposal site, utilities & supporting infrastructure etc. For the first phase of development total water requirement will be 150 MLD. Power requirement will be approx. 360 MW. Desalination plant of 150 MLD output capacity is proposed. 11 MLD water will be sourced through Narmada water pipeline. Two CETP each of capacity 50 MLD and 17 MLD as well as STP of 62 MLD is proposed. This will require 375 MLD of seawater intake and 241 MLD of treated waste water outfall into the sea. For final phase of development total water requirement will be 450 MLD and power requirement will be approx. 1000 MW.



3. A suitable seawater intake point has been identified on the eastern end of the approved East Port Basin at Latitude 22°48'30.76"N; Longitude 69°46'34.06"E where a depth of 6 m below CD would be available after the port development. As per modelling study the combined discharge of 241MLD which includes 16MLD from CETP and 225 MLD from desalination plant as RO reject is expected having 57.57ppt of salinity, 14.41 mg / l of BOD and 94.39 mg/l of COD. After careful consideration of many aspects a suitable outfall location is identified on the west of the Eastern basin at Latitude 22°46'44.04"N; Longitude 69°45'5.51"E taking advantage of the expected 7.5m below CD basin depth. The outfall pipe line length is approximately 5.7 km and diffuser designed to attain a minimum dilution of 40-50 times.
4. The Centre for Earth Science Studies demarcated HTL, LTL and CRZ area. As per the CESS report and GCZMA, out of 6641.2784 ha of SEZ area, 1473.39 ha area falls within CRZ area. No SEZ industrial activity is proposed in the CRZ area. Only the Desalination plant pipeline for intake and outfall is proposed in CRZ areas. The Gujarat SCZMA in their 14<sup>th</sup> meeting held on 27-02-2012 considered the proposal of intake, outfall facilities, Desalination plant and laying pipeline and recommended the same vide their letter no.ENV-10-2010-1601-E dated 27<sup>th</sup> March 2012. Gujarat Pollution Control Board has granted Consent to Establishment of Marine outfall (NOC) vide letter dated 10.11.2011. The length of the intake will be approximately 5 Kms. As the sea water intake demand is 15000m<sup>3</sup>/h, drawal by pipe system is suitable by incorporating a wet well structure at the location. The intake point proposed is within the proposed East Port basin with a depth of 6 m below CD. The projected quantity of water can be transported through a single pipe of 1.3 m dia with a flow velocity of 3 m/ s or with a 1.6 m pipe with flow velocity of 2m/s.
5. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, have recommended for the grant of Environment and CRZ Clearance for the SEZ in an area of 8481.2784 ha. However, SEZ for 1840 ha has been approved in principle by Ministry of Commerce and Industries.
6. Hon'ble High Court of Gujarat in WP No. 21 of 2013 vide order dated 13.01.2014 has directed that the Ministry to take a decision of its own so far as the issue of grant of environmental clearance is concerned considering the position prevailing as on date and also the aspects which have been highlighted by us in this judgment, within a period of thirty days from the date of this judgment without fail. Further, vide order dated 27.01.2014 Hon'ble Supreme Court in SLP No. 1526 of 2014 which was filed against the Order of High Court by the Respondent-1 has passed order that in case, the MOEF is unable to complete the process within the time stipulated by the High Court, it will be open for them to approach this Court for extension of time. Accordingly, Ministry has filed a petition before the Hon'ble Supreme Court seeking extension of two months time.
7. It is noted from the Judgement dated 13.01.2014 of Hon'ble High Court of Gujarat in PIL 21 of 2013 the Hon'ble Court has construed the grant of lease to units prior to



obtaining EC by M/s APSEZL as violation of EIA, Notification, 2006. Therefore, according to the OM's dated 12.12.2012 and 27.06.2013, PP was addressed for Board Resolution and the State Government was addressed to take credible action against the PP for the violation. Direction under Section 5 of E(P)Act, 1986 was also issued to APSEZ not to take up and allow any further construction activity within SEZ till the grant of clearance.

8. Further, Hon'ble Supreme Court video order dated 02.05.2014 in SLP 1526 of 2013 had ordered for stay of Ministry's letter dated 3.04.2014 addressed to Government of Gujarat to initiate legal action for the violation, also directed that the Ministry to complete the process of EC within eight weeks.

9. M/s APSEZ Ltd. has stated that the Board resolved that since the matter is sub-judice before the Hon'ble Supreme Court of India, will fully abide by the outcome of the decision of the Hon'ble Supreme Court.

10. In view of the above and to comply with the orders of Hon'ble Courts, Ministry hereby accords necessary Environment Clearance for proposed Multi- Product SEZ in an area of 6641.2784 ha and CRZ clearance for desalination, seawater intake, outfall facility and pipeline for as per the provisions of Environmental Impact Assessment Notification – 2006 and its subsequent amendments and Coastal Regulation Zone Notification, 2011, subject to strict compliance of the terms and conditions as follows:

#### **11. PART A - SPECIFIC CONDITIONS**

- (i) *PP shall abide by the final order/decision of Hon'ble Supreme Court in SLP (Civil) no. 1526/2014 and connected matters.*
- (ii) *Properly conserve the creeks, river and the mangroves area in the area.*
- (iii) *Ensure that mouths of all the creeks are kept open to ensure flushing of the creeks.*
- (iv) *Bring the creeks to the condition as was seen in the satellite map of 2005 which will be a "reference" satellite map and a copy of which shall be sent to you separately.*
- (v) *Submit once in a year latest satellite map which can be compared with the reference satellite map of 2005 to ensure that no modification in the creeks, rivers, mangroves and mouth of creeks have taken place.*
- (vi) *Any direction issued by the MoEF with respect to the report submitted by Ms Sunita Narain Committee shall be complied with by the Proponent as applicable.*
- (vii) *At its cost get Inspection study done once in a year by the organizations like NEERI or any organization approved by this Ministry to - (i) ensure compliance of all the EC conditions (ii) development of SEZ meeting of the environment norms, and (iii) advise any mid-term correction that can be introduced depending on the recommendation of the independent Third Party.*



- (viii) "Consent for Establishment" for the SEZ shall be obtained from Gujarat Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.
- (ix) PP shall get detailed bathymetry done for all the creeks and rivers within Port and SEZ areas along with mapping of co-ordinates, running length, HTL, CRZ boundary, mangrove areas including buffer zone through NCSCM / NIOT. PP shall also get prepared a detailed action plan for conservation and protection of creeks/ mangrove area etc through NCSCM / NIOT and submit the same to GCZMA for their examination and recommendation. GCZMA will submit its recommendations to MoEF for approval.
- (x) PP shall demarcate the CRZ area on land with GPS coordinates in consultation with GCZMA/ the agency which has done the HTL/LTL demarcation for the area. There shall be no allotment of plot/s in CRZ area to industries. No industrial activity within CRZ area except the port and harbor & the foreshore facilities shall be allowed as committed
- (xi) Till the approval of action plan for conservation and protection of creeks/ mangrove area, the CRZ area within SEZ shall be demarcated as "No Development Zone". PP shall not allow/ undertake any development in CRZ area of SEZ.
- (xii) The implementation of action plan approved by the MoEF shall be monitored by the NCSCM/ NIOT. Compliance with action plan shall be submitted to GCZMA and to MoEF, RO. at Bhopal along with six monthly monitoring report.
- (xiii) PP shall earmark separate budget for the implementation of the above action plan. The details of the expenditure shall be submitted to GCZMA and to MoEF, RO. at Bhopal along with six monthly monitoring report.
- (xiv) All the industry in SEZ shall be connected through impervious drainage lines to the STP/ CETP for the discharge of their sewage or industrial effluent. There shall not be any discharge to creeks / rivers. PP shall be accountable for implementing this condition and necessary clause shall be incorporated in the MoU while allotting the plot to the individual industries
- (xv) PP shall not carry out any river course modification.
- (xvi) The individual industrial units shall obtain prior EC under EIA Notification, 2006 as applicable.
- (xvii) Proponent shall identify 200 ha of land for mangrove plantation as per the condition laid by SEAC.
- (xviii) 50 meter buffer from the existing mangrove area should be provided for any developmental activity,





- (xix) *Proponent shall develop the green belt with 3 layers of canopy all along the periphery.*
- (xx) *All the recommendation of the EMP shall be complied with in letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to MoEF along with half yearly compliance report to MoEF-RO.*
- (xxi) *There shall be no disturbance to the sand dunes. The pipelines shall be laid using advanced method viz. Horizontal Directional Drilling (HDD) so as to avoid disturbance to the sand dunes/ creeks/ mangroves.*

## **PART – B. GENERAL CONDITIONS**

### **Construction Phase.**

- (i) *Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.*
- (ii) *A First Aid Room will be provided in the project both during construction and operation of the project.*
- (iii) *All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.*
- (iv) *Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed, taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.*
- (v) *Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.*
- (vi) *Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.*
- (vii) *Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Gujarat Pollution Control Board.*
- (viii) *The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.*



- (ix) *The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.*
- (x) *Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.*
- (xi) *Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/GPCB.*
- (xii) *Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27<sup>th</sup> August, 2003. (The above condition is applicable only if the project site is located within 100 Kms of Thermal Power Stations).*
- (xiii) *Ready mixed concrete must be used in building construction.*
- (xiv) *Storm water control and its re-use should be regulated as per CGWB and BIS standards for various applications.*
- (xv) *Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other referred best practices.*
- (xvi) *Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.*
- (xvii) *Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.*
- (xviii) *Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.*
- (xix) *Use of glass may be reduced by upto 40% to reduce the electricity consumption and load on air-conditioning. If necessary, use high quality double glass with special reflective coating in windows.*
- (xx) *Roof should meet prescriptive requirements as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirements.*
- (xxi) *Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all airconditioned spaces while it is aspirational for non-airconditioned spaces by use of appropriate thermal insulation material to fulfil these requirement.*



- (xxii) *The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National Building Code including protection measures from lightning etc.*
- (xxiii) *Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.*
- (xxiv) *Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it is found that construction of the project has been started without obtaining environmental clearance.*

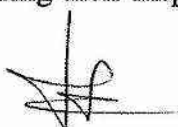
### **Operation Phase**

- (i) *The PP while issuing the allotment letter to individual member units shall specifically mention the allowable maximum quantity of water usage and effluent generated by each member unit.*
- (ii) *The PP shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest improvements.*
- (iii) *Treated affluent emanating from STP shall be recycled/reused to the maximum extent possible. Treatment of 100% grey water by decentralised treatment should be done. Discharge of unused treated affluent shall conform to the norms and standards of the Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.*
- (iv) *The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry / inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.*
- (v) *Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operational phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Low sulphur diesel should be used. The location of the DG sets may be decided in consultation with the Gujarat Pollution Control Board.*
- (vi) *Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.*
- (vii) *Green belt of adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.*



- (viii) *Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.*
- (ix) *Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented.*
- (x) *The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.*
- (xi) *Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.*
- (xii) *A Report on the energy conservation measures conforming to energy conservation norms finalised by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & D Factors etc and submitted to the Ministry along with six monthly monitoring report.*
- (xiii) *Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be an integral part of the project design and should be in place before project commissioning. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination. Solar panels may be used to the extent possible.*
- (xiv) *Adequate measures should be taken to prevent odour problems from solid waste processing plant and STP.*
- (xv) *The buildings should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.*
- (xvi) *The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.*
- (xvii) *Adequate drinking water facility be provided.*
- (xviii) *Incremental pollution loads on the ambient air quality, noise and water quality should be periodically monitored after commissioning of the project.*
- (xix) *Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid system or fully solar system for portion of the apartments should be provided.*
- (xx) *Ozone depleting substance (Regulation & Control) Rules should be followed while designing the air conditioning system of the project.*

12. Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the





documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Bhopal

13. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

14. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

15. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

16. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

17. The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Clearance and copies of clearance letters are available with the Gujarat Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bhopal.

18. Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

19. "Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010".

20. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

21. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.




22. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.

23. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

  
(Lalit Kapur)  
Director (IA-III)

Copy to:

1. The Principal Secretary, Forest and Environment Department, Block no. 14/ 8 floor Sachivalaya, Gandhinagar – 382 010 Gujarat.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 110 032.
3. The Member Secretary, Gujarat Coastal Zone Management Authority & Director,(Environment) Forests & Environment Department, Block No. 14, 8<sup>th</sup> Floor, Sachivalaya, GandhiNagar-382.
4. The Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No. 3, Ravishankar Nagar, Bhopal – 462016 (M.P.)
5. The Member Secretary, Gujarat State Pollution Control Board, Paryavaran Bhawan , Sector 10-A, Gandhi Nagar 382043, Gujarat
6. Director (EI), Ministry of Environment and Forests.
7. Guard File.
8. Monitoring File.

  
(Lalit Kapur)  
Director (IA-III)



**Adani Ports and Special Economic  
Zone Limited, Mundra.**

**From : Apr'19  
To : Sep'19**

**Status of the conditions stipulated in Environment and CRZ Clearance**

# **Compliance Report of Environmental and CRZ Clearance**

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

M/s. APSEZ has been granted Environmental / CRZ clearance vide letter no. 10-138/2008-IA.III, dated 15<sup>th</sup> July, 2014 for development of “Multi Product SEZ, Desalination, Sea Water Intake, Outfall Facility and Pipeline”.

Activities / Facilities approved are as below:

<b>Facilities / Components Approved</b>	<b>Capacity</b>	<b>Status as on 30.09.2019</b>
Desalination Plant	150 MLD	Construction has not been started.
Sea water Intake & Outfall Facility	375 MLD: Intake 241 MLD: Outfall	Construction has not been started.
Common Effluent Treatment Plant	17 MLD	MPSEZ Utilities Pvt. Ltd. (MUPL) has been granted environmental clearance for CETP having 17.0 MLD capacities. Out of which at present one module of CETP having 2.5 MLD capacities has been constructed and is in operation.
	50 MLD	Construction has not been started.
Social Infrastructure Projects	--	Adani Mundra SEZ Infrastructure Pvt. Ltd. (AMSIPL) has granted environmental clearance for township and area development project in 255 Ha. Out of approved 10,000 no. of residential units, 1368 units are constructed.
Sewage Treatment Plant	62 MLD	APSEZ has installed Sewage Treatment Plant @ 150 KLD Capacities within SEZ for treatment of sewage generated from port user buildings.
Airstrip	--	Airstrip has been developed within SEZ area after obtaining requisite permissions.
Municipal Solid Waste Site	--	Material Recovery site is provided for the management of Municipal Solid Waste.
Free Trade & Ware House Zone (FTWZ)	--	Construction is completed and in operation.

**Note:**

Environmental / CRZ clearance has been granted for additional facilities like Processing Zones, Non-processing Zones, Warehousing Zones, Road Network (Trunk as well as Internal), Bridges or Culverts over natural drain, Rail Network, IT-Telecommunication Network, Electric Network, Water Supply, Conservation & Drainage Network, Effluent Collection Network and Utilities & Supporting Infrastructure within SEZ area.

Boundary wall is constructed along the project periphery. In some of areas level raising and area development of SEZ area, wherever required is also under progress.



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Inline to the APSEZ's request, Ministry of Commerce & Industry (MoCI) vide Gazette order dtd. 4<sup>th</sup> July 2019 has de-notified 46.6894 from total area of 8481.2784 Ha, thereby making resultant area of notified Multiproduct SEZ as 8434.5890 Ha.

### List of Industrial Units within SEZ area

Sr. No.	Name of Unit	Nature of Business	Status
1	Skaps Industries (Unit – I & II)	Textile	In Operation
2	Skaps Industries (Unit – III)		In Operation
3	Terram Gosynthetics Pvt. Ltd.		In Operation
4	Ahlstrom Fibre Composite India Pvt. Ltd.		In Operation
5	Ashapura Garments		Not in Operation
6	Anjani Udyog Pvt. Ltd.		In Operation
7	Raa Overseas Pvt. Ltd.		Under Construction
8	M.D. Equipments		Under Construction
9	Thermax Ltd.	Engineering	In Operation
10	Oilfield Warehouse Services Pvt. Ltd.	Ware House	In Operation
11	Oilfield Warehouse Services LLP		Under Construction
12	Avesta Eng. Pvt. Ltd.	Engineering	Not in Operation
13	MD equipment		Not in Operation
14	Alstom Bharat Forge Power Ltd. & Kalyani Alstom Power Ltd.		Under Construction
15	Dorf Ketel Specialty Catalyst Pvt. Ltd.	Chemical	In Operation
16	Oriental Carbon and Chemicals Ltd.		In Operation
17	Gujarat CREDO Alumina Chemicals Pvt. Ltd.		In Operation
18	Aadi Oil Pvt. Ltd. (Mundra Oil)		In Operation
19	Garg Tubes Exports LLP		In Operation
20	Seabird Marine Services Pvt. Ltd.	CFS	In Operation
21	Honeycomb Logistics Pvt. Ltd.		In Operation
22	All Cargo Global Logistics Ltd.		In Operation
23	Mundhra CFS		In Operation
24	Saurashtra Containers Pvt. Ltd.		In Operation
25	Transworld Terminals Pvt. Ltd.		In Operation
26	Mundra International Container Terminal (DP World)		In Operation
27	Central Warehousing Corp. Ltd.		In Operation
28	Maruti Suzuki India Limited (PDI Yard)	Pre Delivery Inspection Yard	In Operation
29	Britannia Industries Limited	Food Products	In Operation
30	Mundra Solar Photo Voltaic Ltd.	Electronics Manufacturing Cluster	In Operation
31	Mundra Solar Technopark Pvt. Ltd.		In Operation
32	Vishakha Renewable Pvt Ltd		In Operation
33	Vishakha Solar Films Pvt Ltd		In Operation
34	Vishakha Metals Pvt Ltd		Under Construction
35	Empezar Logistics	Ware House	In Operation
36	Steinweige Sharaf		In Operation
37	Kerry Indev Logistic Pvt. Ltd.		In Operation
38	Fast Track CFS		In Operation
39	Adani Power (Mundra) Limited	Thermal Power Plant	In Operation
40	Samudra Township (including residential units, hospital, hotel, commercial complex, school etc.)	Social Infrastructure	In Operation
41	Mundra International Airport Pvt. Ltd.	Private Airstrip	In Operation
42	MPSEZ Utilities Pvt. Ltd.	Common Effluent Treatment Plant	In Operation

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
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**Half yearly Compliance report of Environment Clearance for the project “Multi Product SEZ” and CRZ Clearance for the project “Desalination, Sea Water Intake, Outfall Facility and Pipeline at Mundra, Dist. Kachchh, Gujarat of M/s. Adani Ports and SEZ Limited” vide MoEF letter No. 10-138/2008-IA.III dated 15<sup>th</sup> July, 2014.**

<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>
<b>Part – A: Specific Conditions</b>		
i.	PP shall abide by the final order/decision of Hon'ble Supreme Court in SLP (Civil) no. 1526/2014 and connected matters.	<p>Point noted and will be complied.</p> <p>Vide order dated 14.07.2014, the Hon'ble Supreme Court directed MoEF&amp;CC to complete the process of environmental clearance to the MSEZ project of APSEZ within eight weeks. MoEF&amp;CC issued EC and CRZ clearance to the proposed project vide letter dated 15.07.2014. Hence, the SLP (Civil) no. 1526/2014 is deemed closed. Details of the same were submitted along with last EC Compliance report for the period Apr'18 to Sep'18.</p>
ii.	Properly conserve the creeks, river and the mangroves area in the area.	<p>Complied.</p> <p>This reply covers condition no ii, iii, ix, x, xi, xii &amp; xiii.</p> <p>Conservation of creeks and rivers:</p> <ul style="list-style-type: none"> <li>• The prominent creek system (main creeks and small branches of creeks) in and around APSEZ are: (1) Kotdi (2) Baradimata (3) Navinal (4) Bocha (5) Mundra (Oldest port (Juna Bandar) leading to Bhukhi river).</li> <li>• Rivers passing through the APSEZ area are: (1) Khari (2) Nagmati (3) Phot (4) Bhukhi (5) Dhaneshwari (6) Buchiya (7) Jidal.</li> <li>• All the rivers passing through the SEZ area are dry throughout the year except for monsoon season.</li> <li>• All creeks as well as rivers are in existence allowing free flow of water and there is no filling or reclamation of any creek or river area. APSEZ has so far constructed 19 culverts having total length of approx. 1100 m with total cost of INR 20 Crores. Three RCC Bridges have also been constructed over Kotdi creek with total length of 230 m and cost of INR 10 Crores. Details were submitted along with compliance report submission for the period of Apr'17 to Sep'17.</li> <li>• From the APSEZ operations, there is no discharge of any sewage or effluent to the water streams.</li> </ul>

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		<p>Conservation of mangroves:</p> <ul style="list-style-type: none"> <li>• In and around APSEZ, approx. 1800 ha. mangrove area was identified by NIO in an EIA report prepared the year 1998.</li> <li>• Out of this 1800 ha area, 1254 ha area was further demarcated as potential mangrove conservation by NIO in the year 2008 (as part of the EIA report of WFDP).</li> <li>• It may be noted that the entire area of 1254 ha is not covered with mangroves.</li> <li>• Entire area is being conserved and there is no disturbance to the mangroves in this area. Measures such as restricted entry and regular surveillance have resulted in overall growth of mangroves within this area.</li> <li>• As per MoEF&amp;CC directive, APSEZ entrusted NCSCM to demarcate mangroves in and around APSEZ area. As per their study, presently, mangrove cover in and around APSEZ is over 2340 ha. The analysis of the comparison between 2011 and 2016-17 has shown an overall growth of 246 ha.</li> <li>• NCSCM final report on comprehensive and integrated plan for preservation and conservation of mangroves and associated creeks in and around has been submitted to the concerned authorities i.e. MoEF&amp;CC, New Delhi and GCZMA, Gandhinagar vide our letter dated 04.06.2018 and details of the same were submitted along with half yearly EC Compliance report for the period Oct'18 to Mar'19. Presentation on the findings of the report was made to GCZMA committee on 4<sup>th</sup> October 2019 and same has been approved vide MOM published by GCZMA</li> </ul>
iii.	Ensure that mouths of all the creeks are kept open to ensure flushing of the creeks.	<p>Complied.</p> <ul style="list-style-type: none"> <li>• The prominent creek system (main creeks and small branches of creeks) in and around APSEZ are: (1) Kotdi (2) Baradimata (3) Navinal (4) Bocha (5) Mundra (Oldest port (Juna Bandar) leading to Bhukhi river).</li> <li>• All above creek mouths are open allowing free flow of water in to the creeks and surrounding areas and there is no filling or reclamation of any creek area.</li> <li>• This aspect is also confirmed from the recent study of NCSCM which highlights the bathymetry data of the entire coast around APSEZ.</li> <li>• From the bathymetry data it can be concluded that there are sufficient depths at the creek mouths and all creek mouths are open allowing flushing of water.</li> </ul>

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iv.	Bring the creeks to the condition as was seen in the satellite map of 2005 which will be a "reference" satellite map and a copy of which shall be sent to you separately.	Not applicable  This reply covers condition no iv, v, vi. The stated conditions were stipulated in the EC and CRZ clearance with respect to the pending SCNs and based on Ms. Sunita Narain committee report. In continuation to the SCNs and subsequent submissions by APSEZ, MoEF&CC issued a final order vide letter dated 18.09.2015 (which disposed the pending Show Cause Notices). Full compliance of the directions issued vide the said order is provided as <b>Annexure – B</b> .
v.	Submit once in a year latest satellite map which can be compared with the reference satellite map of 2005 to ensure that no modifications in the creeks, rivers, mangroves and mouth of creeks have taken place.	It may be noted that the stated conditions related to the satellite image of 2005 are not imposed to APSEZ as part of the said order. Hence, APSEZ has made submission to MoEF&CC vide letters dated 23.05.2016 and 07.11.2016. Copies of the said letters were submitted along with compliance submission for the period from Oct'16 to Mar'17. Further there are no directions from MoEF&CC.
vi.	Any direction issued by the MoEF with respect to the report submitted by Ms Sunita Narain Committee shall be complied with by the Proponent as applicable.	
vii.	At its cost get Inspection study done once in a year by the organizations like NEERI or any organization approved by this Ministry to - (i) ensure compliance of all the EC conditions (ii) development of SEZ meeting of the environment norms, and (iii) advise any mid-term correction that can be introduced depending on the recommendation of the independent Third Party.	Complied.  NEERI has been appointed to carry out the inspection study up to the year 2020 at a cost of INR 12 Lacs.  Compliance report of Multi Product SEZ EC and CRZ clearance was submitted to senior official of NEERI. Based on the site visit as well as the said compliance report NEERI has given their feedback and no non-compliance is observed. Details of the same were submitted along with last half yearly EC Compliance report for the period Oct'18 to Mar'19.  Correction measures / recommendations suggested, if any, by NEERI in this regards will be discussed and implemented.
viii.	"Consent for	Complied.



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	Establishment" for the SEZ shall be obtained from Gujarat Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.	<p>Consent to Establish (CtE) is obtained for the project from Gujarat Pollution Control Board vide their letter no. GPCB/CCA-KUTCH-1044/ GPCB ID 31463/ 109800, dated 16.04.2012. Copy of the same was submitted to MoEF&amp;CC, Regional Office, Bhopal vide our letter dated 05<sup>th</sup> Aug, 2014. The CtE was also submitted with compliance report submission for the period Oct'15 to Mar'16.</p> <p>The project has been developed as per Consent to Establish (CtE) and Consent to Operate (CtO) granted by SPCB. The present in-force CtO are mentioned below.</p> <table><tr><th>Permission</th><th>Project</th><th>Ref. No. / Order No.</th><th>Valid till</th></tr><tr><td>CtO – Fresh</td><td>Multi Product SEZ</td><td>AWH – 88998</td><td>21.08.2022</td></tr><tr><td>CtO – Amendment</td><td>Multi Product SEZ</td><td>AWH – 97361</td><td>21.08.2022</td></tr></table> <p>Copy of updated CtO and CtE were submitted along with last half yearly EC Compliance report for the Oct'18 to Mar'19 and there is no further change.</p>	Permission	Project	Ref. No. / Order No.	Valid till	CtO – Fresh	Multi Product SEZ	AWH – 88998	21.08.2022	CtO – Amendment	Multi Product SEZ	AWH – 97361	21.08.2022
Permission	Project	Ref. No. / Order No.	Valid till											
CtO – Fresh	Multi Product SEZ	AWH – 88998	21.08.2022											
CtO – Amendment	Multi Product SEZ	AWH – 97361	21.08.2022											
ix.	PP shall get detailed bathymetry done for all the creeks and rivers within Port and SEZ areas along with mapping of co-ordinates, running length, HTL, CRZ boundary, mangrove area including buffer zone through NCSCM /NIOT. PP shall also get prepared a detailed action plan for conservation and protection of creeks /mangrove area etc through NCSCM/NIOT and submit the same to GCZMA for their examination and recommendation. GCZMA will submit its recommendations to MoEF for approval.	<p>Complied</p> <p>Based on the MoEF&amp;CC directions, APSEZ has entrusted NCSCM to carry out the detailed study. Scope of the study include the following:</p> <ul style="list-style-type: none"><li>• Detail bathymetry and topography survey of creeks</li><li>• Demarcation of mangrove areas and buffer zone</li><li>• Demarcation of HTL and CRZ areas with co-ordinates</li><li>• Preparation of a comprehensive and integrated conservation plan for protection of creeks and mangroves</li></ul> <p>In order to complete the study, NCSCM has carried out number of site surveys which are mentioned below:</p> <ul style="list-style-type: none"><li>• Bathymetry survey of creeks</li><li>• Topography survey of intertidal areas</li><li>• Mangrove survey (health and area demarcation)</li><li>• Sampling of soil and water for analysis of physico-chemical and biological parameters</li><li>• Tide and currents data collection (including residence time of tidal water) study</li></ul> <p>Based on the study, the following points can be summarized:</p> <ul style="list-style-type: none"><li>• There is no obstruction to any water stream (creeks / branches</li></ul>												

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		<p>of creeks / rivers)</p> <ul style="list-style-type: none"> <li>• Presently, mangrove cover in and around APSEZ is over 2340 ha. There is substantial growth in mangrove cover to the tune of 246 ha (comparison between 2011 and 2016-17)</li> <li>• Majority of the development at Mundra has happened between this tenure. Hence it can be interpreted that the infrastructure development has not left any adverse impacts on ecology.</li> </ul> <p>The study report is submitted to GCZMA (with a copy to MoEF&amp;CC) for their examination and recommendation. NCSCM final report on comprehensive and integrated plan for preservation and conservation of mangroves and associated creeks in and around has been submitted to the concerned authorities i.e. MoEF&amp;CC, New Delhi and GCZMA, Gandhinagar vide our letter dated 04.06.2018 and details of the same were submitted along with half yearly EC Compliance report for the period Apr'18 to Sep'18. Further request letter for necessary hearing has been submitted to GCZMA vide letter dated 4<sup>th</sup> Jan 2019. Presentation on the findings of the report was made to GCZMA committee on 4<sup>th</sup> October 2019 and same has been approved vide MOM published by GCZMA.</p> <p>Cost of the study as per the NCSCM proposal is 315.5 Lakh. 90% of the payment against the proposal value is already paid to NCSCM.</p>
x.	<p>PP shall demarcate the CRZ area on land with GPS coordinates in consultation with GCZMA/ the agency which has done the HTL /LTL demarcation for the area.</p> <p>There shall be no allotment of plot/s in CRZ area to industries. No industrial activity within CRZ area except the port and harbor &amp; the foreshore facilities shall be allowed as committed.</p>	<p>Being complied</p> <p>Based on the MoEF&amp;CC directions and in consultation with GCZMA, APSEZ has entrusted NCSCM for demarcation of HTL and CRZ areas. NCSCM has prepared the draft maps. Once the maps are finalized, they will be submitted to GCZMA and MoEF&amp;CC for their examination and recommendation.</p> <p>In addition to that please note that</p> <ul style="list-style-type: none"> <li>• There is no allotment of plot(s) in CRZ area to any industry.</li> <li>• Only those activities which are allowed within CRZ area are being carried out (with due approvals from concerned authorities)</li> <li>• No industrial activity within CRZ area except the port and harbor &amp; the foreshore facilities are carried out.</li> </ul>
xi.	Till the approval of action plan for conservation and	<p>Complied</p> <p>The action plan for conservation of creeks and mangrove areas is</p>

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	protection of creeks /mangrove area, the CRZ area within SEZ shall be demarcated as "No Development Zone". PP shall not allow / undertake any development in CRZ area of SEZ.	<p>prepared by NCSCM and the same is submitted to GCZMA and MoEF&amp;CC for their examination and recommendation. The main action plan as per the study are mentioned summarized below:</p> <ul style="list-style-type: none"> <li>• Monitoring of mangrove cover in Jan/Mar, 2020 using latest satellite images and validation with field observations</li> <li>• Monitoring of tidal range in the mangrove areas and comparison with the data collected during 2017</li> <li>• Removal of silt / sand spits from the central part of navinal creek</li> <li>• Dredging of shallow area off Bocha Island to reduce current velocity.</li> </ul> <p>These measures will be discussed with GCZMA and the same will be implemented after obtaining their approval. No development is carried out in the 'No Development Zone' (i.e. CRZ area of SEZ)</p>
xii.	The implementation of action plan approved by the MoEF shall be monitored by the NCSCM/NIOT. Compliance with action plan shall be submitted to GCZMA and to MoEF, RO at Bhopal along with six monthly monitoring report.	<p>Point noted and will be complied</p> <p>The action plan for conservation of eco sensitive areas prepared by NCSCM is submitted to GCZMA and MoEF&amp;CC for their approval. Implementation of the action plan will be carried out by APSEZ and same will be monitored by NCSCM and compliance report in this regard will be submitted to all the concerned authorities as part of the six monthly compliance report.</p>
xiii.	PP shall earmark separate budget for the implementation of the above action plan. The details of the expenditure shall be submitted to GCZMA and to MoEF, RO at Bhopal along with six monthly monitoring report.	<p>Point noted and will be complied</p> <p>A separate budget will be allocated for implementation of this action plan and details of the same will be submitted as part of the six monthly compliance report.</p>
xiv.	All the industry in SEZ shall be connected through impervious drainage lines to the STP/CETP for the discharge of their sewage or industrial effluent. There shall not	<p>Complied.</p> <p>As per the Lease Deed agreement, all existing industries are well connected with impervious pipeline to discharge their effluent / sewage after confirming to the inlet norms of CETP. Typical copy of the Lease Deed (Agreement) was submitted along with compliance report submission for the duration of Oct'16 to Mar'17.</p>

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	be any discharge to creeks / rivers. PP shall be accountable for implementing this condition and necessary clause shall be incorporated in the MoU while allotting the plot to the individual industries.	<p>Entire quantity of treated wastewater from CETP is being utilized for horticulture purpose within SEZ area. No discharge is allowed in to creeks / rivers. Same practice will be continued in future as well and capacity enhancement of CETP will be carried out based on requirement.</p> <p>List of CETP member units were submitted along with last compliance report submission Apr'17 to Sep'17. And there is no further change.</p> <p>The industries which treat the sewage / effluent within their premises comply the stipulated norms of discharge given by GPCB. Through regular monitoring it is ensured by APSEZ that the treated water is used for gardening within the respective industries and there is no discharge to any water body including rivers or creeks.</p>
xv.	PP shall not carry out any river course modification.	<p>Complied</p> <p>The project was conceptualized in such a way that no river course modification is required to be carried out. All the rivers passing through SEZ are maintained through proper path for area drainage.</p>
xvi.	The individual industrial units shall obtain prior EC under EIA Notification, 2006 as applicable.	<p>Complied.</p> <p>All industrial units coming up in within the SEZ are informed and aware about the said requirement. Out of total units established within SEZ, only APL &amp; Dorf Ketel falls under purview of EIA Notification 2006 and they have obtained their specific EC as applicable. During the compliance period of Apr'19 to Sep'19, no new such industry has been established at SEZ which requires EC under EIA Notification, 2006. The condition is being followed on case to case basis as applicable.</p>
xvii.	Proponent shall identify 200 ha of land for mangrove plantation as per the condition laid by SEAC.	<p>Complied.</p> <p>100 Ha. Mangrove plantation is carried out by SAVE at Tala Tadav village of Khambhat Taluka of Anand district. A final report of SAVE was submitted along with half yearly compliance report for the period Apr'17 to Sep'17.</p> <p>100 Ha. Mangrove plantation is carried out by GEC. From which 38 ha. plantation is completed at Tala Tadav village of Khambhat Taluka of Anand district during 2017-18 and remaining 62 ha. plantation is completed at Aliya Bet of Bharuch district during 2018-19. A final report of GEC was submitted along with half</p>

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		yearly compliance report for the period Oct'18 to Mar'19.
xviii.	50 meter buffer from the existing mangrove area should be provided for any developmental activity.	<p>Complied.</p> <p>50 meter buffer from the existing mangrove area as per the CRZ notification is being maintained and all developmental activities are being carried out as per the approval only.</p>
xix.	Proponent shall develop the green belt with 3 layers of canopy all along the periphery.	<p>Being complied.</p> <p>APSEZ has developed "Dept. of Horticulture" which is taking measures/ steps for terrestrial greening as well as mangrove plantation. Development of greenbelt at various locations within the SEZ is an ongoing activity. Green belt of 3 layer canopy will be developed as part of the development of SEZ.</p> <p>The species such as Ficus Infectoria, Ficus religiosa, Terminalia arjuna, Cocos nucifera, Washingtonia fillifera, Casurina spp., Azadirachta Indica, Eucalyptus spp., Jatropha curacus, Ficus bengalensis, Subabool spp., Casia fistula, Date Palm and Delonix regia were grown in SEZ area.</p> <p>Width of the green belt varies from 2 m to 8 m and density varies from 2000 to 2500 trees per hectare at various locations. Total 116.6 hectares of land with approx. 2.5 Lacs trees is developed within SEZ area till date. So, far APSEZ has developed 467 Ha area as greenbelt with plantation 8.7 Lacs trees within the entire APSEZ area.</p> <p>Please refer <b>Annexure – 1</b> for further details regarding greenbelt development and mangrove afforestation. An updated green belt development plan is also attached as part of the said annexure. Total expenditures of the horticulture dept. during the FY 2019-20 (Till Sep'19) are INR 547 lakh.</p> <p>It may be noted that individual industrial units has developed the greenbelt within their premises based on their planning &amp; approvals and new industries coming up any will also comply as per their approvals. The same will be ensured by the environment monitoring committee of APSEZ.</p> <p>For the area where further development is yet to be carried out, APSEZ will ensure that greenbelt with 3 layer canopy is developed by either APSEZ or the industrial unit to whom the land is allotted. Photographs showing the 3 layer canopy greenbelt developed within APSEZ were along with half yearly compliance report for the period Oct'18 to Mar'19.</p>



**Status of the conditions stipulated in Environment and CRZ Clearance**

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xx.	All the recommendation of the EMP shall be complied with in letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to MoEF along with half yearly compliance report to MoEF-RO.	<p>Complied.</p> <p>Compliance report of environmental management plan and mitigation measures proposed as part of the EIA report is summarized below. The same is submitted to the concerned authorities including MoEF&amp;CC, RO, Bhopal as part of the six monthly compliance reports. Details of the past six compliance reports are mentioned below.</p> <table border="1"> <thead> <tr> <th>Sr. no.</th><th>Compliance period</th><th>Date of submission</th></tr> </thead> <tbody> <tr> <td>1</td><td>Apr'16 to Sep'16</td><td>01.12.2016</td></tr> <tr> <td>2</td><td>Oct'16 to Mar'17</td><td>30.05.2017</td></tr> <tr> <td>3</td><td>Apr'17 to Sep'17</td><td>01.12.2017</td></tr> <tr> <td>4</td><td>Oct'17 to Mar'18</td><td>29.05.2018</td></tr> <tr> <td>5</td><td>Apr'18 to Sep'18</td><td>30.11.2018</td></tr> <tr> <td>6</td><td>Oct'18 to Apr'19</td><td>31.05.2019</td></tr> </tbody> </table> <p>Summary of the compliance to the measures suggested in EMP are given in <b>Annexure – 2</b>.</p>	Sr. no.	Compliance period	Date of submission	1	Apr'16 to Sep'16	01.12.2016	2	Oct'16 to Mar'17	30.05.2017	3	Apr'17 to Sep'17	01.12.2017	4	Oct'17 to Mar'18	29.05.2018	5	Apr'18 to Sep'18	30.11.2018	6	Oct'18 to Apr'19	31.05.2019
Sr. no.	Compliance period	Date of submission																					
1	Apr'16 to Sep'16	01.12.2016																					
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3	Apr'17 to Sep'17	01.12.2017																					
4	Oct'17 to Mar'18	29.05.2018																					
5	Apr'18 to Sep'18	30.11.2018																					
6	Oct'18 to Apr'19	31.05.2019																					
xxi.	There shall be no disturbance to the sand dunes. The pipelines shall be laid using advanced method viz. Horizontal Directional Drilling (HDD) so as to avoid disturbance to the sand dunes/creeks/mangroves.	<p>Complied.</p> <p>There is no sand dune in the SEZ area.</p> <p>Point noted. No pipelines for intake and outfall of sea water are laid till now and same will be studied as and when required.</p>																					
<b>Part – B: General Conditions</b>																							
	<b>Construction Phase</b>																						
i	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary	<p>Not applicable at present.</p> <p>Most of the construction labours reside in the nearby villages where all basic facilities are easily available. There are no housing requirements for labours inside the project area.</p>																					

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30-09-2019										
	structures to be removed after the completion of the project.											
ii	A first aid room will be provided in the project both during construction and operation of the project.	Complied.  APSEZ has established Occupational Health Center & First Aid facility, which will be utilized during entire construction as well as operation phase of SEZ project. In case of emergency situation requiring higher level of treatment, the facilities at Adani hospital located with SEZ area can be utilized.										
iii	All the topsoil excavated during construction phase should be stored for use in horticulture/landscape development within the project site.	Complied.  Excavated topsoil, if any, will be used for the horticulture /landscape development within the project site.										
iv	Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed, taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	Complied.  No excavated muck has been generated and disposed-off. Construction waste, if any, is utilized for area development within the project site.										
v	Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.	Complied.  Environment Monitoring is being carried out on regular basis in Port & SEZ areas through NABL accredited and MoEF&CC approved agency namely M/s. Pollucon Laboratories Pvt. Ltd. Summary of the ground water as well as soil assessment for duration from Apr'19 to Sep'19 is mentioned below.  <b><u>Bore Hole Water Sampling:</u></b>  <b>Sampling locations &amp; frequency: 3 nos. (Half Yearly)</b> <table><tr><th>Sr. No.</th><th>Parameter</th><th>Unit</th><th>Max. Value</th><th>Min. Value</th></tr><tr><td>1</td><td>pH</td><td>--</td><td>8.16</td><td>7.41</td></tr></table>	Sr. No.	Parameter	Unit	Max. Value	Min. Value	1	pH	--	8.16	7.41
Sr. No.	Parameter	Unit	Max. Value	Min. Value								
1	pH	--	8.16	7.41								

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30-09-2019				
		2	Salinity	ppt	35.1	3.4
		3	Oil & Grease	mg/L	BDL*	BDL*
		4	Hydrocarbon	mg/L	BDL*	BDL*
		5	Lead as Pb	mg/L	0.026	0.02
		6	Arsenic as As	mg/L	BDL*	BDL*
		7	Nickel as Ni	mg/L	BDL*	BDL*
		8	Total Chromium as Cr	mg/L	0.08	0.08
		9	Cadmium as Cd	mg/L	BDL*	BDL*
		10	Mercury as Hg	mg/L	BDL*	BDL*
		11	Zinc as Zn	mg/L	0.38	0.075
		12	Copper as Cu	mg/L	BDL*	BDL*
		13	Iron as Fe	mg/L	0.48	0.12
		14	Insecticides/Pesticides	mg/L	BDL*	BDL*
		15	Depth of Water Level from Ground Level	meter	2.1	1.9
		*BDL = Below Detectable Limit				
		Comparison of the present data with baseline data for the nearest locations for Soil.				
		Sr. No.	Parameter	Unit	Dhrub station	Zarpara village
		1	pH	--	7.41	8.1
		2	Lead as Pb	mg/L	0.092	BDL
		3	Nickel as Ni	mg/L	BDL	0.146
		4	Total Chromium as Cr	mg/L	0.017	0.039
		5	Iron as Fe	mg/L	0.29	0.258
		6	Insecticides/Pesticides	mg/L	BDL	BDL
		7	Depth of Water Level from GL	meter	2.6	1.7
		<b>Soil Sampling:</b>				
		<b>Sampling locations &amp; frequency: 4 nos. (Half Yearly)</b>				
		Sr. No.	Parameter	Unit	Max. Value	Min. Value
		1	pH	--	8.6	7.75
		2	Nitrogen as N	%	0.045	0.01
		3	Phosphorus as P	mg/kg	310	80
		4	Potassium as K	mg/kg	75	32
		5	Baron as B	mg/kg	2.1	1.1
		6	Calcium as Ca	mg/kg	740	430
		7	Magnesium as Mg	mg/kg	680	560
		8	Iron as Fe	%	0.65	0.33
		9	Moisture	%	12.8	7.8
		10	Organic Matter	%	0.2	0.1
		11	CEC	meq/100 gm	9.4	8.1
		12	TVC	CFU/gm	8.5 x 10 <sup>4</sup>	2.8 x 10 <sup>3</sup>
		<b>Heavy Metal</b>				
		13	Cadmium as Cd	mg/kg	ND*	ND*
		14	Antimony as Sb	mg/kg	ND*	ND*
		15	Arsenic as As	mg/kg	ND*	ND*
		16	Thorium as Th	mg/kg	ND*	ND*
		17	Lead as Pb	mg/kg	28.8	2.66
		18	Chromium (VI) as Cr	mg/kg	14.64	5.5
		19	Cobalt as Co	mg/kg	34.74	16.15
		20	Copper as Cu	mg/kg	85.54	8.8
		21	Nickel as Ni	mg/kg	24.94	13.23
		22	Manganese as Mn	mg/kg	938	233
		23	Vanadium as V	mg/kg	11.4	6.95
		*ND = Not Detected				

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30-09-2019																																																		
		<p>Comparison of the present data with baseline data for the nearest locations for Soil.</p> <table><tr><th>Sr. No.</th><th>Parameter</th><th>Unit</th><th>Dhrub station</th><th>Zarpara village</th></tr><tr><td>1</td><td>pH</td><td>--</td><td>7.43</td><td>6.45</td></tr><tr><td>2</td><td>Nitrogen as N</td><td>%</td><td>0.0067</td><td>1.38 gm/kg</td></tr><tr><td>3</td><td>Phosphorus as P</td><td>mg/kg</td><td>134</td><td>1230</td></tr><tr><td>4</td><td>Potassium as K</td><td>mg/kg</td><td>52</td><td>62120</td></tr><tr><td>5</td><td>Calcium as Ca</td><td>mg/kg</td><td>550</td><td>1500</td></tr><tr><td>6</td><td>Magnesium as Mg</td><td>mg/kg</td><td>60</td><td>1580</td></tr><tr><td>7</td><td>Iron as Fe</td><td>%</td><td>0.53</td><td>1.34</td></tr><tr><td>8</td><td>Organic Matter</td><td>%</td><td>0.038</td><td>0.98</td></tr><tr><td>9</td><td>CEC</td><td>meq/100 gm</td><td>8.1</td><td>7.4</td></tr></table> <p>From the above results it can be inferred that</p> <ul style="list-style-type: none"><li>• The ground level in this area is saline in nature due to close proximity to the coast.</li><li>• There is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.</li><li>• There is no leaching of heavy metals and other toxic contaminants through soil.</li></ul> <p>Please refer <b>Annexure – 3</b> for detailed analysis reports. Approx. INR 11.23 Lakh is spent for all environmental monitoring activities during the FY 2019-20 (Till Sep'19).</p>	Sr. No.	Parameter	Unit	Dhrub station	Zarpara village	1	pH	--	7.43	6.45	2	Nitrogen as N	%	0.0067	1.38 gm/kg	3	Phosphorus as P	mg/kg	134	1230	4	Potassium as K	mg/kg	52	62120	5	Calcium as Ca	mg/kg	550	1500	6	Magnesium as Mg	mg/kg	60	1580	7	Iron as Fe	%	0.53	1.34	8	Organic Matter	%	0.038	0.98	9	CEC	meq/100 gm	8.1	7.4
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vi	Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.	<p>Complied.</p> <p>Construction spoils including bituminous material is being kept at identified temporary storage area outside CRZ and is being utilized for area development purpose as and when required.</p> <p>Hazardous materials such as diesel, lube oil etc. are handled with utmost care and all applicable rules are followed. Storage area is provided with paving and spill kit to ensure there is no contamination to soil or ground water.</p> <p>Used oil is sold to GPCB approved recycler namely M/s. Western India Petrochem Industries, Bhavnagar. Oily rags are being disposed though co-processing at cement industries namely M/s. Sanghi Industries Ltd., Kutch and / or Recycling Solutions Pvt. Ltd., Panoli. Dates of validity of all the vendors and details of the same were submitted along with last half yearly EC compliance report for the period Apr'18 to Sep'18. Necessary approvals from GPCB for disposal of hazardous wastes are obtained. Authorization copy was submitted with compliance report submission for the period Apr'17 to Sep'17.</p>																																																		

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>
		Individual units within SEZ are handling their hazardous wastes as per Hazardous waste rules – 2016 after obtaining necessary permissions from GPCB.
vii	Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Gujarat Pollution Control Board.	<p>Complied.</p> <p>All the hazardous wastes are being handled as per Hazardous Waste Rules – 2016.</p> <p>Please refer Point No. vi (General Condition: Construction Phase) for further details.</p>
viii	The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.	<p>Complied.</p> <p>DG sets are being used only as power back up source in case of power failure. Presently, cumulative capacity of all DG sets installed at APSEZ is 4843 KVA. During the compliance period of Apr'19 to Sep'19, there was no instance of power failure hence it was not required to operate the DG sets.</p> <p>All the DG sets are of low sulphur diesel type. Certificate showing Sulphur content in diesel was submitted along with last half yearly EC compliance report for the period Apr'18 to Sep'18. DG sets are being used in conformance to the EPA norms and proof for the same was submitted along with last compliance period i.e. Apr'17 to Sep'17.</p>
ix	The diesel required for operating DG sets shall be stored in underground tanks if required; clearance from Chief Controller of Explosives shall be taken.	<p>Complied.</p> <p>Diesel is stored in the underground tank located in existing port area and approval of the same from Chief Controller of Explosives is obtained from PESO with License no. P/HQ/GJ/15/5188 (P28539) dated 15.12.2016 and is valid till 31.12.2019. Copy of Certificate from CCE was submitted along with last half yearly EC Compliance report for the period Oct'18 to Mar'19.</p>
x	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should	<p>Complied.</p> <p>The vehicles of on-going construction work enter inside the premises only after passing through the fitness check at vehicle health-check centre established by APSEZ. At the vehicle health check-up centre, parking light, reverse light, Horn, wheel, breaks, mirror, etc. are checked before allowing the vehicle to enter the site.</p> <p>APSEZ has also established a licenced PUC station to monitor</p>



	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
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Sr. No.	Conditions	Compliance Status as on 30-09-2019																																								
	operate only during non-peak hours.	<p>the compliance with applicable Motor Vehicle Act for vehicles. Details were submitted along with half yearly EC compliance report for the period Apr'18 to Sep'18.</p> <p>Majority of the vehicles bringing construction materials are operated during non-peak hours.</p>																																								
xi	Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/GPCB.	<p>Complied.</p> <p>Ambient Air Quality and Noise monitoring are being carried out by NABL accredited and MoEF&amp;CC authorized agency namely M/s. Pollucon Laboratories Pvt. Ltd. Summary of the same for duration from Apr'19 to Sep'19 is mentioned below.</p> <p><b>Air sampling locations &amp; frequency: 8 nos. (twice a week) &amp; Noise sampling locations &amp; frequency: 5 nos. (once in a month)</b></p> <table><tr><th>Parameter</th><th>Unit</th><th>Max</th><th>Min</th><th>Perm. Limit<sup>\$</sup></th></tr><tr><td>PM<sub>10</sub></td><td>µg/m<sup>3</sup></td><td>87.33</td><td>50.20</td><td>100</td></tr><tr><td>PM<sub>2.5</sub></td><td>µg/m<sup>3</sup></td><td>46.27</td><td>20.57</td><td>60</td></tr><tr><td>SO<sub>2</sub></td><td>µg/m<sup>3</sup></td><td>24.38</td><td>6.54</td><td>80</td></tr><tr><td>NO<sub>2</sub></td><td>µg/m<sup>3</sup></td><td>38.64</td><td>15.65</td><td>80</td></tr><tr><th>Noise</th><th>Unit</th><th>Max</th><th>Min</th><th>Perm. Limit</th></tr><tr><td>Day Time</td><td>dB(A)</td><td>73.2</td><td>47.7</td><td>75</td></tr><tr><td>Night Time</td><td>dB(A)</td><td>68.7</td><td>46.6</td><td>70</td></tr></table> <p><sup>\$</sup> as per NAAQ standards, 2009 Values recorded confirms to the stipulated standards.</p> <p>Such environmental monitoring is being carried out on continuous basis at stipulated frequencies. The analysis results are being closely observed for incremental pollution load. From the above results and past data, it can be inferred that the emission levels are well within the prescribed standards. All the analysis data collected are submitted to the concerned authorities as part of the six monthly compliance reports. The data is also submitted to GPCB on monthly basis as part of the online submission – Monthly Patrak.</p> <p>Please refer <b>Annexure – 3</b> for detailed analysis reports and accreditation certificates. Approx. INR 11.23 Lakh is spent for all environmental monitoring activities during the FY 2019-20 (Till Sep'19).</p> <p>Following safeguard measures are taken for abatement of dust</p>	Parameter	Unit	Max	Min	Perm. Limit <sup>\$</sup>	PM <sub>10</sub>	µg/m <sup>3</sup>	87.33	50.20	100	PM <sub>2.5</sub>	µg/m <sup>3</sup>	46.27	20.57	60	SO <sub>2</sub>	µg/m <sup>3</sup>	24.38	6.54	80	NO <sub>2</sub>	µg/m <sup>3</sup>	38.64	15.65	80	Noise	Unit	Max	Min	Perm. Limit	Day Time	dB(A)	73.2	47.7	75	Night Time	dB(A)	68.7	46.6	70
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	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>
		<p>and noise emissions.</p> <ul style="list-style-type: none"> <li>• Regular sprinkling on road and other open area</li> <li>• Regular cleaning of roads</li> <li>• Development of greenbelt along the periphery of the storage yards/back up area</li> <li>• D.G. Sets having Acoustic enclosures</li> </ul>
xii	Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27 <sup>th</sup> August, 2003. (The above condition is applicable only if the project site is located within 100 Kms of Thermal Power Stations).	<p>Complied.</p> <p>Part of fly ash generated from Adani Power Limited, Mundra is being utilized by Adani Group to manufacture paver blocks and the same paver blocks are used for development of back up area, footpath, colonies area, parking area, approach road etc.</p> <p>APSEZ has utilized 1600 MT of fly ash to manufacture paver block during the period of Apr'19 to Sep'19. Details of methodology for manufacturing of paver blocks were submitted along with half yearly EC compliance report for the period Apr'18 to Sep'18.</p> <p>Fly ash based PPC cement is used for construction activity.</p>
xiii	Ready mixed concrete must be used in building construction.	<p>Complied.</p> <p>Only RMC is used for construction activity.</p>
xiv	Storm water control and its re-use should be regulated as per CGWB and BIS standards for various applications.	<p>Complied.</p> <p>Storm water drainage systems are provided. There are no perennial rivers and the possibility of storm water run-off is only during monsoon season. The area is receiving scanty rainfall and there is no continuous flow of water during monsoon. Therefore presently, the storm water drainage is designed to facilitate the area drainage meeting with the downstream part of water area.</p>
xv	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other referred best practices.	<p>Complied.</p> <p>Only RMC is used for construction activity.</p>
xvi	Permission to draw ground water shall be obtained from the competent Authority prior to construction /operation of the project.	<p>Complied.</p> <p>No ground water is used during construction &amp; operation stage of the project. Current sources of water are Narmada water through GWIL and desalination plant of APSEZ. Average water requirement is approx. 4.6 MLD during the compliance Period i.e. Apr'19 to Sep'19.</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>
xvii	Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.	<p>Not applicable</p> <p>As per the master planning all types of waste water generated are transferred through common conveying system for providing desired treatment at CETP. Treated waste water is utilized for gardening purpose within the premises of APSEZ / individual industries.</p> <p>It may be noted that condition number xvi to xxi are imposed on all member industries coming up within the SEZ areas (as part of the Lease Deed agreement). The same practice will continue in future also. As suggested by RO, Bhopal during the site visit, an environment monitoring committee is formed which will ensure strict compliance of the stipulated conditions by individual industries.</p>
xviii	Fixtures for shower, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.	<p>Complied.</p> <p>Water flow reducers are installed at various locations within APSEZ. The water flow reducers consume approx. 66% less water compared to the normal tap. Water free urinals are also installed at Port User Buildings for water conservation. In phase wise manner, all the fixtures will be replaced with such water efficient devices.</p>
xix	Use of glass may be reduced by up to 40% to reduce the electricity consumption and load on air-conditioning. If necessary, use high quality double glass with special reflective coating in windows.	<p>Complied</p> <p>Majority of the building envelopes are constructed with energy efficient building materials. While using glass, wherever required, it is ensured that only high quality glass with reflective coating is used.</p>
xx	Roof should meet prescriptive requirements as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirements.	<p>Complied</p> <p>Majority of the building envelopes (including roofs) are constructed with ECBC compliant building materials having appropriate thermal insulation.</p>
xxi	Opaque wall should meet prescriptive requirement as per Energy Conservation	<p>Complied</p> <p>Majority of the building envelopes (including walls) are constructed with ECBC compliant building materials having</p>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>
	Building Code which is proposed to be mandatory for all air-conditioned spaces while it is aspirational for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfil these requirement.	appropriate thermal insulation.
xxii	The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of firefighting equipments, etc. as per National Building Code including protection measures from lightning etc.	Complied  Mundra falls in seismic zone V. All the building structures constructed, if any, will meet the requirements of the applicable guidelines for safety. The same practice will continue in future also. However, being a developer no buildings are constructed by APSEZ.
xxiii	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.	Complied. SEZ industries were visited to check measures taken for Energy Conservation, Water Conservation, Waste and Hazardous waste management and phase out plan of Ozone depleting substance during the compliance period. Various industries shared the data in line with above reference. Details of the same were submitted along with EC compliance report for the period Apr'18 to Sep'18.  It may be noted that condition number xvi to xxi are imposed on all member industries coming up within the SEZ areas (as part of the Lease Deed agreement). The same practice will continue in future also. As suggested by RO, Bhopal during the site visit, an environment monitoring committee is formed and ensures strict compliance of the stipulated conditions by individual industries. Details of compliance verification of SEZ industries are attached as <b>Annexure – 4</b> .
xxiv	Under the provisions of Environment (Protection) Act 1986, legal action shall be initiated against the project proponent if it is found that construction	Point noted.  Wherever applicable, construction activities have started only after obtaining environmental clearance.

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30-09-2019		
	of the project has been started without obtaining environmental clearance.			
	Operation Phase			
i.	The PP while issuing the allotment letter to individual member units shall specifically mention the allowable maximum quantity of water usage and effluent generated by each member unit.	Complied. Provisions are made while issuing the allotment letter to individual member units for specifically mentioning the allowable maximum quantity of water usage and effluent generated by each member unit. Sample copy of one of such letter was submitted along with compliance report submission for the period Oct'16 to Mar'17.		
ii.	The PP shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest improvements.	<p>Complied.</p> <p>APSEZ has a well structured Environment Management Cell, staffed with qualified manpower for reviewing the environmental monitoring data and suggest improvements. Environment Management Cell organogram is attached as <b>Annexure – 5</b>.</p> <p>Separate budget for the Environment protection measures is earmarked every year. All environment and horticulture activities are considered at corporate level and budget allocation is done accordingly. No separate bank account is maintained for the same however, all the expenses are recorded in advanced accounting system of the organization.</p> <p>Budget for environmental management measures (including horticulture) for the FY 2019-20 is to the tune of INR 1042 lakh. Out of which, Approx. INR 727 lakh are spent during this compliance period. Detailed breakup of the expenditures is attached as <b>Annexure – 6</b>.</p> <p>Please refer Point No. xxiii (General Condition: Construction Phase) for further details.</p>		
iii.	Treated effluent emanating from STP shall be recycled / reused to the maximum extent possible. Treatment of 100% grey water by decentralized treatment should be done. Discharge of	Complied.  APSEZ has total installed capacity of 5.6 MLD for treatment of effluent / sewage generated at various locations. Details regarding the same are mentioned below. The treated sewage from these decentralized units meets the norms stipulated by GPCB and it is used for gardening purpose.		
		Location	Capacity	Technology



**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30-09-2019				
	unused treated effluent shall conform to the norms and standards of the Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.	CETP	2.5 MLD	Aerobic Digestion		
		Shantivan Colony STP	350 KLD	Aerobic Digestion		
		Shantivan Colony STP	250 KLD	Aerobic Digestion		
		Adani House STP	150 KLD	PVA Gel Technology		
		Samudra Township STP	2.0 MLD	MBR		
		Adani Hospital STP	30.0 KLD	Aerobic Digestion		
		Liquid Terminal ETP	265 KLD	Aerobic Digestion		
		West Port STP	55.0 KLD	FAB		
		CETP of 2.5 MLD capacity is also constructed in SEZ area (having a separate independent environmental clearance). Sewage generated from individual industry is treated by individual industry itself. However, some of the industries are giving their sewage to the CETP for treatment and final disposal. List of CETP member units were submitted along with last compliance report submission Apr'17 to Sep'17. And there is no further change.				
		The treated effluent from CETP confirms to the GPCB norms. Treated water is used for gardening / horticulture purpose within CETP premises and SEZ areas. Online monitoring system at the discharge point is provided to get the system alert in case of any deviation from discharge norms.				
		Assessment of treated sewage is being carried out by NABL accredited and MoEF&CC approved agency namely M/s. Pollucon Laboratories Pvt. Ltd. The summary of analysis results is mentioned below.				
		<b>Treated Water Analysis (Frequency Twice in a Month)</b>				
		Parameter	Unit	Max	Min	Perm. Limit <sup>\$</sup>
		pH	--	7.86	6.91	--
		TSS	mg/L	29	10	100
		BOD (3 Days @ 27 °C)	mg/L	19	8	30
		Residual Chlorine	ppm	0.8	0.3	--
Fecal Coliform	MPN/ 100 ml	430	170	< 1000		
<sup>\$</sup> as per CC&A granted by GPCB						
Please refer <b>Annexure – 3</b> for detailed analysis reports. Approx. INR 11.23 Lakh is spent for all environmental monitoring activities during the period FY 2019-20 (Till Sep'19).						
Greenbelt area developed around the treatment plants act as barrier for odour. In addition to this, regular supervision is done						

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<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>
		to ensure there is no odour problem from any of the treatment plants.
iv.	The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.	<p>Complied.</p> <p><b>Waste Management</b> – APSEZ has adopted 5R concept for environmentally sound management of different types of solid &amp; liquid wastes. Please refer below details about management of each type of waste.</p> <p><b>Municipal Solid Waste:</b> A well-established system for segregation of dry &amp; wet waste is in place. All wet waste (Organic waste) is being segregated &amp; utilized for compost manufacturing and/or biogas generation for cooking purpose. The compost is further used by in house horticulture team for greenbelt development. Whereas dry recyclable waste is being sorted in various categories. Presently manual sorting is being done for sorting of different types of solid waste. Segregated recyclable materials such as Paper, Plastic, Cardboard, PET Bottles, Glass etc. are then sent to respective recycling units, whereas remaining non-recyclable waste is bailed and sent to cement plant (M/s. Sanghi Industries Ltd., Kutch and/or M/s. Ambuja Cement Ltd., Kodinar) for Co-processing as RDF (Refused Derived Fuel).</p> <p><b>Hazardous Waste:</b></p> <ul style="list-style-type: none"> <li>• E – Waste &amp; Used Batteries are being sold to GPCB registered recyclers namely M/s. e-Processing House.</li> <li>• Solid Hazardous Waste is being disposed through co-processing through common facility i.e. M/s. Saurashtra Enviro Projects Pvt. Ltd., Bhachau and/or cement industries of Sanghi Industries Ltd., Kutch and/or Ambuja Cement Ltd., Kodinar. Used/Waste Oil is being sold to GPCB authorized recyclers / re-processors namely M/s. Western India Petrochem Industry, Bhavnagar.</li> <li>• Downgrade chemicals generated from cleaning of storage tanks / pipelines are being sold to authorized solvent recovery facilities namely M/s. Acquire Chemicals, Ankleshwar however during the compliance period, there was no disposal of downgrade chemicals.</li> <li>• Slop Oil received from vessels is treated to separate water and oil particles in Oil Water Separator system. Separated oil from the same is being sold to authorized recycler / reprocessor namely M/s. Western India Petrochem Industry, Bhavnagar and water is sent to ETP for further treatment. However during the compliance period, there was no disposal of Slope Oil.</li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30-09-2019																																					
		<p>Details of permissions / agreements of hazardous waste authorized vendors were submitted along with last EC Compliance Report for the period Apr'18 to Sep'18.</p> <p>The following table summarizes the waste management practice (for Apr'19 to Sep'19) for different types of wastes at APSEZ:</p> <table border="1"> <thead> <tr> <th>Type of Waste</th><th>Quantity in MT</th><th>Disposal method</th></tr> </thead> <tbody> <tr> <td colspan="3"><b>Hazardous Waste</b></td></tr> <tr> <td>Pig Waste</td><td>6.88</td><td rowspan="4">Co-processing at cement industries</td></tr> <tr> <td>Tank Bottom Sludge</td><td>46.26</td></tr> <tr> <td>Oily Cotton waste</td><td>62.11</td></tr> <tr> <td>ETP Sludge</td><td>4.41</td></tr> <tr> <td>Used / Spent Oil</td><td>35.41</td><td rowspan="3">Sell to registered recycler</td></tr> <tr> <td>Discarded Containers</td><td>3.57</td></tr> <tr> <td>E-Waste</td><td>2.07</td></tr> <tr> <td>Bio Medical Waste</td><td>1.38</td><td>To approved CBWTF Site</td></tr> <tr> <td colspan="3"><b>Municipal Solid Waste</b></td></tr> <tr> <td>Recyclables</td><td>67.82</td><td>After recovery sent for recycling</td></tr> <tr> <td>Refuse Derived Fuel</td><td>174.72</td><td>Co-processing at Cement Industries</td></tr> <tr> <td>Wet Waste (Food waste + Organic waste)</td><td>441.59</td><td>Converted to Manure for Horticulture use / Biogas for cooking purpose</td></tr> </tbody> </table> <p>Please refer Point No. xxiii (General Condition: Construction Phase) for further details.</p>	Type of Waste	Quantity in MT	Disposal method	<b>Hazardous Waste</b>			Pig Waste	6.88	Co-processing at cement industries	Tank Bottom Sludge	46.26	Oily Cotton waste	62.11	ETP Sludge	4.41	Used / Spent Oil	35.41	Sell to registered recycler	Discarded Containers	3.57	E-Waste	2.07	Bio Medical Waste	1.38	To approved CBWTF Site	<b>Municipal Solid Waste</b>			Recyclables	67.82	After recovery sent for recycling	Refuse Derived Fuel	174.72	Co-processing at Cement Industries	Wet Waste (Food waste + Organic waste)	441.59	Converted to Manure for Horticulture use / Biogas for cooking purpose
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v.	Diesel power generating sets proposed as source of backup power for elevators and common area illumination during operational phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Low sulphur diesel should be used. The	<p>Complied.</p> <p>DG sets are being used only as power back up source in case of power failure.</p> <p>Please refer Point No. viii &amp; ix (General Condition: Construction Phase) for further details.</p> <p>Heights of stacks are maintained as needed for the combined capacity of all attached DG Sets. Locations of the DG sets are checked by GPCB officials during the site visits. Details of all DG set stack heights are mentioned below.</p> <table border="1"> <thead> <tr> <th>Location</th><th>Capacity (KVA)</th><th>Stack height (m)</th></tr> </thead> <tbody> <tr> <td>Sherkhariya gate</td><td>5</td><td>3</td></tr> <tr> <td>Sherkhariya gate</td><td>5</td><td>3</td></tr> <tr> <td>Airstip</td><td>140</td><td>4</td></tr> <tr> <td>Airstip</td><td>125</td><td>4</td></tr> <tr> <td>BAROI ROAD</td><td>5</td><td>3</td></tr> </tbody> </table>	Location	Capacity (KVA)	Stack height (m)	Sherkhariya gate	5	3	Sherkhariya gate	5	3	Airstip	140	4	Airstip	125	4	BAROI ROAD	5	3																			
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	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
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<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>			
	location of the DG sets may be decided in consultation with the Gujarat Pollution Control Board.	Airport road entry gate	5	3	
		Addi salt	5	3	
		Adani hospital	500	3.5	
		GMB road	5	3	
		East gate	30	4	
		MITAP substation	62.5	4	
		ROB	320	5	
		Zharpara fishermen corridor	5	3	
		Navinal fishermen corridor	5	3	
		109 culvert	5	3	
		Anupam Junction	5	3	
		West gate	30	3	
		MRSS	250	3	
		Agripark	125	3	
		Labour colony	100	3	
		WTP	380	4	
		Mundra guest house	15	3	
		Shantivan colony	750	3	
		Shantivan colony	250	3	
		Shantivan colony	5	3	
		STP plant shantivan	200	4	
		Adani public school	82.5	3	
		Wadhala farm house	30	3	
		Adani house	750	4	
		PUB Building	500	4	
		PMC stores	82.5	3	
		R&D yard	50	3	
		Near DG house (Adani house)	5	2.5	
		Near DG house (Adani house)	5	2.5	
		Near DG house (Adani house)	5	2.5	
vi.	Noise should be controlled to ensure that it does not exceed the prescribed standards, During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.	<p>Complied.</p> <p>Noise monitoring is being carried out by NABL accredited and MoEF&amp;CC authorized agency namely M/s. Pollucon Laboratories Pvt. Ltd.</p> <p>Please refer Point No. xi (General Condition: Construction Phase) for further details.</p>			
vii.	Green belt of adequate width and density preferably with local species along the periphery of the plot shall be raised so as to	<p>Being complied.</p> <p>APSEZ has developed "Dept. of Horticulture" which is taking measures/ steps for terrestrial greening as well as mangrove plantation. Development of greenbelt at various locations within the SEZ is an ongoing activity.</p>			

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	provide protection against particulates and noise.	Please refer condition no. xix (Specific Condition) for further details.
viii.	Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.	<p>Complied.</p> <p>Boundary walls are constructed in such a way by keeping weep holes for defined river path to facilitate free flow of water and it is ensured that water is not stagnant at any given point during rainy season.</p>
ix.	Rain water harvesting for roof run-off and surface run-off, as plan submitted should be implemented.	<p>Complied.</p> <p>Groundwater recharge cannot be done at the project site since the entire project is in the intertidal / sub tidal areas. Rain water within project area is managed through storm water drainage.</p> <p>We have installed Rain water recharge bore well (4 Nos.) within our township to recharge ground water. Details of the same is attached as <b>Annexure – 7</b>. Due to the same approx. 5.6 ML of rain water has been harvested during last monsoon.</p> <p>We have also connected roof top rain water duct of operational building (Tug berth building within MPT) with u/g water tank for utilization of collected rain water for gardening / horticulture purpose. Details of the same were submitted along with last EC Compliance report for the period Oct'18 to Mar'19.</p> <p>However, APSEZ has carried out rainwater harvesting activities in the nearby villages for benefit of the locals. Following measures are taken for the same during the year 2011 – 13 and the same have benefited to the local farmers.</p> <ol style="list-style-type: none"> <li>1. Pond deepening activities at villages</li> <li>2. 18 check dams were constructed under the 'Sardar Patel Sahbhagi Jalsanchay Yojna'</li> </ol> <p>Total cost of these efforts was approx. INR 320 lakh.</p> <p>Under Sujlam Suflam project Adani Foundation has successfully completed pond deepening work in Mundra &amp; Abdasa Taluka in record time. 26 pond deepening in Mundra and 7 pond deepening in Abdasa accomplished with all parameters calculated. In Mundra taluka 51723 cum excavation work has been done which increase storage capacity of 51 ML. In Naliya taluka 14550 cum excavation work has been done which increase storage capacity of 15 ML. Total 66 ML storage capacity</p>



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		<p>will be increased.</p> <p><b>Participatory Ground Water Management:</b> Adani foundation has started participatory ground water management project. The objective of the project was to reduce the salinity ingress in and around the coastal regions of Mundra, Kutchh and mitigate the ill-effects of this manmade problem to improve the livelihoods of the rural people. The Project will help to get water table high, also it will help in agricultural activities. As a part of pre monsoon activities with ACT (Arid Communities and Technologies – NGO) under this program, we have carried out following work. But, due to negligible rainfall we are not able to find out outcome of this project.</p> <ul style="list-style-type: none"> <li>i. Borana – Artificial bore well recharge (work completed)</li> <li>ii. Mangara – Artificial bore well recharge (work completed)</li> <li>iii. Dhrub – Pond deepening work (work completed)</li> <li>iv. Mota Kapaya – abandoned bore well recharge (work completed)</li> </ul> <p>With the objective of to preserve the rain water to reduce the impact of salinity and recharge the ground water (the main source of water) to facilitate the Agricultural activities as well as for drinking water.</p> <p>Under UTHHAN MODEL VILLAGE PROJECT, Salinity ingress issue is well taken with pond deepening, recharge bore well technique and roof top rain water harvesting. Total ground water recharged due to this project 1878 ML.</p> <p>Please refer <b>Annexure – 8</b> for full details of CSR activities carried out by Adani Foundation in the Mundra region. Budget for CSR Activity for the FY 2019-20 is to the tune of INR 2043 lakh. Out of which, Approx. INR 745 lakh are spent during this compliance period Apr'19 to Sep'19.</p> <p>It may be noted that the individual industrial units will also be encouraged for taking various initiatives for rainwater harvesting within their premises / in the villages around the SEZ area.</p>
x.	The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.	<p>Complied.</p> <p>Ground Water Monitoring is being carried out on regular basis in SEZ areas through NABL accredited and MoEF&amp;CC approved agency namely M/s. Pollucon Laboratories Pvt. Ltd.</p>

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		<p>Please refer Point No. v (General Condition: Construction Phase) for further details.</p> <p>It may be noted that the analysis results of ground water quality are submitted to CGWB, West Central region, Ahmedabad. Details of the same were submitted along with EC Compliance Report for the period Apr'18 to Sep'18.</p>
xi.	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.	<p>Complied.</p> <p>The entry and exit gates of SEZ and port are provided with ample parking area (210838 m<sup>2</sup>) near the gate. The entry / exit complex is fully equipped with traffic control equipments and round the clock security is provided for seamless support. No public space is utilized for parking of the vehicle. Details of the same were submitted along with half yearly EC Compliance Report for the period Apr'18 to Sep'18.</p>
xii.	A report on the energy conservation measures conforming to energy conservation norms finalized by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & D Factors etc. and submitted to the Ministry along with six monthly monitoring report.	<p>Complied</p> <p>Energy audit of port user buildings (including the details about building materials and technology etc.) is carried out once in three years. Last energy audit was done during Oct-2016. Report of the same is submitted to Chief Electrical officer, Gandhinagar. The said report was submitted to MoEF&amp;CC, RO, Bhopal as part of the compliance report for the period Apr – Sept, 2017.</p> <p>Some of the recommendations of these reports have already been implemented as follows.</p> <ul style="list-style-type: none"> <li>• Saving in PAC by overhauling with repairing damage fall ceiling and window curtain</li> <li>• Saving with Improving Power Factor</li> <li>• APFC Panel has already been installed and average PF maintained during last 2 months comes to 0.987</li> <li>• The system voltage at load end is being maintained 230V and therefore there is no need to install AVC</li> </ul>
xiii.	Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be an integral part of the project design and should be in place before project	<p>Complied</p> <p>Energy Conservation through Installation of Motion Sensor (Occu switch) &amp; AC Temp. controls in few of the buildings are provided. Measures for energy conservation are incorporated at design stage. Few of the buildings in MSTPL are designed as green building. Some features of the same are as below.</p> <ul style="list-style-type: none"> <li>• Used fly ash based cement and bricks</li> <li>• Special types of glasses were used which gives maximum</li> </ul>

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	commissioning. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines / rules of the regulatory authority to avoid mercury contamination. Solar panels may be used to the extent possible.	<p>sunlight and less heat</p> <ul style="list-style-type: none"> <li>• VOC free paint used certified by CII (Certificate of Indian Industries)</li> <li>• Water flow reducer installed in the entire building</li> </ul> <p>CFL / LED lighting are being used at various common areas of SEZ as well buildings and townships. Used CFL are collected and sent for recycling through authorized e-waste collection agency.</p> <p>APSEZ has installed &amp; commissioned 3.37 MW roof top solar plants within APSEZ and Township premises. APSEZ has also installed and commissioned 12 MW wind mill and whatever electricity generated is being supplied to grid. Details of the same were submitted along with last half yearly compliance report for the period Oct'18 to Mar'19.</p> <p>It may be noted that the individual industrial units will also be encouraged for taking various initiatives with respect to energy conservation (such as energy audit, installation of renewable energy sources, utilization of energy efficient fixtures etc.).</p>
xiv.	Adequate measures should be taken to prevent odour problems from solid waste processing plant and STP.	<p>Complied</p> <p>5R principals are adopted for sustainable waste management at APSEZ. Utmost care is being taken during the waste management and sewage /effluent treatment to ensure that there is no odour generation. Proper secondary treatment and disinfection is provided to the domestic sewage and treated sewage and then it is utilized for horticulture purpose. These measures ensure that odor problem is not created in the surrounding area. Furthermore, greenbelt on the periphery of the treatment plant as well as waste management sites help to prevent odour problems.</p>
xv.	The buildings should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.	<p>Complied.</p> <p>Presently, all the buildings have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation. The same practice will be continued in future also.</p> <p>It may be noted that the individual industrial units will also be encouraged for consideration of these design parameters.</p>

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<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>
xvi.	The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.	<p>Complied.</p> <p>Compliance report of all the environmental safeguards contained in the EIA report is attached as <b>Annexure – 3</b>.</p>
xvii.	Adequate drinking water facility be provided.	<p>Complied.</p> <p>Drinking water facility at approx. 200 locations within APSEZ area is provided.</p>
xviii.	Incremental pollution loads on the ambient air quality, noise and water quality should be periodically monitored after commissioning of the project.	<p>Complied.</p> <p>Environment Monitoring (air, noise, water, soil) is being carried out on regular basis in Port &amp; SEZ areas through NABL accredited and MoEF&amp;CC approved agency namely M/s. Pollucon Laboratories Pvt. Ltd.</p> <p>Please refer following condition nos. for further details.</p> <ul style="list-style-type: none"> <li>• v, viii &amp; xi of General Conditions – Construction Phase</li> <li>• iii of General Conditions – Operation Phase</li> </ul>
xix.	Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid system or fully solar system for portion of the apartments should be provided.	<p>Complied.</p> <p>APSEZ has installed &amp; commissioned 3.37 MW roof top solar plants within APSEZ and Township premises. APSEZ has also installed and commissioned 12 MW wind mill and electricity generated from it is being supplied to grid.</p> <p>Please refer condition no. xiii of the General Conditions – Operation Phase for further details.</p>
xx.	Ozone depleting substance (Regulation & Control) Rules should be followed while designing the air conditioning system of the project.	<p>Complied.</p> <p>APSEZ is not procuring air conditioning systems which use ozone depleting gases. All the HVAC systems are with Ozone friendly gases within APSEZ. All new air conditioning systems installed, if any, will be designed in line with Ozone depleting substance (Regulation &amp; Control) Rules.</p> <p>It may be noted that the individual industrial units will also be encouraged to follow Ozone depleting substance (Regulation &amp; Control) Rules while designing the air conditioning system of the project. The same will be implemented by individual unit as per project suitability.</p>

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12	Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional Office of MOEF, Bhopal.	<p>Complied.</p> <p>Full support is always extended to officers of regulatory authorities (including MoEF&amp;CC and GPCB) visiting the project site. The documents as per their requirements are provided to them.</p> <p>The communication documents like application Form – 1, ToR received from MoEF&amp;CC, Final EIA report, Public Hearing proceedings and recommendations of GCZMA are submitted to MoEF&amp;CC, RO, Bhopal for necessary records.</p>
13	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.	Point noted and agreed.
14	The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provision of the Environmental (Protection) Act, 1986, to ensure effective implementation of the safeguard measures in a time bound and satisfactory manner.	Point noted and agreed.
15	All other statutory clearances such as the approvals for storage of diesel from Chief	<p>Not Applicable at present.</p> <p>The mentioned approvals are not applicable to APSEZ since we are the infrastructure support provider. However, the applicable</p>

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<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>
	Controller of Explosives, Fire Department Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponent from the respective competent authorities.	approvals will be availed by the individual member industries prior to construction of work. The environment management committee will ensure strict adherence to the condition by the individual industries.
16	These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.	Point noted and agreed.
17	The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Clearance and copies of clearance letters are available with the Gujarat Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a> .	Complied  APSEZ has advertised Environmental and CRZ Clearance in two local newspapers "The Indian Express" (in English language) and "Kutch Mitra" (in vernacular language) on 24.07.14 (within 10 days from the date of receipt of the clearance letter) and copy of the same was submitted vide letter dated 05.08.2014 to Ministry of Environment, Forests & Climate Change, Bhopal.



	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>
	The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bhopal.	
18	Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004 as may be applicable to this project.	Point noted and agreed.
19	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Point noted and agreed.
20	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	<p>Complied</p> <p>Copy of clearance letter was sent to concerned Panchayats, Zilla Parishad, Urban Local Body, Local NGOs and from whom suggestion/representation received. Details regarding the same were submitted to the MoEF &amp; CC along with half yearly compliance report for the period from Apr – 2014 to Sep – 2014.</p> <p>Clearance letter is also put up on the website of the Adani ports <a href="https://www.adaniports.com/ports-downloads">https://www.adaniports.com/ports-downloads</a></p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>																					
21	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	<p>Complied.</p> <p>Compliance report of EC conditions is uploaded regularly. Last compliance report including results of monitoring data for the period of Oct'18 to Mar'19 was submitted to Regional Office of MoEF&amp;CC @ Bhopal, Zonal Office of CPCB @ Baroda, GPCB @ Gandhinagar &amp; Gandhidham and Dept. of Forests &amp; Env., Gandhinagar vide our letter dated 20.05.2019. Copy of the same is also available on our web site <a href="https://www.adaniports.com/ports-downloads">https://www.adaniports.com/ports-downloads</a>. A soft copy of the same was also submitted through e-mail on 27.05.2019 to all the concern authorities. Please refer below for the details regarding past six compliance submissions.</p> <table border="1"> <thead> <tr> <th><b>Sr. no.</b></th><th><b>Compliance period</b></th><th><b>Date of submission</b></th></tr> </thead> <tbody> <tr> <td>1</td><td>Apr'16 to Sep'16</td><td>01.12.2016</td></tr> <tr> <td>2</td><td>Oct'16 to Mar'17</td><td>30.05.2017</td></tr> <tr> <td>3</td><td>Apr'17 to Sep'17</td><td>01.12.2017</td></tr> <tr> <td>4</td><td>Oct'17 to Mar'18</td><td>29.05.2018</td></tr> <tr> <td>5</td><td>Apr'18 to Sep'18</td><td>30.11.2018</td></tr> <tr> <td>6</td><td>Oct'18 to Apr'19</td><td>31.05.2019</td></tr> </tbody> </table>	<b>Sr. no.</b>	<b>Compliance period</b>	<b>Date of submission</b>	1	Apr'16 to Sep'16	01.12.2016	2	Oct'16 to Mar'17	30.05.2017	3	Apr'17 to Sep'17	01.12.2017	4	Oct'17 to Mar'18	29.05.2018	5	Apr'18 to Sep'18	30.11.2018	6	Oct'18 to Apr'19	31.05.2019
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22	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.																						
23	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environmental (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance	<p>Complied.</p> <p>Environmental statement for each financial year is submitted to GPCB. The same for the FY ending 31.03.2018 in Form-V is submitted to GPCB vide our letter dated 10<sup>th</sup> May, 2018. Details of the same were submitted with last EC Compliance report for the period Apr'18 to Sep'18. Copy of the same is also available on our web site <a href="https://www.adaniports.com/ports-downloads">https://www.adaniports.com/ports-downloads</a>. A soft copy of the same was also submitted through e-mail to all the authorities vide e-mail dated 27.05.2019.</p>																					

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

<b>Sr. No.</b>	<b>Conditions</b>	<b>Compliance Status as on 30-09-2019</b>
	of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

# **ANNEXURE A**

## **Compliance Report of CRZ Recommendation**

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

**Note:**

With respect to the project components attracting CRZ recommendation from GCZMA, following points shall be noted:

- GCZMA has recommended the CRZ proposal for Sea Water Intake, Outfall system and Pipeline.
- Construction with respect to Desalination Plant, sea water intake and outfall system has not been started yet.
- Existing units are having requisite environmental permissions (from state or central body, as the case may be) for discharging their wastewater, if any, to the Common Effluent Treatment Plant of MPSEZ Utilities Pvt. Ltd. having 2.5 MLD capacity (having a separate individual environmental clearance).
- Treated waste water is being utilized within the premises of CETP and / or SEZ for the gardening / horticulture activities.
- As soon as the need for discharging the effluent / reject form the desalination plant into sea will arise, constriction work for the intake and outfall will be started.

In view of the above mentioned facts, the compliance to the conditions stipulated in the CRZ recommendation will be submitted to all the competent authorities when the construction and operation activities are initiated for the project components attracting CRZ recommendation.

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

## **Annexure – B**

# **Compliance Status of MoEF & CC Order dated 18.09.2015**

Based on the report submitted by Sunita Narain committee, MoEF&CC issued a Show Cause Notice (SCN) to APSEZ vide their letter dated 30.09.2013. APSEZ replied to the SCN vide letter dated 14.10.2013. Further, an order (containing 10 directions) was issued by MoEF&CC vide their letter dated 18.09.2015. Compliance to these 10 directions is mentioned below.



**Status of the conditions stipulated in Environment and CRZ Clearance**

<b>Sr. No.</b>	<b>Condition</b>	<b>Compliance Status</b>
i	The proposal of extension of the validity of environmental clearance granted to the North Port vide letter dated 12.01.2009 will be considered separately at later stage.	Complied  After receipt of this order, so far APSEZ has not done any application to MoEF&CC for the proposed North port.
ii	Bocha island, ecologically sensitive geomorphological features and areas in the island and creeks around the island will be declared as conservation zone action plan for its conservation must be prepared. M/s. APSEZ should provide necessary financial assistance for this purpose.	Complied  This reply covers condition no ii, iv and v.  Based on the MoEF&CC directions,  <ol style="list-style-type: none"> <li>1. APSEZ, vide letter dtd. 19<sup>th</sup> October 2015 (Copy attached as <b>Annexure 9</b>) had requested GCZMA, for consideration of project for finalization of ToR for NCSCM.</li> <li>2. Project was considered on 28<sup>th</sup> GCZMA meeting, scheduled on 22<sup>nd</sup> April 2016, where ToR was discussed and agreed, upon - Copy of the minutes (Page No. 38 &amp; 39) are enclosed as <b>Annexure 10</b>.</li> <li>3. APSEZ, vide its letter dtd. 25<sup>th</sup> April 2016, (Copy enclosed as <b>Annexure 11</b>) submitted the proposal to GCZMA along with Scope of work, as submitted by NCSCM.</li> <li>4. Service Order was issued to NCSCM vide SO dtd. 29<sup>th</sup> Aug 2016 (Copy enclosed as <b>Annexure 12</b>). Cost of the study as per the NCSCM proposal was 315.5 Lakh and 90% of payment has already paid to NCSCM.</li> <li>5. NCSCM has carried out number of site surveys during the period, February 2017 – April 2018 as per the defined scope</li> <li>6. The study report was submitted to GCZMA (with a copy to MoEF&amp;CC vide letter dated 04.06.2018) <b>Annexure - 13</b> for their consideration and recommendation if any.</li> <li>7. A reminder letter has been submitted to GCZMA vide letter dated 4<sup>th</sup> Jan 2019. <b>Annexure – 14</b>. As informed by concerned officials, at present GCZMA committee</li> </ol>
iv	A comprehensive and integrated study and protection of creeks/ mangrove area including buffer zone, mapping of co-ordinates, running length,	

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status
	HTL, CRZ boundary, will be put in place. The plan will take note of all the conditions of approvals granted to all the project proponents in this area e.g. the reported case of disappearance of mangroves near navinal creek. The preservation of entire area to maintain the fragile ecological condition will be a part of the plan in relation to the creeks, mangrove conservation and conservation of bocha island up to baradimata and others.	<p>has been dissolved, hence project will be considered after reformation of GCZMA committee.</p> <p>The site survey carried out by NCSCM includes:</p> <ol style="list-style-type: none"> <li>1. Bathymetry survey of creeks</li> <li>2. Topography survey of intertidal areas</li> <li>3. Mangrove survey (health and area demarcation)</li> <li>4. Sampling of soil and water for analysis of physico-chemical and biological parameters</li> <li>5. Tide and currents data collection (including residence time of tidal water)</li> <li>6. Focus Group Discussions with the community in the close vicinity of the project area</li> </ol> <p>In addition to the site surveys, NCSCM has procured satellite images for analysis of mangrove cover.</p> <p>The data collected (through site surveys and analysis of satellite maps) was used as input for mathematical modelling. The modelling studies were carried out to understand the impacts of the development activities. Based on the outcome of the modelling studies the necessary conservation plan for protection of creeks and mangrove areas is prepared.</p> <p>Based on the final study report, outcome is summarized in to following points :</p> <ol style="list-style-type: none"> <li>1. There is no obstruction to any water stream (creeks / branches of creeks / rivers)</li> <li>2. Presently, mangrove cover in and around APSEZ is over 2340 ha. There is substantial growth in mangrove cover to the tune of 246 ha (comparison between 2011 and 2016-17)</li> <li>3. Mundra has undergone substantial development during this tenure. Hence it can be interpreted that the infrastructure development has not left any adverse impacts on ecology.</li> </ol> <p>The NCSCM study report was submitted to GCZMA (with a copy to MoEF&amp;CC vide letter dated 04.06.2018) for their consideration and recommendation if any.. Presentation on the findings of the report was made to GCZMA committee on 4<sup>th</sup> October 2019 and same has been approved vide MOM published by GCZMA</p>
v	NCSCM will prepare the plan in consultation with NIOT, PP and GCZMA. In recognition of the fact that the existing legal provisions under the E(P) Act 1986 do not provide for any authority to impose ERF by the government, the plan will be financed by the	

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status
	PP. the implementation will be carried out by GCZMA. The monitoring of the implementation will be carried by NCSCM.	For demarcation of HTL and CRZ areas, NCSCM is under process of finalizing CZMP for this area. Once the maps are finalized, NCSCM will issue the final maps for the project area of APSEZ. The said maps will then be submitted to GCZMA and MoEF&CC by APSEZ.
iii	The violations of specific condition of all the ECs and CRZ clearances, if any, will be examined and proceeded with the provisions of EP Act, 1986 independently.	<p>Complied</p> <p>Regional Officer, MoEF&amp;CC, Bhopal visited APSEZ on 21-22 December'16 for monitoring the implementation of environmental safeguards.</p> <p>APSEZ was also visited by RO, MoEF&amp;CC Bhopal on 3<sup>rd</sup> May, 2018 for compliance verification. APSEZ provided all requisite information and documents required by the Regional Officer. During the said compliance verification visit, and as per the compliance certificate by Ro-MOEF&amp;CC vide dated, 07<sup>th</sup> June 2018, there was no major non-compliance observed.</p> <p>Regional Office MoEF&amp;CC, Bhopal, officer had visited the site on 3<sup>rd</sup> &amp; 4<sup>th</sup> Sep, 2019 in compliance of the order of the Hon'ble HIGH COURT of Gujarat vide letter dated 22<sup>nd</sup> Aug. 2019 w.r.t. compliance verification of MoEF&amp;CC order dated 18<sup>th</sup> Sep, 2015. APSEZ had provided all requisite information and documents required by the Officer.</p> <p>It may also be noted that GPCB, Regional Office does regular site visit for various components. During the compliance period (Apr'19 – Sep'19), there was no any site visit done through SPCB w.r.t. MSEZ project.</p>
vi	There will be no development in the area restricted by the High court of Gujarat. APSEZ shall abide by the outcome of the PIL 12 of 2011 and other relevant cases.	<p>Complied</p> <p>The order passed by Hon' ble high court in context of PIL 12 of 2011 vide dated 10<sup>th</sup> Nov 2011. Subject PIL has been disposed off by Hon'ble High Court vide their order dated 17.04.2015 and now there is no restriction on development in the subject area. The order reads as <i>"In view of the aforesaid discussion, we do not find any merit in this writ petition. This writ petition fails and is accordingly dismissed. No order as to cost."</i> Copy of the order was submitted along with last EC Compliance report for the period Apr'18 to Sep'18.</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status
		Considering the above status and in line to submission of compliance of all the directions under this order, this condition is closed.
vii	APSEZ will submit specific action plan to protect the livelihood of fishermen along with budget.	<p>Complied.</p> <p>Adani Foundation (AF) is the CSR arm of the Adani Group actively working for upliftment of the communities in the surroundings of various project sites of Adani Group. AF has prepared a specific action plan to protect livelihood of fishermen at Mundra.</p> <p>Various initiatives, as stated below are discussed in detail in the report namely "Silent Transformation of Fisher folk at Mundra". Said report also includes the information related to the planned expenses to the tune of approx. 13.5 Cr. INR for various initiatives for the next five years (2016 – 2021) (Budget details provided in Page No. 68 of report). <b>Copy of the same is already submitted to MoEF&amp;CC vide our letter dated 10.09.2016.</b></p> <p>Till, Sep 2019, approx. 7.049 Cr. INR has already been invested. Further, details regarding the expenditure incurred against the commitment are attached as <b>Annexure – 15</b>.</p> <p>APSEZ is carrying out various initiatives specific to the Fisherfolk community which includes:</p> <ul style="list-style-type: none"> <li>• <b>Vidya Deep Yojana</b> Developing school preparedness programme and empowering balwadis at fisherfolk settlement Under this scheme, 4 balwadis at different settlement has been constructed This programme include nutrition food, hygiene, awareness of health, cleanliness, discipline, regularity and development of basic age appropriate conception</li> <li>• <b>Vidya Sahay Yojana – Scholarship Support</b> All basic education supportive facilities have been created to promote education in fisher folk community.</li> <li>• <b>Adani Vidya Mandir</b> Childred of the family with the income of salary less than 1.5 lac/annum are admitted School focusses on nutrition food, uniform and other services to the children for free.</li> <li>• <b>Fisherman Approach in SEZ</b> After due consultative process, APSEZ has provided 7 fishermen access roads for to approach to the sea for fishing activity.</li> <li>• <b>Machhimar Arogya Yojana</b> The Fisher folk communities are disposed to several water and air</li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status
		<p>abided diseased due to exposure to unhygienic working conditions. Frequently Special Health care Camps are organized at Vasahat. Our Mobile health care unit van regularly visit fisher folk settlements</p> <ul style="list-style-type: none"> <li> <b>Machhimar Kaushalya Vardhan Yojana</b>  Based on need assessment a number of trades were introduced through the Adani Skill Development Centre in Mundra, where in fisher folk youth could join and get a number of technical and non-technical training </li> <li> <b>Machhimar Sadhan Sahay Yojana</b>  Fishing material support was provided by AF at Mundra as per the requests of Pagadiya fishermen. According to their needs, fishing nets, ropes, buoys, ice boxes, crates, weighing scales, anchors, solar lights etc., were provided </li> <li> <b>Machhimar Awas Yojana</b>  Shelters, equipped with basic facilities of a toilet and pure drinking water have been constructed for living while fishing and to provide a healthy and hygienic residence. </li> <li> <b>Machhimar Shudhh Jal Yojana</b>  This scheme of providing potable water has helped in reducing the drudgery of women and contributed largely towards general wellbeing </li> <li> <b>Sughad Yojana</b>  Toilets for men and women are constructed at all three Vasahats. Infrastructure was accompanied with continuous awareness campaign on hygiene sanitation and use of toilets in particular. </li> <li> <b>Machhimar Akshay kiran Yojana</b>  Solar street lights at each settlement have been installed. For fish landing shed and school extension room have been fitted with solar inverter allowing late evening video shows for awareness and fish sorting work at ease. </li> <li> <b>Machhimar Suraksha Yojana</b>  Distance Alarm Transmission System – DATS' project was introduced in order to promote safety of the fishermen. Forced to be at sea to earn their livelihood puts the lives of many fishermen at risk </li> <li> <b>Machhimar Ajivika Uparjan Yojana</b>  Mangrove plantation in the area as means of alternate income generating activity for the fisher folk community during the non-fishing months.  During the non-fishing months, the fishermen under usual circumstances were benefited by other alternate economic activity to sustain them. </li> <li> <b>Bandar Svachhata Yojana</b>  Waste bins have been provided for proper collection and segregation of waste. </li> </ul> <p>Further, APSEZ is actively working with local community (including fishermen community) around the project area and provides required support for their livelihood and other concerns through the CSR arm – Adani Foundation. Brief information about activities in the main five persuasions is mentioned below.</p>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status																																													
		<table><tr><th>Area</th><th>Activity</th></tr><tr><td rowspan="10">Community Health</td><td><ul style="list-style-type: none"><li>11 Rural Clinic-8 from Mundra &amp; 3 from Anjar block treated; <b>10889</b> patients.</li><li>31 villages covered through Mobile healthcare unit <b>7902</b> patients benefited during six month.</li><li>19 General Health Camp conducted - 12 General &amp; 7 under Utthan project; <b>2873</b> patients treated.</li><li><b>498</b> Needy patient benefited through Medical support Total amount of support is <b>Rs.4,02,201/-</b>.</li><li>Sr. Citizen Project <b>8672</b> Card holders of 68 villages get benefit under this project. <b>4713</b> sr. citizen patients benefited during six month <b>30000</b> limit for three year per patients.</li><li>First Medical College of Kutch district based on PPP model. It started from 2009. Affiliate with "Krantiguru Shyamji Krishna Verma Kutch University"</li><li><b>750 bed– Largest Multi Specialty Hospital in kutch.</b></li><li>Adani foundation, Adani Hospital and GAIMS have Jointly Celebrated "Arogya Saptah "8<sup>th</sup> to 14<sup>th</sup> August 2019 in Respect of 73<sup>th</sup> Independence of our country. – Approximately <b>4500</b> people will be direct beneficiaries of the program.</li></ul></td></tr><tr><td><table><tr><th>Day</th><th>Date</th><th>Event Name</th><th>Beneficiaries</th></tr><tr><td>1</td><td>07/08/2019</td><td>Health check up at Orphan age, Bhuj</td><td>101</td></tr><tr><td>2</td><td>08/08/2019</td><td>Blood Donation Camp, Nakhatrana</td><td>55</td></tr><tr><td>3</td><td>09/08/2019</td><td>Pregnant Women health check up, Madhapar</td><td>50</td></tr><tr><td>4</td><td>10/08/2019</td><td>Surgical Mega Camp, Khavda</td><td>223</td></tr><tr><td>5</td><td>11/08/2019</td><td>General Health Camp, Palera Jail</td><td>139</td></tr><tr><td>6</td><td>12/08/2019</td><td>Ayushman Health Card Enrolment, Gorevali</td><td>52</td></tr><tr><td>7</td><td>13/08/2019</td><td>Awareness on women health, mukt jivan college, Bhuj</td><td>250</td></tr><tr><td>8</td><td>14/08/2019</td><td>Blood Donor Appreciation</td><td>36</td></tr></table></td></tr><tr><td rowspan="10">Sustainable Livelihood – Fisher folk</td><td><ul style="list-style-type: none"><li>Average <b>70</b> KL of water was supplied to <b>983</b> households at 4 fisherman vasahat on a daily basis under Machhimar Shudhh Jal Yojana.</li><li>Adani Foundation constructed four Balwadis for kids between the age group of 2.5 years to 5 years at different settlements under Vidya Deep Yojana. <b>125</b> children are benefiting from this scheme.</li><li><b>115</b> students are getting benefit of vehicle transportation support from different Bandar.</li><li>100% girls &amp; 80% boys providing scholarship support to motivate and encourage fishermen boys and girls for higher education. Book support <b>49 Fisherman Students</b> of Higher Secondary Standard (9to12) has been benefitted.</li><li>Mangrove Plantation, moss cleaning, etc.: <b>4300 Man-days</b>.</li><li><b>Biodiversity Project</b>:-Project started with two spices of mangroves which has good survival rate &amp; Plantation at site– <b>70 % Survival Total 4Hector Plantation</b>.</li><li><b>Sea Weed Culture</b>: Sea Weed Culture is going on. Seed bank preparation is going on under guidance of VRTI.</li></ul></td></tr><tr><td rowspan="10">Education</td><td><ul style="list-style-type: none"><li>Adani foundation adopted <b>17 government school</b> located at Mundra Taluka under the project '<b>UTTHAN</b>' a drive of quality education.</li><li>One teacher–One school + Sports teacher + IT teacher</li><li>'IT on Wheel 'Van with <b>35 laptops and computer</b> instructor make students more tech savvy and spreading the digital and technology knowledge amongst the younger generation.</li></ul></td></tr></table>	Area	Activity	Community Health	<ul style="list-style-type: none"><li>11 Rural Clinic-8 from Mundra &amp; 3 from Anjar block treated; <b>10889</b> patients.</li><li>31 villages covered through Mobile healthcare unit <b>7902</b> patients benefited during six month.</li><li>19 General Health Camp conducted - 12 General &amp; 7 under Utthan project; <b>2873</b> patients treated.</li><li><b>498</b> Needy patient benefited through Medical support Total amount of support is <b>Rs.4,02,201/-</b>.</li><li>Sr. Citizen Project <b>8672</b> Card holders of 68 villages get benefit under this project. <b>4713</b> sr. citizen patients benefited during six month <b>30000</b> limit for three year per patients.</li><li>First Medical College of Kutch district based on PPP model. 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Book support <b>49 Fisherman Students</b> of Higher Secondary Standard (9to12) has been benefitted.</li><li>Mangrove Plantation, moss cleaning, etc.: <b>4300 Man-days</b>.</li><li><b>Biodiversity Project</b>:-Project started with two spices of mangroves which has good survival rate &amp; Plantation at site– <b>70 % Survival Total 4Hector Plantation</b>.</li><li><b>Sea Weed Culture</b>: Sea Weed Culture is going on. Seed bank preparation is going on under guidance of VRTI.</li></ul>	Education	<ul style="list-style-type: none"><li>Adani foundation adopted <b>17 government school</b> located at Mundra Taluka under the project '<b>UTTHAN</b>' a drive of quality education.</li><li>One teacher–One school + Sports teacher + IT teacher</li><li>'IT on Wheel 'Van with <b>35 laptops and computer</b> instructor make students more tech savvy and spreading the digital and technology knowledge amongst the younger generation.</li></ul>
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**Status of the conditions stipulated in Environment and CRZ Clearance**

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		<ul style="list-style-type: none"><li>With the intervene of our Sports teacher in all Utthan Schools successfully enrolled <b>500+ students</b> in Khel Mahakumbh.</li><li>Utthan Sahayak <b>+1222 students</b> from High school &amp; Higher secondary of 6 villages celebrate Fifth International Yoga Day.</li><li>Adani Vidya Mandir: provide “cost-free” education to meritorious students coming from challenging economic background, who have priceless treasures but have been under achievers due to situation. In year 2019-20 <b>450 students</b> are studying.</li><li><b>250 institutes</b> and <b>15,329 beneficiaries</b> have made inspirational visit of Adani Port, Power abd Wilmar during this six months under Project UDAAN.</li></ul>																								
	Rural Infrastructure	<p><b>WORK COMPLETED</b></p> <ul style="list-style-type: none"><li>Water Conservation Works:<ul style="list-style-type: none"><li>✓ Pond deepening work in Baroi, Luni &amp; Zarpara villages</li><li>✓ Mota Bhadiya Check Dam desilting work</li><li>✓ Lakhpatt Godhatal dam desilting work</li><li>✓ Mota Bhadiya artificial bore well recharge -2 no's</li></ul></li><li>Protection Compound wall at Navinal Village</li><li>Garden development – Hanuman Temple Baroi</li><li>Fixing of Street Light<ul style="list-style-type: none"><li>✓ 30 LED Street light Bhopawandh</li><li>✓ 20 LED Street light Mundra</li><li>✓ 50 LED Street Light at Bhorara</li></ul></li><li>Construction of Prayer Shed at AVMB</li><li>Garden Development work at-Bhujpur Village.</li><li>Construction of R.O. Plant Room at Primary School sadau Village</li><li>Drainage maintenance.</li><li>Renovation of ITI at Mundra work in Progress.</li></ul> <p><b>WORK INPROGRESS</b></p> <ul style="list-style-type: none"><li>Renovation of Bavadi at Bavadi Bandar</li><li>DevelopmentofCommunityTrainingHallatMundra&amp;Goyarsama</li><li>Fisherman Room at Navinal &amp; Zarpara Vasahat</li></ul>																								
	Skill Development	<ul style="list-style-type: none"><li>Soft skill training – 437 Nos.</li><li>Technical Training – 206 Nos.</li></ul> <table><tr><td></td><td>Digital Literacy</td><td>Self Employed Tailor</td><td>Beauty Therapist</td><td>Spoken English</td><td>Junior Operator Crane</td><td>Excel Training</td><td>RTG Crain Operator</td></tr><tr><td>Male</td><td>189</td><td>0</td><td>0</td><td>45</td><td>60</td><td>11</td><td>24</td></tr><tr><td>Female</td><td>156</td><td>22</td><td>100</td><td>36</td><td>0</td><td>0</td><td>0</td></tr></table>		Digital Literacy	Self Employed Tailor	Beauty Therapist	Spoken English	Junior Operator Crane	Excel Training	RTG Crain Operator	Male	189	0	0	45	60	11	24	Female	156	22	100	36	0	0	0
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		Please refer <b>Annexure – 8</b> for full details of CSR activities carried out by Adani Foundation in the Mundra region. Budget for CSR Activity for the FY 2019-20 is to the tune of INR 2043 lakh. Out of which, Approx. INR 745 lakh are spent during this compliance period Apr'19 to Sep'19.																								
viii	APSEZ will voluntarily return the grazing land, if any, in their possession.	Point noted.  All lands are acquired through proper procedure prescribed by State Government. However APSEZ has agreed for voluntarily giving 400 acres of land back to Zarpara village for the																								

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Condition	Compliance Status
		purpose of Gauchar. 400 acres of land has been identified in the presence and confirmation of Gram Panchayat. Necessary procedure has been initiated by APSEZ vide its letter dated 09 <sup>th</sup> Aug 2012 (copy enclosed as <b>Annexure 16</b> ) with concerned revenue authority with respect to surrender of 400 acre gauchar land at village Zarpara. Same has been taken up by revenue department for necessary procedure of transfer and is under process.
ix	A regional strategic impact assessment report with a special focus on Mundra region will also be prepared. The cost towards these studies will also be borne by PP.	Complied
x.	In the subject matter of thermal power plant, the proposed regional strategic Impact assessment analysis will take in to account salinity aspect along with its potential environmental Impact to suggest future corrective actions as well as the guiding tool on extension and addition of the capacities.	<p>This reply covers direction no ix and x.</p> <ol style="list-style-type: none"> <li>1. APSEZ vide its letter dtd. 24<sup>th</sup> Feb 2014 (copy enclosed as <b>Annexure 17</b>) has submitted draft ToR for preparation of CIA report to GCZMA for their approval.</li> <li>2. GCZMA vide its letter dtd. 19<sup>th</sup> Dec 2014 (copy enclosed as <b>Annexure 18</b>), has approved ToR for CIA.</li> <li>3. Based on the ToR finalized by GCZMA (as per the instructions of MoEF&amp;CC) for carrying out regional impact assessment study, APSEZ awarded the work to NABET accredited consultant M/s. Cholamandalam MS Risk Services Ltd. to carry out the studies, vide SO dtd 10<sup>th</sup> Feb 2016 (copy enclosed as <b>Annexure 19</b>) as stated in these directions.</li> <li>4. Primary baseline environmental monitoring data collection during March – June 2016 and published secondary data on various environmental attributes have been considered for the study.</li> <li>5. The study has been concluded and the final report was submitted to GCZMA and MoEF&amp;CC for their consideration vide our letter dated 30.04.2018, <b>Annexure - 20</b>.</li> <li>6. Reminder letter has been submitted to GCZMA for their comments and consideration vide letter dated 4<sup>th</sup> Jan 2019 <b>Annexure - 21</b>. GCZMA committee has been dissolved, hence project will be considered after reformation of GCZMA committee.</li> </ol> <p>Total cost of the study is approx. INR 1.3 cr. which is financed by APSEZ. 90% of the payment has already been made.</p> <p>The stated study was carried out in following 3 phases</p> <ul style="list-style-type: none"> <li>• Baseline data collection and review of the past EIA reports and clearances issued to APSEZ.</li> </ul>

**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Condition	Compliance Status
		<ul style="list-style-type: none"> <li>• Mathematical modelling and other technical studies for identification of potential impacts (for the year 2030) of the approved and existing project activities.</li> <li>• Development of macro level EMP for the phase wise implementation of actionable points.</li> </ul> <p>As part of the study, following modelling exercises / technical studies have been carried out to study the impacts on all environmental attributes:</p> <ul style="list-style-type: none"> <li>• Ambient air quality</li> <li>• Marine (Hydrodynamic, Thermal &amp; Salinity dispersion, Sediment transport)</li> <li>• Noise level</li> <li>• Traffic assessment</li> <li>• Oil spill contingency plan</li> <li>• Water resource and salinity ingress</li> <li>• Land Use / Land Cover</li> <li>• Socioeconomic, Regional infrastructure</li> <li>• Waste management</li> <li>• Ecology, Bio diversity and Fisheries</li> <li>• Shoreline change assessment</li> </ul> <p>Preparation of these reports require extensive use of modelling software and study of the available information / research reports to assess the impacts on individual attribute of environment. Based on the modelling outcomes and findings of the technical studies, a macro level environment management plan is prepared.</p> <p>Inline to the present stage of the project, APSEZ is already complying, as per Environment Management Plan and further recommendations, applicable to APSEZ as mentioned in the EMP, wrt Traffic Management Plan, Ground water quality management, Salinity ingress programme, Air and Noise quality Management, Surface and Marine water quality management, Ecology and Biodiversity Management, Solid &amp; Hazardous waste management, Socio-economic Management and Shoreline Management, will be implemented in phase wise manner as per the progress of development within the boundary limits of APSEZ.</p> <p>The final CIA study report was submitted to GCZMA and MoEF&amp;CC for their consideration vide our letter dated 30.04.2018. Details of the same were submitted along with half yearly EC Compliance report for the period Apr'18 to</p>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'19 To : Sep'19</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

<b>Sr. No.</b>	<b>Condition</b>	<b>Compliance Status</b>
		Sep'18. Presentation on the findings of the report was made to GCZMA committee on 4th October 2019 and after detailed discussion, authority has decided to constitute committee of members, to verify the report in detail.

# **Annexure – 1**

## **Details of Greenbelt development at APSEZ, Mundra**

LOCATION	Total Green Zone Detail Till Up to Sept - 20 19				
	Area (In Ha.)	Trees (Nos.)	Palm (Nos.)	Shrubs (SQM)	Lawn (SQM)
SV COLONY	69.53	32480.00	7298.00	68327.00	95019.00
PORT & NON SEZ	81.37	146692.00	19220.00	75061.78	61937.38
SEZ	116.60	227120.00	20489.00	220583.60	28162.03
MITAP	2.48	8168.00	33.00	3340.00	4036.00
WEST PORT	94.33	206587.00	63331.00	24112.00	22854.15
AGRI PARK	8.94	17244.00	1332.00	5400.00	2121.44
SOUTH PORT	14.45	27530.00	3470.00	3882.00	3327.26
Samudra Township	55.93	53672.00	11834.00	20908.89	47520.07
Productive Farming (Vadala Farm)	23.79	27976.00	0.00	0.00	0.00
<b>TOTAL (APSEZL)</b>	<b>467.40</b>	<b>747469.00</b>	<b>127007.00</b>	<b>421615.27</b>	<b>264977.33</b>
		<b>874476.00</b>			



## **Details of Mangrove Afforestation done by APSEZ**

Sl. no.	Location	Area (ha)	Duration	Species	Implementation agency
1	Mundra Port	24.0	-	Avicennia marina	Dr. Maity, Mangrove consultant of India
2	Mundra Port	25.0	-	Avicennia marina	Dr. Maity, Mangrove consultant of India
3	Luni/Hamirmora (Mundra, Kutch)	160.8	2007 - 2015	Avicennia marina, Rhizophora mucronata, Ceriops tagal	GUIDE, Bhuj
4	Kukadsar (Mundra, Kutch)	66.5	2012 - 2014	Avicennia marina	GUIDE, Bhuj
5	Forest Area (Mundra)	298.0	2011 - 2013	Avicennia marina	-
6	Jangi Village (Bhachau, Kutch)	50.0	2012 - 2014	Avicennia marina	GUIDE, Bhuj
7	Jakhau Village (Abdasa, Kutch)	310.6	2007-08 & 2011-13	Avicennia marina, Rhizophora mucronata, Ceriops tagal	GUIDE, Bhuj
8	Sat Saida Bet (Kutch)	255.0	2014-15 & 2016-17	Avicennia marina & Bio diversity	GUIDE, Bhuj
9	Dandi Village (Navsari)	800.0	2006 - 2011	Avicennia marina, Rhizophora mucronata, Ceriops tagal	SAVE, Ahmedabad
10	Talaza Village (Bhavnagar)	50.0	2011-12	Avicennia marina	SAVE, Ahmedabad
11	Narmada Village (Bhavnagar)	250.0	2014 - 2015	Avicennia marina	SAVE, Ahmedabad
12	Malpur Village (Bharuch)	200.0	2012-14	Avicennia marina	SAVE, Ahmedabad
13	Kantiyajal Village (Bharuch)	50.0	2014-15	Avicennia marina	SAVE, Ahmedabad
14	Devla Village (Bharuch)	150.0	210-16	Avicennia marina	SAVE, Ahmedabad
15	Village Tala Talav (Khambhat, Anand)	100.0	2015 - 2016	Avicennia marina	SAVE, Ahmedabad
16	Village Tala Talav (Khambhat, Anand)	38.0	2015 - 2016	Avicennia marina	GEC, Gandhinagar
17	Aliya Bet, Village Katpor (Hansot, Bharuch)	62.0	2017-18	Avicennia marina & Rhizophora spp.	GEC, Gandhinagar
<b>Total Mangrove Plantation:</b>		<b>2889.90 Ha</b>			

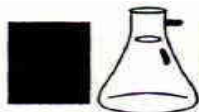
# **Annexure – 2**

## Compliance Report of EMP & Mitigation Measures

Sr. No.	Suggested Measures	Compliance Status
<b>Construction Phase:</b>		
<b>A</b>	<b>Air Environment</b>	
1	Water sprinkling in vulnerable areas	Water sprinkling on road and other construction area as well as on construction materials is being carried out on regular bases.
2	Enforce proper maintenance of vehicles and construction equipment. Allowing only PUC approved vehicles in the site.	Please refer Condition No. ix of Part-B (General Conditions Construction phase) of EC and CRZ Clearance.
3	Enforce usage of covered trucks for transport of construction material.	Covered trucks are being used for handling of construction materials.
<b>B</b>	<b>Noise Environment</b>	
4	Enforce proper maintenance of vehicles and construction equipment. Enforce use of earmuffs / earplugs to workers in high noise level areas.	The vehicles of on-going construction work enter inside the premises after the fitness check. Ear protection device is provided to workers in high noise areas.
<b>C</b>	<b>Water Environment</b>	
5	Provide temporary drinking water supply and proper sanitation facilities within the site	Provision of drinking water and sanitation facility is being provided.
<b>D</b>	<b>Land / Soil Environment</b>	
6	Proper disposal of construction debris at regular intervals	Construction debris is being kept at identified temporary storage area and is being utilized for area development.
<b>E</b>	<b>Thermal Environment</b>	
7	Enforce (i) use of Portland Pozzallano Cement / (ii) use of Portland Slag Cement / (iii) use fly ash as admixture in construction	Part of fly ash generated from Adani Power Limited, Mundra is being utilized by Adani Group to manufacture paver blocks and the same paver blocks are used for development of back up area, footpath, colonies area, parking area, approach road etc.  Please refer Condition No. xi of Part-B (General Conditions: Construction phase) of EC and CRZ Clearance.
<b>F</b>	<b>Energy</b>	
8	Wherever possible, piping shall be along the natural topography to permit gravity flow. Else, energy efficient pumps shall be used. Pipe material	Energy efficient pumps and HDPE Pipelines are used for supply of utilities. Refer point no. xii of EC & CRZ Clearance in Part – B (Operation Phase)

Sr. No.	Suggested Measures	Compliance Status
	shall be such as to minimize friction losses.	for energy efficient electrical fittings. Few of the buildings in MSTPL are designed as green building.
9	Wherever possible, natural light shall be used. Energy efficient electrical fittings and fixtures shall be used.	
🔧 Operation Phase:		
A	Land / Soil Environment	
1	Good quality non-corrosive type pipeline should be used. Regular checking of the pipelines for early detection of any possible leakage and damage. Regular ground water monitoring should be done within the SEZ.	HDPE pipelines are used for supply of utility. Regular visual surveillance along the utility lines corridor is being done to check leakage or damage.  Third party analysis of the ground water is being carried out at every three month by NABL and MoEF&CC accredited agency namely M/s. Pollucon Laboratories Pvt. Ltd.  Please refer Condition No. v of Part-B (General Conditions: Construction phase) of EC and CRZ Clearance.
2	The waste should be transported in covered trucks. Vermi-composting is highly recommended for treatment and disposal of biodegradable and kitchen wastes. Other domestic solid waste (garbage) shall be disposed through MSW facility or as per prevailing norms.	Please refer Condition No. iv of Part-B (General Conditions: Construction phase) of EC and CRZ Clearance.
3	The waste should be transported in covered trucks. Transporter should be informed of remedial measures required to be taken in case of spillage of waste	Waste handling vehicles are being handled through covered trucks only. Details were submitted along with compliance report submission i.e. Apr'17 to Sep'17.
B	Socio-Economic Environment	
4	It will encourage development of surrounding areas & further generate employment. People from various cultures shall mingle encouraging a more tolerant society.	Please refer Condition No. vii of Annexure – B (Compliance Status of MoEF & CC Order dated 18.09.2015).

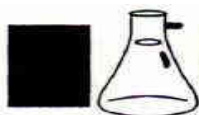
# **Annexure – 3**

**POLLUCON****LABORATORIES PVT. LTD.**Environmental Auditors, Consultants & Analysts.  
Cleaner Production / Waste Minimization Facilitator

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

# **"HALF YEARLY ENVIRONMENTAL MONITORING REPORT"**

**FOR****ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED  
TAL: MUNDRA, KUTCH, MUNDRA – 370 421****MONITORING PERIOD:  
APRIL 2019 TO SEPTEMBER 2019****PREPARED BY:****POLLUCON LABORATORIES PVT.LTD.****PLOT NO.5/6 "POLLUCON HOUSE", OPP. BALAJI INDUSTRIAL SOCIETY,  
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E-mail: [pollucon@gmail.com](mailto:pollucon@gmail.com) Web: [www.polluconlab.com](http://www.polluconlab.com)****TC - 5945****ISO 9001:2015****ISO 14001:2015****OHSAS 18001:2007**

**POLLUCON** LABORATORIES PVT. LTD.Environmental Auditors, Consultants & Analysts.  
Cleaner Production / Waste Minimization Facilitator

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

**RESULT OF AMBIENT AIR QUALITY MONITORING**

WTP- NEAR CETP					
Sr. No.	Date of Sampling	Particulate Matter (PM <sub>10</sub> ) µg/m <sup>3</sup>	Particulate Matter (PM <sub>2.5</sub> ) µg/m <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> ) µg/m <sup>3</sup>	Oxides of Nitrogen (NO <sub>2</sub> ) µg/m <sup>3</sup>
1	02/04/2019	85.77	40.18	16.59	33.45
2	03/04/2019	74.65	36.28	14.56	30.42
3	08/04/2019	82.43	44.26	21.37	27.67
4	10/04/2019	78.61	33.37	17.55	31.27
5	15/04/2019	69.33	39.60	20.26	25.61
6	17/04/2019	80.38	49.41	18.59	32.67
7	22/04/2019	75.63	34.24	22.42	38.68
8	24/04/2019	93.37	51.61	19.31	35.65
9	29/04/2019	84.27	35.65	26.19	43.57
10	01/05/2019	86.36	53.48	25.68	46.32
11	06/05/2019	75.68	37.57	18.34	29.49
12	09/05/2019	96.21	56.39	27.51	37.46
13	13/05/2019	89.38	40.18	15.33	34.54
14	15/05/2019	93.4	54.23	19.42	38.24
15	20/05/2019	88.26	47.58	16.56	40.54
16	22/05/2019	79.63	35.45	23.6	31.56
17	27/05/2019	87.58	43.42	20.29	28.68
18	29/05/2019	78.66	38.56	28.44	44.77
19	03/06/2019	81.67	47.66	18.29	31.3
20	05/06/2019	78.25	36.53	24.48	35.64
21	10/06/2019	86.26	50.41	21.25	40.21
22	17/06/2019	80.28	43.59	14.19	34.56
23	19/06/2019	70.32	30.42	19.35	27.7
24	24/06/2019	87.52	46.25	22.97	32.6
25	26/06/2019	75.62	38.48	17.5	38.66
26	01/07/2019	71.27	36.24	25.47	46.47
27	03/07/2019	90.46	46.29	20.46	42.59
28	08/07/2019	63.47	28.67	23.44	29.02
29	10/07/2019	83.31	35.36	19.49	38.61
30	15/07/2019	76.33	42.59	21.26	27.52

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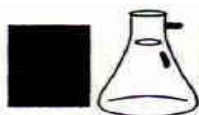
H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)



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WTP- NEAR CETP					
Sr.No.	Date of Sampling	Particulate Matter (PM10) µg/m3	Particulate Matter (PM2.5) µg/m3	Sulphur Dioxide (SO2) µg/m3	Oxides of Nitrogen (NO2) µg/m3
31	17/07/2019	81.24	45.67	16.39	33.54
32	22/07/2019	72.65	39.22	26.25	41.51
33	24/07/2019	70.64	32.74	24.62	37.34
34	29/07/2019	88.67	47.58	22.31	43.49
35	31/07/2019	91.25	52.52	27.58	34.53
36	05/08/2019	84.29	47.62	24.68	31.52
37	07/08/2019	68.39	36.57	18.61	36.26
38	12/08/2019	72.65	40.39	21.54	41.28
39	14/08/2019	80.21	34.53	26.27	34.23
40	19/08/2019	73.62	39.35	22.68	30.46
41	21/08/2019	86.36	44.55	19.27	37.56
42	26/08/2019	76.37	37.57	23.48	26.47
43	28/08/2019	81.54	41.26	12.38	32.47
44	03/09/2019	75.36	41.6	22.53	28.36
45	05/09/2019	80.34	48.62	24.61	32.44
46	09/09/2019	73.33	35.7	19.55	25.37
47	11/09/2019	69.25	27.68	17.63	35.33
48	16/09/2019	82.43	40.27	20.4	23.34
49	18/09/2019	77.84	33.53	25.73	34.39
50	23/09/2019	86.28	43.51	11.68	29.44
51	25/09/2019	64.3	28.76	23.41	38.67
52	30/09/2019	81.28	45.38	18.7	30.21
TEST METHOD		IS:5182(Part 23):Gravimetric CPCB - Method (Vol.I,May-2011)	Gravimetric- CPCB - Method (Vol.I,May-2011)	IS:5182(Part II):Improved West and Gaeke	IS:5182(Part VI):Modified Jacob &Hochheiser (NaOH-NaAsO2)

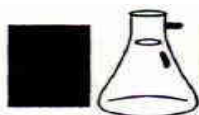
\*Below detection limit

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)



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**RESULT OF AMBIENT AIR QUALITY MONITORING**

AIR STRIP								
Sr. No	Date of Sampling	Particulate Matter (PM <sub>10</sub> ) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM <sub>2.5</sub> ) $\mu\text{g}/\text{m}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Carbon Monoxide as CO $\text{mg}/\text{m}^3$	Hydrocarbon as CH <sub>4</sub> $\text{mg}/\text{m}^3$	Benzene as C <sub>6</sub> H <sub>6</sub> $\mu\text{g}/\text{m}^3$
1	02/04/2019	76.26	28.62	10.23	26.77	0.26	BDL*	BDL*
2	03/04/2019	46.38	24.32	13.58	23.61	0.32	BDL*	BDL*
3	08/04/2019	67.59	39.42	6.36	21.58	0.42	BDL*	BDL*
4	10/04/2019	48.38	21.55	11.28	15.62	0.54	BDL*	BDL*
5	15/04/2019	58.36	31.23	16.49	17.62	0.11	BDL*	BDL*
6	17/04/2019	63.65	37.56	12.33	22.67	0.22	BDL*	BDL*
7	22/04/2019	56.20	25.64	8.65	20.41	0.18	BDL*	BDL*
8	24/04/2019	60.25	34.22	14.46	18.39	0.29	BDL*	BDL*
9	29/04/2019	47.67	20.47	17.54	25.31	0.23	BDL*	BDL*
10	01/05/2019	69.31	41.28	13.52	29.25	0.63	BDL*	BDL*
11	06/05/2019	51.31	23.74	11.26	32.57	0.25	BDL*	BDL*
12	09/05/2019	63.23	37.84	14.64	26.42	0.13	BDL*	BDL*
13	13/05/2019	55.63	22.71	16.48	23.56	0.24	BDL*	BDL*
14	15/05/2019	80.63	38.55	12.29	19.56	0.22	BDL*	BDL*
15	20/05/2019	59.3	28.5	17.6	30.4	0.16	BDL*	BDL*
16	22/05/2019	49.66	20.39	7.82	24.32	0.33	BDL*	BDL*
17	27/05/2019	64.51	33.58	15.66	20.31	0.49	BDL*	BDL*
18	29/05/2019	57.57	29.7	10.39	22.5	0.37	BDL*	BDL*
19	03/06/2019	72.24	34.54	10.23	16.59	0.11	BDL*	BDL*
20	05/06/2019	47.6	20.39	7.53	20.55	0.18	BDL*	BDL*
21	10/06/2019	56.34	32.55	16.59	25.4	0.3	BDL*	BDL*
22	17/06/2019	50.29	25.6	15.36	26.29	0.17	BDL*	BDL*
23	19/06/2019	45.64	18.28	6.38	21.52	0.34	BDL*	BDL*
24	24/06/2019	76.54	33.3	17.54	19.24	0.14	BDL*	BDL*
25	26/06/2019	80.86	42.35	8.48	23.57	0.32	BDL*	BDL*
26	01/07/2019	52.66	22.46	11.39	23.66	0.46	BDL*	BDL*
27	03/07/2019	68.21	27.5	9.66	18.69	0.42	BDL*	BDL*
28	08/07/2019	45.35	20.56	7.55	26.56	0.11	BDL*	BDL*
29	10/07/2019	59.68	38.38	14.39	24.77	0.17	BDL*	BDL*
30	15/07/2019	71.25	32.43	10.57	16.93	0.24	BDL*	BDL*

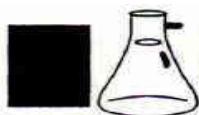
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H. T. Shah

Lab Manager

Dr. Arun Bajpai

Lab Manager (Q)



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AIR STRIP								
Sr. No	Date of Sampling	Particulate Matter (PM <sub>10</sub> ) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM <sub>2.5</sub> ) $\mu\text{g}/\text{m}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Carbon Monoxide as CO $\text{mg}/\text{m}^3$	Hydrocarbon as CH <sub>4</sub> $\text{mg}/\text{m}^3$	Benzene as C <sub>6</sub> H <sub>6</sub> $\mu\text{g}/\text{m}^3$
31	17/07/2019	61.21	28.41	8.68	20.07	0.15	BDL*	BDL*
32	22/07/2019	51.54	23.43	16.36	30.29	0.37	BDL*	BDL*
33	24/07/2019	44.03	18.61	13.38	21.16	0.21	BDL*	BDL*
34	29/07/2019	54.25	31.27	18.47	25.59	0.33	BDL*	BDL*
35	31/07/2019	65.44	34.21	15.52	20.68	0.37	BDL*	BDL*
36	05/08/2019	61.21	34.54	13.47	26.38	0.30	BDL*	BDL*
37	07/08/2019	52.3	20.51	11.47	16.58	0.19	BDL*	BDL*
38	12/08/2019	67.37	30.23	15.28	23.41	0.39	BDL*	BDL*
39	14/08/2019	50.38	28.66	12.48	20.6	0.25	BDL*	BDL*
40	19/08/2019	64.57	35.32	17.54	29.32	0.17	BDL*	BDL*
41	21/08/2019	71.28	40.29	14.57	25.37	0.33	BDL*	BDL*
42	26/08/2019	61.38	33.5	6.87	22.48	0.27	BDL*	BDL*
43	28/08/2019	56.05	25.35	9.56	17.88	0.11	BDL*	BDL*
44	03/09/2019	57.3	32.63	15.64	24.58	0.22	BDL*	BDL*
45	05/09/2019	46.39	28.7	10.58	14.59	0.27	BDL*	BDL*
46	09/09/2019	60.25	25.56	6.56	19.56	0.15	BDL*	BDL*
47	11/09/2019	59.42	16.54	11.55	22.62	0.19	BDL*	BDL*
48	16/09/2019	65.44	31.6	16.56	20.36	0.24	BDL*	BDL*
49	18/09/2019	54.21	19.56	18.67	30.42	0.14	BDL*	BDL*
50	23/09/2019	68.66	23.53	9.69	26.38	0.32	BDL*	BDL*
51	25/09/2019	74.65	34.58	12.72	23.42	0.37	BDL*	BDL*
52	30/09/2019	62.67	22.71	7.66	25.48	0.26	BDL*	BDL*
	<b>TEST METHOD</b>	IS:5182(Part 23):Gravimetric CPCB - Method (Vol.I,May-2011)	Gravimetric-CPCB - Method (Vol.I,May-2011)	IS:5182(Part II):Improved West and Gaeke	IS:5182(Part VI):Modified Jacob &Hochheiser (NaOH-NaAsO <sub>2</sub> )	NDIR Digital Gas Analyzer	SOP: HC: GC/GCMS/Gas analyzer	IS 5182 (Part XI):2006/CPCB Method

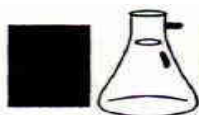
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H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)



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**RESULTS OF AMBIENT AIR QUALITY MONITORING**

SAMUDRA TOWNSHIP STP					
Sr. No.	Date of Sampling	Particulate Matter (PM <sub>10</sub> ) µg/m <sup>3</sup>	Particulate Matter (PM <sub>2.5</sub> ) µg/m <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> ) µg/m <sup>3</sup>	Oxides of Nitrogen (NO <sub>2</sub> ) µg/m <sup>3</sup>
1	02/04/2019	70.37	33.52	19.59	14.31
2	03/04/2019	67.22	27.64	6.60	18.36
3	08/04/2019	59.31	35.72	17.50	35.70
4	10/04/2019	72.34	30.25	8.65	24.39
5	15/04/2019	64.24	36.22	14.29	20.32
6	17/04/2019	52.67	31.66	16.36	29.45
7	22/04/2019	68.64	29.46	18.22	34.59
8	24/04/2019	74.50	42.30	11.23	32.56
9	29/04/2019	62.31	24.37	15.59	28.64
10	01/05/2019	57.61	36.38	16.35	33.52
11	06/05/2019	62.76	33.48	22.43	36.59
12	09/05/2019	79.69	46.29	19.23	31.59
13	13/05/2019	67.88	26.73	11.47	21.55
14	15/05/2019	76.39	34.27	10.31	25.33
15	20/05/2019	63.72	39.20	12.68	37.47
16	22/05/2019	73.26	30.50	20.29	41.27
17	27/05/2019	68.59	38.41	17.55	23.74
18	29/05/2019	70.41	35.35	18.28	40.56
19	03/06/2019	67.48	30.5	9.19	22.4
20	05/06/2019	56.37	24.32	14.52	18.67
21	10/06/2019	74.62	45.46	12.38	33.52
22	17/06/2019	70.26	27.6	20.26	31.21
23	19/06/2019	64.25	37.5	17.77	36.85
24	24/06/2019	71.58	42.27	7.62	27.59
25	26/06/2019	68.64	33.52	15.36	30.51
26	01/07/2019	62.46	33.57	21.3	42.66
27	03/07/2019	72.63	36.26	18.65	21.56
28	08/07/2019	57.35	30.42	11.53	39.15
29	10/07/2019	74.37	29.46	22.37	32.41
30	15/07/2019	63.89	24.20	9.82	24.07

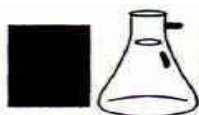
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Lab Manager

Dr. ArunBajpai

Lab Manager (Q)



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SAMUDRA TOWNSHIP STP					
Sr. No.	Date of Sampling	Particulate Matter (PM <sub>10</sub> ) µg/m <sup>3</sup>	Particulate Matter (PM <sub>2.5</sub> ) µg/m <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> ) µg/m <sup>3</sup>	Oxides of Nitrogen (NO <sub>2</sub> ) µg/m <sup>3</sup>
31	17/07/2019	58.61	39.24	12.69	29.61
32	22/07/2019	65.33	25.67	10.54	38.70
33	24/07/2019	52.39	22.38	8.66	19.72
34	29/07/2019	67.22	42.56	13.59	35.67
35	31/07/2019	58.38	38.41	20.31	26.44
36	05/08/2019	54.39	29.46	6.86	22.80
37	07/08/2019	62.41	31.53	8.47	20.46
38	12/08/2019	58.75	22.34	10.59	37.44
39	14/08/2019	73.42	26.36	18.61	28.45
40	19/08/2019	55.36	20.26	13.64	17.63
41	21/08/2019	79.61	37.5	17.42	31.56
42	26/08/2019	69.24	32.45	9.55	34.6
43	28/08/2019	50.34	35.76	14.54	25.65
44	03/09/2019	51.88	25.4	19.46	31.63
45	05/09/2019	67.2	23.66	16.56	26.44
46	09/09/2019	54.47	19.48	12.48	16.36
47	11/09/2019	65.72	22.5	14.59	27.69
48	16/09/2019	59.41	26.6	8.68	30.43
49	18/09/2019	63.59	29.5	21.59	25.52
50	23/09/2019	73.62	33.86	13.72	22.53
51	25/09/2019	56.37	20.6	9.7	33.56
52	30/09/2019	71.71	38.58	17.58	28.41
	<b>TEST METHOD</b>	IS:5182(Part 23):Gravimetric CPCB - Method (Vol.I,May-2011)	Gravimetric- CPCB - Method (Vol.I,May-2011)	IS:5182(Part II):Improved West and Gaeke	IS:5182(Part VI):Modified Jacob &Hochheiser (NaOH-NaAsO <sub>2</sub> )

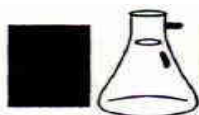
\*Below detection limit

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)

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**RESULTS OF AMBIENT AIR QUALITY MONITORING**

SAMUDRA TOWNSHIP CUSTOMER CARE					
Sr.No.	Date of Sampling	Particulate Matter (PM <sub>10</sub> ) µg/m <sup>3</sup>	Particulate Matter (PM <sub>2.5</sub> ) µg/m <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> ) µg/m <sup>3</sup>	Oxides of Nitrogen (NO <sub>2</sub> ) µg/m <sup>3</sup>
1	02/04/2019	48.64	21.65	13.63	22.65
2	03/04/2019	62.34	33.45	16.26	27.54
3	08/04/2019	52.64	30.21	10.64	31.54
4	10/04/2019	64.21	27.59	14.64	28.37
5	15/04/2019	51.65	23.40	8.58	15.77
6	17/04/2019	74.59	40.22	11.69	25.33
7	22/04/2019	49.67	20.53	20.44	29.33
8	24/04/2019	69.28	38.49	9.40	23.64
9	29/04/2019	73.46	29.34	19.55	17.32
10	01/05/2019	72.76	45.71	21.22	36.50
11	06/05/2019	69.36	30.25	15.41	25.35
12	09/05/2019	74.28	43.55	13.90	29.55
13	13/05/2019	61.84	32.41	8.52	31.22
14	15/05/2019	53.49	24.52	16.56	28.67
15	20/05/2019	70.65	35.49	10.53	34.29
16	22/05/2019	68.61	27.68	12.43	38.45
17	27/05/2019	56.32	21.57	7.41	17.57
18	29/05/2019	62.36	28.38	23.52	33.88
19	03/06/2019	45.56	21.61	14.56	29.62
20	05/06/2019	51.55	28.34	10.32	26.31
21	10/06/2019	67.54	41.31	18.61	30.32
22	17/06/2019	65.6	29.42	7.54	23.42
23	19/06/2019	58.32	23.6	15.55	31.54
24	24/06/2019	64.34	39.52	13.44	24.5
25	26/06/2019	70.34	25.31	21.54	27.58
26	01/07/2019	57.3	25.64	19.53	35.79
27	03/07/2019	60.23	22.11	14.54	16.18
28	08/07/2019	51.23	23.31	17.47	34.53
29	10/07/2019	63.40	20.61	7.65	28.57
30	15/07/2019	58.40	28.63	15.69	31.19

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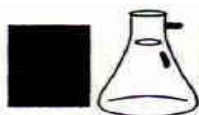
H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)



**POLLUCON** LABORATORIES PVT. LTD.Environmental Auditors, Consultants & Analysts.  
Cleaner Production / Waste Minimization Facilitator

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

SAMUDRA TOWNSHIP CUSTOMER CARE					
Sr.No.	Date of Sampling	Particulate Matter (PM <sub>10</sub> ) µg/m <sup>3</sup>	Particulate Matter (PM <sub>2.5</sub> ) µg/m <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> ) µg/m <sup>3</sup>	Oxides of Nitrogen (NO <sub>2</sub> ) µg/m <sup>3</sup>
31	17/07/2019	67.32	33.20	10.22	25.64
32	22/07/2019	56.22	29.48	8.39	19.37
33	24/07/2019	47.25	26.47	6.54	29.59
34	29/07/2019	61.63	38.35	20.28	32.40
35	31/07/2019	72.65	42.63	13.37	20.59
36	05/08/2019	68.39	39.31	9.61	18.66
37	07/08/2019	58.67	24.56	16.55	27.62
38	12/08/2019	49.35	26.76	12.65	32.58
39	14/08/2019	66.34	30.25	19.57	22.6
40	19/08/2019	50.26	23.64	10.37	26.38
41	21/08/2019	60.33	31.21	11.42	20.41
42	26/08/2019	59.36	21.57	15.36	30.24
43	28/08/2019	63.94	29.38	8.64	21.55
44	03/09/2019	63.5	35.45	11.54	16.5
45	05/09/2019	57.6	26.35	19.61	36.44
46	09/09/2019	46.38	22.69	8.58	22.39
47	11/09/2019	53.4	19.57	6.48	17.63
48	16/09/2019	68.34	33.7	13.61	34.61
49	18/09/2019	72.35	23.69	10.33	23.62
50	23/09/2019	56.34	27.68	7.57	18.32
51	25/09/2019	45.34	18.53	14.58	27.65
52	30/09/2019	54.42	25.35	12.45	20.33
	<b>TEST METHOD</b>	IS:5182(Part 23):Gravimetric CPCB - Method (Vol.I,May-2011)	Gravimetric- CPCB - Method (Vol.I,May-2011)	IS:5182(Part II):Improved West and Gaeke	IS:5182(Part VI):Modified Jacob &Hochheiser (NaOH-NaAsO <sub>2</sub> )

\*Below detection limit

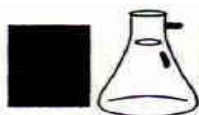
H. T. Shah

Lab Manager

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**RESULT OF AMBIENT AIR QUALITY MONITORING**

ADANI HOUSE								
Sr. No.	Date of Sampling	Particulate Matter (PM10) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM 2.5) $\mu\text{g}/\text{m}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Carbon Monoxide as CO $\text{mg}/\text{m}^3$	Hydrocarbon as CH <sub>4</sub> $\text{mg}/\text{m}^3$	Benzene as C <sub>6</sub> H <sub>6</sub> $\mu\text{g}/\text{m}^3$
1	02/04/2019	68.30	31.55	11.54	21.67	0.86	BDL*	BDL*
2	03/04/2019	52.32	26.20	19.64	28.62	0.70	BDL*	BDL*
3	08/04/2019	60.49	37.52	18.55	33.67	0.61	BDL*	BDL*
4	10/04/2019	76.33	22.29	9.67	17.51	0.96	BDL*	BDL*
5	15/04/2019	54.33	29.70	10.28	29.34	0.84	BDL*	BDL*
6	17/04/2019	62.35	35.63	13.63	26.65	0.94	BDL*	BDL*
7	22/04/2019	73.65	32.47	7.70	23.42	0.48	BDL*	BDL*
8	24/04/2019	64.53	36.55	16.42	22.23	0.40	BDL*	BDL*
9	29/04/2019	75.64	30.54	21.64	24.32	0.64	BDL*	BDL*
10	01/05/2019	67.33	39.5	24.38	26.71	0.77	BDL*	BDL*
11	06/05/2019	87.33	25.78	13.27	23.55	1	BDL*	BDL*
12	09/05/2019	75.76	40.3	15.65	35.43	0.81	BDL*	BDL*
13	13/05/2019	85.67	46.27	23.43	30.24	0.27	BDL*	BDL*
14	15/05/2019	78.55	35.63	9.71	18.69	0.56	BDL*	BDL*
15	20/05/2019	68.4	42.52	18.57	24.5	0.73	BDL*	BDL*
16	22/05/2019	72.66	29.4	16.37	37.57	0.37	BDL*	BDL*
17	27/05/2019	62.84	31.55	11.78	31.39	0.64	BDL*	BDL*
18	29/05/2019	86.34	36.72	14.57	25.36	0.79	BDL*	BDL*
19	03/06/2019	66.52	31.55	8.56	15.65	0.49	BDL*	BDL*
20	05/06/2019	76.36	39.5	15.25	28.48	0.22	BDL*	BDL*
21	10/06/2019	60.52	36.26	19.42	23.43	0.63	BDL*	BDL*
22	17/06/2019	69.26	30.5	13.57	22.65	0.74	BDL*	BDL*
23	19/06/2019	50.2	25.66	16.25	32.62	0.29	BDL*	BDL*
24	24/06/2019	66.62	34.58	11.3	26.52	0.68	BDL*	BDL*
25	26/06/2019	79.86	32.39	7.59	21.64	0.34	BDL*	BDL*
26	01/07/2019	82.42	41.89	7.6	27.51	0.53	BDL*	BDL*
27	03/07/2019	73.63	26.37	10.68	30.23	0.61	BDL*	BDL*
28	08/07/2019	55.21	29.40	6.54	20.49	0.32	BDL*	BDL*
29	10/07/2019	71.23	37.27	8.63	23.44	0.39	BDL*	BDL*
30	02/04/2019	68.30	31.55	11.54	21.67	0.86	BDL*	BDL*

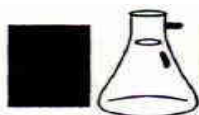
Continue ...

H. T. Shah

Lab Manager

Dr. Arun Bajpai

Lab Manager (Q)



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ADANI HOUSE								
Sr. No	Date of Sampling	Particulate Matter (PM <sub>10</sub> ) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM <sub>2.5</sub> ) $\mu\text{g}/\text{m}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Carbon Monoxide as CO $\text{mg}/\text{m}^3$	Hydrocarbon as CH <sub>4</sub> $\text{mg}/\text{m}^3$	Benzene as C <sub>6</sub> H <sub>6</sub> $\mu\text{g}/\text{m}^3$
31	15/07/2019	59.32	27.51	22.43	33.53	0.47	BDL*	BDL*
32	17/07/2019	62.47	32.22	18.23	28.51	0.74	BDL*	BDL*
33	22/07/2019	74.38	28.46	13.52	22.41	0.84	BDL*	BDL*
34	24/07/2019	69.45	38.23	20.23	32.47	0.24	BDL*	BDL*
35	29/07/2019	52.42	30.24	17.53	26.67	0.69	BDL*	BDL*
36	31/07/2019	70.66	36.26	21.20	31.41	0.52	BDL*	BDL*
37	05/08/2019	62.51	35.58	19.22	24.51	0.42	BDL*	BDL*
38	07/08/2019	77.5	38.82	21.53	29.53	0.37	BDL*	BDL*
39	12/08/2019	65.35	41.56	11.25	26.59	0.4	BDL*	BDL*
40	14/08/2019	56.2	20.57	13.62	19.34	0.6	BDL*	BDL*
41	19/08/2019	70.69	34.28	18.29	28.55	0.18	BDL*	BDL*
42	21/08/2019	64.23	23.64	9.76	22.6	0.46	BDL*	BDL*
43	26/08/2019	72.41	29.44	7.56	31.53	0.25	BDL*	BDL*
44	28/08/2019	57.31	30.45	16.9	30.22	0.58	BDL*	BDL*
45	03/09/2019	56.22	29.7	17.59	23.41	0.36	BDL*	BDL*
46	05/09/2019	62.39	34.62	14.57	24.43	0.44	BDL*	BDL*
47	09/09/2019	50.42	26.42	16.51	30.35	0.13	BDL*	BDL*
48	11/09/2019	60.54	23.77	12.7	20.26	0.48	BDL*	BDL*
49	16/09/2019	69.35	27.68	7.59	27.57	0.21	BDL*	BDL*
50	18/09/2019	74.62	36.68	20.5	37.64	0.25	BDL*	BDL*
51	23/09/2019	53.69	25.41	15.66	25.44	0.41	BDL*	BDL*
52	25/09/2019	78.32	39.16	10.4	21.61	0.29	BDL*	BDL*
53	30/09/2019	63.51	28.69	22.47	38.64	0.56	BDL*	BDL*
	<b>TEST METHOD</b>	IS:5182(Part 23):Gravimetric CPCB - Method (Vol.I,May-2011)	Gravimetric-CPCB - Method (Vol.I,May-2011)	IS:5182(Part II):Improved West and Gaeke	IS:5182(Part VI):Modified Jacob &Hochheiser (NaOH-NaAsO <sub>2</sub> )	NDIR Digital Gas Analyzer	SOP: HC: GC/GCMS/Gas analyzer	IS 5182 (Part XI):2006/CPCB Method

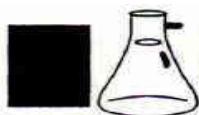
\*Below detection limit

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)

**RESULTS OF NOISE LEVEL MONITORING****Result of Noise level monitoring [Day Time]**

SR. NO.	Name of Location	CETP					
		Result [dB(A) Leq]					
		08/04/2019	10/05/2019	03/06/2019	09/07/2019	02/08/2019	02/09/2019
1	6:00-7:00	58.4	62.7	63.4	57.1	67.2	68.4
2	7:00-8:00	52.7	69.1	61.4	62.4	69.4	62.1
3	8:00-9:00	69.4	65.7	61.8	63.1	71.4	69.7
4	9:00-10:00	62.4	70.4	65.1	65.4	70.3	63.1
5	10:00-11:00	70.1	72.1	72.4	62.1	67.4	70.1
6	11:00-12:00	65.4	68.1	69.4	68.4	69.8	72.3
7	12:00-13:00	64.7	63.5	68.1	63.1	65.2	63.1
8	13:00-14:00	61.05	65.9	69.4	61.2	72.4	69.4
9	14:00-15:00	67.3	69.1	66.1	63.4	68.3	64.1
10	15:00-16:00	65.4	62.8	63.4	68.4	64.2	62.8
11	16:00-17:00	62.4	66.1	66.7	62.1	68.3	68.1
12	17:00-18:00	67.9	62.8	64.1	60.1	68.2	71.3
13	18:00-19:00	61.7	66.1	62.5	63.1	65.3	68.1
14	19:00-20:00	60.8	69.4	63.8	65.1	73.2	65.1
15	20:00-21:00	67.1	65.6	68.1	64.8	64.3	65.9
16	21:00-22:00	68.2	63.7	62.4	62.1	68.3	64.2
Day Time Limit*		75 dB(A) Leq					

**Result of Noise level monitoring [Night Time]**

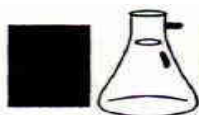
	Name of Location	CETP					
		Result [dB(A) Leq]					
		08/04/2019	10/05/2019	03/06/2019	09/07/2019	02/08/2019	02/09/2019
1	22:00-23:00	61.9	64.2	66.2	55.1	58.4	60.4
2	23:00-00:00	58.7	59.3	62.1	61.8	60.3	62.8
3	00:00-01:00	57.1	62.1	60.4	56.7	63.4	59.4
4	01:00-02:00	61.4	65.3	63.1	59.7	61.4	62.7
5	02:00-03:00	63.4	58.4	61.4	62.1	60.4	61.8
6	03:00-04:00	58.8	63.2	60.1	65.4	60.2	60.9
7	04:00-05:00	54.3	66.2	60.8	60.4	58.4	60.4
8	05:00-06:00	53.1	59.8	62.8	57.4	59.4	62.8
Night Time Limit*		70 dB(A) Leq					

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)

**RESULTS OF NOISE LEVEL MONITORING****Result of Noise level monitoring [Day Time]**

SR. NO.	Name of Location	AIR STRIP					
		Result [dB(A) Leq]					
		12/04/2019	21/05/2019	07/06/2019	12/07/2019	26/08/2019	30/09/2019
1	6:00-7:00	49.5	55.1	55.1	56.3	55.1	52.1
2	7:00-8:00	47.7	59.4	58.4	63.2	60.4	56.4
3	8:00-9:00	58.5	62.1	60.1	66.3	59.9	63.1
4	9:00-10:00	53.4	63.4	62.4	59.3	63.4	62.4
5	10:00-11:00	59.1	60.8	59.1	68.4	65.1	68.4
6	11:00-12:00	62.4	60.4	63.4	65.2	62.4	61.4
7	12:00-13:00	63.1	61.7	62.8	62.6	60.7	60.4
8	13:00-14:00	57.3	59.4	59.4	67.3	68.4	58.4
9	14:00-15:00	52.1	63.4	61.2	67.4	63.4	60.4
10	15:00-16:00	56.4	65.1	61.8	67.9	61.5	60.9
11	16:00-17:00	64.8	61.4	60.8	72.3	65.6	63.1
12	17:00-18:00	58.8	62.8	62.4	64.4	66.1	61.4
13	18:00-19:00	60	61.5	63.4	68.3	63.4	65.4
14	19:00-20:00	58.4	63.7	61.8	62.5	61.5	62.4
15	20:00-21:00	65.21	62.4	62.8	62.1	62.8	60.4
16	21:00-22:00	63.3	60.8	65.2	65.8	66.1	60.7
Day Time Limit*		75 dB(A) Leq					

**Result of Noise level monitoring [Night Time]**

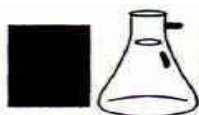
SR. NO.	Name of Location	AIR STRIP					
		Result [dB(A) Leq]					
		12/04/2019	21/05/2019	07/06/2019	12/07/2019	26/08/2019	30/09/2019
1	22:00-23:00	56.4	55.2	62.4	59.4	55.7	56.1
2	23:00-00:00	52.4	51.4	60.1	54.4	59.4	50.3
3	00:00-01:00	46.6	50.6	55.4	54.8	56.1	52.1
4	01:00-02:00	48.4	49.8	59.7	58.3	60.8	51.8
5	02:00-03:00	48.4	57.6	56.1	50.3	62.8	58.4
6	03:00-04:00	53.4	54.9	52.4	50.2	57.1	53.1
7	04:00-05:00	55.6	49.4	53.7	51.4	53.8	52.8
8	05:00-06:00	58.8	53.4	59.7	56.4	59.7	56.8
Night Time Limit*		70 dB(A) Leq					

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Lab Manager

Dr. ArunBajpai

Lab Manager (Q)

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**Result of Noise level monitoring [Day Time]**

SR. NO.	Name of Location	SAMUNDRA TOWNSHIP STP					
		Result [Leq dB(A)]					
	Sampling Date & Time	02/04/2019	15/05/2019	21/06/2019	24/07/2019	09/08/2019	20/09/2019
1	6:00-7:00	62.3	61.7	58.4	60.8	64.3	57.1
2	7:00-8:00	58.8	55.4	58.1	63.4	60.2	60.4
3	8:00-9:00	52.1	59.1	62.4	59.4	65.8	59.1
4	9:00-10:00	60.0	61.7	60.4	63.1	68.9	62.4
5	10:00-11:00	59.7	65.8	68.4	60.7	72.1	61.4
6	11:00-12:00	67.4	65.1	65.7	60.8	70.4	63.1
7	12:00-13:00	62.9	59.1	67.1	63.4	66.3	65.4
8	13:00-14:00	61.4	62.7	62.6	65.1	69.9	62.4
9	14:00-15:00	62.7	67.4	63.4	65.2	67.3	62.8
10	15:00-16:00	64.8	62.4	64.1	66.8	62.3	62.9
11	16:00-17:00	62.0	61.8	68.7	62.7	67.4	63.4
12	17:00-18:00	67.4	60.9	62.4	67.1	64.9	61.7
13	18:00-19:00	65.8	63.8	68.4	65.7	72.1	64.7
14	19:00-20:00	61.9	62.8	69.4	64.1	67.3	67.1
15	20:00-21:00	59.8	65.1	67.2	62.8	65.5	65.1
16	21:00-22:00	58.1	61.8	62.4	63.8	62.1	61.8
Day Time Limit*		75 Leq dB(A)					

**Result of Noise level monitoring [Night Time]**

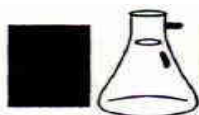
SR. NO.	Name of Location	SAMUNDRA TOWNSHIP STP					
		Result [Leq dB(A)]					
	Sampling Date & Time	02/04/2019	15/05/2019	21/06/2019	24/07/2019	09/08/2019	20/09/2019
1	22:00-23:00	58.4	64.1	60.4	61.4	67.3	65.1
2	23:00-00:00	60.4	57.2	59.4	60.8	64.2	58.7
3	00:00-01:00	60.2	51.6	62.4	65.1	60.4	53.7
4	01:00-02:00	63.4	50.9	61.7	62.9	62.4	52.9
5	02:00-03:00	61.4	58.8	60.3	59.9	61.3	52.1
6	03:00-04:00	63.2	52.4	62.8	60.4	60.3	56.4
7	04:00-05:00	61.7	60.0	61.8	58.1	60.1	55.9
8	05:00-06:00	60.3	51.6	60.9	62.4	62.6	58.4
Night Time Limit*		70 Leq dB(A)					

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)



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**Result of Noise level monitoring [Day Time]**

SR. NO.	Name of Location	SAMUNDRA TOWNSHIP CUSTOMER CARE					
		Result [Leq dB(A)]					
		05/04/2019	24/05/2019	26/06/2019	05/07/2019	07/08/2019	13/09/2019
1	6:00-7:00	52.4	57.3	56.2	57.3	60.4	54.1
2	7:00-8:00	60.4	55.5	60.1	62.3	62.4	59.4
3	8:00-9:00	61.9	60.3	62.8	67.3	59.4	55.1
4	9:00-10:00	58.7	65.3	64.0	53.2	63.4	63.4
5	10:00-11:00	68.4	61.2	63.1	69.5	68.7	68.4
6	11:00-12:00	64.5	61.7	67.4	71.3	65.1	62.4
7	12:00-13:00	65.1	63.8	63.4	65.3	61.4	61.4
8	13:00-14:00	68.7	65.3	62.8	67.2	68.2	68.4
9	14:00-15:00	69.0	62.7	65.1	66.6	65.2	62.1
10	15:00-16:00	62.4	62.3	66.4	69.4	62.4	64.1
11	16:00-17:00	61.4	65.3	66.1	64.2	61.8	63.7
12	17:00-18:00	63.8	62.3	63.1	67.8	69.4	68.4
13	18:00-19:00	59.1	63.7	62.4	60.1	65.3	66.1
14	19:00-20:00	62.7	65.3	62.8	62.3	63.4	66.4
15	20:00-21:00	64.8	62.4	64.1	68.3	68.7	69.4
16	21:00-22:00	61.9	65.4	60.8	65.5	65.1	67.2
Day Time Limit*		75 Leq dB(A)					

**Result of Noise level monitoring [Night Time]**

SR. NO.	Name of Location	SAMUNDRA TOWNSHIP CUSTOMER CARE					
		Result [Leq dB(A)]					
		05/04/2019	24/05/2019	26/06/2019	05/07/2019	07/08/2019	13/09/2019
1	22:00-23:00	62.4	60.4	62.1	60.3	62.8	60.4
2	23:00-00:00	56.3	58.8	58.4	60.5	65.7	52.1
3	00:00-01:00	50.4	59.4	56.1	57.3	55.4	57.1
4	01:00-02:00	52.5	54.1	57.1	52.6	59.8	53.4
5	02:00-03:00	48.4	58.5	60.1	54.7	56.8	60.4
6	03:00-04:00	56.3	60.4	52.1	50.4	55.4	62.4
7	04:00-05:00	58.3	54.1	57.1	59.4	53.4	61.4
8	05:00-06:00	61.9	63.7	60.8	62.5	68.4	67.4
Night Time Limit*		70 Leq dB(A)					

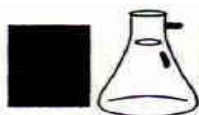
H. T. Shah

Lab Manager

Dr. Arun Bajpai

Lab Manager (Q)



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**Result of Noise level monitoring [Day Time]**

SR. NO.	Name of Location	ADANI HOUSE					
		Result [Leq dB(A)]					
	Sampling Date & Time	15/04/2019	03/05/2019	04/06/2019	03/07/2019	05/08/2019	04/09/2019
1	6:00-7:00	60.3	67.2	61.7	65.4	65.4	64.3
2	7:00-8:00	63.4	65.9	67.3	68.1	66.3	68.8
3	8:00-9:00	62.3	68.1	65.2	62.5	66.9	65.7
4	9:00-10:00	67.4	62.4	70.3	73.1	67.4	70.1
5	10:00-11:00	65.6	62.8	73.2	70.5	63.2	72.4
6	11:00-12:00	68.4	61.8	68.3	69.9	62.4	63.4
7	12:00-13:00	70.4	68.4	68.1	66.4	67.4	60.4
8	13:00-14:00	65.3	68.7	62.4	62.1	65.3	67.9
9	14:00-15:00	69.4	68.2	69.3	68.4	62.5	67.5
10	15:00-16:00	69.7	64.1	66.9	63.4	68.4	62.4
11	16:00-17:00	67.3	69.1	70.2	68.1	68.3	70.3
12	17:00-18:00	65.3	73.1	63.2	66.8	68.7	71.9
13	18:00-19:00	63.8	70.4	64.0	63.1	64.3	68.8
14	19:00-20:00	64.3	64.1	61.0	62.9	62.7	62.1
15	20:00-21:00	67.4	62.8	68.0	65.4	65.8	60.1
16	21:00-22:00	63.8	60.8	65.5	66.7	63.6	64.1
Day Time Limit*		75 Leq dB(A)					

**Result of Noise level monitoring [Night Time]**

SR. NO.	Name of Location	ADANI HOUSE					
		Result [Leq dB(A)]					
	Sampling Date & Time	15/04/2019	03/05/2019	04/06/2019	03/07/2019	05/08/2019	04/09/2019
1	22:00-23:00	60.4	65.7	67.3	65.5	60.4	62.4
2	23:00-00:00	65.1	67.1	59.5	62.1	62.4	67.3
3	00:00-01:00	65.4	61.5	63.1	63.4	68.7	64.3
4	01:00-02:00	61.8	60.4	61.0	68.1	60.1	67.4
5	02:00-03:00	63.4	60.3	61.3	62.7	63.1	60.3
6	03:00-04:00	62.4	62.8	63.4	60.1	60.8	62.3
7	04:00-05:00	65.7	64.1	68.3	60.9	61.4	65.3
8	05:00-06:00	67.1	62.9	66.2	63.1	64.1	68.4
Night Time Limit*		70Leq dB(A)					

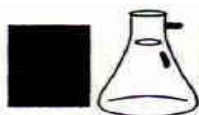
H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)





## RESULTS OF STP WATER OUTLET

SR. NO	TEST PARAMETERS	Unit	ADANI HOUSE STP OUTLET							
			April-19		May-19		June-19		GPCB Permissible Limit	TEST METHOD
			05/04/2019	18/04/2019	07/05/2019	20/05/2019	04/06/2019	18/06/2019		
1	pH	--	7.39	7.58	7.03	7.86	6.91	7.64	--	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	17	23	24	16	29	10	30	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	18	8	12	12	19	9.0	20	IS 3025 (P44)1993Re.03Edition2.1
4	Residual Chlorine	mg/L	0.8	0.6	0.6	0.8	0.4	0.5	Min 0.5	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/ 100 ml	430	350	350	210	280	220	< 1000	APHA (22ndEdi) 9221 C&E

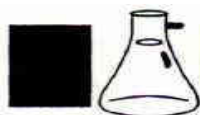
SR. NO	TEST PARAMETERS	Unit	ADANI HOUSE STP OUTLET							
			July-19		August-19		September-19		GPCB Permissible Limit	TEST METHOD
			03/07/2019	16/07/2019	05/08/2019	19/08/2019	04/09/2019	17/09/2019		
1	pH	--	7.59	7.69	6.98	7.55	7.16	7.25	--	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	23	13	16	20	24	16	30	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	15	15	12	18	10	14	20	IS 3025 (P44)1993Re.03Edition2.1
4	Residual Chlorine	mg/L	0.6	0.3	0.8	0.4	0.5	0.5	Min 0.5	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/100 ml	240	210	280	220	430	170	< 1000	APHA (22ndEdi) 9221 C&E

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## RESULTS OF STP WATER OUTLET

SR. NO	TEST PARAMETERS	Unit	AMSIPL SAMUNDRA TOWNSHIP STP OUTLET							
			April-19		May-19		June-19		GPCB Permissible Limit	TEST METHOD
			05/04/2019	18/04/2019	07/05/2019	20/05/2019	03/06/2019	18/06/2019		
1	pH	--	7.99	7.72	7.56	7.52	7.62	7.75	--	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	12	28	23	20	18	14	30	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	8	16	10	12	19	13	20	IS 3025 (P44)1993Re.03Edition 2.1
4	Residual Chlorine	mg/L	0.5	0.6	0.6	0.8	0.4	0.5	Min 0.5	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/100 ml	150	170	170	130	150	150	< 1000	APHA (22ndEdi) 9221 C&E

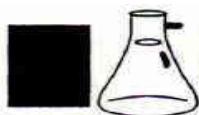
SR. NO	TEST PARAMETERS	Unit	AMSIPL SAMUNDRA TOWNSHIP STP OUTLET							
			July-19		August-19		September-19		GPCB Permissible Limit	TEST METHOD
			02/07/2019	16/07/2019	05/08/2019	19/08/2019	04/09/2019	17/09/2019		
1	pH	--	7.54	7.36	7.18	7.46	7.26	7.41	--	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	24	10	28	15	25	16	30	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	16	12	12	10	15	13	20	IS 3025 (P44)1993Re.03Edition 2.1
4	Residual Chlorine	mg/L	0.2	0.3	0.4	0.5	0.5	0.4	Min 0.5	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/100 ml	120	170	280	140	350	150	< 1000	APHA (22ndEdi) 9221 C&E

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## RESULT OF CETP OUTLET

SR. NO.	TEST PARAMETERS	UNIT	CETP OUTLET						GPCB Permissible Limit CETP OUTLET	TEST METHOD
			April-19	May-19	June-19	July-19	Aug-19	Sep-19		
1	pH	--	7.06	7.45	7.06	7.45	7.18	7.3	6 to 9	IS3025(P11)83Re.02
2	Temperature	°C	31.8	31.8	32	31.6	31.2	31.3	Shall Not exceed more than 5 °C above ambient water temperature	IS3025(P9)84Re.02
3	Colour	Co-pt	50	50	40	50	40	20	100	IS3025(P4)83Re.02
4	Total Suspended Solids	mg/L	34	56	34	49	66	43	100	IS3025(P17)84Re.02
5	Oil & Grease	mg/L	2.9	2.4	2.9	3.4	2.8	2.2	10	APHA(22 <sup>nd</sup> Edition)5520D
6	Phenolic Compound	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	1	IS3025(P43)92Re.03
7	Fluorides	mg/L	0.5	0.6	0.75	0.56	0.5	0.36	2	APHA(22 <sup>nd</sup> Edition) 4500 F D SPANDS
8	Iron	mg/L	0.092	0.18	0.31	0.2	0.12	0.098	3	AAS APHA(22 <sup>nd</sup> Edition)3111 B
9	Zinc as Zn	mg/L	0.052	0.062	0.12	0.16	0.21	0.17	15	AAS APHA(22 <sup>nd</sup> Edition)3111 B
10	Trivalent Chromium	mg/L	0.32	0.16	0.42	0.28	0.32	0.28	2	AAS APHA(22 <sup>nd</sup> Edition)3111 B
11	Sulphide as S	mg/L	0.6	0.6	0.8	0.8	1.2	1.1	2	APHA(22 <sup>nd</sup> Edition) 4500-S
12	Ammonical Nitrogen as NH <sub>3</sub>	mg/L	8	18	28	38	32	28	50	IS3025(P34)88Cla.2.3
13	BOD (3 Days @ 27°C)	mg/L	30	52	43	58	64	41	100	IS 3025 (P44)1993Re.03Edition 2.1
14	COD	mg/L	138	184	150	184	202	183	250	APHA(22 <sup>nd</sup> Edition) 5520-D Open Reflux
15	Chloride as Cl	mg/L	546	529	549	502	490	468	1000	IS3025(P32)88Re.99
16	Sulphate as SO <sub>4</sub>	mg/L	80	86	98	84	96	90	1000	APHA(22 <sup>nd</sup> Edition)4500 SO <sub>4</sub> E
17	Total Dissolved Solids	mg/L	1640	1698	1684	1398	1548	1360	2100	IS3025(P16)84Re.02
18	Total Residual Chlorine	mg/L	0.6	0.5	0.4	0.5	0.6	0.8	1	APHA(22 <sup>nd</sup> Edition)4500 Cl
19	Copper as Cu	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*	3	AAS APHA(22 <sup>nd</sup> Edition)3111 B

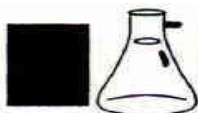
\*Below Detection Limit

H. T. Shah

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Dr. ArunBajpai

Lab Manager (Q)



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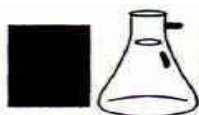
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### RESULTS OF BORE HOLE WATER

SR. NO	TEST PARAMETERS	UNIT	RESULTS			TEST METHOD
			OPP. DRUB RAILWAY STATION	NEAR PUB BUILDING	NEAR CETP MAIN GATE	
	GPS Location		N 22° 43.073' E 069° 39.861'	N 22° 46.761' E 069° 40.999'	N 22° 48.630' S 069° 42.393'	
	Sampling Date		20/06/2019	20/06/2019	20/06/2019	
1	pH	--	7.45	7.41	8.16	IS3025(P11)83Re.02
2	Salinity	ppt	35.1	7.2	3.4	APHA 2520B
3	Oil & Grease	mg/L	BDL*	BDL*	BDL*	APHA(22ndEdi)5520D
4	Hydrocarbon	mg/L	BDL*	BDL*	BDL*	GC/GC-MS
5	Lead as Pb	mg/L	BDL*	0.02	0.026	AAS APHA(22ndEdi)3111 B
6	Arsenic as As	mg/L	BDL*	BDL*	BDL*	AAS APHA 3114 B
7	Nickel as Ni	mg/L	BDL*	BDL*	BDL*	AAS APHA(22ndEdi)3111 B
8	Total Chromium as Cr	mg/L	BDL*	0.08	BDL*	AAS 3111B
9	Cadmium as Cd	mg/L	BDL*	BDL*	BDL*	AAS APHA(22ndEdi)3111 B
10	Mercury as Hg	mg/L	BDL*	BDL*	BDL*	AAS APHA- 3112 B
11	Zinc as Zn	mg/L	0.38	0.098	0.075	AAS APHA(22ndEdi)3111 B
12	Copper as Cu	mg/L	BDL*	BDL*	BDL*	AAS APHA(22ndEdi)3111 B
13	Iron as Fe	mg/L	0.48	0.12	0.19	AAS APHA(22ndEdi)3111 B
14	Insecticides/Pesticides	mg/L	Absent	Absent	Absent	GC/GC-MS
15	Depth of Water Level from Ground Level	meter	2.0	2.1	1.90	--

H. T. Shah  
Lab Manager

Dr. ArunBajpai  
Lab Manager (Q)

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**RESULTS OF D.G. STACK MONITORING**

14/04/2019						
SR. NO.	TEST PARAMETERS	Unit	WTP	Adani Hospital	GPCB Limit	Test Method
			D.G. Set (380KVA)	D.G. Set* (500 KVA)		
1	Particulate Matter	mg/Nm <sup>3</sup>	14.37	25.54	150	IS:11255 (Part-I):1985
2	Sulphur Dioxide	ppm	3.32	5.55	100	IS:11255 (Part-II):1985
3	Oxide of Nitrogen	ppm	26.79	38.33	50	IS:11255 (Part-VII):2005
4	Carbon Monoxide	mg/m <sup>3</sup>	7.23	4.33	Not Specified	Digital Gas Analyzer
5	Hydro Carbon NMHC	ppm	BDL*	BDL*	Not Specified	Gas Chromatography

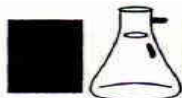
\*DG sets are used as standby, so stack monitoring is done on quarterly basis. Results on 15 % O<sub>2</sub> Correction when Oxygen is greater than 15 %

H. T. Shah

Lab Manager

Dr. ArunBajpai

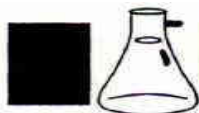
Lab Manager (Q)

**RESULTS OF SOIL**

SR. NO.	TEST PARAMETERS	UNIT	RESULT			
			20/06/2019			
			CETP	Dhrub	Near Flyover Bridge	Pub Building
1	pH	--	7.75	8.35	8.4	8.6
2	Nitrogen as N	%	0.01	0.03	0.045	0.025
3	Phosphorus as P	mg/kg	310	80	140	110
4	Potassium as K	mg/kg	32	40	75	70
5	Baron as B	mg/kg	2.1	1.5	1.1	1.4
6	Calcium as Ca	mg/kg	740	610	430	440
7	Magnesium as Mg	mg/kg	620	680	560	620
8	Iron as Fe	%	0.44	0.58	0.65	0.33
9	Moisture	%	11.4	7.8	12.2	12.8
10	Organic Matter	%	0.1	0.15	0.2	0.15
11	CEC	meq/100 gm	8.1	8.7	9.4	8.8
12	TVC	CFU/gm	$6.3 \times 10^4$	$2.8 \times 10^3$	$8.5 \times 10^4$	$6.8 \times 10^3$
<b>A</b>	<b>Heavy Metals</b>					
13	Cadmium as Cd	mg/kg	Not Detected	Not Detected	Not Detected	Not Detected
14	Thorium as Th	mg/kg	Not Detected	Not Detected	Not Detected	Not Detected
15	Antimony as Sb	mg/kg	Not Detected	Not Detected	Not Detected	Not Detected
16	Arsenic as As	mg/kg	Not Detected	Not Detected	Not Detected	Not Detected
17	Lead as Pb	mg/kg	28.8	Not Detected	Not Detected	2.66
18	Chromium (VI) as Cr	mg/kg	14.64	Not Detected	5.5	Not Detected
19	Cobalt as Co	mg/kg	34.74	16.98	27.91	16.15
20	Copper as Cu	mg/kg	85.54	8.8	19.78	18.75
21	Nickel as Ni	mg/kg	24.94	13.43	19.13	13.23
22	Manganese as Mn	mg/kg	938	269	268	233
23	Vanadium as V	mg/kg	6.95	8.4	9.9	11.4

Not Detected [Minimum Detection Limit for Solid Waste/Soil sample prepared as per USEPA method 3050 B: Cadmium as Cd: 1.0 mg/kg, Thorium as Th: 0.1 mg/kg, Antimony as Sb: 1.0 mg/kg, Arsenic as As: 1.0 mg/kg, Lead as Pb: 1.0 mg/kg, Chromium (VI) as Cr: 0.1 mg/kg, Cobalt as Co: 1.0 mg/kg]

**H. T. Shah****Lab Manager****Dr. Arun Bajpai****Lab Manager (Q)**

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**Minimum Detection Limit [MDL]**

Water parameter(mg/L)		
Sr. No.	Test parameter	MDL
1	pH	2
2	Temperature	2
3	Colour	2
4	Total Suspended Solids	2
5	Oil & Grease	2
6	Phenolic Compound	0.005
7	Fluorides	0.05
8	Iron	0.01
9	Zinc as Zn	0.05
10	Trivalent Chromium	0.05
11	Sulphide as S	0.1
12	Ammonical Nitrogen as NH <sub>3</sub>	0.2
13	BOD (3 Days @ 27 °C)	1
14	COD	5
15	Chloride as Cl	1
16	Sulphate as SO <sub>4</sub>	1
17	Total Dissolved Solids	10
18	Total Residual Chlorine	0.2
19	Copper as Cu	0.01

Borehole Water Parameters			
SR. NO.	TEST PARAMETERS	UNIT	MDL
1	pH	--	2
2	Salinity	mg/L	0.5
3	Oil & Grease	mg/L	2
4	Hydrocarbon	mg/L	0.01
5	Lead as Pb	mg/L	0.01
6	Arsenic as As	mg/L	0.001
7	Nickel as Ni	mg/L	0.02
8	Total Chromium as Cr	mg/L	0.025
9	Cadmium as Cd	mg/L	0.002
10	Mercury as Hg	mg/L	0.005
11	Zinc as Zn	mg/L	0.06
12	Copper as Cu	mg/L	0.01
13	Iron as Fe	mg/L	0.1
14	Insecticides/Pesticides	mg/L	0.1

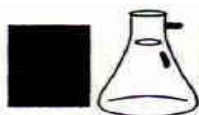
H. T. Shah

Lab Manager

Dr. ArunBajpai

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Ambient Air Parameters		
Sr. No.	Test Parameter	MDL
1	Particulate Matter (PM10) ( $\mu\text{g}/\text{m}^3$ )	10
2	Particulate Matter (PM 2.5) ( $\mu\text{g}/\text{m}^3$ )	10
3	Sulphur Dioxide ( $\text{SO}_2$ ) ( $\mu\text{g}/\text{m}^3$ )	5
4	Oxides of Nitrogen ( $\mu\text{g}/\text{m}^3$ )	5
5	Hydrogen Sulphide as $\text{H}_2\text{S}$ ( $\mu\text{g}/\text{m}^3$ )	6

STP Water parameter(mg/L)		
Sr. No.	Test parameter	MDL
1	pH	2
2	Total Suspended Solids (mg/L)	2
3	BOD (3 days @ 270 C) (mg/L)	1
4	Residual Chlorine (mg/L)	0.2
5	Fecal Coliform (MPN INDEX/100 mL)	1.8

Stack parameter		
Sr.No.	Test parameter	MDL
1	Particulate Matter ( $\text{mg}/\text{Nm}^3$ )	10
2	Sulphur Dioxide (ppm)	1.52
3	Oxides of Nitrogen (ppm)	2.65
4	Carbon Monoxide ( $\text{mg}/\text{Nm}^3$ )	0.1
5	Haydro Carbon NMHC(ppm)	1.0

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)

**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : April - 2019

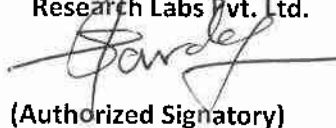
**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-19/04/001

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m³)					
		PM <sub>10</sub> µg/M³	PM <sub>2.5</sub> µg/M³	Sulphur Dioxide (SO <sub>2</sub> )µg/M³	Nitrogen Dioxide (NO <sub>2</sub> )µg/M³	Ozone (O <sub>3</sub> )µg/M³	Mercury (Hg) µg/M³
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/04/2019	76.2	32.5	15.4	23.7		--
2.	05/04/2019	63.6	25.9	23.8	29.5		--
3.	09/04/2019	81.2	37.2	18.6	20.2		--
4.	12/04/2019	72.4	33.3	21.6	14.3		--
5.	16/04/2019	78.5	41.7	18.7	25.6		--
6.	19/04/2019	63.2	28.3	23.1	25.2	20.8	BDL
7.	23/04/2019	79.3	37.5	26.4	18.5		--
8.	26/04/2019	69.2	34.5	21.7	26.4		--
9.	30/04/2019	84.8	37.2	22.3	28.1		--
Average		74.3	34.2	21.3	23.5		--

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub> - Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppbO<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : April - 2019

**Name of Location** : Village - Kandagara

**ID No.** : URA/ID/A-19/04/002

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m³)					
		PM <sub>10</sub> µg/M³	PM <sub>2.5</sub> µg/M³	Sulphur Dioxide (SO <sub>2</sub> )µg/M³	Nitrogen Dioxide (NO <sub>2</sub> )µg/M³	Ozone (O <sub>3</sub> )µg/M³	Mercury (Hg) µg/M³
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/04/2019	73.5	35.4	21.1	28.3		--
2.	05/04/2019	66.9	36.1	16.4	17.5		--
3.	09/04/2019	80.6	35.1	17.6	25.1		--
4.	12/04/2019	75.8	35.9	21.5	15.2		--
5.	16/04/2019	65.8	24.4	19.3	24.7		--
6.	19/04/2019	72.4	32.1	22.8	23.2	18.9	BDL
7.	23/04/2019	78.5	36.4	12.6	25.4		--
8.	26/04/2019	68.2	23.4	24.2	23.8		--
9.	30/04/2019	69.4	30.1	21.3	10.5		--
Average		72.3	32.1	19.6	21.5		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM-- IS: 5182 (Part 4), 1999, PM<sub>10</sub>-- IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>-- Guidelines by CPCB (Vol-1), SO<sub>2</sub>-- IS: 5182 (Part 2), 2001, NO<sub>x</sub>-- IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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QCINABET Accredited EIA Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

OHSAS18001:2007 Certified Company

ISO 9001:2015 Certified Company

**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village:Tunda&Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : April - 2019

**Name of Location** : Village - Wandh

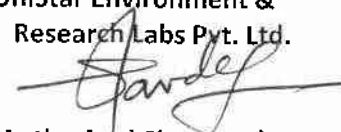
**ID No.** : URA/ID/A-19/04/003

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g} / \text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/04/2019	65.8	28.8	18.3	22.8		--
2.	05/04/2019	72.4	31.4	21.1	23.4		--
3.	09/04/2019	68.5	30.5	13.6	16.7		--
4.	12/04/2019	79.5	28.7	20.3	25.4		--
5.	16/04/2019	68.7	24.3	17.6	21.8		--
6.	19/04/2019	58.7	30.1	20.5	28.5	16.4	BDL
7.	23/04/2019	62.6	29.1	16.7	16.3		--
8.	26/04/2019	76.5	29.3	21.5	22.7		--
9.	30/04/2019	73.1	32.1	18.9	21.4		--
Average		69.5	29.4	18.7	22.1		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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Auditor (Schedule-II)

OHSAS18001:2007  
Certified Company

ISO 9001:2015  
Certified Company

**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : May - 2019

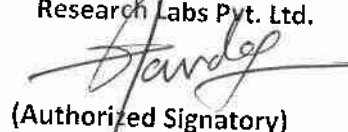
**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-19/05/001

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m³)					
		PM <sub>10</sub> µg/M³	PM <sub>2.5</sub> µg/M³	Sulphur Dioxide (SO <sub>2</sub> )µg/M³	Nitrogen Dioxide (NO <sub>2</sub> )µg/M³	Ozone (O <sub>3</sub> )µg/M³	Mercury (Hg) µg/M³
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	03/05/2019	75.2	33.1	22.5	17.2		--
2.	07/05/2019	66.6	31.3	20.1	27.5		--
3.	10/05/2019	75.5	30.1	14.8	26.4	20.4	BDL
4.	14/05/2019	84.6	39.2	11.5	20.7		--
5.	17/05/2019	77.1	24.5	21.4	19.4		--
6.	21/05/2019	71.6	38.0	14.7	15.5		--
7.	24/05/2019	57.0	29.1	24.0	25.2		--
8.	28/05/2019	73.9	36.4	21.7	26.4		--
9.	31/05/2019	68.4	30.5	22.3	28.1		--
Average		72.2	32.5	19.2	22.9		--
Analysis Method Reference: SPM - IS: 5182 (Part 4): 1992							

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub> - Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method - 3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS - 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

OHSAS18001:2007  
Certified Company

ISO 9001:2015  
Certified Company

### Monthly Average Report Ambient Air Quality Monitoring

Name and Address of Client

: M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

Month of Monitoring

: May - 2019

Name of Location

: Village - Kandagara

ID No.

: URA/ID/A-19/05/002

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g} / \text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	03/05/2019	66.1	27.5	16.3	29.5		--
2.	07/05/2019	62.9	25.2	20.8	15.2		--
3.	10/05/2019	77.1	30.3	15.4	28.4	20.7	BDL
4.	14/05/2019	81.6	37.3	15.7	20.5		--
5.	17/05/2019	79.6	34.9	10.5	15.5		--
6.	21/05/2019	61.1	23.0	25.3	24.2		--
7.	24/05/2019	77.0	35.4	21.8	19.7		--
8.	28/05/2019	70.8	34.4	24.2	23.8		--
9.	31/05/2019	51.4	31.2	21.3	20.5		--
Average		69.8	31.0	19.0	21.9		--
Remark: Calibrated equipment & instruments were used during the monitoring.							

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM- IS: 5182 (Part 4), 1999, PM<sub>10</sub>- IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub>- IS: 5182 (Part 2), 2001, NO<sub>x</sub>- IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS - 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
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(Authorized Signatory)

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QC/NABET Accredited EIA Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

OHSAS18001:2007 Certified Company

ISO 9001:2015 Certified Company

### Monthly Average Report Ambient Air Quality Monitoring

Name and Address of Client

: M/s. Adani Power (Mundra) Ltd.  
Village:Tunda&Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

Month of Monitoring

: May - 2019

Name of Location

: Village - Wandh

ID No.

: URA/ID/A-19/05/003

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g} / \text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	03/05/2019	65.7	29.5	14.6	28.5		--
2.	07/05/2019	76.2	30.1	20.2	18.9		--
3.	10/05/2019	63.8	29.0	17.5	23.5	18.3	BDL
4.	14/05/2019	63.4	21.8	22.8	27.7		--
5.	17/05/2019	70.0	28.9	23.5	25.3		--
6.	21/05/2019	76.7	27.7	23.1	32.2		--
7.	24/05/2019	80.1	37.8	20.5	25.6		--
8.	28/05/2019	63.7	28.8	18.7	26.3		--
9.	31/05/2019	50.5	26.6	19.6	23.2		--
Average		67.8	28.9	20.1	25.7		--
Remark: Calibrated equipment & instruments were used during monitoring.							

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
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**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : June - 2019


**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-19/06/001

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m <sup>3</sup> )					
		PM <sub>10</sub> µg/M <sup>3</sup>	PM <sub>2.5</sub> µg/M <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> )µg/M <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> )µg/M <sup>3</sup>	Ozone (O <sub>3</sub> )µg/M <sup>3</sup>	Mercury (Hg) µg/M <sup>3</sup>
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	04/06/2019	78.7	39.1	19.3	26.4		--
2.	07/06/2019	70.6	32.1	28.5	22.3		--
3.	11/06/2019	80.1	33.2	21.4	29.4		--
4.	14/06/2019	74.2	32.0	15.7	27.8		--
5.	18/06/2019	66.3	25.5	25.1	21.3	22.3	BDL
6.	21/06/2019	69.9	27.2	22.5	18.5		--
7.	25/06/2019	73.2	31.1	17.3	23.4		--
8.	28/06/2019	67.0	27.8	19.5	14.7		--
Average		72.5	31.0	21.2	23.0		--

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub> - Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method - 3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS - 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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QC-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

OHSAS18001:2007  
Certified Company

ISO 9001:2015  
Certified Company

### Monthly Average Report Ambient Air Quality Monitoring

Name and Address of Client : M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

Month of Monitoring : June - 2019

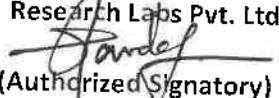
Name of Location : Village - Kandagara

ID No. : URA/ID/A-19/06/002

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m <sup>3</sup> )					
		PM <sub>10</sub> µg/M <sup>3</sup>	PM <sub>2.5</sub> µg/M <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> )µg/M <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> )µg/M <sup>3</sup>	Ozone (O <sub>3</sub> )µg/M <sup>3</sup>	Mercury (Hg) µg/M <sup>3</sup>
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	04/06/2019	71.9	34.2	23.8	28.5		--
2.	07/06/2019	57.4	26.2	21.1	24.3		--
3.	11/06/2019	67.2	31.5	20.3	30.7		--
4.	14/06/2019	77.9	32.0	18.7	16.7		--
5.	18/06/2019	70.2	26.1	23.1	21.4	17.8	BDL
6.	21/06/2019	75.7	28.1	13.4	17.5		--
7.	25/06/2019	60.8	27.2	19.5	12.2		--
8.	28/06/2019	71.1	32.1	21.4	20.3		--
Average		69.0	29.7	20.2	21.5		--
Remarks: Calibrated equipment & instrument used.							

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM– IS: 5182 (Part 4), 1999, PM<sub>10</sub>– IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub>– IS: 5182 (Part 2), 2001, NO<sub>x</sub>– IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
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**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village:Tunda&Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : June - 2019

**Name of Location** : Village - Wandh

**ID No.** : URA/ID/A-19/06/003

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m³)					
		PM <sub>10</sub> µg/M³	PM <sub>2.5</sub> µg/M³	Sulphur Dioxide (SO <sub>2</sub> )µg/M³	Nitrogen Dioxide (NO <sub>2</sub> )µg/M³	Ozone (O <sub>3</sub> )µg/M³	Mercury (Hg) µg/M³
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	04/06/2019	66.9	24.8	15.2	23.8		--
2.	07/06/2019	76.2	38.5	21.7	29.4		--
3.	11/06/2019	60.4	26.4	20.5	16.5		--
4.	14/06/2019	62.6	35.4	16.3	27.1		--
5.	18/06/2019	59.4	21.9	23.8	19.5	16.2	BDL
6.	21/06/2019	74.6	33.7	18.5	25.2		--
7.	25/06/2019	79.7	31.5	22.1	21.6		--
8.	28/06/2019	73.0	27.3	13.4	18.3		--
Average		69.1	29.9	18.9	22.7		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : July - 2019

**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-19/07/001

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m <sup>3</sup> )					
		PM <sub>10</sub> µg/M <sup>3</sup>	PM <sub>2.5</sub> µg/M <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> )µg/M <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> )µg/M <sup>3</sup>	Ozone (O <sub>3</sub> )µg/M <sup>3</sup>	Mercury (Hg) µg/M <sup>3</sup>
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/07/2019	77.3	33.3	23.1	21.8		--
2.	05/07/2019	75.3	31.3	17.4	19.5		--
3.	09/07/2019	66.1	27.9	21.6	25.7	18.6	BDL
4.	12/07/2019	65.9	29.5	20.5	18.3		--
5.	16/07/2019	60.8	26.8	18.3	19.5		--
6.	19/07/2019	63.0	24.7	13.4	23.7		--
7.	23/07/2019	Rain Fall					
8.	26/07/2019						
9.	30/07/2019						
Average		68.1	28.9	19.1	21.4		--

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub> - Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub>: IS - 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : July - 2019

**Name of Location** : Village - Kandagara

**ID No.** : URA/ID/A-19/07/002

Sr. No.	Sampling Date	Concentration in Ambient Air ( $\mu\text{g} / \text{m}^3$ )					
		PM <sub>10</sub> $\mu\text{g}/\text{M}^3$	PM <sub>2.5</sub> $\mu\text{g}/\text{M}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{M}^3$	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{M}^3$	Mercury (Hg) $\mu\text{g}/\text{M}^3$
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/07/2019	66.7	31.1	19.3	26.2		--
2.	05/07/2019	76.1	30.6	15.7	22.7		--
3.	09/07/2019	65.1	31.6	18.2	20.4	16.2	BDL
4.	12/07/2019	55.3	21.6	10.9	15.7		--
5.	16/07/2019	52.7	25.6	15.5	22.5		--
6.	19/07/2019	66.7	24.3	17.2	20.2		--
7.	23/07/2019	Rain Fall					
8.	26/07/2019						
9.	30/07/2019						
Average		63.8	27.5	16.1	21.3		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM– IS: 5182 (Part 4), 1999, PM<sub>10</sub>– IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>– Guidelines by CPCB (Vol-1), SO<sub>2</sub>– IS: 5182 (Part 2), 2001, NO<sub>x</sub>– IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.

(Authorized Signatory)



**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village:Tunda&Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : July - 2019

**Name of Location** : Village - Wandh

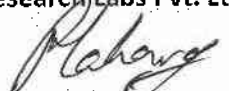
**ID No.** : URA/ID/A-19/07/003

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m <sup>3</sup> )					
		PM <sub>10</sub> µg/M <sup>3</sup>	PM <sub>2.5</sub> µg/M <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> )µg/M <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> )µg/M <sup>3</sup>	Ozone (O <sub>3</sub> )µg/M <sup>3</sup>	Mercury (Hg) µg/M <sup>3</sup>
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/07/2019	73.4	23.8	18.5	25.8		--
2.	05/07/2019	60.4	30.5	17.2	20.5		--
3.	09/07/2019	62.5	31.7	17.3	24.6	15.1	BDL
4.	12/07/2019	57.4	27.3	14.5	20.2		--
5.	16/07/2019	63.8	26.0	16.8	14.3		--
6.	19/07/2019	53.1	29.5	21.5	17.3		--
7.	23/07/2019	Rain Fall					
8.	26/07/2019						
9.	30/07/2019						
Average		61.8	28.1	17.6	20.5		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub> - Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS - 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.

  
(Authorized Signatory)

**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : August - 2019


**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-19/08/001

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m³)					
		PM <sub>10</sub> µg/M³	PM <sub>2.5</sub> µg/M³	Sulphur Dioxide (SO <sub>2</sub> )µg/M³	Nitrogen Dioxide (NO <sub>2</sub> )µg/M³	Ozone (O <sub>3</sub> )µg/M³	Mercury (Hg) µg/M³
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/08/2019	78.0	31.4	18.6	15.2		--
2.	06/08/2019	65.1	19.1	15.7	23.4		--
3.	09/08/2019	70.8	19.9	19.2	25.7		--
4.	13/08/2019	71.1	22.3	19.5	20.4		--
5.	16/08/2019	65.7	22.5	17.4	22.1	13.5	BDL
6.	20/08/2019	60.5	21.0	21.8	18.4		--
7.	23/08/2019	73.4	33.8	16.1	16.3		--
8.	27/08/2019	65.0	24.2	19.5	23.7		--
9.	30/08/2019	Rain Fall					
Average		68.7	24.3	18.5	20.7		--

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub> - Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg: AAS by VGA Method -3112 B APHA 22 Edison & Hg: 2 ppb O<sub>3</sub> - IS - 5182 (Part 9) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### Monthly Average Report Ambient Air Quality Monitoring

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
 Village: Tunda & Siracha,  
 Tal. Mundra, Dist.: Kutch.  
 GUJARAT - 370 435.

**Month of Monitoring** : August - 2019

**Name of Location** : Village - Kandagara

**ID No.** : URA/ID/A-19/08/002

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m <sup>3</sup> )					
		PM <sub>10</sub> µg/M <sup>3</sup>	PM <sub>2.5</sub> µg/M <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> )µg/M <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> )µg/M <sup>3</sup>	Ozone (O <sub>3</sub> )µg/M <sup>3</sup>	Mercury (Hg) µg/M <sup>3</sup>
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/08/2019	66.2	22.0	15.3	19.4		--
2.	06/08/2019	64.9	21.0	12.5	20.1		--
3.	09/08/2019	56.6	23.4	17.3	10.4		--
4.	13/08/2019	72.6	32.8	21.5	23.7		--
5.	16/08/2019	58.4	20.6	20.2	16.2	15.7	BDL
6.	20/08/2019	56.6	24.6	15.8	19.7		--
7.	23/08/2019	71.3	28.7	22.4	21.7		--
8.	27/08/2019	68.5	18.2	13.7	20.5		--
9.	30/08/2019	Rain Fall					
Average		64.4	23.9	17.3	19.0		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM- IS: 5182 (Part 4), 1999, PM<sub>10</sub>- IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub>- IS: 5182 (Part 2), 2001, NO<sub>x</sub>- IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS - 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.

(Authorized Signatory)

**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village:Tunda&Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : August - 2019

**Name of Location** : Village - Wandh

**ID No.** : URA/ID/A-19/08/003

Sr. No.	Sampling Date	Concentration in Ambient Air (µg / m <sup>3</sup> )					
		PM <sub>10</sub> µg/M <sup>3</sup>	PM <sub>2.5</sub> µg/M <sup>3</sup>	Sulphur Dioxide (SO <sub>2</sub> )µg/M <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> )µg/M <sup>3</sup>	Ozone (O <sub>3</sub> )µg/M <sup>3</sup>	Mercury (Hg) µg/M <sup>3</sup>
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	02/08/2019	66.2	25.4	15.3	18.5		--
2.	06/08/2019	79.7	34.2	22.2	24.8		--
3.	09/08/2019	70.3	26.8	11.4	20.4		--
4.	13/08/2019	66.0	25.4	18.2	25.1		--
5.	16/08/2019	74.9	31.1	20.5	17.3	23.5	BDL
6.	20/08/2019	62.4	22.5	16.2	22.6		--
7.	23/08/2019	73.5	24.6	26.2	20.8		--
8.	27/08/2019	67.8	23.8	21.5	24.6		--
9.	30/08/2019	Rain Fall					
Average		70.1	26.7	18.9	21.8		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.



### Monthly Average Report Ambient Air Quality Monitoring

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : September - 2019

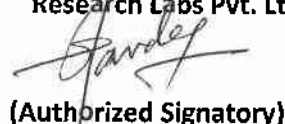
**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-19/09/001

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m³)					
		PM <sub>10</sub> µg/M³	PM <sub>2.5</sub> µg/M³	Sulphur Dioxide (SO <sub>2</sub> )µg/M³	Nitrogen Dioxide (NO <sub>2</sub> )µg/M³	Ozone (O <sub>3</sub> )µg/M³	Mercury (Hg) µg/M³
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	03/09/2019	Rain Fall					--
2.	06/09/2019	Rain Fall					--
3.	10/09/2019	Rain Fall					--
4.	13/09/2019	Rain Fall					--
5.	16/09/2019	55.4	17.2	12.4	20.3	13.4	BDL
6.	18/09/2019	63.5	27.8	16.7	14.5		--
7.	24/09/2019	74.1	25.1	20.5	23.6		--
8.	26/09/2019	54.7	20.2	19.5	23.7		--
Average		61.9	22.6	17.3	20.5		--

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppbO<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.



(Authorized Signatory)

**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village: Tunda & Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : September - 2019


**Name of Location** : Village - Kandagara

**ID No.** : URA/ID/A-19/09/002

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m³)					
		PM <sub>10</sub> µg/M³	PM <sub>2.5</sub> µg/M³	Sulphur Dioxide (SO <sub>2</sub> )µg/M³	Nitrogen Dioxide (NO <sub>2</sub> )µg/M³	Ozone (O <sub>3</sub> )µg/M³	Mercury (Hg) µg/M³
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	03/09/2019	Rain Fall					--
2.	06/09/2019	Rain Fall					--
3.	10/09/2019	Rain Fall					--
4.	13/09/2019	Rain Fall					--
5.	16/09/2019	52.0	21.2	14.4	13.8	14.7	BDL
6.	18/09/2019	58.7	17.8	15.2	19.2		--
7.	24/09/2019	68.4	24.0	17.3	18.5		--
8.	26/09/2019	62.8	23.6	13.7	20.5		--
Average		60.4	21.7	15.2	18.0		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM– IS: 5182 (Part 4), 1999, PM<sub>10</sub>– IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub>– IS: 5182 (Part 2), 2001, NO<sub>x</sub>– IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.  
  
(Authorized Signatory)

**Monthly Average Report**  
**Ambient Air Quality Monitoring**

**Name and Address of Client** : M/s. Adani Power (Mundra) Ltd.  
Village:Tunda&Siracha,  
Tal. Mundra, Dist.: Kutch.  
GUJARAT – 370 435.

**Month of Monitoring** : September - 2019

**Name of Location** : Village - Wandh

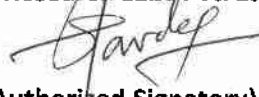
**ID No.** : URA/ID/A-19/09/003

Sr. No.	Sampling Date	Concentration in Ambient Air (µg /m³)					
		PM <sub>10</sub> µg/M³	PM <sub>2.5</sub> µg/M³	Sulphur Dioxide (SO <sub>2</sub> )µg/M³	Nitrogen Dioxide (NO <sub>2</sub> )µg/M³	Ozone (O <sub>3</sub> )µg/M³	Mercury (Hg) µg/M³
GPCB Permissible Limit (TWA for 24 hrs.)		100	60	80	80	100	N.A.
1.	03/09/2019	Rain Fall					--
2.	06/09/2019	Rain Fall					--
3.	10/09/2019	Rain Fall					--
4.	13/09/2019	Rain Fall					--
5.	16/09/2019	68.2	21.7	14.7	21.5	18.5	BDL
6.	18/09/2019	74.5	25.6	16.2	18.3		--
7.	24/09/2019	73.1	33.7	23.5	26.7		--
8.	26/09/2019	63.5	29.6	16.3	24.6		--
Average		69.8	27.6	17.7	22.8		--

**Remark:** Calibrated equipment & instruments were used during monitoring & analysis of above identified sample.

**Analysis Method Reference:** SPM - IS: 5182 (Part 4), 1999, PM<sub>10</sub> - IS: 5182 (Part 23), 2006, PM<sub>2.5</sub>- Guidelines by CPCB (Vol-1), SO<sub>2</sub> - IS: 5182 (Part 2), 2001, NO<sub>x</sub> - IS: 5182 (Part 6), 2006, Hg:AAS by VGA Method -3112 B APHA 22 Edison&Hg: 2 ppb O<sub>3</sub>: IS – 5182 (Part 9) 2009Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

UniStar Environment &  
Research Labs Pvt. Ltd.



(Authorized Signatory)





# Earth Envirotech

**ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY**  
An NABL Accredited Laboratory, GPCB Approved Environmental Auditors,

## EARTH ENVIROTECH

7 & 15, Ground Floor, Madhav Palace,  
Plot No. 55, Sector-8, Opp. D-Mart Mall,  
Gandhidham, Dist.: Kutch -370201, Gujarat, INDIA  
Phone: 02836-237150, Cell: 09724734757  
E-Mail: earthenvirotech@gmail.com,  
Web: www.earthenvirotech.com

Report No: - EE/LAB/EA/2019/06/001

Date: 13/06/2019

### ANALYSIS REPORT

Name and Address Of Client	M/s Orient Carbon & Chemicals Ltd Plot No. 141/P, Mundra SEZ Taluka : Mundra Dist. Kutch 370421
Sampling Done By :	Earth Envirotech Team
Method of Sampling	IS 5182: Part - 5: 2014
Analysis Start on	06.06.2019
Analysis end on	10.06.2019

### AMBIENT AIR MONITORING RESULTS

Sr. No.	Parameters	Unit	National Ambient Air Quality Standards (NAAQS)	Reference Method	Results			
					Near Main Gate	Nr. CF boiler	Nr. Packaging line 4	Near ETP plant
				Date of Sampling	03.06.2019	03.06.2019	04.06.2019	04.06.2019
				Code	EE/19/Q1/OCCL/AA1	EE/19/Q1/OCCL/AA2	EE/19/Q1/OCCL/AA3	EE/19/Q1/OCCL/AA4
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	100	IS 5182 Part 23 : 2017	71.59	69.21	77.17	68.52
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	CPCB manual Volume I	42.84	51.5	64.14	24.06
3.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS 5182 Part 2 : 2017	20.71	34.72	28.02	23.15
4.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS 5182 Part 6 : 2017	12.34	10.8	12.99	9.0

Checked By :

Authorized Signatory:

- Analysis is subject to the condition in which the sample is received at our Laboratory.
- Reports can not be used as an evidence anywhere including judiciary purpose without our prior permission.
- Sample will be retained till one month from the date of sampling.





# Earth Envirotech

**ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY**  
An NABL Accredited Laboratory, GPCB Approved Environmental Auditors,

## EARTH ENVIROTECH

7 & 15, Ground Floor, Madhav Palace,  
Plot No. 55, Sector-8, Opp. D-Mart Mall,  
Gandhidham, Dist.: Kutch -370201, Gujarat, INDIA  
Phone: 02836-237150, Cell: 09724734757  
E-Mail: earthenvirotech@gmail.com,  
Web: www.earthenvirotech.com

Report No: - EE/LAB/EA/2019/09/001

Date: 17/09/2019

### ANALYSIS REPORT

Name and Address Of Client	M/s Orient Carbon & Chemicals Ltd Plot No. 141/P, Mundra SEZ Taluka : Mundra Dist. Kutch 370421
Sampling Done By :	Earth Envirotech Team
Method of Sampling	IS 5182: Part - 5: 2014
Analysis Start on	09/09/2019
Analysis end on	13/09/2019

### AMBIENT AIR MONITORING RESULTS

Sr. No.	Parameters	Unit	National Ambient Air Quality Standards (NAAQS)	Reference Method	Results			
					Near Main Gate	Nr. CF boiler	Nr. Packaging line 4	Near ETP plant
				Date of Sampling	06/09/2019	06/09/2019	07/09/2019	07/09/2019
				Code	EE/19/Q2/OCCL/AA1	EE/19/Q2/OCCL/AA2	EE/19/Q2/OCCL/AA3	EE/19/Q2/OCCL/AA4
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	100	IS 5182 Part 23 : 2017	64.53	67.93	69.53	63.24
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	CPCB manual Volume I	25.12	27.63	32.71	22.61
3.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS 5182 Part 2 : 2017	25.03	26.88	29.6	20.38
4.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS 5182 Part 6 : 2017	27.96	29.56	26.35	25.16

Checked By :

Authorized Signatory:

- Analysis is subject to the condition In Which the Sample Is received at our Laboratory.
- Reports can not be used as an evidence anywhere including judiciary purpose without our prior permission.
- Sample will be retained till one month from the date of sampling.





# Royal

## Environment Auditing & Consultancy Service

303-304, Shivalik-7, B/s Bal Adalat, Gondal Road, RAJKOT - 360 002.

Ph. +91 281 2360695 Email : royalenvironment@live.com admin@royalconsultancy.com

Ref.No.: 256/07/2019-20

Date : 31/07/2019

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of Company: Ahlstrom Munksjo Fibercomposites India Pvt. Ltd.

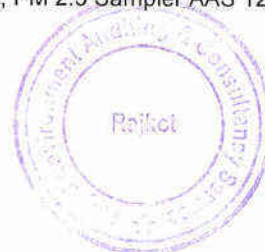
Address: Mundra SEZ Integrated Textile & Apparell Park,  
(MITAP), Plot No. - 07  
Survey No. -141, Mundra,  
Kutch-370421

Test Method : As per IS Standards - 5182\_2/4/6

Sr.No.	Particulars	Unit	Location No. 1	Location No. 2
01.	Location of Sampling	----	Nr. New Security Gate	Nr. Old Security Gate
02.	Date of sampling	----	16/07/2019	16/07/2019
03.	Time of sampling	Hr.	10.00	10.15
04.	Duration of sampling	Hrs.	24.00	24.00
05.	Dominant Wind Direction (From)	----	WNW	WNW
06.	Average Wind Speed	Km/Hr.	7.2	7.2
07.	Average flow rate during sampling	m <sup>3</sup> /minute	1.1	1.1
08.	Average flow rate for Gas sampling	Meter	0.2	0.2
09.	Permissible Limits of PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	60
10.	Measured Concentration of PM <sub>2.5</sub>	µg/m <sup>3</sup>	38	37
11.	Permissible Limits of PM <sub>10</sub>	µg/m <sup>3</sup>	100	100
12.	Measured Concentration of PM <sub>10</sub>	µg/m <sup>3</sup>	70	62
13.	Permissible Limits of SO <sub>2</sub>	µg/m <sup>3</sup>	80	80
14.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	11.2	11.6
15.	Permissible Limits of NO <sub>2</sub>	µg/m <sup>3</sup>	80	80
16.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	18.7	21.3

Instrument Used : Ecotech make AAS - 217 BL , Gaseous Sampler AAS 109, PM 2.5 Sampler AAS 127

Calibration Done on. : 06/05/2019







# Earth Envirotech

**ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY**  
An NABL Accredited Laboratory, GPCB Approved Environmental Auditors,

## EARTH ENVIROTECH

7 & 15, Ground Floor, Madhav Palace,  
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Gandhidham, Dist.: Kutch -370201, Gujarat, INDIA  
Phone: 02836-237150, Cell: 09724734757  
E-Mail: earthenvirotech@gmail.com,  
Web: www.earthenvirotech.com

Report No: - EE/LAB/EMR/2019/07/038

Date: 29/07/2019

### ANALYSIS REPORT (For the Month of July - 2019)

Client Details		Sample Details	
Name	Britannia Industries Ltd.	Sample Code	EE/0719/BIL/AA1
Address	Survey No. 169/p,	Location	Near Security Gate
	Adani Port & Special Economic Zone, Ta. Mundra, Dist. Kutch	Quantity	N/A
Sampling Done By	Earth Envirotech Team	Date of Sampling	23/07/2019
Analysis Starts on	25/07/2019	Sampling Method	IS 5182: Part - 5: 1975
Analysis Completion On	27/07/2019	Sample Received Date	24/07/2019

### AMBIENT AIR MONITORING RESULTS

Sr. No.	Parameters	Unit	Results	National Ambient Air Quality Standards (NAAQS)	Reference Method
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	69.36	100	IS 5182 Part 4 : 2006
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	31.41	60	IS 5182 Part 23 : 2006
3.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	20.4	80	IS 5182 Part 2 : 2001
4.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	25.74	80	IS 5182 Part 6 : 2006

Checked By:

Z. A. Jani



- Analysis is subject to the condition In Which the Sample Is received at our Laboratory.
- Reports can not be used as an evidence anywhere including judiciary purpose without our prior permission.
- Sample will be retained till one month from the date of sampling.



Report No: - EE/LAB/EMR/2019/05/001

Date: 06/05/2019

### ANALYSIS REPORT (For the Month of May- 2019)

Client Details		Sample Details	
Name	M/s. Terram Geosynthetics Pvt. Ltd.	Sample Code	EE/0419/TGPL/AA1
Address	Plot No.: 5, Block - B, Sector-12 S, Adani Port & SEZ, Tal: Mundra, Dist: Kutch,	Location	Near Admin Building
		Quantity	N/A
Sampling Done By	Earth Envirotech Team	Date of Sampling	29/04/2019
Analysis Starts on	30/04/2019	Sampling Method	IS 5182: Part - 5: 2014
Analysis Completion On	03/05/2019	Sample Received Date	30/04/2019

### AMBIENT AIR MONITORING RESULTS

Sr. No.	Parameters	Unit	Results	National Ambient Air Quality Standards (NAAQS)	Reference Method
			Near Admin Building		
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	81.25	100	IS 5182 Part 23 : 2017
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	31.44	60	CPCB manual Volume I
3.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	27.63	80	IS 5182 Part 2 : 2017
4.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	24.41	80	IS 5182 Part 6 : 2017

  
Checked By :

  
Authorized Signatory:

- Analysis is subject to the condition In Which the Sample Is received at our Laboratory.
- Reports can not be used as an evidence anywhere including judiciary purpose without our prior permission.
- Sample will be retained till one month from the date of sampling.





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Gandhidham, Dist.: Kutch -370201, Gujarat, INDIA  
Phone: 02836-237150, Cell: 09724734757  
E-Mail: earthenvirotech@gmail.com,  
Web: www.earthenvirotech.com

Report No: - EE/LAB/EMR/2019/08/001

Date: 02/08/2019

### ANALYSIS REPORT (For the Month of July- 2019)

Client Details		Sample Details	
Name	M/s. Terram Geosynthetics Pvt. Ltd.	Sample Code	EE/0719/TGPL/AA1
Address	Plot No.: 5, Block - B, Sector-12 S, Adani Port & SEZ, Tal: Mundra, Dist: Kutch,	Location	Near Admin Building
		Quantity	N/A
Sampling Done By	Earth Envirotech Team	Date of Sampling	25/07/2019
Analysis Starts on	27/07/2019	Sampling Method	IS 5182: Part - 5: 2014
Analysis Completion On	31/07/2019	Sample Received Date	26/07/2019

### AMBIENT AIR MONITORING RESULTS

Sr. No.	Parameters	Unit	Results	National Ambient Air Quality Standards (NAAQS)	Reference Method
			Near Admin Building		
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	79.52	100	IS 5182 Part 23 : 2017
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	31.96	60	CPCB manual Volume I
3.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	26.23	80	IS 5182 Part 2 : 2017
4.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	26.10	80	IS 5182 Part 6 : 2017

*[Signature]*  
Checked By :

*[Signature]*  
Authorized Signatory:

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- Reports can not be used as an evidence anywhere including judiciary purpose without our prior permission.
- Sample will be retained till one month from the date of sampling.



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**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

<b>ULR - TC775319000015778F</b>			
<b>Test Report No.:</b>	<b>URA/19/09/A-085</b>	<b>Report Issue Date:</b>	<b>02/10/2019</b>
<b>Service Request form No.:</b>	<b>URA/SRF/09/040</b>	<b>Service Request Date</b>	<b>16/09/2019</b>
<b>Sample ID No.:</b>	<b>URA/ID/A-19/09/085</b>	<b>Field Data Sheet No.:</b>	<b>URA/FDS/A-19/09/085</b>
<b>Name &amp; Add. of Customer</b>	<b>M/s. Dorf Ketel Chemicals India Pvt. Ltd.</b> Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
<b>Dates of Sampling :</b>	<b>26/09/2019</b>	<b>Date of Testing</b>	<b>28/09/2019</b>
<b>Sampling Procedure:</b>	<b>CPCB Guideline</b>		
<b>Location of Sampling / Monitoring:</b>	<b>A - 1 (Nr. ETP)</b>		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Call. Date	Next Cali. Date
UERL/AIR/RDS/24	Respirable Dust Sampler	2345-DTB-2012,1039-DTC-2012	02/08/2019	01/08/2020
UERL/AIR/FPS/30	Fine Particulate Sampler	132-DTL-2012	02/08/2019	01/08/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.27
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1828
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing :** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%.

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	67	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	20	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	15.2	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	18.7	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

**Sampling Done By:**

*(Signature)*  
(Chemist) / (Supervisor)  
(2019)

**Tested By:**

*(Signature)*  
(Chemist) / (Sr. Chemist)  
(20.09.19)

**Authorized By:**

*(Signature)*  
(Manager - Operations)  
(27-09-19)

Page No.: 1 of 1

UERL/AIR/F-05/03

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### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775319000015779F			
Test Report No.:	URA/19/09/A-086	Report Issue Date:	02/10/2019
Service Request form No.:	URA/SRF/09/040	Service Request Date	16/09/2019
Sample ID No.:	URA/ID/A-19/09/086	Field Data Sheet No.:	URA/FDS/A-19/09/086
Name & Add. of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	26/09/2019	Date of Testing	28/09/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 3 (Nr. Main Gate / RMU)		

#### Details of Master Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013, 1127-DTJ-2012	02/08/2019	01/08/2020
UERL/AIR/FPS/41	Fine Particulate Sampler	137-DTD-2013	03/08/2019	02/08/2020

#### General Sampling / Monitoring Observation as per CPCB Guideline

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.26
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1814
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

Environmental Conditions during testing : Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	73	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	22	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	17.5	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	22.4	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

(Chemist) / (Supervisor)  
(S. I.)

Tested By:

(Chemist) / (Sr. Chemist)  
(S. I.)

Authorized By:

(Manager - Operations)  
(S. I.)  
UERL/AIR/F-05/03

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### TEST REPORT (AMBIENT AIR MONITORING)

<b>ULR - TC775319000015780F</b>			
<b>Test Report No.:</b>	<b>URA/19/09/A-087</b>	<b>Report Issue Date:</b>	<b>02/10/2019</b>
<b>Service Request form No.:</b>	<b>URA/SRF/09/040</b>	<b>Service Request Date</b>	<b>16/09/2019</b>
<b>Sample ID No.:</b>	<b>URA/ID/A-19/09/087</b>	<b>Field Data Sheet No.:</b>	<b>URA/FDS/A-19/09/087</b>
<b>Name &amp; Add. of Customer</b>	<b>M/s. Dorf Ketel Chemicals India Pvt. Ltd.</b> Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
<b>Dates of Sampling :</b>	<b>26/09/2019</b>	<b>Date of Testing</b>	<b>28/09/2019</b>
<b>Sampling Procedure:</b>	<b>CPCB Guideline</b>		
<b>Location of Sampling / Monitoring:</b>	<b>A - 2 (Nr. Ware House)</b>		

#### > Details of Master Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UURL/AIR/RDS/26	Respirable Dust Sampler	1745-DTA-2013,1139-DTA-2013	02/08/2019	01/08/2020
UURL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	03/08/2019	02/08/2020

#### > General Sampling / Monitoring Observation as per CPCB Guideline

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.22
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1756
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

> **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

#### > Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	54	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	16	60	UURL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	11.7	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	15.3	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UURL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

**Note:** BDL = Below Detection Limit.

**Sampling Done By:**

*Acad*  
(Chemist) / (Supervisor)  
(A-21)

**Tested By:**

*(Signature)*  
(Chemist) / (Sr. Chemist)  
(A-21)

**Authorized By:**

*(Signature)*  
(Manager - Operations)  
(A-21)

Page No.: 1 of 1

UURL/AIR/F-05/03

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Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.

CIN: U73100GJ2007PTC051463



**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

<b>ULR - TC775319000013937F</b>			
Test Report No.:	URA/19/08/A-090	Report Issue Date:	02/09/2019
Service Request form No.:	URA/SRF/08/060	Service Request Date	28/08/2019
Sample ID No.:	URA/ID/A-19/08/090	Field Data Sheet No.:	URA/FDS/A-19/08/090
Name & Add. of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	28/08/2019	Date of Testing	30/08/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 1 (Nr. ETP)		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/24	Respirable Dust Sampler	2345-DTB-2012,1039-DTC-2012	02/08/2019	01/08/2020
UERL/AIR/FPS/30	Fine Particulate Sampler	132-DTL-2012	02/08/2019	01/08/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.29
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1857
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	72	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	23	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	17.4	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	20.7	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

**Note:** BDL = Below Detection Limit.

**Sampling Done By:**

*(Signature)*  
(Chemist) / (Supervisor)  
(A-1)

**Tested By:**

*(Signature)*  
(Chemist) / (Sr. Chemist)  
(~ 2.8)

**Authorized By:**

*(Signature)*  
(Manager - Operations)  
(7-57)

Page No.: 1 of 1

UERL/AIR/F-05/03

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Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.

CIN: U73100GJ2007PTC051483

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**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

<b>ULR - TC775319000013939F</b>			
Test Report No.:	URA/19/08/A-092	Report Issue Date:	02/09/2019
Service Request form No.:	URA/SRF/08/060	Service Request Date	28/08/2019
Sample ID No.:	URA/ID/A-19/08/092	Field Data Sheet No.:	URA/FDS/A-19/08/092
Name & Add. of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	28/08/2019	Date of Testing	30/08/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 2 (Nr. Ware House)		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/26	Respirable Dust Sampler	1745-DTA-2013,1139-DTA-2013	02/08/2019	01/08/2020
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	03/08/2019	02/08/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.26
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1814
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	60	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	19	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	12.7	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	16.4	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*(Signature)*  
(Chemist) / (Supervisor)  
(A.T.)

Tested By:

*(Signature)*  
(Chemist) / (Sr. Chemist)  
(M.D.P.)

Authorized By:

*(Signature)*  
(Manager - Operations)  
(3-27)

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UERL/AIR/F-05/03

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Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.

CIN:U73100GJ2007PTC051463



**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

<b>ULR - TC775319000013938F</b>			
Test Report No.:	URA/19/08/A-091	Report Issue Date:	02/09/2019
Service Request form No.:	URA/SRF/08/060	Service Request Date:	28/08/2019
Sample ID No.:	URA/ID/A-19/08/091	Field Data Sheet No.:	URA/FDS/A-19/08/091
Name & Add. of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	28/08/2019	Date of Testing	30/08/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 3 (Nr. Main Gate / RMU)		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013,1127-DTI-2012	02/08/2019	01/08/2020
UERL/AIR/FPS/41	Fine Particulate Sampler	137-DTD-2013	03/08/2019	02/08/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.25
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1800
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	78	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	25	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	20.1	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	24.5	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*Seel*  
(Chemist) / (Supervisor)  
*Caril*

Tested By:

*[Signature]*  
(Chemist) / (Sr. Chemist)  
*Caril*

Authorized By:

*[Signature]*  
(Manager - Operations)  
*CSJ*

Page No.: 1 of 1

UERL/AIR/F-05/03

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Extended Work Office : G.I.D.C., Daheji-II, Bharuch, Gujarat.

CIN: U71100GJ2007PTC051463



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### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775319000012228F			
Test Report No.:	URA/19/07/A-107	Report Issue Date:	29/07/2019
Service Request form No.:	URA/SRF/07/080	Service Request Date:	24/07/2019
Sample ID No.:	URA/ID/A-19/07/107	Field Data Sheet No.:	URA/FDS/A-19/07/107
Name & Add. of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	24/07/2019	Date of Testing:	26/07/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 3 (Nr. Main Gate / RMU)		

#### Details of Master Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013, 1127-DTJ-2012	23/01/2019	22/01/2020
UERL/AIR/FPS/41	Fine Particulate Sampler	137-DTD-2013	01/04/2019	31/03/2020

#### General Sampling / Monitoring Observation as per CPCB Guideline

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.27
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1828
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

Environmental Conditions during testing: Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	83	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	29	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	18.5	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	25.7	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*(Signature)*  
(Chemist) / (Supervisor)  
(A.T.)

Page No.: 1 of 1

Tested By:

*(Signature)*  
(Chemist) / (Sr. Chemist)  
(A.D.C.)

Authorized By:

*(Signature)*  
(Manager - Operations)  
(J.S.T.)  
UERL/AIR/F-05/03



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**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

ULR - TC775319000012227F			
Test Report No.:	URA/19/07/A-106	Report Issue Date:	29/07/2019
Service Request form No.:	URA/SRF/07/080	Service Request Date	24/07/2019
Sample ID No.:	URA/ID/A-19/07/106	Field Data Sheet No.:	URA/FDS/A-19/07/106
Name & Add. of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	24/07/2019	Date of Testing	26/07/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 1 (Nr. ETP)		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/24	Respirable Dust Sampler	2345-DTB-2012,1039-DTC-2012	01/04/2019	31/03/2020
UERL/AIR/FPS/30	Fine Particulate Sampler	132-DTL-2012	07/03/2019	06/03/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.24
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1786
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing** : Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	77	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	26	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	15.2	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	22.5	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*Amit*  
(Chemist) / (Supervisor)  
(Amit)

Page No.: 1 of 1

Tested By:

*R. P.*  
(Chemist) / (Sr. Chemist)  
(R.P.)

Authorized By:

*Harish*  
(Manager - Operations)  
(J.S.)  
UERL/AIR/F-05/03



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### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775319000012229F			
Test Report No.:	URA/19/07/A-108	Report Issue Date:	29/07/2019
Service Request form No.:	URA/SRF/07/080	Service Request Date:	24/07/2019
Sample ID No.:	URA/ID/A-19/07/108	Field Data Sheet No.:	URA/FDS/A-19/07/108
Name & Add. of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	24/07/2019	Date of Testing	26/07/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 2 (Nr. Ware House)		

#### > Details of Master Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Call. Date
UERL/AIR/RD5/26	Respirable Dust Sampler	1745-DTA, 1139-DTA-2013	23/01/2019	22/01/2020
UERL/AIR/FPS/42	Fine Particulate Sampler	125 - DTD - 2013	01/04/2019	31/03/2020

#### > General Sampling / Monitoring Observation as per CPCB Guideline

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.25
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1800
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

> Environmental Conditions during testing : Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

#### > Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter, (PM <sub>10</sub> )	µg/m <sup>3</sup>	72	100	IS - 5182, Part - 23
2.	Particulate Matter, (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	24	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	14.2	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	18.7	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*(Signature)*  
(Chemist) / (Supervisor)  
(A.T.)

Page No.: 1 of 1

Tested By:

*(Signature)*  
(Chemist) (Sr. Chemist)  
(A.P.P.)

Authorized By:

*(Signature)*  
(Manager - Operations)  
(J.S.J.)  
UERL/AIR/F-05/03



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### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775319000010436F			
Test Report No.:	URA/19/06/A-085	Report Issue Date:	29/06/2019
Service Request form No.:	URA/SRF/06/071	Service Request Date:	24/06/2019
Sample ID No.:	URA/ID/A-19/06/085	Field Data Sheet No.:	URA/FDS/A-19/06/085
Name & Add. of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	24/06/2019	Date of Testing	26/06/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 3 (Nr. Main Gate / RMU)		

#### Details of Master Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/03	Respirable Dust Sampler	1117-DTC-2008, 3355-DTB-2008	21/08/2018	20/08/2019
UERL/AIR/FPS/41	Fine Particulate Sampler	137-DTD - 2013	01/04/2019	31/03/2020

#### General Sampling / Monitoring Observation as per CPCB Guideline

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.25
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1800
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

Environmental Conditions during testing : Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	91	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	33	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	22.7	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	28.3	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*Acael*  
(Chemist) / (Supervisor)  
(A.T.)

Page No.: 1 of 1

Tested By:

*[Signature]*  
(Chemist) / (Sr. Chemist)  
(~.D.D.)

Authorized By:

*[Signature]*  
(Manager - Operations)  
(S.S.S.)

UERL/AIR/F-05/03



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### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775319000010437F			
Test Report No.:	URA/19/06/A-086	Report Issue Date:	29/06/2019
Service Request form No.:	URA/SRF/06/071	Service Request Date	24/06/2019
Sample ID No.:	URA/ID/A-19/06/086	Field Data Sheet No.:	URA/FDS/A-19/06/086
Name & Add. of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd., Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	24/06/2019	Date of Testing	26/06/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 2 (Nr. Ware House)		

#### Details of Master Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/26	Respirable Dust Sampler	1745-DTA, 1139-DTA-2013	23/01/2019	21/01/2020
UERL/AIR/FPS/42	Fine Particulate Sampler	125 - DTD - 2013	01/04/2019	31/03/2020

#### General Sampling / Monitoring Observation as per CPCB Guideline

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.26
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1814
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

Environmental Conditions during testing: Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter, (PM <sub>10</sub> )	µg/m <sup>3</sup>	85	100	IS - 5182, Part - 23
2.	Particulate Matter, (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	32	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	20.8	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	24.6	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*(Signature)*  
 (Chemist) / (Supervisor)  
 (A.T.)

Page No.: 1 of 1

Tested By:

*(Signature)*  
 (Chemist) / (Sr. Chemist)  
 (A.D.P.)

Authorized By:

*(Signature)*  
 (Manager - Operations)  
 (J.S.)

UERL/AIR/F-05/03



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QC-NABET Accredited EA Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

OHSA518001:2007 Certified Company

ISO 9001:2015 Certified Company

### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775319000010435F			
Test Report No.:	URA/19/06/A-084	Report Issue Date:	29/06/2019
Service Request form No.:	URA/SRF/06/071	Service Request Date	24/06/2019
Sample ID No.:	URA/ID/A-19/06/084	Field Data Sheet No.:	URA/FDS/A-19/06/084
Name & Add. of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	24/06/2019	Date of Testing:	26/06/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 1 (Nr. ETP)		

#### Details of Master Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/24	Respirable Dust Sampler	2345-DTB & 1039-DTC-2012	01/04/2019	31/03/2020
UERL/AIR/FPS/50	Fine Particulate Sampler	129-DTL-2012	07/03/2019	06/03/2020

#### General Sampling / Monitoring Observation as per CPCB Guideline

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.28
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1843
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

Environmental Conditions during testing: Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQM5)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	88	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	31	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	18.3	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	26.5	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*A. A. Patel*  
(In-charge) / (Supervisory)  
(A 21)

Page No.: 1 of 1

Tested By:

*(Signature)*  
(Chemist) / (Sr. Chemist)  
(A 21)

Authorized By:

*(Signature)*  
(Manager - Operations)  
(A 21)

UERL/AIR/F-05/03



**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

<b>ULR - TC775319000008849F</b>			
<b>Test Report No.:</b>	URA/19/05/A-092	<b>Report Issue Date:</b>	31/05/2019
<b>Service Request form No.:</b>	URA/SRF/05/064	<b>Service Request Date</b>	27/05/2019
<b>Sample ID No.:</b>	URA/ID/A-19/05/092	<b>Field Data Sheet No.:</b>	URA/FDS/A-19/05/092
<b>Name &amp; Add. of Customer</b>	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
<b>Dates of Sampling :</b>	27/05/2019	<b>Date of Testing</b>	29/05/2019
<b>Sampling Procedure:</b>	CPCB Guideline		
<b>Location of Sampling / Monitoring:</b>	A - 3 (Nr. Main Gate / RMU)		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/03	Respirable Dust Sampler	1117-DTC-2008, 3355-DTB-2008	21/08/2018	20/08/2019
UERL/AIR/FPS/41	Fine Particulate Sampler	137 - DTD - 2013	01/04/2019	31/03/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.27
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1828
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	86	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	30	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	18.5	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	26.2	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

**Note:** BDL = Below Detection Limit.

**Sampling Done By:**

*(Signature)*  
(Chemist) / (Supervisor)

(A 21)

Page No.: 1 of 1

**Tested By:**

*(Signature)*  
(Chemist) / (Sr. Chemist)

(A 21)

**Authorized By:**

*(Signature)*  
(Manager - Operations)

(A 21)

UERL/AIR/F-05/03



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Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 9001:2015  
Certified Company

**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

ULR - TC775319000008848F			
Test Report No.:	URA/19/05/A-091	Report Issue Date:	31/05/2019
Service Request form No.:	URA/SRF/05/064	Service Request Date	27/05/2019
Sample ID No.:	URA/ID/A-19/05/091	Field Data Sheet No.:	URA/FDS/A-19/05/091
Name & Add. of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	27/05/2019	Date of Testing	29/05/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 1 (Nr. ETP)		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/24	Respirable Dust Sampler	2345-DTB & 1039-DTC-2012	01/04/2019	31/03/2020
UERL/AIR/FPS/50	Fine Particulate Sampler	129 - DTL - 2012	07/03/2019	06/03/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.23
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1771
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter, (PM <sub>10</sub> )	µg/m <sup>3</sup>	96	100	IS - 5182, Part - 23
2.	Particulate Matter, (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	34	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	22.4	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	30.7	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*(Signature)*  
(Chemist) / (Supervisor)

(A-21)  
Page No.: 1 of 1

Tested By:

*(Signature)*  
(Chemist) / (Sr. Chemist)

(A-21)

Authorized By:

*(Signature)*  
(Manager - Operations)

(A-21)  
UERL/AIR/F-05/03



**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

<b>ULR - TC775319000008850F</b>			
<b>Test Report No.:</b>	URA/19/05/A-093	<b>Report Issue Date:</b>	31/05/2019
<b>Service Request form No.:</b>	URA/SRF/05/064	<b>Service Request Date</b>	27/05/2019
<b>Sample ID No.:</b>	URA/ID/A-19/05/093	<b>Field Data Sheet No.:</b>	URA/FDS/A-19/05/093
<b>Name &amp; Add. of Customer</b>	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
<b>Dates of Sampling :</b>	27/05/2019	<b>Date of Testing:</b>	29/05/2019
<b>Sampling Procedure:</b>	CPCB Guideline		
<b>Location of Sampling / Monitoring:</b>	A - 2 (Nr. Ware House)		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/26	Respirable Dust Sampler	1745-DTA, 1139-DTA-2013	23/01/2019	21/01/2020
UERL/AIR/FPS/42	Fine Particulate Sampler	125 - DTD - 2013	01/04/2019	31/03/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.30
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1872
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	82	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	29	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	24.3	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	29.4	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*(Signature)*  
(Chemist) / (Supervisor)  
(A 11)

Page No.: 1 of 1

Tested By:

*(Signature)*  
(Chemist) / (Sr. Chemist)  
(20.0.2)

Authorized By:

*(Signature)*  
(Manager Operations)  
(3-2-1)  
UERL/AIR/F-05/03



**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

<b>ULR - TC775319000007123F</b>			
Test Report No.:	URA/19/04/A-086	Report Issue Date:	30/04/2019
Service Request form No.:	URA/SRF/04/053	Service Request Date:	22/04/2019
Sample ID No.:	URA/ID/A-19/04/086	Field Data Sheet No.:	URA/FDS/A-19/04/086
Name & Add. of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	22/04/2019	Date of Testing	24/04/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 1 (Nr. ETP)		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERI/AIR/RDS/24	Respirable Dust Sampler	2345-DTB & 1039-DTC-2012	01/04/2019	31/03/2020
UERI/AIR/FPS/50	Fine Particulate Sampler	129 - DTL - 2012	07/03/2019	06/03/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.27
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1828
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.05
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	91	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	30	60	UERI/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	20.2	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	27.5	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERI/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzopyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*(Signature)*  
(Chemist) / (Supervisor)  
(A-1)

Page No.: 1 of 1

Tested By:

*(Signature)*  
(Chemist) / (Sr. Chemist)  
(A-5-R)

Authorized By:

*(Signature)*  
(Manager - Operations)  
(A-1)

UERI/AIR/F-05/03



**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

<b>ULR - TC775319000007125F</b>			
<b>Test Report No.:</b>	<b>URA/19/04/A-088</b>	<b>Report Issue Date:</b>	<b>30/04/2019</b>
<b>Service Request form No.:</b>	<b>URA/SRF/04/053</b>	<b>Service Request Date:</b>	<b>22/04/2019</b>
<b>Sample ID No.:</b>	<b>URA/ID/A-19/04/088</b>	<b>Field Data Sheet No.:</b>	<b>URA/FDS/A-19/04/088</b>
<b>Name &amp; Add. of Customer</b>	<b>M/s. Dorf Ketel Chemicals India Pvt. Ltd.</b> Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
<b>Dates of Sampling :</b>	<b>22/04/2019</b>	<b>Date of Testing</b>	<b>24/04/2019</b>
<b>Sampling Procedure:</b>	<b>CPCB Guideline</b>		
<b>Location of Sampling / Monitoring:</b>	<b>A - 2 (Nr. Ware House)</b>		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/26	Respirable Dust Sampler	1745-DTA, 1139-DTA-2013	23/01/2019	21/01/2020
UERL/AIR/FPS/42	Fine Particulate Sampler	125 - DTD - 2013	01/04/2019	31/03/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.25
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1800
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.05
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	78	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	27	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	21.4	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	26.3	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

**Sampling Done By:**

*(Signature)*  
(Chemist) / (Supervisor)  
(A-2)

Page No.: 1 of 1

**Tested By:**

*(Signature)*  
(Chemist) / (Sr. Chemist)  
(A-2)

**Authorized By:**

*(Signature)*  
(Manager Operations)  
(A-2)

UERL/AIR/F-05/03



**TEST REPORT**  
**(AMBIENT AIR MONITORING)**

<b>ULR - TC775319000007124F</b>			
Test Report No.:	URA/19/04/A-087	Report Issue Date:	30/04/2019
Service Request form No.:	URA/SRF/04/053	Service Request Date	22/04/2019
Sample ID No.:	URA/ID/A-19/04/087	Field Data Sheet No.:	URA/FDS/A-19/04/087
Name & Add. of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	22/04/2019	Date of Testing	24/04/2019
Sampling Procedure:	CPCB Guideline		
Location of Sampling / Monitoring:	A - 3 (Nr. Main Gate / RMU)		

➤ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/03	Respirable Dust Sampler	1117-DTC-2008, 3355-DTB-2008	21/08/2018	20/08/2019
UERL/AIR/FPS/41	Fine Particulate Sampler	137 - DTD - 2013	01/04/2019	31/03/2020

➤ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.22
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1756
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.05
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

➤ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 50%

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQMS)	Test Method
1.	Particulate Matter. (PM <sub>10</sub> )	µg/m <sup>3</sup>	89	100	IS - 5182, Part - 23
2.	Particulate Matter. (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	33	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	23.7	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	29.4	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BDL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BDL	400	UERL/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BDL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

**Note:** BDL = Below Detection Limit.

**Sampling Done By:**

*(Signature)*  
(Chemist) / (Supervisor)  
(A-27)

**Tested By:**

*(Signature)*  
(Chemist) / (Sr. Chemist)  
(A-27)

**Authorized By:**

*(Signature)*  
(Manager - Operations)  
(S-27)

Page No.: 1 of 1


UERL/AIR/F-05/03


# **Annexure – 4**

## Thermax and Warehouse Zone site visit report

**Date of Visit:** 12.04.2019

**Site visit person:-** Chiragsing Rajput (Environment cell)  
Dhanesh Tank (Environment cell)

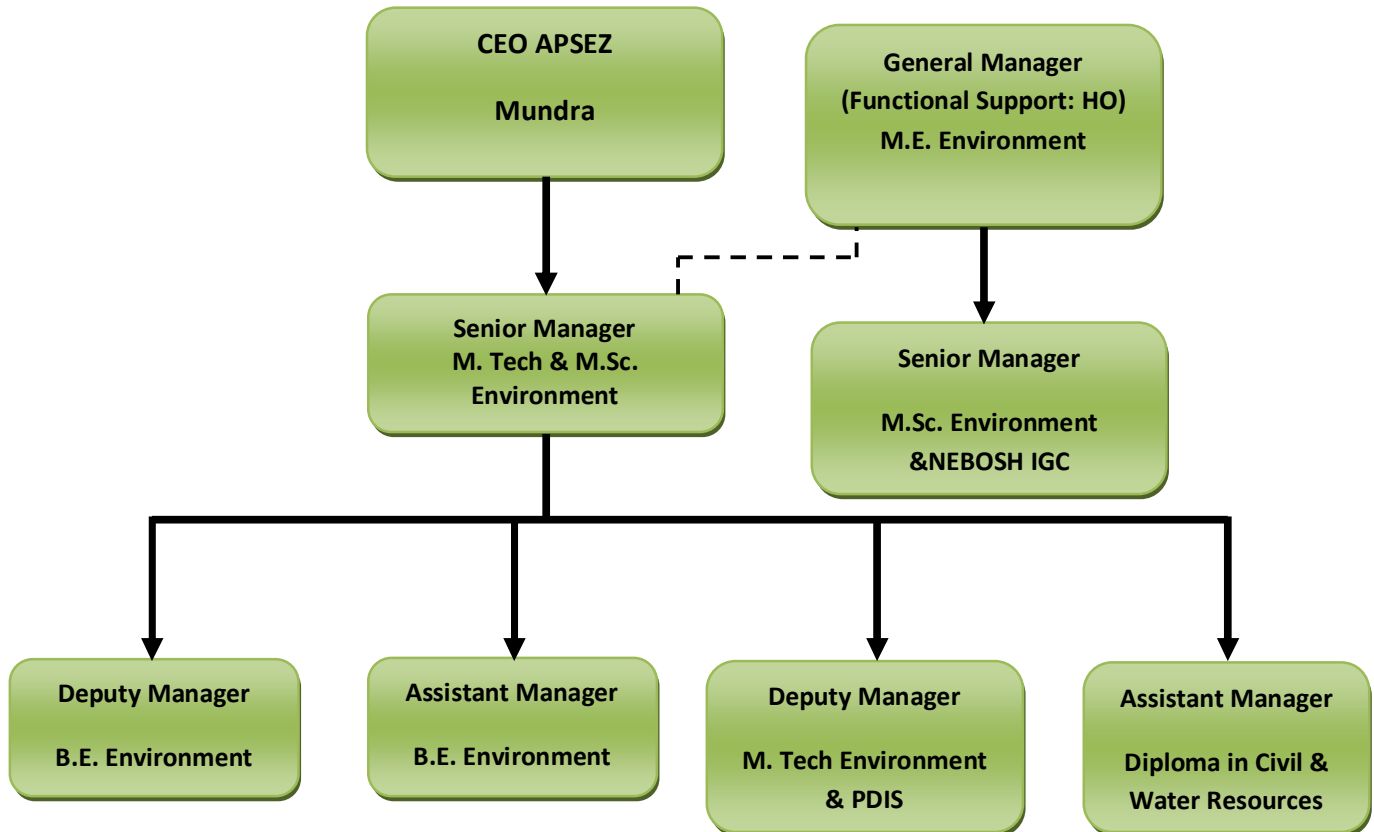
Sr. No.	Name of Chemical Zone Unit	Contact person	Discussion and feedback	Remarks
01	Thermax Ltd.	Mr. Shukla, Mr. Sinha	<ul style="list-style-type: none"> <li>Valid GPCB Consent available</li> <li>Environment Compliance is being submitted regularly.</li> <li>Environmental monitoring w.r.t. ambient air, D.G. stack, noise is being carried out through third party on quarterly basis.</li> <li>Municipal solid waste is being handled and disposed through local vendor.</li> <li>Hazardous Waste is being disposed as per GPCB permission.</li> </ul>	
02	Oilfield Warehouse Services Pvt. Ltd.	Mr. Asadullah Siddique Mr. Dayal	<ul style="list-style-type: none"> <li>Municipal Solid waste generated from unit is of client waste and it is being handled through client only.</li> <li>Nominal quantity of waste generated from unit is disposed in dust bin of SEZ area.</li> </ul>	<ul style="list-style-type: none"> <li>When septic tank will be filled completely, they will disposed their sewage to the CETP.</li> <li>Agreed to dispose their solid waste to APSEZ solid waste management site.</li> <li>Agreed to collect and store hazardous waste (oily rags) in to segregated waste bins and will dispose with consultation of APSEZ.</li> </ul>

Sr. No.	Name of Chemical Zone Unit	Contact person	Discussion and feedback	Remarks
				 <p>SHOT ON REDMI NOTES PRO MI DUAL CAMERA</p>



# **Annexure – 5**

Organogram of Environment Management Cell, APSEZ, Mundra



# **Annexure – 6**

### **Cost of Environmental Protection Measures**

Sr. No.	Activity	Cost incurred (INR in Lacs)			Budgeted Cost (INR in Lacs)
		20 17 – 18	20 18 – 19	20 19 – 20 (Till Sep'19)	20 19 – 20
1.	Environmental Study / Audit and Consultancy	9.0	6.7	1.35	6.0
2.	Legal & Statutory Expenses	5.07	4.42	0.78	5.7
3.	Environmental Monitoring Services	27.02	20.36	11.23	25
4.	Hazardous / Non Hazardous Waste Management & Disposal	65.62	95.72	44.57	78.5
5.	Environment Days Celebration	2.85	0.28	3.5	10
6.	Treatment and Disposal of Bio-Medical Waste	1.13	1.21	0.68	1.5
7.	Mangrove Plantation, Monitoring & Conservation	60.0	47.0	Nil	Nil
8.	Other Horticulture Expenses	547.0	579.32	546.60	696.46
9.	O&M of Sewage Treatment Plant and Effluent Treatment Plant (including STP, ETP of Port & SEZ & Common Effluent Treatment Plant)	70.02	144.29	43.42	116.44
10.	Expenditure of Environment Dept. (Apart from above head)	102.15	109.28	75.13	102.5
<b>Total</b>		<b>889.86</b>	<b>1008.58</b>	<b>727.26</b>	<b>1042.10</b>



# **Annexure - 7**

**Rain Water Recharging System**





# **Annexure – 8**



Adani

Foundation

Education  
Community  
Health  
**Kutch**  
CSR  
Community  
Infrastructure  
Development  
Sustainable Livelihood  
Development

Sustainable Growth  
With Goodness



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Our  
Change makers

Suposhan

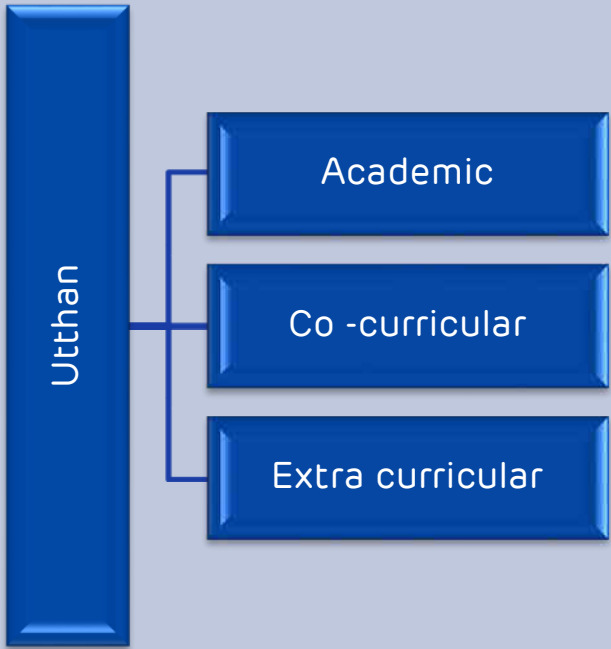
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Awards and  
Accolades



# Project: Utthan



Majority of Indians are the products of Government schools. These schools are a linchpin of the Indian educational system, accounting for 70% of Pre-Primary and Primary Schools and Secondary Schools. They have a great penetration into the very interiors of our country. We find them in hilly areas, unreachable islands, tribal areas and everywhere.

For the academic year 2018-19, Adani Foundation leveraging their experience, to intervene in Government Schools. These interventions will aim to enhance the quality of primary education in Government schools and result in around 3000 of children benefiting from a meaningful education. 17 Primary Government schools of Mundra taluka of Kutch district have been adopted to take up various initiatives aimed at improving quality in these schools. The project titled is 'UTTHAN'. In this holistic educational project we are focusing on:



## Academic

- One teacher – One school + Sports teacher + IT teacher
- 'IT on Wheel' Van with 35 laptops and computer instructor make students more tech savvy and spreading the digital and technology knowledge amongst the younger generation
- To achieve academic excellence of Priya Vidyarthi, Utthan Shikshak implies various alternative method to make their classroom more friendly and interesting.
- English is to be taught to the students from the early classes so that they will be equipped with ample resources during their further studies.
- Training cum Induction Program on various topic like teaching methodology of progressive learner, assessment pattern of slow learner, multiple intelligence etc.



## Co - Curricular

- Every Saturday Library activity with the Book issue were planned and executed in a meaningful manner
- Sports are a crucial part of a student's growth and development. Through participation in sports and games, a student gains various skills, experience and confidence. With the intervene of our Sports teacher in all Utthan Schools successfully enrolled 500+ students in Khel Mahakumbh





## Extra - Curricular

- Utthan Sahayak + 1222 students from High school & Higher secondary of 6 villages celebrate Fifth International Yoga Day
- On International Plastic Bag Free Day, Awareness were spread through Effective speech, Soft board decoration, Video and Newspaper clipping in all Utthan school.
- Celebration of Gurupurnima in all Utthan Schools during morning special.
- 363 students from 17 schools got an opportunity to visit Adani West port. Main port , Willmar, power & power through project Udaan.
- Tree plantation in all the Utthan School. Adani Foundation align with the circular passed by the Government of Gujarat "Ek baal Ek Jhhad" distributed 100 trees in each school. Students not only planted the trees in fact they adopt each tree with giving their own names.





# Adani Vidya Mandir Bhadreshwar



**provide “cost-free”** education to meritorious students coming from challenging economic background, who have priceless treasures but have been under achievers due to situation. In year 2019-20 450 students are studying.



## Activities Covered

- Science Fair – Block level
- Drawing Competition under the P.C.R.A. National level competition
- Assembly on every Saturday.
- International Yoga Day Celebration
- Guru Purnima celebration
- Independence Day Celebration
- Teacher’s day Celebration
- Children’s Day Celebration
- Educational Tour for each standard
- Festival Celebration
- Awareness Street Play organized at various villages





92% - Result SSC Board Exam

Shala Pravastosav of Std.-1 Students



Parents Teachers Meeting



Healthy Food



Festival Celebration

Various Competitions





With a vision to familiarize, educate and inspire the future generations, Adani Foundation organizes Education Exposure visits to Mundra for High schools and educational institutes in Various parts of Gujrat.

250 institutes and 15,329 beneficiaries have made inspirational visit during this six months





# Community Health

Health is the basic need for development of community. Adani Foundation focuses on ensuring good health for better contribution to growth and progress and improving access to quality healthcare service in remote area.

## Rural Clinic & Mobile healthcare unit



### 11 Rural Clinic

8 from mundra 3 from Anjar block treated ;  
**10889** patients.

**31 villages** covered through Mobile healthcare unit  
**7902** patients benefited during six month





**19 General Health Camp** conducted -  
12 General & 7 under Utthan project ;  
**2873 patients** treated





# Community Health



**206 Dialysis patients**

**498** Needy patient benefited through Medical support Total amount of support is **Rs.4,02,201/-**



**Sr. Citizen project**  
**8672 Card holders of 68 villages** get

benefit under this project .

4713 sr. citizen patients benefited during six month

30000 limit for three year per patients





## Gujarat Adani Institute of Medical Science (GAIMS) - Bhuj

First Medical College of Kutch district based on PPP model. It started from 2009.

Affiliate with "Krantiguru Shyamji Krishna Verma Kutch University"

**750** bed – Largest Multi Specialty Hospital in kutch

Adani Foundation Team has initiated coordination with GKGH hospital and established a reception area for the smooth patient coordination and preparation for the social networking Programme.





# Health - Bhuj

3075 Beneficiaries of 27 General Health camps.

2629 Golden card enrolled in 18 Health camps in Interior villages & Mahiti Setu as well.

322 death bodies Reached at various locations of Kutchh with dignity and respect.

258 Poor patient supported in GKGH(Rs.2,84,321/-)

4242 People helped through Mahiti Setu for various government schemes

37450 Patinets benefitted though 11 camps towards Mata Madh



Celebration of various days like - World No tobacco day, Kargil Vijay divas, Health week on independence day, 5 years completion ceremony of GKGH, Teachers day,





Awareness  
for Health &  
hygiene



Mahiti  
setu



Support  
Poor patient



General  
Health camps





## Arogya Saptah (7<sup>th</sup> – 14<sup>th</sup> August 2019)



Adani foundation, Adani Hospital and GAIMS have Jointly Celebrated "Arogya Saptah" 8th to 14th August-2019 in Respect of 73th Independence of our country. Celebration included multi specialty camps, Workshops, truckers health check up, surgical camp on foundation day and adolescent fair at different part of district. Collector, DDO, Minister, MLA and other dignitaries from NGOs had remained present. Objective of the program was to avail health benefits at GKGH and also at Adani Hospital Mundra and Approximately 4500 people will be direct beneficiaries of the program.

Day	Date	Event Name	Beneficiaries
1	07/08/2019	Health check up at Orphan age, Bhuj	101
2	08/08/2019	Blood Donation Camp, Nakhatrana	55
3	09/08/2019	Pregnant Women health check up, Madhapar	50
4	10/08/2019	Surgical Mega Camp, Khavda	223
5	11/08/2019	General Health Camp, Palara Jail	139
6	12/08/2019	Ayushman Health Card Enrolment, Gorevali	52
7	13/08/2019	Awareness on women health, mukt jivan college, Bhuj	250
8	14/08/2019	Blood Donor Appreciation	36



## Fisherman Education

To strengthen the standard of pre-primary education, Adani Foundation has constructed 4 BALWADI at different fishermen helmet Which focuses on the development of basic age-appropriate learning concepts, discipline, regularity, awareness of health & hygiene, cleanliness and also provides nutritious food.

125 children are benefiting from this scheme



115 students are getting benefit of vehicle transportation support from different Bandar.

## Vidya Sahay Yojana



100% girls      80% boys

providing **scholarship support** to motivate and encourage fishermen boys and girls for higher education

**Book support** : 49 Fisherman Students of Higher Secondary Standard (9 to 12) has been benefitted





# SLD Fisherman



65 Teams

13 villages

750 Fisherman youth`

## "Adani Premiere League"

Cricket Tournament organized among fishermen community to promote healthy sportsmanship ,and harmonically transparent community relationship

## Awareness Program

Facilitation of Government Fishermen Welfare

Vessel Approach Related Message Intimation to Fishermen.



4 Fishermen VAsahat

983 Families

70000 ltr water per day`

potable water provided to the fishermen communities at different vasaht through water tanker



## Sea Weed Culture

Sea Weed Culture is going on. Seed bank preparation is going on under guidance of VRTI.



**4300** Man-days

Mangrove plantation at Hamira mora site .

## Bio diversity Project:-

Project started with two species of mangroves which has good survival rate & Plantation at site – 70 % Survival  
Total 4 Hecter Plantation.





- The organization has carried out remarkable activities in the agricultural and animal husbandry sectors. We have initiated Programme for Awareness of Farmers in collaboration with KVK. The outreach is approximate 200 farmers of 7 villages
- The purpose of this project is to initiate village wise integrated agricultural & allied development for sustaining agriculture and socio economic situation of farming community of Mundra block.





# Sustainable Livelihood Development

After periodic discussions with Village Development Committee, Gram Panchayat and Gau Seva Samiti of Siracha – Adani Foundation had coordinated for Village Gauchar Development. Total 85 Acre Gauchar Land was approved by GP for Development by decision taken in Gram sabha . Among them 22 Acre land Has been Sowed with Sorghum and Remaining land would be Grow with Wild Grass

## Siracha

22 Acre – 88000Kg Sorghum

63 Acre- 63000Kg Wild Grass

**Total 85 Acre= 151000KG**

Bhadreshwar @ 7 Acre= 28000Kg

Kukadsar @ 15 Acre= 60000Kg

## UTTHAN MODEL VILLAGE DEVELOPMENT PROJECT



## Implementation Process includes

- Meeting with Village Development Committee
- Meeting with SDM for Gauchar Land Details





# Sustainable Livelihood Development

With the Objective of to Preserve the rain Water to reduce the Impact of salinity and Recharge the Ground Water (the Main Source of water) to facilitate the Agricultural activities as well as For Drinking water.

Under **UTHHAN MODEL VILLAGE PROJECT**. Salinity ingress issue is well taken with Pond Deepening, Recharge Borewell technique and Roof Top Rain Water Harvesting.



RRWHS: 54

Bore Recharge - 75

Well Recharge- 31

Pond Deepning- 2

Total Ground Water Recharge

- 1878140 cum





## Tissue Culture

### UTTHAN MODEL VILLAGE DEVELOPMENT PROJECT



Date is the Amrut Fal of Kutchh and Mainly best quality available in some villages in Mundra Taluka. To maintain quality uniformity Adani Foundation is planning for cultivate 4000 tissue cultured plants of elite varieties to the farmers of project area.

Registration is in progress for Farmer's Producer Company with NABARD – 220 Farmers had registered for the same.





## WOMEN EMPOWERMENT

An initiative under the Sustainable Livelihoods Development Program to encourage women, take control of their own lives and increase their confidence whether they are single, married or widowed.

**Aaarambh SHG "Suf"  
Handicraft Cluster  
Seven Women from  
Pragpar village are  
doing embroidery  
and one women from  
Mundra is looking  
after design part.**



Total Sale more than **Rs.3.50** Lacs and women are getting approximately **Rs.8500** per month.

# Women Empowerment

## Tejashvi Saheli

3100 School bags for the Students 300 wall hanging for the project of Swachhagraha and 170 Uniform Pair to the Students of Balwadi.



## 24 Nos of Women got employment

6 women got Job in Britannia Company (Rs.7500/- per month), 9 women got bank sakhi Yojana, 9 women working in various field in SEZ and other companies

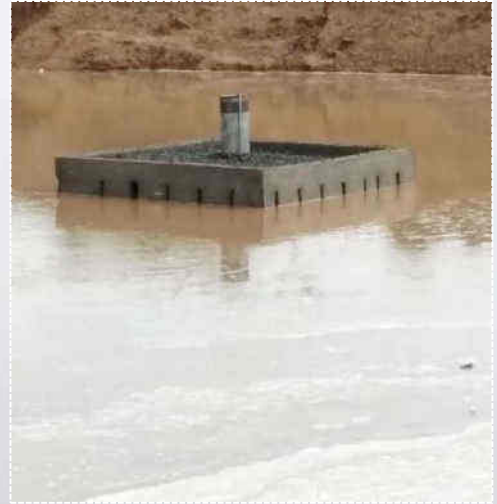




## Water Conservation Works



- Pond deepening work in Baroi, Luni & Zarpara villages
- Mota Bhadiya Check Dam desilting work
- Lakhpat Godhatal dam desilting work
- Mota Bhadiya artificial bore well recharge - 2 no's





## Protection Compound wall at Navinal Village



## Garden Development Hanuman Temple - Baroi



## Fixing of street light

30 LED Street light Bhopawandh  
20 LED Street light Mundra  
50 LED Street Light at Borara



# Community Infrastructure Development

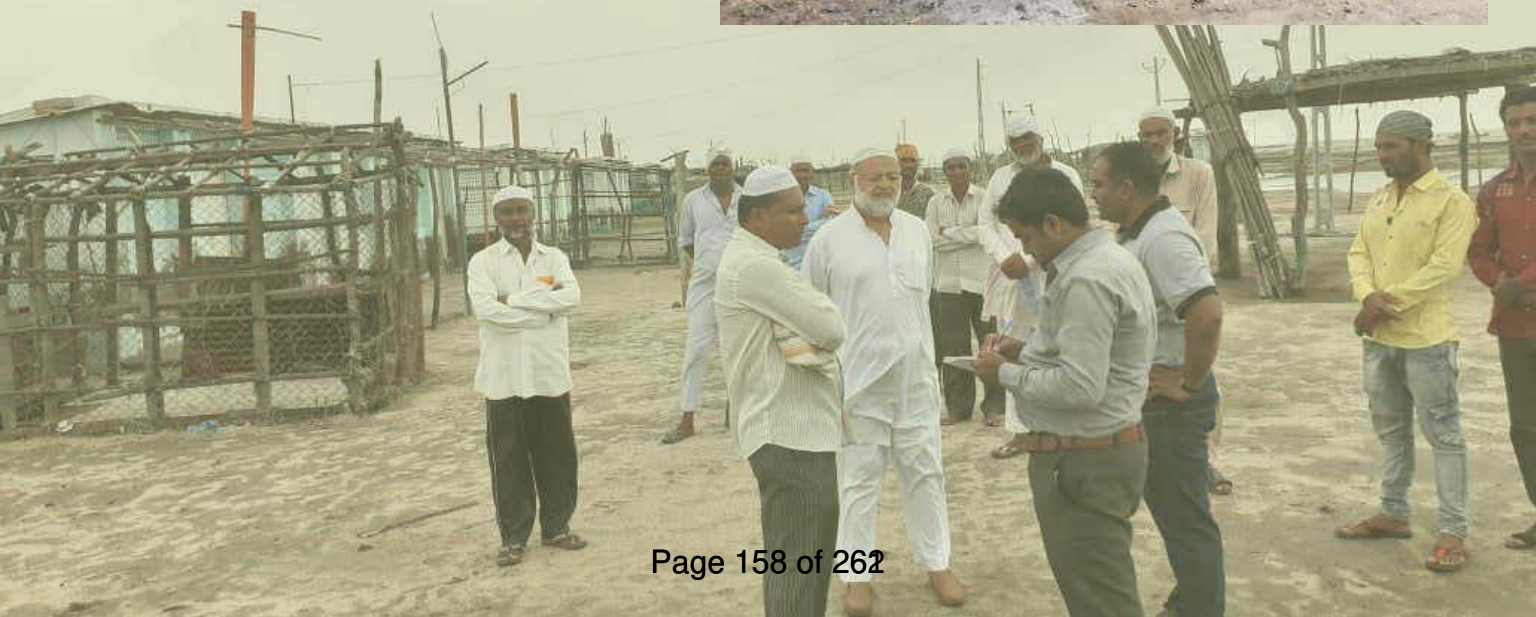
- Construction of Prayer Shed at AVMB
- Garden Development work at- Bhujpur Village.
- Construction of R.O. Plant Room at Primary School sadau Village
- Drainage maintenance.
- Renovation of ITI at Mundra work in Progress.



Work In progress



- Renovation of Bavadi at Bavadi Bandar
- Development of Community Training Hall at Mundra & Goyarsama
- Fisherman Room at Navinal & Zarpara Vasahat





# Adani Skill Development Centre

Adani Skill Development Centre is providing various employment-oriented trainings to the young for become self-reliant, responsible and active citizen.

ASDC is tied up with Pradhan Mantri Kaushalya Vardhan Yojana and Deen Dayal Upadhyaya Grameen Kaushalya Yojana.



Total No of trainee 643

Total No of batch. 33

Digital Literacy 345

Beauty Therapist 100

Self Employed Tailor 22

Junior Operator Crane 60

Excel training 11

RTG Crane Operator 24

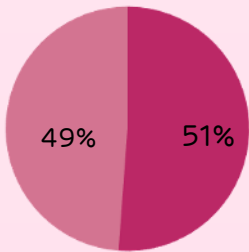
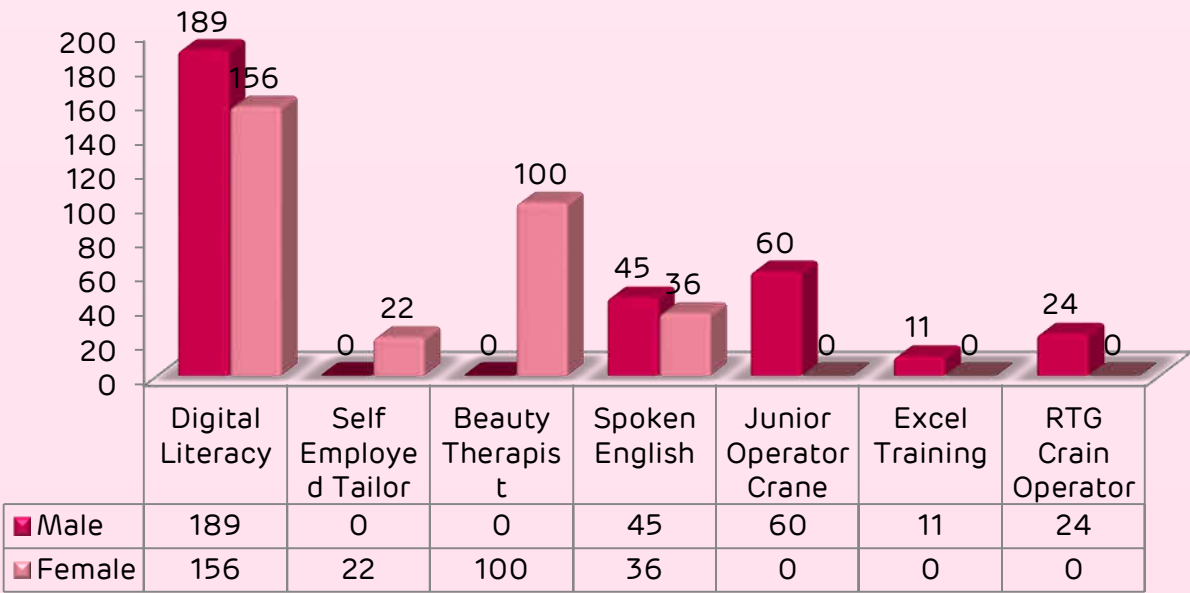


# Adani Skill Development Centre



- 42 candidates passed out of 43 people of PMKVY Junior Operator Crane training.
- 21 candidates working in various company with 8000-15000 PM.
- 26 students got job in various company
- 48 women self employed.
- Spoken English class.
- Mobilization activities for SC batch in various village and collage

## Completed & Running batch (April to September 2019)





# Adani Skill Development Centre

## Recognition of Prior Learning (RPL)



RPL recognizes the value of learning acquired a formal setting and provides a government certificate for an individuals skill.

Candidates received an accidental insurance coverage for three years at free of cost.

Certified 27 assessor, 19 Trainer and 08 Assessor.

Started first loader-Unloader job role in Port.

Total Candidates registration 550

ASDC Mundra team received award for Best Center - Unique Initiatives



Another milestone reached on 12th Sep 2019, ASDC launched its program for schedule caste in the state of Gujarat. This program will train candidates in various vocational training educational course like Self employed tailor and Beauty & Wellness. Total 135 women/Girls participated in this training. This course is sponsored by Department of Social justice and Empowerment .





# Adani Skill Development Centre

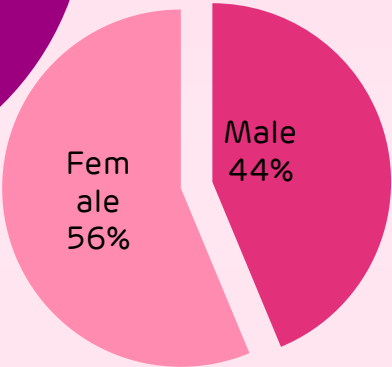


## Skill Development Training Program for Schedule Cast Beneficiaries

1440 SC beneficiaries from Eight Taluka of Kutchh.

- Hand embroidery
- Self employed stitching
- Mobile Repairing
- Beauty parlor
- Crane operator

Inauguration in presence of Mr Vinod Chavda (MP, Kutchh and Morabi) Mrs Lata Solanki (Pramukh, Nagar Palika,Bhuj) Mr Rohit (District Social Justice and Empowerment ), Mr Jatin Trivedi (Head, ASDC)and Mr solanki (Chairman, social justice committee Kutchh) we're present



460 Training Completed at Centre

441 Training completed outreach

Sr No	Job Role (Write Full Name of Job Role)	Female	Male	Total
1	General Duty Assistant	86	38	124
2	Digital Literacy	239	313	552
3	Spoken English	113	40	153
4	Beauty Therapist	38	0	38
5	Tally erp.9	31	3	34
Total		507	394	901



# Suposhan



The objective of the Project is to reduce occurrence of malnutrition and anemia.

create awareness about malnutrition and anaemia and related factors amongst all stakeholders and role they may play in curbing the issue.

To successful implementation of the project, “Sangini – Village Health Volunteer” plays major role in the Project.

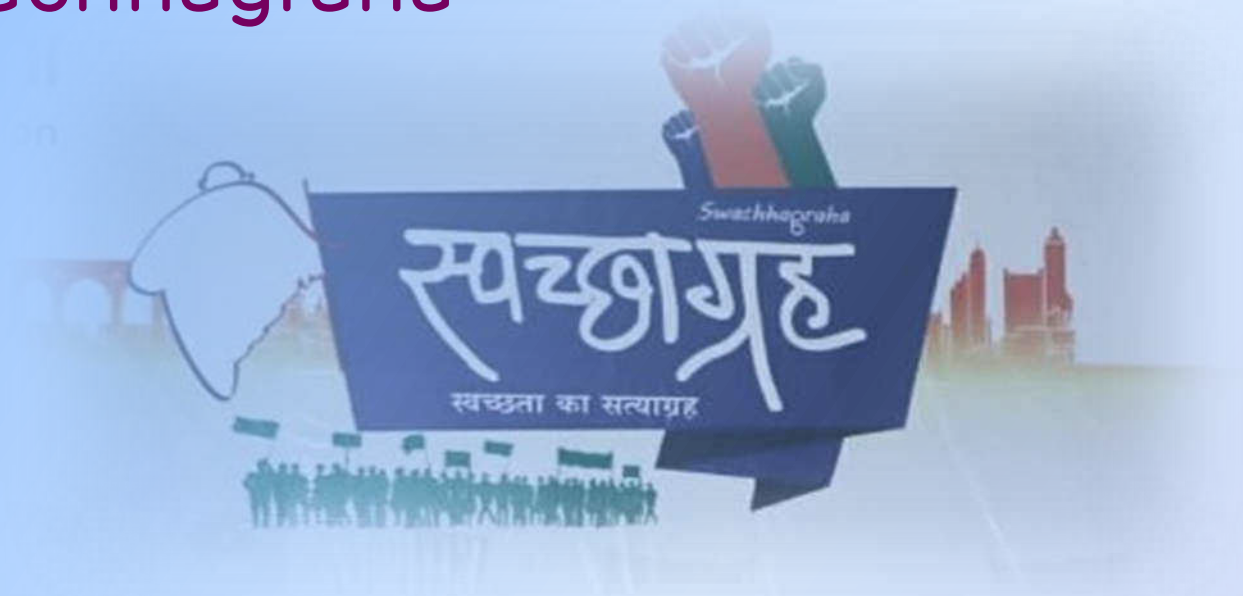
## Community Engagement and other Activities

1	No of Sangini	25
2	Total Village Cover	45
3	Total Anganwadi Cover	76
4	SAM to MAM Monitoring Progress	9
5	MAM to Normal Monitoring Progress	20
6	Focus Group Discussion	1111
7	Family Based Counselling	310
8	Village level Events	57
9	Formation of women's groups	15
10	Formation of adolescent's Groups	14
11	No of SAM children referred to CMTC	15
12	No of SAM children provided with EDF	10
13	Total HB screening - RPA	1086
14	Total HB screening - Adolescent girls	1161
15	Total Anthropometric screening	6268
16	Total Family Cover	9038
17	“NATIONAL NUTRITION month Celebration”	1551
18	“WORLD BREASTFEEDING WEEK”celebration	500
19	SuPoshan Melawa	140
20	World menstrual Hygiene Day celebration	220





## Swachhagraha



Adani Foundation has launched project "Swachhagraha" Swachhata ka Satyagraha in the year 2015, to support the 'Swachh Bharat Abhiyan'. Falling in line with our Honorable Prime Minister's call for a Clean India, we launched this mass movement towards making our Nation litter free.



Swachhagraha at Kutchh

4 City / town

266 Schools

266 Prerak trained

5000+ Dal members



# Swachhagraha



Swachhagraha  
Wall



Toilet  
Etiquettes

Safai  
Ke Sitare



Personal  
Hygiene



Large Scale  
community events



Swachhagraha  
Oath



Activities of Swachhagraha



Adani Kandla Bulk Terminal Port Limited is joint venture of Adani Ports and SEZ Limited as well as Kandla Port. We are going to implement drainage pipeline for Tuna and Wandi with participation of Kandla Port in current year. Survey is done and work will be started soon..



- In Rampar and Tuna Village We are providing Fodder in summer season. Also guiding farmers for modern farming techniques for Organic Farming and sustainable Agriculture
- Praveshotsav Kit is distributed in 8 schools covering 180 Students in Tuna and Surrounding seven villages.. Our efforts were appreciated by community.
- Adani Foundation is bridging the gap between Government Schemes and Beneficiaries. In this Six Months we could able to support 5 widows and 4 differently abled to avail benefits of Government. Tree Plantation and 4 health camp was organized in Tuna and Rampar Village.



## CSR Nakhatrana

As a Part of Integrated Development of any Rural area – Education is the most powerful weapon. Keeping in mind, Utthan Education Project will be start after November at 8 Schools of Nakhatrana.

During Primary Information collection, we received warm welcome from Principals and Government Officials. .

Adani Foundation has initiated UTTHAN programme in Government schools. The programme converges the four pillars of education seamlessly: Students, Teachers, Guardians and Infrastructure.

The Project Relates to Adani Green energy Limited – Mainly Windmills project. First phase is completed.

Adani Foundation is also planning to implement Uthhan Model Village Concept and Bio Diversity – Peacock Conservation will be planned in next Budget.

From Current year We are implementing UTHHAN EDUCATION PROJECT in Eight Schools of Nakhatrana





## CSR Lakhpatt

Successfully  
completion of  
Public Hearing  
without any  
hindrances

Most of the population of Lakhpatt Depends upon Livestock for their livelihood. Fodder is the prime requirement of them. Adani Foundation had distributed Jovar seeds after considerable rain to 260 Farmers to motivate them for sustainable Livestock development.

### SLD Projects

Total 260 Acre = 2000000Kg

Kapurashi @ 130 Acre= 520000Kg

Koriyavi @ 105Acre=480000Kg

Maundhvaiky @25 Acre= 100000Kg

### Education Support

Music Kit – 4

Sports Kit - 4

Carpet – 4

Provided to Govt. Schools of  
Kapurashi, Koriyani and Mundhvay

### Linkages with Govt. Scheme

Wheelchair support – 2

Tri cycle support - 3

Divyang Form – 2

### Health

Every Friday Specialist Doctor  
from GKGH are regularly serving  
at CHC Dayapar. More than 250  
beneficiaries per month



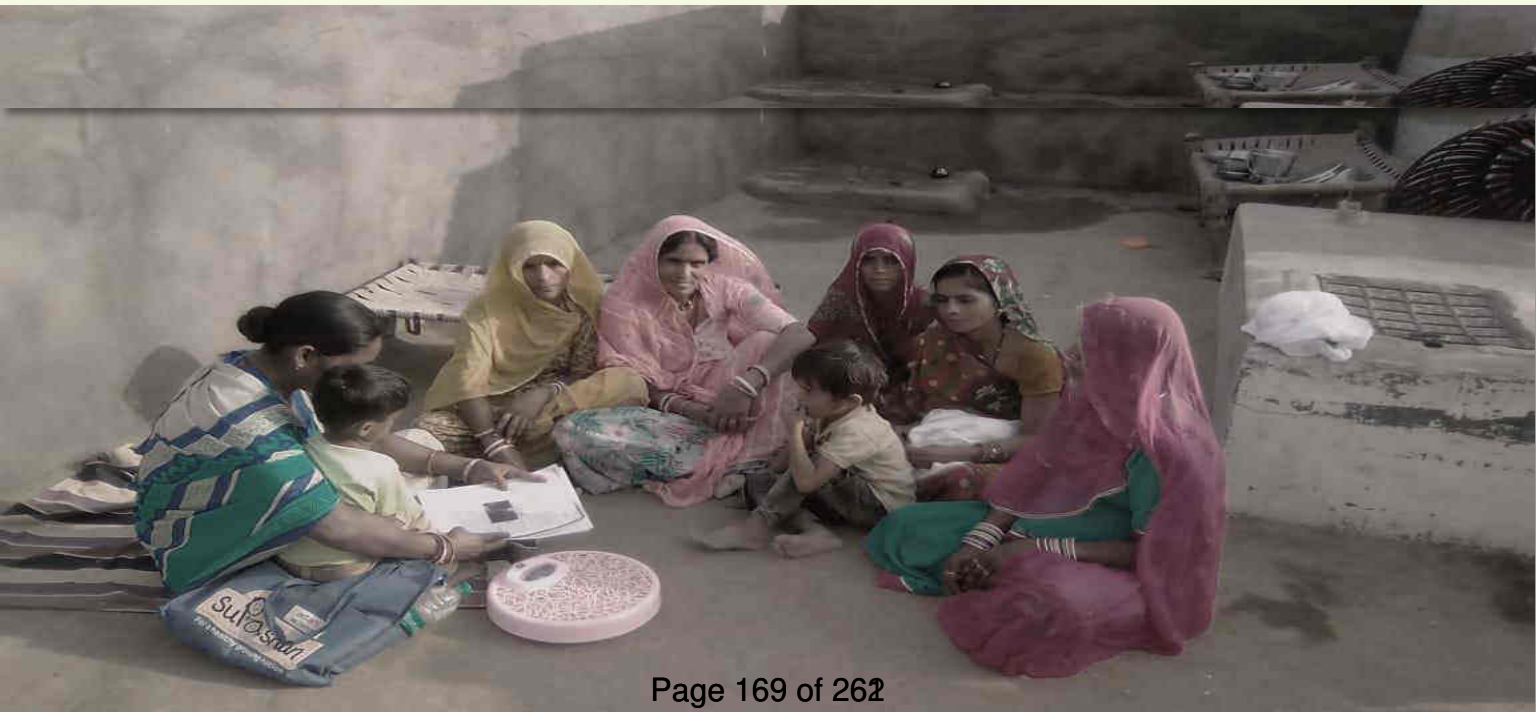
Under Adani Solar Limited – 40 MW Solar Panel Power Unit is Situated at Bitta Village in Abdasa Taluka. We are providing Fodder Support and Health Camp Facilities at Bitta. Our Suposhan Project is running successfully at Bitta..

Adani Foundation has taken Eco Friendly initiative for whole village. Village street lights, School and GP is provided Solar Panel to save electricity. The unit was conceptualized and implemented by Solar Team.

Under “Sujlam Suflam Jal Abhiyan” Two Pond Deepening was carried out and got appreciation letter from District Magistrate.

As Abdasa is water scared region and very less rain in past years , as per humble request of villagers Adani Foundation has provided 1,13,750 Kg Fodder to Bitta, Dhrufi and Moti Dhrufi village.

Praveshotsav Kit is distributed in 8 schools covering 47 Students in Bitta and Surrounding seven villages.. Our efforts were appreciated by community.



## Employee volunteering

- Medical Camp – **23**
- Senior Citizen Home – **17**
- Blood Donation Camp – **1174**
- Plastic Free campaign – **251**
- Bio Diversity – **4**
- Joy of Giving – **13**
- Yoga Day - **538**
- Total – **2020**



Adani Group is deeply involved in all round social and economic development of the areas in and around Mundra. Adani EVP is context driven and employees have taken part in teaching, Medical Camps, giving impetus to national Swachhata Mission and blood donation. The journey continues







### **Suf Handicraft : Conserving "VIRASAT" of Decades**

Parvati Ben's earliest memory of stitching delicate handicrafts is from when she was as little as 5-years-old. Since then, she has followed this art with an immense dedication that shows through her intricate and precise handiwork.

Parvati is a resident of Pragpar-2 village. She lives in a house with 5 other people and is the sole breadwinner. Even so, Parvati is a humble, loving and welcoming individual.

Parvati Ben had been practising her intricate Suf handicraft all along, making scarves, table cloths, garments and more for her fellow villagers and the occasional visitors. Her artwork had consistently been worth more than what she sold it for- her only desire being that her art finds an expression, a space in the world, however small it may be.

One day, Adani Foundation discovered this diligent, rigorous woman. Parvati Ben now works on projects brought to her by Adani Foundation and is hence able to sustain her entire family on her own. She has risen to be an aspirational figure, looked upon as a role model by her fellow village women. Parvati Ben is playing a major role in now setting up a federation for the village women across Mundra district to practise their handicraft work and earn a livelihood.

But more than all the titles and positions, what Parvati Ben deems sacred is the sheer recognition of her art. All she ever wanted was to be known as an artist and now she is the voice of this very own art, inspiring dozens of women like her to become independent.



**Healthy children  
become  
happy children**

Under the initiative of Balwadi at Vasahat (doorstep Early age Education for less Fisher folk), special awareness camps are organized for kids in school in order to imbibe health seeking behavior in the next generation. Various awareness activities based on healthy living are taught to them such as hand-washing steps and healthy eating habits so that they actively participate in adopting methods for personal hygiene in their daily routine.

Yamina is one of the student of Balwadi. She is five years old. Earlier she used to come to Balwadi without taking bath or hair combing. But after regular awareness camps for mother and students now she is coming well dressed and clean – due to maintaining personnel hygiene she remains healthy too..



### Every Dark Cloud has Silver Lining

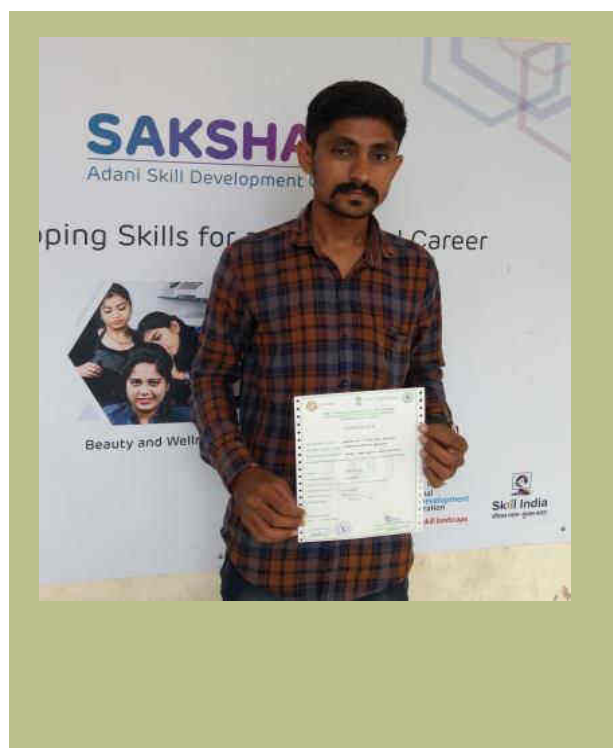
Ms. Ramila Maheswari belongs to village Dhruv. Her father's occupation is farming. She has completed graduation and was searching job but lacking in computer operation skill.

Ramila says one of my friends suggested me to join digital literacy training at Adani Skill Development Centre, Mundra. I visited the center with my friend and joined class. I sincerely attended all classes of the course and learnt basics of computer operation viz; Typing, Paint, MS Office (word, Excel, power point), shortcut Keys and using internet for web browsing like; Gmail, Paytm, amazon, net banking etc.

She is saying with smiling on face that

"Today, I am working with firm "YASH ENTERPRISE" in Nana Kapaya, Mundra as a customer care executive and earning Rs. 7000 per month. I am really thankful to Adani Skill development Center to make 'SAKSHAM'.





### **Pathways towards bright future !!**

Kripalsinh Jadeja comes from Hatadi, Mundra with a family of 5 people, four elder brothers and parents. His father is a farmer and mother help him in farming. The brother is working as truck driver. The economic condition of the family was very poor.

Kripalsinh has completed 12th and was searching job. The team of ASDC Mundra had mobilized in the area where he stays and through which he got to know that Adani Skill Development Centre (ASDC) is providing training for checker-cum-RTG crane operator and this was his dream job.

He performed well during the training and understood how this training would help him to grow in future in the field he desires. He was regular to the classes and always eager to know the process well and he performed well during all the activities.

Kripalsinh says he gained back his confidence after starting the training and was motivated by the trainer to participate in all activities and grab any opportunity where he can showcase his skills.

He says that he got more support by getting additional training of soft skills, public speaking, professional manners and facing interviews with confidence.

While undergoing the ASDC training Kripalsinh never imagined that this additional knowledge and skill up gradation would bring him a bright future.



### My Emotional Support

*Adani Foundations' Senior Citizen Health Card is like a cure to our emotional, physical and psychological problem; in the times when we are completely lonely and handicap at age."....Says both of them while weeping.*

Every human being has specific periods of the life wherein the childhood is for fun and the adulthood is spent for the family; remains old age to take care of health

Adani Foundation is holded hands of the senior citizens of Mundra Rajendrasinh and his wife stay alone. Their son and daughters stay separately. They earn their living by grazing cattle. he is having severe arthritis and respiratory disorder. The source of income is very meager and that to dependent on rain. He had to borrow money from family friends or at times take on interest for taking basic treatment. His wife Shantaba also has blood sugar and hence she also requires medical assistance at times. The couple took Adani Foundations' Senior Citizen Health Card in 2015 by which they are able to save good amount, which was their medical expense every month



**Can any other  
relationship be as  
beautiful?"**

When you grow old, loneliness is sometimes more painful than physical sickness. During routine visits of Dr Mukesh Parmar – Medical Officer of Medical Mobile Unit in the community as a health volunteer, he met Rahomat Ba (grandmother in Gujarati) who initially appeared as an introvert. She lives in Gundala Village. According to her neighbors, she confined herself within the four walls after her husband's demise. Despite living with her children, she is often seen sitting alone in the corridor of her house, as the family members are apparently busy with their own lives. Financially strained, she refrained from visiting a doctor due to fear of their exorbitant fee.

Mukesh bhai was determined to not only get her to our mobile hospital, but also cultivate a health seeking behavior in her. He would keep on standing outside her house till the time she didn't agree to listen to my request. Do you know something? Ba is his best friend today. They not only share our secrets with each other, but also counsel each other as a mother and a son. Can any other relationship be as beautiful?"





### **Good Human Beings are Gods Incarnate**

While many people talk about water crisis and drought in Kutchh, Rambhai Gadhavi of Zarpara has practically found and tried a solution to it and that is water conservation. Born into a poor farmer's family, he faced water problems in childhood and used to wake up at wee hours to fetch water, which inspired him to find ways of water conservation. Under Guidance and Support of Adani Foundation He practiced non-irrigation agricultural methods as solutions to water crisis which causes drought, thereby leading to Indian farmer suicides every year.

He did Bore well recharge and Farm Bunding to increase capacity of ground water through rain and to prevent run off. Not only that, he gave guidance to other farmers to accept water conservation practices.

Rambhai and his wife Veerbai's enthusiasm is remarkable in micro irrigation, fodder cultivation and Recharge activities. They are real change makers of "Sustainable Agriculture Projects" of Adani Foundation

### Every drop that matters!



Kutchh district is a dry temperate zone and rainfall is negligible. Water requirement is met through the reservoirs in which the water decreases during summer months when crop is standing in the field. Whatever irrigation was provided resulted in soil erosion leading to loss of huge quantity of soil every year thereby increasing the farmer's problem in producing good quality crop. Therefore, usage of water and land is to be done sensibly by the farmer. Muljibhai The farmer of Navinal Village attended awareness programme of micro irrigation and organic farming organized by the Adani Foundation and showed interest in adopting the same. He was given every suitable help in subsidy and was persuaded into adopting drip irrigation for field crops.

Not only this, with support of DRDA and Adani Foundation he had adopted Bio gas which is utilized for cooking and organic fertilizer as well.

With the help of drip system, the Muljibhai was able to diversify towards different Horticulture crops like Pomegranate, Jamfal, chikoo etc. in addition to traditionally grown crops like Cotton and Caster.

As a result, he is able to get 40-45% higher yield as compared to flood irrigated crops. Diversification has helped in improving returns from the same area.



### Giving Back to the Society

Sharad Sharma is Plant head of Adani Wilmar Limited since six years. During Review meetings he came to know about activities of Adani Foundation. He asked Adani Foundation to start health camps near Wilmar Workforce settlements.

Before three years, when Adani Foundation organized first health camp under dignity of workforce – he came during inauguration. He discussed various issues of workforce during camp and being generous and sensitive – he took a decision to do some concrete work for the workforce.

He started visit of labour vasahat once in a month for interacting with them regarding various issues i.e. deaddiction, sanitation, health issues and education of children. Due to his support, We could able to start “Joy of Giving Week” twice in a year.

Not only this, his wife has also extended great support for Education and Joy of giving Week. In spite of being always occupied Sharad ji is volunteering as a proud adanian.

Adani Foundation is feeling proud to have employee volunteer like Shard Sharma – one of the HEROS AT WORK.



### જીવન જીવવાના દરવાજા ખૂલે

મુજબા એક ૨૨ વર્ષના યુવાનની કથા છે. બેકારીના રોદણા રોનારા યુવાનોને પ્રેરણા આપે છે. બાળપણમાં જ, લગભગ બે વર્ષની વયે જ જેને થેલિસિમિયા મેજર હોવાની ખબર પડી હતી, તેવા નખત્રાણા તાલુકાના નાનકડા ગામ દેસલપર(ગુંતલી)ના રાજુ કરસન ચાવડાની સારવાર તો તેના માતાપિતા પોતાના ક્ષમતા મુજબ કરાવતા હતાં પરંતુ દસ વર્ષના રાજુને લઈને માતાપિતા ચોટીલા દર્શન કરવા ગયાં તો ત્યાં ગમખવાર અકસ્માતનો ભોગ બન્યાં ને



માતાપિતાને કાળે છીનવી લીધાં અને રાજુને પગમાં કાયમી ખોડ આવી. અનાથ બનેલા રાજુનો સહારો તેના માસી બન્યાં. બે વર્ષ તેમની સાથે રહ્યા બાદ રાજુ એક ચાની રેંકડી પર નોકરી કરીને પેટિયું રળવા લાગ્યો, પરંતુ આશરોનો સવાલ તો ઊભો જ હતો. ત્યાંના શેઠે તેને બહેર શૌચાલયમાં નોકરીએ રખાવ્યો. આશરો મળતો હોવાથી રાજુ ત્યાં કામ કરવા તૈયાર થઈ ગયો. રાજુ કહે છે, 'મારો પોતાનો કંઈ વિશેષ ખર્ચ નથી. મને રોજ ટિફિન મળે છે, એટલે જમવાનો ખર્ચ થતો નથી. રોટરી ક્લબની સહાયથી જી.કે. જનરલ હોસ્પિટલમાં દર મહિને મારું લોહી બદલાવાય છે. દવા પણ મને નિ:શુલ્ક મળે છે. આમ મારું જીવન ચાલ્યા કરે છે. કોઈ સામે હાથ લાંબો કર્યા વગર જીવાય તેને ભગવાનના આશીર્વાદ ગણું છું.' કામ નથી મળતું કહીને નિરાશ થનારા યુવાનો માટે રાજુ ખરેખર પ્રેરણાસ્ત્રોત સમો છે. ■

### True Warrior : We Salute

This is the story of Raju residing at Desalpar village of Nakhatrana Taluka. He is lesser blessed child of the almighty as he got Thalassemia Major and needs blood transfusion regularly.

Not only this - he lost his parents at the age of 10 in accident. He started work at tea stall for bread n butter for two ends meet. Then he started work at public toilet with the help of Village leaders.

In all this miseries - he says with smile that due to GKGH Hospital he could elongate his life span.

Every Month blood transfusion and free medicine n guidance by thalassemia ward by Rotary saved his life...

We salute this warrior and wish him best wishes.

## World Environment Day

World Environment Day was celebrated in Five Talukas by different activities related to conservation of Environment. These Events were organized in coordination with DDO, TDO, SDM and Village Leaders of all Five Talukas. The activities Tree Plantation, Check dam Augmentation work, Inauguration work of Godhatal Dam Deepening work.



555+ Tree  
plantation  
in Bhuj,  
Mundra &  
Nakhtrana  
Taluka



9000+ cum  
Augmentation  
and deepening  
work of check  
dam in Mandvi  
& Lakhpatri  
Taluka





## International Coastal Clean up Day



Mundra Adani foundation MUNDRA has celebrated swachhagraha related International Coastal Clean up Day celebrated with Coast Guard" with theme swachhagraha.. School students, Coast Guard staff and Adani foundation staff had cleaned Mandvi beach and give a message of swachhagraha.. At the end information given about swachhagraha project

## Teacher’s Day : Guru Vandana

Teachers day celebration in coordination with District Education Office and District Development Office with Adani Foundation - District Level Best teacher Award on this auspicious day.

13 teachers is selected after screening by DEO Office and tofay award will be given in presence of DEO, DPEO and Vasan bhai Ahir Minister Gujarat .





## Divine Feelings Towards Mata no Madh



Mata no Madh is a village in Lakhpat Taluka of Kutch district, Gujarat, India. The village lies surrounded by hills on both banks of a small stream and has a temple dedicated to Ashapura Mata. She is considered patron deity of Kutch. The village is located about 105 km from Bhuj, the headquarters of Kutch district.

People used to go by foot to Mata no madh in Navaratri. Total 8 camps at different locations is inaugurated today in way towards Mata no Madh by Adani Foundation Bhuj and GKGH Hospital.

Total 34537 Patients were benefitted in this Camp

## "Ayushman Bharat – Celebrating First Birthday !! "

On the first birth anniversary of "AYUSHMAN ENROLMENT CARD" Adani Foundation Bhuj and Mundra had successfully completed 11 Ayushman card enrollment camps in a single Day.



## Skill Development Training Program for Schedule Cast Beneficiaries

we could able to fulfil target of training 1440 SC beneficiaries from Eight Talukas from Kutchhh for different courses.

Mr Vinod Chavda (MP, Kutchhh and Morabi) Mrs Lata Solanki (Pramukh, Nagar Palika,Bhuj) Mr Rohit (District Social Justice and Empowerment ), Mr Jatin Trivedi (Head, ASDC)and Mr solanki (Chairman, social justice commitee Kutchhh) we're present.



### courses

1. Hand embroidery
2. Self employed stitching
3. Mobile Repairing
4. Beauty parlor
5. Crane operator





## Awards and Accolades

### Apex India CSR Innovation Award 2019



Adani Foundation Mundra received **"Gold Award"** under Apex India CSR Innovation Award 2019 Today at Goa.

Cheif Guest of the event was Shri Prasad ( Union Minister Goa,GOI) and Guest of Honour Mr Suri (Former Governor Goa).

From Adani Foundation Mundra - Mr Vijay Gosai (Coordinator SLD Projects) and Mr. Karsan Gadhvi ( Sr PO SLD Projects) received the Award.





# Awards and Accolades

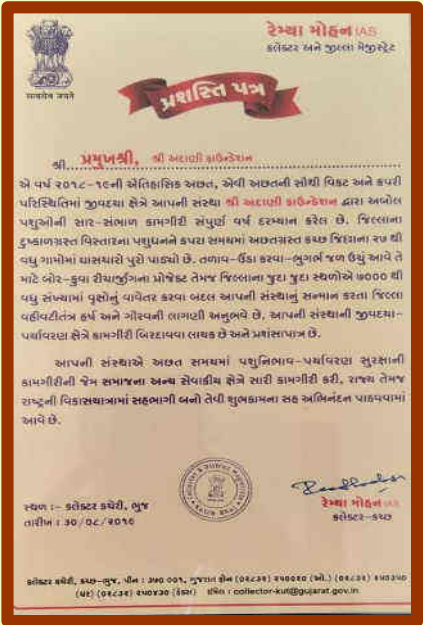


Sharing with Proud that Adani Foundation got felicitation from Mr Vijay Rupani Honorable Cheif Minister Gujarat for

- 1. Water Conservation works
- 2. More than 7000 Tree Plantation in Mundra, Anjar, Lakhpat and Mandvi Taluka

Felicitation of 3 CSR from Kutchh district for remarkable scarcity related work.

From Adani Foundation - Mr Karsanbhai Gadhai received Award.



## Awards and Accolades



Ms. Pankti Shah was invited as a guest of honour for Mission Eco Next "Eco Eureka Training" by ministry of science and technology - Government of India at KSKV Bhuj.

Initiatives of Adani Foundation for Biodiversity and water conservation was shared on this platform.



Ms. Mavajibhai Baraiya was invited as a guest of honor for "Creating Sustainable Farming Villages" by Krushi Research and Development Association by Vagad Visa Oswal Samaj.

Initiatives of Adani Foundation for Fodder Sustainability and water conservation was shared by him.

Beneficiaries

No	Core Area	Beneficiaries	Remarks
1	Utthan (Education)	3000	Uthhan, Labour School, School Enrollment
2	Adani Vidya Mandir	450	School Students
3	UDAAN	15329	250 Institute Visited
4	Adani Skill Dev. Center	1544	Mundra and Bhuj
5	Health Mundra	30336	MHCU, Medical Camps, Senior Citizen
6	Health Bhuj	47526	Health Camps, Mahiti Setu,care
7	SLD Fisherman	5572	Water, Education, Mangroves etc.
8	SLD Agriculture	1232	Drip Irrigation, Bio gas, tissue
9	SLD Women Empowerment	132	Saheli mahila gruh udyog – 12 SHG
10	CID Work	12345	Pond deepening, AKBTPL,
11	Swachhagraha	5266	Mundra, Bhuj, Anjar and Gandhidham
12	Suposhan Mundra	21439	Adolescent, Children and RPA
13	CSR Tuna	745	Health Camp, Cattle feed,
14	CSR NaKhtrana	-	
15	CSR Bitta	2450	Pond Deepening, Fodder, School Praveshotsav
16	CSR Lakhpat	1890	Fodder, School Support, Dam Desilting



**Adani Foundation -Mundra**  
**Executive Summary-Budget Utilization up to September 2019**

**F.Y. 2019-20 (Rs. In Lacs)**

Sr. No.	Budget Line Item	CAPEX	OPEX	Budget 2019-20	Expenditure up to Sept.19	% of utilization against FY 2019-20 budget
A	Admin Expense	1.30	70.20	71.50	28.56	39.94%
B.	Education	0.00	57.75	57.75	26.70	46.23%
C.	Community Health	0.60	220.06	220.66	78.91	35.76%
D.	Sustainable Livelihood Development	30.00	387.30	487.80	325.04	66.63%
E	Rural Infrastructure Development	358.93	33.10	321.53	28.53	8.87%
<b>Total AF CSR Budget :</b>		<b>390.83</b>	<b>768.41</b>	<b>1159.24</b>	<b>487.73</b>	<b>42.07%</b>
F.	Utthan - Education	49.97	58.96	108.93	31.86	29.25%
G.	Model Village	132.93	64.33	197.26	61.52	31.19%
<b>Total Project Utthan Budget</b>		<b>182.90</b>	<b>123.29</b>	<b>306.19</b>	<b>93.38</b>	<b>30.50%</b>
H.	Adani Vidya Mandir - Bhadreshwar	33.36	170.99	204.35	71.34	34.91%
<b>Total AVMB Budget</b>		<b>33.36</b>	<b>170.99</b>	<b>204.35</b>	<b>71.34</b>	<b>34.91%</b>
I.	Project Udaan_Mundra	5.00	368.14	373.14	92.41	24.77%
<b>Total Project Udaan Budget</b>		<b>5.00</b>	<b>368.14</b>	<b>373.14</b>	<b>92.41</b>	<b>24.77%</b>
<b>GRAND TOTAL</b>		<b>612.09</b>	<b>1430.83</b>	<b>2042.92</b>	<b>744.86</b>	<b>36.46%</b>



# **Annexure – 9**



19.10.2015

To,  
Member Secretary,  
Gujarat Coastal Zone Management Authority  
Forest and Environment Department, Government of Gujarat,  
Block no. 14/8, Sachivalaya,  
Gandhinagar – 382 010

**Subject:** Compliance of direction no. *ii, iv and v* of MoEF&CC Order dated 18.09.2015  
(copy attached)

Dear Sir,

With reference to the Show Cause Notices dated 15.10.2010 and 30.09.2013 issued to APSEZ, MoEF&CC has disposed of both the notices and have issued certain directions vide an Order dated 18.09.2015.

As per the direction no. *ii, iv and v*, NCSCM shall prepare a comprehensive and integrated conservation plan in consultation with NIOT, APSEZ and GCZMA. We therefore kindly request you to consider our case in the next GCZMA meeting by inviting concerned authorities so that terms of reference for the stated work can be discussed and finalized.

Thanking you,  
Yours faithfully,

  
P. N. Roy Chowdhury  
Head – Environment

  
રાજેન્દ્ર શાહ  
નાયબ સેક્શન અધિકારી  
રજીસ્ટ્રી શાખા  
વન અને પર્યાવરણ વિભાગ  
સચિવાલય, ગાંધીનગર

# **Annexure – 10**

## **Minutes of the 28<sup>th</sup> meeting of the Gujarat Coastal Zone Management Authority held on 22-04-2016**

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The 28<sup>th</sup> meeting of the Gujarat Coastal Zone Management Authority (GCZMA) was held on 22-04-2016 under chairmanship of Shri Punamchand Parmar, IAS, Principal Secretary, Forests & Environment Department and Chairman, GCZMA in the Committee Room, Forests and Environment Department, Gandhinagar. A list of the members and other participants, who attended the meeting, appears at **Annexure-A**. Also a list of the representative of various project proponents, who have made presentation before the Authority appears at **Annexure-B**.

Initiating the meeting, with the permission of the Principal Secretary, Forests & Environment Department, and Chairman of GCZMA, the Member Secretary, GCZMA, welcomed all the members of the newly constituted GCZMA and other participants. He also brief all the members regarding functions and duties of the GCZMA as per constitution order of the MOEF&C, GOI.

Then after he briefed the Members of the GCZMA about the agenda items for the meeting and various actions taken by the Department in compliance of the various decisions taken during last meeting.

The agenda wise discussion and decisions taken thereafter is as under:

### **→AgendaitemNo:28.1:-**

**❖Compliance report with respect to the decision taken in the 27<sup>th</sup> meeting of the GCZMA, which was held on 15-09-2015.**

- a) Preparation of an action plan for development of Bio- Shielding project for entire area between Dahej and Hazira by way of planting various species of vegetation, such as mangroves, seaweeds, sea grass, casuarinas to control the soil erosion, stabilize the area sand for protection in case of Tsunami in association with any institute / Organization having some experience in this Field.**

The GEC apprised the authority that the GEC visited potential sites as recommended by the M.S. University and they have completed



**28.17      Strengthening of GCZMA through manpower, infrastructures and purchasing Instruments like advance cameras, GPS meter etc.**

The Authority was apprised that the Secretariat of Gujarat Coastal Zone Management Authority is working in the Directorate (Environment) in the Forests and Environment Department, Government of Gujarat as PS, F&ED is the chairman of GCZMA and Director(Environment) is the Member Secretary of the GCZMA. At present, the work related to GCZMA is being looked after by the Director(Env) along with all other works related to Environment Sector of the State. There is only three Deputy Environment Engineers working under Directorate on loan service from GPCB. No other supporting staff is there. Moreover, it is also require to strengthen the GCZMA by providing adequate infrastructure like colour printers, computers, advanced cameras, GPC meters etc and also providing sufficient men powers to assists the GCZMA for better implementation of CRZ Notification 2011 in the State including to carry out work related to various court.

***The Authority decided that the necessary proposal in this regard necessary action would be initiated by the Forests and Environment Department to strengthen the GCZMA. The other instruments would be purchased trough GMB from the GCZMA account being maintained by the GMB.***

**28.18      Issues related to M/S Adani Port and SEZ Limited as per Directions issued by the MOEF&CC,GOI**

The Authority was apprised that the Ministry of Environment, Forests and Climate Change, Government of India has issued an office order No: F.NO.10-47/2008-IA.III dated 18<sup>th</sup> September, 2015 with reference to Show Cause notice dated 15-12-2010 issued to M/S Adani Port and SEZ Limited for alleged violations. The Ministry has issued detailed order with following directions specific directions:

“A comprehensive and integrated conservation plan including detailed bathymetry study and protection of creeks/mangroves area including buffer zone , mapping of co-ordinates , running length , HTL, CRZ boundary will be put in place. The plan will take note of all the conditions of approvals granted to all project proponents in this area e.g. the reported

case of disappearance of mangrove near Navinal creek. The preservation of entire area to maintain the fragile ecology conditions will be a part of the plan in relation to the creeks, mangrove conservation and conservation of Bocha island up to Bharadimata and others.

The NCSCM will prepare the plan in consultation with NIOT, PP and GCZMA.. In recognition of the fact that the existing legal provisions under E(P) Act 1986 do not provide for any authority to impose ERF by the Government, the plan will be financed by the PP. The Implementation will be carried out by GCZMA. The monitoring of the implementation will be carried by NCSCM”

The representative of NCSCM, Chennai made a presentation before the GCZMA on the draft scope of work for preparation of a comprehensive and integrated conservation plan including detailed bathymetry study and protection of creeks/mangroves area including buffer zone , mapping of co-ordinates , running length , HTL, CRZ boundary.

***After detailed deliberation and discussion, the Authority decided to constitute a committee of following members from GCZMA under chairmanship of PCCF(WL) to finalize scope of work to be carried out by the for NCSCM as per directives issued by the MOEF&CC, GOI***

1. Shri J.A,Khan, IFS, PCCF(WL) ----- Chairman
2. Shri H.S.Singh, Retd. PCCF, Member GCZMA-----Member
3. Shri H.B. Chauhan, ISRO, Member GCZMA-----Member
4. S.K.Chaturvedi,IFS, MS, GEC, Member GCZMA-----Member
5. Shri Rajesh. I. Shah, Member, GCZMA -----Member
6. Shri Hardik Shah, IAS, Director(Env)& MS, GCZMA—Convener

**28.19      Table Agenda- CRZ Clearance for proposed up gradation of for widening and improvement of Wamleshwar Ankalwa – Dhamrad, Aniyadra , Sunerkhurd Road at Taluka: Hansot, Dist: Bharuch Under National Cyclone Risk Mitigation Project(NCRMP) Funded By G.S.D.M.A ( World Bank Assisted) in the State of Gujarat by the Road and Building Department, Government of Gujarat**

The Authority was further apprised that the Road and Building and Panchayat Department has approached this Department for seeking the

# **Annexure – 11**



25.04.2016

To,  
Member Secretary,  
Gujarat Coastal Zone Management Authority  
Forest and Environment Department, Government of Gujarat,  
Block no. 14/8, Sachivalaya,  
Gandhinagar – 382 010

**Subject:** Compliance of direction no. *ii, iv and v* of MoEF&CC Order dated 18.09.2015

**Reference:** Our presentation during 28<sup>th</sup> GCZMA committee meeting on 22.04.2016

Dear Sir,

In continuation to the discussions during the above stated reference meeting, please find enclosed proposal that we have received from NCSCM. It may please be noted that as per the discussion, NCSCM will now start the studies as per the scope identified and presented in the meeting. The scope is submitted to your office for consideration and approval.

Thanking you,  
Yours faithfully,



Shalin Shah  
Head – Environment

26/4/2016  
નાયબ સેકશન અધિકારી  
રજીસ્ટ્રી શાખા  
ગન અને પર્યાવરણ વિભાગ  
સચિવાલય, ગાંધીનગર

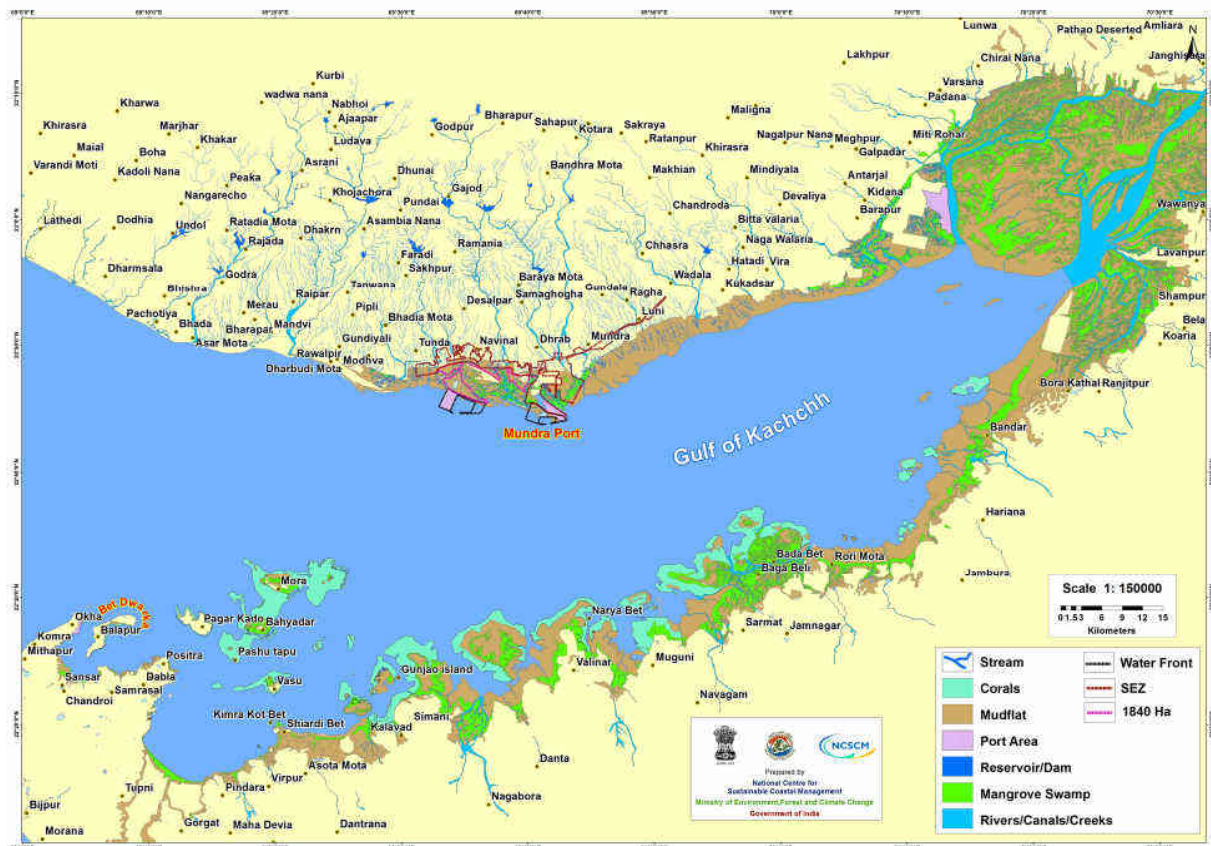
## **Proposed activities to fulfill NCSCM's role in checking compliance of Environmental Clearance accorded for Adani Port & Special Economic Zone Ltd**

### **1. Introduction**

The Ministry of Environment and Forests have accorded Environmental Clearance (EC) to M/s Adani Ports and Special Economic Zone Ltd (APSEZ) to set up a multi-product SEZ at Mundra, Kachchh, Gujarat (Fig.1). The project involves development of SEZ in a notified SEZ area of 6641.2784 ha for which Environmental and CRZ clearance has been given. The activities proposed in the SEZ include:

- Processing zones
- Non-processing zones
- Warehousing zones
- Road network (trunk as well as internal)
- Bridges or culverts over natural drains
- Rail and IT communication networks
- Effluent collection network
- Water supply thro' freshwater sources and desalination
- Conservation & drainage network
- Effluent collection network
- Social infrastructure
- Existing/proposed airstrip
- Municipal solid waste disposal site
- Utilities & supporting infrastructure
- Disposal of treated sewage, effluents and brine from desalination plant

The SEZ covers both inland and water front areas. Industrial plots will be made by APSEZ and shall be given to the firms that would be setting up individual industries of above types who need to obtain EC before initiating their projects. The industries envisage to utilize the services of Adani port for transport of imported and exported goods. While according EC to the project, the MoEF have stipulated General and Special conditions. A summary of these conditions are given in Annex 1. The MoEF have also specified that while implementing the project, the firm should furnish half-yearly reports on compliance of EC conditions to the Regional Office of MoEF at Bhopal, CPCB and SPCB of Gujarat.



**Fig.1. Gulf of Kachchh showing Adani Port Special Economic Zone area**

## 2.0. Environs of APSEZ

The project area is located in Mundra region of Kachchh district in Gujarat (Fig.1). 14 villages of Mundra taluk are in the vicinity of the project area. The western, central and central-eastern zones are mainly barren land. The eastern zone is mainly dry cultivated agriculture and the southern zone is coastal belt facing the Arabian Sea. Ephemeral rivers like Khari, Dhaneswari and Nagavanti flow in the region. The study area comprises of sea area of 43.88% in Gulf of Kachchh and remaining are inland water bodies and land. Reserved forests like Danderi, Baroi, Luni, Bhadreswar, Mundra Dhuro and Mundra mangrove exist in the study area. Few other Reserve Forests also exist in the study area. As per the EIA report of the project, in the land area of the SEZ, 50.77% is non-vegetative area, 45.83% is covered with water bodies, 2.72% is scrubs, 0.41% degraded vegetation, 0.26% is sparse and dense mangroves and 0.01% is marshy vegetation and plantation. Regarding geology, the area comprises of rocky uplands (>



55m AMSL), undulating pediment plain (30-55 m AMSL), Alluvial plain (20-30m AMSL) and coastal plain (<20 m AMSL).

Though the region is dry, it has natural resources with unique sea bathymetry which attracted port development in the last two decades with the last decade experiencing rapid industrialization. The Mundra Adani Port was established in 1998. According to reports available, there are 31 large to small scale industries in and around Mundra. They belong to the categories of Port, power plants, steel plant, oil and coal refineries, mineral and mining industry etc. Adani Port serves for import and export of raw materials and finished products. The main import materials are edible oil, coal, steel, container, machinery, wood, phosphoric acid and the exported ones are wheat, bentonite, bauxite, salt, lignite and steel pipes. The major industrial pockets are around Mundra, Jharpara, Navinal, Kapaya, Siracha, Tunda, Samaghgha, Vadala, Luni and Bhadreshvar villages. The industrial growth led to rise of population of Mundra town from 12,900 (2001) to 20,300 (2011). Besides, the area will foresee rapid industrial development due to establishment of APSEZ. The proposed industries are heavy engineering, steel and cement plant, minerals and metals, textile chemical, pharma, plastic and apparel parks, petrochemical hubs, auto/auto accessories, light engineering, power plant etc.

The project area which is around Mundra, has mangrove formation which ranges from scattered to dense mangroves. Limited information on distribution of mangrove area is available in the literature. A committee chaired by Ms Sunita Narain evaluated impact of development of Adani Port and APSEZ on the health of creeks and mangroves. The committee has made several recommendations for conservation of creeks and mangroves. Accordingly, the MoEF, in its EC also have specified to conduct extensive bathymetric survey to facilitate actions that ensure availability of appropriate water to the mangrove areas and continued opening of mouths of creeks and also to restore creeks that were closed by the proponent.

Keeping the likely impacts on environment in mind, under the conditions of EC, the MoEF has specified following roles to the R & D institutions:

1. The APSEZ at its cost inspection study done once in a year by organization like NEERI or any other approved by the Ministry. – to ensure compliance of all EC

conditions to (i) ensure compliance of all the EC conditions (ii) development of SEZ meeting of the environment norms and iii) advise any mid-term correction that can be introduced depending on the recommendation of the independent third party.

2. The Project Proponent (PP) shall get detailed bathymetry done for all the creeks and rivers within Port and SEZ areas along with mapping of co-ordinates, running length, HTL, CRZ boundary, mangrove area including buffer zone through NCSCM/NIOT.

3. PP shall also get prepared a detailed action plan for conservation and protection of creeks, mangrove area etc. through NCSCM/NIOT and submit the same to GCZMA for their examination and recommendation. GCZMA will submit its recommendations to MoEF for approval.

The APSEZ personnel discussed with NCSCM which is an institution under MoEF about undertaking the tasks numbers 2 and 3 as above. Since one of the mandates of NCSCM is to assist MoEF in implementing the CRZ notification, NCSCM has proposed to undertake the following tasks with funding by APSEZ:

### **3. Tasks proposed**

1. Detailed bathymetry of creeks including the ones distributed in the seawater side, water ways and rivers along with mapping of co-ordinates, running length, HTL, CRZ boundary within the Mundra Port and APSEZ area
2. Mapping of mangroves distributed in the Mundra Port and APSEZ area including their seaward side with buffer zones and Development of an action plan for preservation and conservation of mangroves and creeks.

#### **3.1. Detailed activities and Date of commencement of activities**

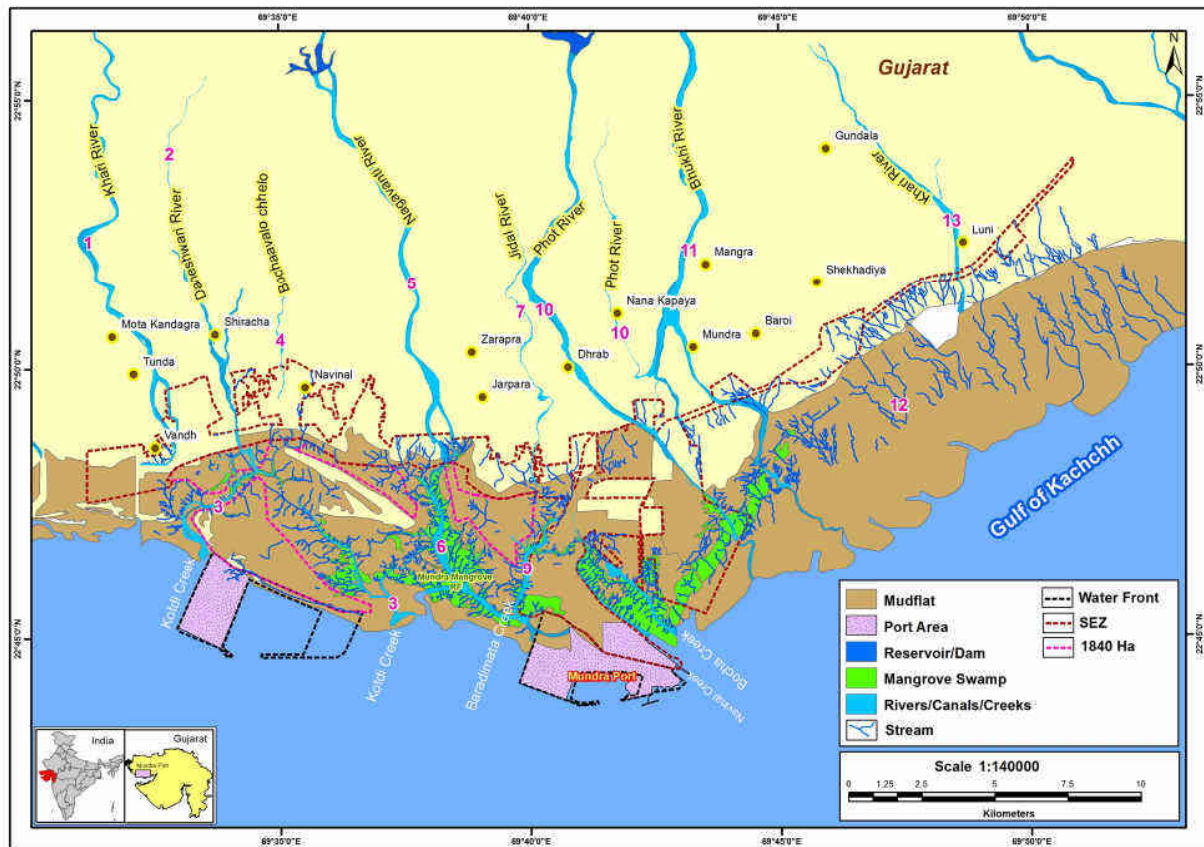
Details of activities proposed under these tasks, schedule, performance indicators, deliverables and budget are given in Sections 4 and 5 below. The activities will be initiated in the first quarter of 2015 and planned to be conducted for a period of 1 year which includes initial preparation time of 3 months.

### **4. Determination of Bathymetry of rivers and creeks, their mapping with details on co-ordinates, HTL and CRZ boundaries**

#### **4.1. Introduction**

One of the conditions of Environmental Clearance accorded by MoEF while approving the establishment of Adani Port Special Economic Zone (APSEZ) is to carry out fresh bathymetry survey and mapping of creeks, rivers within Port and SEZ area and is to be done by NCSCM/NIOT. In order to obtain details on distribution of water bodies, a map containing distribution of rivers, streams, canals, major and minor creeks has been prepared using high

resolution satellite image of April, 2013 (the latest date available in Google Earth) and the details are displayed in Fig.2. Since the field situation on the distribution of creeks may vary, occurrence of these creeks with water can be determined only during the field survey.



**Fig .2. Major rivers,creeks, canals and minor streams in the APSEZ.**

It is proposed to determine the bathymetry of these water bodies using echosounders and graduated/tide poles depending on the depth.

#### 4.2. Tasks involved

1. Mapping of major rivers, creeks and canals that contribute significantly to the growth and survival of mangroves and conducting bathymetric survey incorporating HTL and CRZ boundaries.
2. Documentation of minor creeks and canals which are beyond the mangrove area. The information will be useful to decide about suitability of these areas to facilitate water flow for plantation of mangrove and allied species.
3. Development of GIS based database on bathymetry of rivers, creeks etc., to facilitate periodical monitoring on physical presence of these water bodies over a period of years.



### 4. 3. Description of tasks

#### 4.3.1. Mapping of rivers, creeks, canals etc

As seen in Fig.2 the area has numerous medium and small creeks distributed in a complex manner. An attempt has been made using satellite data of 2013 (Google Earth) to isolate the major and minor creeks besides rivers, streams etc to estimate length of these water bodies. Table 1 gives approx. length of these water bodies.

**Table 1 : Length and number of Major/Minor rivers and associated canals**

<b>Id</b>	<b>River / Creek Name</b>	<b>No. of Streams</b>	<b>Approx Length in (km)</b>
1	Khari River		9.71
	Streams	13	2.14
2	Daneshwari River		4.65
	Streams	5	1.01
3	Kotadi Creek		62.60
	Streams	329	84.76
4	Bochaavalo chhelo		2.55
	Streams	3	1.13
5	Nagavanti River		4.53
	Streams	17	6.37
6	Baradimata Creek		51.48
	Streams	337	84.58
7	Jidal River		2.44
	Streams	6	2.50
8	Navinal Creek		11.72
	Streams	51	16.40
9	Bocha Creek		7.81
	Streams	94	25.41
10	Phot River		17.28
	Streams	79	37.47
11	Bhukhi River		11.35
	Streams	123	34.72
12	Bhukhi River and Khari River between Streams	124	74.37
13	Khari River		2.54
	Streams	106	81.39
	<b>Total</b>	<b>1287</b>	<b>640.94</b>

As per the above table, the total approximate estimated length for which bathymetry to be measured is for 640 line km. This may vary as some of the creeks/branches may be too shallow for making any measurement. The actual line km will be known only at the time of survey,

#### **4.4. Methodology proposed for bathymetric/elevation survey**

A preliminary survey using graduated poles will be carried out to determine approx depth of water bodies and locations for survey will be finalised. An appropriate echosounder will be used to measure bathymetry for rivers, creeks and canals. For other shallow water bodies (depth < 0.5m) tide poles will be used to measure the depth. Water depth data will be collected at close transects and it would be not less than 500m intervals during high tide. During low tide elevation data will be collected in the exposed area using RTK GPS. The measurements made will be represented with reference to MSL as appropriate to the location. A suitable benchmark will be established at appropriate locations by transferring the level from the nearby Survey of India benchmark location. The depth recordings will be corrected for tide by deploying suitable tide gauge. Necessary quality control of data will be performed. The collected data will be plotted as bathymetry charts and will be added as a part of the database.

Mapping of creeks, rivers etc will be carried in GIS using LISS IV images (of latest year) with finer details verified using images from CARTOSAT/World View. Steps involved in mapping are given in Fig.3. Co-ordinates of creeks will be obtained from field survey. HTL will be drawn based on Aerial photographs available with Survey of India. The CRZ boundaries will be drawn based on HTL contours and habitats distributed along the creek.

#### **4.5. Schedule**

Mapping of river, creeks, HTL, CRZ and their field verification will be carried out in subsequent 6 months period. During this period, the entire bathymetry/elevation data will be collected in a period of 3 months and the data will be processed. The bathymetry charts and creek maps will be made available in the following 3 months.

#### **4.6. Performance indicators**

1. Locations for collection of bathymetry data finalised
2. Survey of bathymetry completed and bathymetric chart prepared

3. Mapping of rivers, creeks, water ways (canals) completed

#### **4.8. Deliverables**

1. Bathymetry chart of major rivers, creeks, canals
2. GIS based maps on rivers, creeks, canals, streams and other water ways

#### **4.9. Budget**

Cost of bathymetry/elevation survey, plotting etc will be at the rate of Rs. 20000 per line km. Charges will be made on actual line km. An expert assistance will be taken in field planning of field survey and for fixing locations.

### **5. Action plan for Preservation and Conservation of Mangroves in Mundra, Gujarat and associated APSEZ areas**

#### **5.1. Introduction**

Mundra is a coastal taluk at the northern flank of the Gulf of Kachchh and it has wide intertidal area. This area has been known to be rich in mangroves ( 13.35 sq.km- source BISAG) and is second largest next to Kori creek. The mangrove vegetation was found essentially on Navinal , Bocha, Aban and Baradimatha creeks and adjoining intertidal mud flats (Fig.2). This scenario started changing when this area was identified for the major port development. Some of earlier observations also indicate heavy erosion in the Bocha island. Several other changes including change of sparse mangrove areas as mud flats, reclaimed land etc have been reported in the Sunita Narain's Report.

Earlier studies conducted in this area have classified the mangrove vegetation in to 4 major categories: (i) Dense, (ii) Moderately dense, (iii) Degraded and (iv) Sparse. The major single species encountered in the dense and moderately dense areas is *Avicennia marina*. In addition, *Ceriops tagal*, *Rhizophora mucronata* and *Aegiceras corniculatum* are also seen. *Sonneratia apetala* is also seen in moderately dense areas. In sparse areas, *Acanthus ilicifolius* is seen.

In order to assess the current status of mangroves and creeks and to explore the possibility of ensuring free flow of seawater in to the existing mangrove areas from already existing water sources like creeks and rivers, it is proposed to prepare maps of mangroves and integrate them



in creek maps of the Port and APSEZ. Even though, studies have been conducted by various agencies on mapping of mangroves, the information available does not facilitate detailed assessment on health of the mangroves as the scale of maps are lower say 1:25000 scales. Therefore, mangrove maps at a scale of 1:10000 or 1:5000 will be prepared to fulfill this gap. This will help to classify the existing mangroves as, (i) Pristine(undisturbed), (ii)vulnerable to degradation, (iii) degrading and (iv) degraded. Further, It is also necessary to identify the area under natural regeneration and areas suitable for plantation. In order to accomplish these tasks, preparation of an action plan for preservation and conservation of mangroves of APSEZ is essential. The present activity aims to develop such an action plan.

## **5. 2. Tasks to be undertaken**

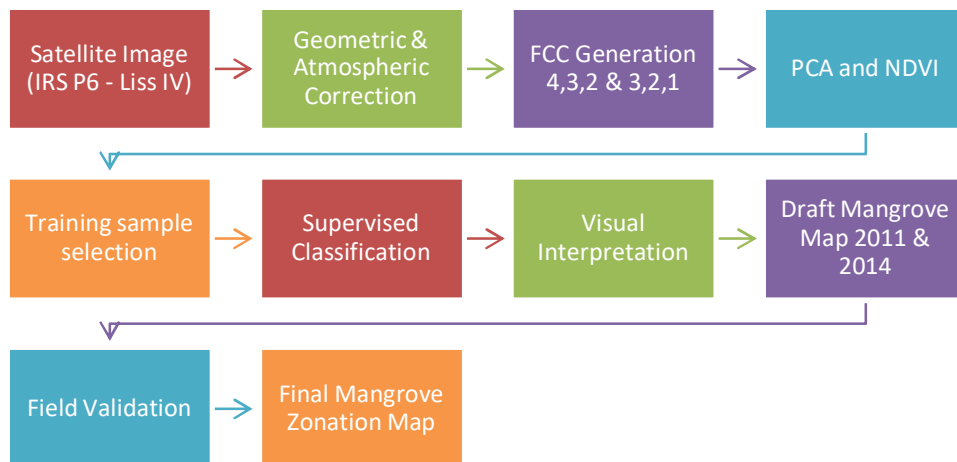
1. Preparation mangrove maps in 1:10000/1:5000 Scale maps along with buffer using satellite image of 2011 and latest 2014 and validating 2014 data with field observations in the second quarter of 2015.
2. Assessment of status of mangrove areas and associated water ways for preparation of an action plan for conservation and restoration of mangroves and associated creeks, thro' appropriate strategies

## **5. 3. Detailed description of tasks**

Proposed activities to carry out the above tasks include:

### **5.3.1. Preparation of mangrove and habitat maps**

LISS IV Satellite data of latest year (2014) will be procured and used for preparation of 1:10000/1:5000 scale maps of mangrove areas. Extensive ground truth data on dense sparse species level etc., will be collected to validate the satellite data. Data on distribution of various species of mangrove plants, associated fauna and flora shall also be collected. Since natural flow of tidal and fresh water affect the mangroves, detailed observations will be made on the tidal incursions, depth of creeks and rivers in the area (from the bathymetry data collected and creek maps prepared), rate of sedimentation in water ways and anthropogenic impacts ( pollution, embankments, animal grazing, cutting of trees etc.). A long-term digital database on mangroves and associated habitats of Mundra region will be developed to facilitate long-term monitoring of environment of Mundra area. Steps involved in preparation of mangrove and creek maps are given below (Fig.3).



**Fig.3. Flow diagram on steps involved in preparation of maps**

### **5. 3. 3. Assessment of health of mangroves and associated habitat**

Based on data collected, thorough annual assessment on loss and gain of mangrove and creek area along with changes in distribution of species will be made between the present condition and the past i.e., 2011 (year of CRZ notification) or as suggested by MoEF & CC etc. Wherever significant changes on these aspects are noticed, the cause of such changes will be assessed and remedial measures such as plantation of mangroves, deepening/widening of creeks or creek mouth, restoration of lost creek area, construction of new canals to facilitate flow of water in to the mangrove areas etc., will be suggested. Recommendations relevant to conservation of mangroves and creeks made in the report of Sunita Narain (2013) will also be taken into account while preparing the action plan. Details on method of implementation of action plan including, techniques involved for restoration etc will be suggested at an appropriate stage of the project.

### **5.3.4. Socio-economic survey**

Since there are villages surrounding the mangrove area, information on extent of their dependence on resources of mangroves and creeks is essential. A onetime survey will be conducted to collect data on users of mangroves, extent of their dependence etc.

#### **5.4. Schedule**

Survey of entire mangrove and creek and other water bodies will be completed in ~ 4 months and in the following 4 months GIS based maps on mangroves will be produced.

#### **5.5. Performance indicators**

- Mangrove and associated habitat maps of 2011 and latest year prepared
- Assessment of changes in mangrove and creek areas made and remedial measures suggested
- Extent of dependence by local communities on resources of mangrove assessed
- Action plan for preservation and conservation of mangroves prepared

#### **5.6. Deliverables**

- Fine scale maps of mangroves and creeks of APSEZ region and a relational data base on aquatic biodiversity of Mundra
- Action plan for preservation and conservation of mangroves

#### **6.0. Overall Performance indicators**

- Survey of bathymetry completed and contour maps produced
- Maps on distribution of mangroves and creeks developed and health status reported
- GIS database on distribution and health of mangroves and associated creeks and biodiversity of the aquatic habitats developed

#### **7.0 Final Deliverables**

- Detailed close grid bathymetry of rivers, creeks and canals and indicating locations where deepening of creeks/mouth required to facilitate permanent flow of seawater
- 1:10000 or 1:5000 scale maps showing distribution of mangroves and creeks in Mundra, assessment of health of mangroves and recommendations for preservation and conservation of mangrove areas
- GIS database on mangrove habitat and associated organisms



#### 8.0. Budget:

Rs. in lakhs	
Item	Amount
Mapping of rivers, creeks, water ways	28.20
Bathymetry/Elevation survey	128.00*
Development of action plan for mangroves and related field survey and socio-economic survey	80.20
Engagement of expert consultants	16.00
<b>Sub- Total</b>	<b>252.40</b>
Institutional charges (25%) as charges for use of equipment, computers, software etc.,	63.10
<b>Total</b>	<b>315.50**</b>

\*Approximate cost indicated. Charges will be made as per actual line km surveyed @ Rs.20000 per line km.

\*\* Service tax as applicable and will be charged extra

**F. No. 10-138/2008-IA.III  
Government of India  
Ministry of Environment & Forests**

**Paryavaran Bhawan,  
CGO Complex, Lodhi Road,  
New Delhi - 110 003.**

**Dated: July 15, 2014**

**To  
M/s Adani Port and SEZ Ltd  
Adani House, Near Mithakhali Six Roads,  
Navarangpura, Ahmedabad,  
Gujarat- 380 009.**

**Subject: EC for proposed Multi- Product SEZ and CRZ clearance for Desalination, sea water intake, outfall facility and pipeline, at Mundra by M/s Adani Port and SEZ Ltd. – Reg.**

This has reference to letter No. ENV-10-2010-1601-E dated 27.03.2012 of the Director (Environment) & Additional Secretary, Govt. of Gujarat and your subsequent letters dated 10.05.2012, 14.05.2012, 26.05.2012 and 29.04.2013 seeking prior Environmental and CRZ Clearance for the above project under the EIA Notification, 2006 and Coastal Regulation Zone Notification, 2011. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 and the Coastal Regulation Zone Notification, 2011 on the basis of the mandatory documents enclosed with the application viz., the Questionnaire, EIA, EMP, recommendations of the State Coastal Zone Management Authority and the additional clarifications furnished in response to the observations of the Expert Appraisal Committee constituted by the competent authority in its meetings held on 16<sup>th</sup> -17<sup>th</sup> April, 2012, 4<sup>th</sup> -5<sup>th</sup> June, 2012 and 9<sup>th</sup> -10<sup>th</sup> July, 2012.

2. It is, interalia, noted that the project involves development of multi product SEZ on a plot area of 18,000 ha. of which 6641.2784 ha. is presently notified under Special Economic Zone (SEZ). As per the proponent, the Multi product SEZ at Mundra comprising of various processing zones, non-processing zones, warehousing zones, Road Network (trunk as well as internal), Bridges or culverts over natural drains, Rail Network, IT-Telecommunication network, Electrical Network, Water supply, conservation & drainage Network, Effluent collection network, Desalination Plant with proposed intake & outfall locations, Common Effluent Treatment Plants & Sewage Treatment Plants, Natural Gas line network, Social Infrastructure, Existing Airstrip, Municipal Solid Waste Disposal site, utilities & supporting infrastructure etc. For the first phase of development total water requirement will be 150 MLD. Power requirement will be approx. 360 MW. Desalination plant of 150 MLD output capacity is proposed. 11 MLD water will be sourced through Narmada water pipeline. Two CETP each of capacity 50 MLD and 17 MLD as well as STP of 62 MLD is proposed. This will require 375 MLD of seawater intake and 241 MLD of treated waste water outfall into the sea. For final phase of development total water requirement will be 450 MLD and power requirement will be approx. 1000 MW.



3. A suitable seawater intake point has been identified on the eastern end of the approved East Port Basin at Latitude 22°48'30.76"N; Longitude 69°46'34.06"E where a depth of 6 m below CD would be available after the port development. As per modelling study the combined discharge of 241MLD which includes 16MLD from CETP and 225 MLD from desalination plant as RO reject is expected having 57.57ppt of salinity, 14.41 mg / l of BOD and 94.39 mg/l of COD. After careful consideration of many aspects a suitable outfall location is identified on the west of the Eastern basin at Latitude 22°46'44.04"N; Longitude 69°45'5.51"E taking advantage of the expected 7.5m below CD basin depth. The outfall pipe line length is approximately 5.7 km and diffuser designed to attain a minimum dilution of 40-50 times.
4. The Centre for Earth Science Studies demarcated HTL, LTL and CRZ area. As per the CESS report and GCZMA, out of 6641.2784 ha of SEZ area, 1473.39 ha area falls within CRZ area. No SEZ industrial activity is proposed in the CRZ area. Only the Desalination plant pipeline for intake and outfall is proposed in CRZ areas. The Gujarat SCZMA in their 14<sup>th</sup> meeting held on 27-02-2012 considered the proposal of intake, outfall facilities, Desalination plant and laying pipeline and recommended the same vide their letter no.ENV-10-2010-1601-E dated 27<sup>th</sup> March 2012. Gujarat Pollution Control Board has granted Consent to Establishment of Marine outfall (NOC) vide letter dated 10.11.2011. The length of the intake will be approximately 5 Kms. As the sea water intake demand is 15000m<sup>3</sup>/h, drawal by pipe system is suitable by incorporating a wet well structure at the location. The intake point proposed is within the proposed East Port basin with a depth of 6 m below CD. The projected quantity of water can be transported through a single pipe of 1.3 m dia with a flow velocity of 3 m/ s or with a 1.6 m pipe with flow velocity of 2m/s.
5. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, have recommended for the grant of Environment and CRZ Clearance for the SEZ in an area of 8481.2784 ha. However, SEZ for 1840 ha has been approved in principle by Ministry of Commerce and Industries.
6. Hon'ble High Court of Gujarat in WP No. 21 of 2013 vide order dated 13.01.2014 has directed that the Ministry to take a decision of its own so far as the issue of grant of environmental clearance is concerned considering the position prevailing as on date and also the aspects which have been highlighted by us in this judgment, within a period of thirty days from the date of this judgment without fail. Further, vide order dated 27.01.2014 Hon'ble Supreme Court in SLP No. 1526 of 2014 which was filed against the Order of High Court by the Respondent-1 has passed order that in case, the MOEF is unable to complete the process within the time stipulated by the High Court, it will be open for them to approach this Court for extension of time. Accordingly, Ministry has filed a petition before the Hon'ble Supreme Court seeking extension of two months time.
7. It is noted from the Judgement dated 13.01.2014 of Hon'ble High Court of Gujarat in PIL 21 of 2013 the Hon'ble Court has construed the grant of lease to units prior to





obtaining EC by M/s APSEZL as violation of EIA, Notification, 2006. Therefore, according to the OM's dated 12.12.2012 and 27.06.2013, PP was addressed for Board Resolution and the State Government was addressed to take credible action against the PP for the violation. Direction under Section 5 of E(P)Act, 1986 was also issued to APSEZ not to take up and allow any further construction activity within SEZ till the grant of clearance.

8. Further, Hon'ble Supreme Court video order dated 02.05.2014 in SLP 1526 of 2013 had ordered for stay of Ministry's letter dated 3.04.2014 addressed to Government of Gujarat to initiate legal action for the violation, also directed that the Ministry to complete the process of EC within eight weeks.

9. M/s APSEZ Ltd. has stated that the Board resolved that since the matter is sub-judice before the Hon'ble Supreme Court of India, will fully abide by the outcome of the decision of the Hon'ble Supreme Court.

10. In view of the above and to comply with the orders of Hon'ble Courts, Ministry hereby accords necessary Environment Clearance for proposed Multi- Product SEZ in an area of 6641.2784 ha and CRZ clearance for desalination, seawater intake, outfall facility and pipeline for as per the provisions of Environmental Impact Assessment Notification – 2006 and its subsequent amendments and Coastal Regulation Zone Notification, 2011, subject to strict compliance of the terms and conditions as follows:

#### **11. PART A - SPECIFIC CONDITIONS**

- (i) *PP shall abide by the final order/decision of Hon'ble Supreme Court in SLP (Civil) no. 1526/2014 and connected matters.*
- (ii) *Properly conserve the creeks, river and the mangroves area in the area.*
- (iii) *Ensure that mouths of all the creeks are kept open to ensure flushing of the creeks.*
- (iv) *Bring the creeks to the condition as was seen in the satellite map of 2005 which will be a "reference" satellite map and a copy of which shall be sent to you separately.*
- (v) *Submit once in a year latest satellite map which can be compared with the reference satellite map of 2005 to ensure that no modification in the creeks, rivers, mangroves and mouth of creeks have taken place.*
- (vi) *Any direction issued by the MoEF with respect to the report submitted by Ms Sunita Narain Committee shall be complied with by the Proponent as applicable.*
- (vii) *At its cost get Inspection study done once in a year by the organizations like NEERI or any organization approved by this Ministry to - (i) ensure compliance of all the EC conditions (ii) development of SEZ meeting of the environment norms, and (iii) advise any mid-term correction that can be introduced depending on the recommendation of the independent Third Party.*



- (viii) "Consent for Establishment" for the SEZ shall be obtained from Gujarat Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.
- (ix) PP shall get detailed bathymetry done for all the creeks and rivers within Port and SEZ areas along with mapping of co-ordinates, running length, HTL, CRZ boundary, mangrove areas including buffer zone through NCSCM / NIOT. PP shall also get prepared a detailed action plan for conservation and protection of creeks/ mangrove area etc through NCSCM / NIOT and submit the same to GCZMA for their examination and recommendation. GCZMA will submit its recommendations to MoEF for approval.
- (x) PP shall demarcate the CRZ area on land with GPS coordinates in consultation with GCZMA/ the agency which has done the HTL/LTL demarcation for the area. There shall be no allotment of plot/s in CRZ area to industries. No industrial activity within CRZ area except the port and harbor & the foreshore facilities shall be allowed as committed
- (xi) Till the approval of action plan for conservation and protection of creeks/ mangrove area, the CRZ area within SEZ shall be demarcated as "No Development Zone". PP shall not allow/ undertake any development in CRZ area of SEZ.
- (xii) The implementation of action plan approved by the MoEF shall be monitored by the NCSCM/ NIOT. Compliance with action plan shall be submitted to GCZMA and to MoEF, RO. at Bhopal along with six monthly monitoring report.
- (xiii) PP shall earmark separate budget for the implementation of the above action plan. The details of the expenditure shall be submitted to GCZMA and to MoEF, RO. at Bhopal along with six monthly monitoring report.
- (xiv) All the industry in SEZ shall be connected through impervious drainage lines to the STP/ CETP for the discharge of their sewage or industrial effluent. There shall not be any discharge to creeks / rivers. PP shall be accountable for implementing this condition and necessary clause shall be incorporated in the MoU while allotting the plot to the individual industries
- (xv) PP shall not carry out any river course modification.
- (xvi) The individual industrial units shall obtain prior EC under EIA Notification, 2006 as applicable.
- (xvii) Proponent shall identify 200 ha of land for mangrove plantation as per the condition laid by SEAC.
- (xviii) 50 meter buffer from the existing mangrove area should be provided for any developmental activity,



- (xix) *Proponent shall develop the green belt with 3 layers of canopy all along the periphery.*
- (xx) *All the recommendation of the EMP shall be complied with in letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to MoEF along with half yearly compliance report to MoEF-RO.*
- (xxi) *There shall be no disturbance to the sand dunes. The pipelines shall be laid using advanced method viz. Horizontal Directional Drilling (HDD) so as to avoid disturbance to the sand dunes/ creeks/ mangroves.*

## **PART – B. GENERAL CONDITIONS**

### **Construction Phase.**

- (i) *Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.*
- (ii) *A First Aid Room will be provided in the project both during construction and operation of the project.*
- (iii) *All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.*
- (iv) *Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed, taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.*
- (v) *Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.*
- (vi) *Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.*
- (vii) *Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Gujarat Pollution Control Board.*
- (viii) *The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.*





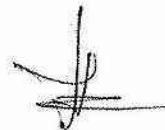
- (ix) *The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.*
- (x) *Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.*
- (xi) *Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/GPCB.*
- (xii) *Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27<sup>th</sup> August, 2003. (The above condition is applicable only if the project site is located within 100 Kms of Thermal Power Stations).*
- (xiii) *Ready mixed concrete must be used in building construction.*
- (xiv) *Storm water control and its re-use should be regulated as per CGWB and BIS standards for various applications.*
- (xv) *Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other referred best practices.*
- (xvi) *Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.*
- (xvii) *Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.*
- (xviii) *Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.*
- (xix) *Use of glass may be reduced by upto 40% to reduce the electricity consumption and load on air-conditioning. If necessary, use high quality double glass with special reflective coating in windows.*
- (xx) *Roof should meet prescriptive requirements as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirements.*
- (xxi) *Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all airconditioned spaces while it is aspirational for non-airconditioned spaces by use of appropriate thermal insulation material to fulfil these requirement.*



- (xxii) *The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National Building Code including protection measures from lightning etc.*
- (xxiii) *Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.*
- (xxiv) *Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it is found that construction of the project has been started without obtaining environmental clearance.*

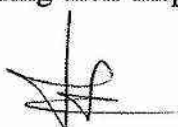
### **Operation Phase**

- (i) *The PP while issuing the allotment letter to individual member units shall specifically mention the allowable maximum quantity of water usage and effluent generated by each member unit.*
- (ii) *The PP shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest improvements.*
- (iii) *Treated affluent emanating from STP shall be recycled/reused to the maximum extent possible. Treatment of 100% grey water by decentralised treatment should be done. Discharge of unused treated affluent shall conform to the norms and standards of the Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.*
- (iv) *The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry / inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.*
- (v) *Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operational phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Low sulphur diesel should be used. The location of the DG sets may be decided in consultation with the Gujarat Pollution Control Board.*
- (vi) *Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.*
- (vii) *Green belt of adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.*



- (viii) *Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.*
- (ix) *Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented.*
- (x) *The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.*
- (xi) *Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.*
- (xii) *A Report on the energy conservation measures conforming to energy conservation norms finalised by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & D Factors etc and submitted to the Ministry along with six monthly monitoring report.*
- (xiii) *Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be an integral part of the project design and should be in place before project commissioning. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination. Solar panels may be used to the extent possible.*
- (xiv) *Adequate measures should be taken to prevent odour problems from solid waste processing plant and STP.*
- (xv) *The buildings should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.*
- (xvi) *The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.*
- (xvii) *Adequate drinking water facility be provided.*
- (xviii) *Incremental pollution loads on the ambient air quality, noise and water quality should be periodically monitored after commissioning of the project.*
- (xix) *Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid system or fully solar system for portion of the apartments should be provided.*
- (xx) *Ozone depleting substance (Regulation & Control) Rules should be followed while designing the air conditioning system of the project.*

12. Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the





documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Bhopal

13. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

14. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

15. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

16. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

17. The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Clearance and copies of clearance letters are available with the Gujarat Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bhopal.

18. Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

19. "Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010".

20. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

21. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.




22. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.

23. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

  
(Lalit Kapur)  
Director (IA-III)

Copy to:

1. The Principal Secretary, Forest and Environment Department, Block no. 14/ 8 floor Sachivalaya, Gandhinagar – 382 010 Gujarat.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 110 032.
3. The Member Secretary, Gujarat Coastal Zone Management Authority & Director,(Environment) Forests & Environment Department, Block No. 14, 8<sup>th</sup> Floor, Sachivalaya, GandhiNagar-382.
4. The Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No. 3, Ravishankar Nagar, Bhopal – 462016 (M.P.)
5. The Member Secretary, Gujarat State Pollution Control Board, Paryavaran Bhawan , Sector 10-A, Gandhi Nagar 382043, Gujarat
6. Director (EI), Ministry of Environment and Forests.
7. Guard File.
8. Monitoring File.

  
(Lalit Kapur)  
Director (IA-III)

# **Annexure – 12**



**ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED**

POST BAG NO:1, VILLAGE:DHURUB

TAL: MUNDRA,KUTCH

MUNDRA 370421 GUJARAT,INDIA

Phone:02838-271181-186 Fax:02838-255460

E-Mail:purchase@adani.com

**PURC/F/012**

<b>To,</b> <b>NATIONAL CENTRE FOR SUSTAINABLE COASTAL MANAGEMENT</b> ANNA UNIVERSITY  , KODAL BUILDING, GUINDY, CHENNAI, TAMIL NADU -CHENNAI-600040 TAMIL NADU, INDIA, Phone :044-22300108 Mobile:098849 82410 Fax :044-22200158 Email :finance@ncscm.org Vendor Code : 650200 <b>Kind Attn: MR.SAMAL</b>	<b>SO No</b> 5700189248 <b>SO Date</b> 29.08.2016 <b>Proj/CC Code &amp; Name</b> B-0247
<b>Vendor Excise &amp; Tax Reg. Details</b> <b>VAT / TIN No</b> <b>CST No</b> <b>Excise ECC No</b> <b>Service Tax Reg. No</b> AABAN2289ASD001 <b>Tan No.</b> <b>Pan No.</b> AABAN2289A <b>Import Export Code</b>	<b>Our Excise &amp; Tax Registration Details</b> <b>VAT No &amp; Date</b> 24073400493 <b>CST No &amp; Date</b> 24573400493 <b>Excise ECC No</b> NOT APPLICABLE <b>Range</b> AR-VIII <b>Division</b> SERVICE TAX DIVISION-II <b>Commissionerate</b> SERVICE TAX, AHMEDABAD <b>Service Tax Reg. No</b> AAACG7917KSD002 WEF: <b>TIN No</b> 24073400493 <b>LST No</b> 24073400493 <b>PAN No</b> AAACG7917K <b>TAN No</b> AHMG00515E <b>Import Export Code</b> 800009665 <b>CIN</b> L63090GJ1998PLC034182  <b>Our Contact Details</b> <b>Buyer:</b> Ramesh Maheshwari <b>Phone:</b> 99252-23654 <b>E-Mail:</b> ramesh.maheshwari@adani.com

Dear Sir,

We are pleased to issue this Service Order for the scope of work mentioned below, subject to the terms and conditions contained herein and in the annexure/s to this SO. Any annexure to this Service Order shall form integral part of the SO and in case there is any contradiction in the different documents with regard to any provision, the order of precedence shall be as mentioned in General terms & conditions.

**Scope of Work**

PREPARATION OF COMPREHENSIVE AND INTEGRATED CONSERVATION PLAN FOR THE APSEZ AREA INCLUDING DETAILED BETHYMETRY STUDY AND PROTECTION OF CREEKS / MANGROVE AREA INCLUDING BUFFER ZONE, MAPPING OF CO-ORDINATES, RUNNING LENGTH, HTL AND CRZ BOUNDARY.

Service Order Currency RUPEE

Price &amp; Conditions (Priced BOQ attached for breakup)

	Currency	Amount
For ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED		For NATIONAL CENTRE FOR SUSTAINABLE,

Authorised Signatory

Reg.Office: POST BAG NO:1, VILL:DHURUB TAL: MUNDRA MUNDRA-370421 Phone: Fax:

Admin.Office:'Adani House', Nr. Mithakhali Circle, Navrangpura, Ahmedabad Phone: Fax:

Date:06.09.2016 Time :17:19:30

Page 1-of- 3

	Currency	Amount
SERVICE ORDER PRICE INCLUDING DISCOUNT	INR	31550000.00
SERVICE TAX	INR	4417000.00
SWACHHA BHARAT CESS	INR	157750.00
KRISHI KALYAN CESS	INR	157750.00
Total Service Order Price :		36,282,500.00

**In Words,** RUPEE THREE CRORE SIXTY TWO LAKH EIGHTY TWO THOUSAND FIVE HUNDRED ONLY

**Taxes & Duties :**  
15% EXTRA  
Commencement Date 01.04.2016    Completion Date 31.03.2018

Terms & Conditions:

**Payment Terms: (A111) Advance Payment immediate due**  
90% Advance payment along with Contract & Balance 10% Payment will be made within 07 days after submission of Final report and certified bill at site.

Delivery destination  
APSEZL-MUNDRA

Transportation  
In Contractor scope.

LD Clause  
NA

Retention Clause  
NA

Bank Guarantee  
NA

Taxes & Duties  
15% EXTRA

**Special Terms & Conditions**  
(1) The various item rates indicated in the BOQ shall remain firm for the entire currency of execution of the SO and no escalation, of whatsoever nature, shall be payable on the same. However, the quantities indicated in the BOQ are approximate and the same may vary to any extent and accordingly the SO Price also may vary. Further, the SO Price is inclusive of all taxes and duties, except Service Tax , as applicable, which will be paid extra, on submission of documents by Vendor to Buyer.  
  
(2) Service Order number and corresponding Item Number shall be indicated in all correspondences concerning the Service Order. All the correspondences shall be addressed to the:

(Buyer's Authorised Signatory)

(Vendor's/Service Provider's  
Authorised Signatory & Stamp)

PROJECT MANAGER : Shalin Shah  
Cell No.:-+91 90999 38893  
Email:- Shalinm.Shah@adani.com

(3) This Service Order is issued to you in duplicate. You are requested to return the duplicate copy along with its annexures, duly signed and stamped on each page of the same as a token of your unconditional acceptance of the Service Order.

(4) Send your order confirmation within 2 working days by mail/fax/courier to  
Commercial Purchase.  
Adani Ports and Special Economic Zone Limited.  
Adani House,1st Floor,  
Post Bag No. 1, Navinal Island,  
Mundra-Kutch-370421, Gujarat.

(5) OBLIGATIONS OF THE CONTRACTOR: -

01. The contractor will provide trained and qualified staff as per requirement of company and approval. The working area would be the entire port and outside port area, as per requirement.

02. In the event of any injury or death in the course of duty the Company shall not be liable to any compensation. It will be the obligation of the contractor to provide medical assistance and compensation, if any.

03. No employee will leave the location of his duty without properly being relieved.

04. The Contractor will ensure that the employees must maintain high standard of discipline, They have also to perform duty at their allocated places and follow all the instruction of shift in charge.

05. The Contractor will meet all statutory obligations like PF, Gratuity, Bonus, Group Insurance etc. for which the Company will not pay any additional amount other than agreed to.

06. All provisions with regards to working hours and other provisions of standing orders, where the provisions of the Industrial Employer (standing order) Act, 1948 are applicable in respect of contract.

07. In case of loss or damage any materials/tools issued to employees, the cost of same shall be deducted from your monthly RA bills.

08. All water power, accommodation for labour and staff, site office required for execution of job are to be arranged by contractor only.

09. Proper care to be taken to preserve the marine environment.

10. Contractor shall arrange suitable insurance policy at his cost to cover his workman, equipment, machinery etc.

11. All Terms and Condition as per signed contract Agreement between APSEZL and NCSCM, Chennai

#### Annexures

Annexure - 1 (Price Schedule/BOQ)

Annexure - 2 (GTC)

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(Buyer's Authorised Signatory)

**(Vendor's/Service Provider's  
Authorised Signatory & Stamp)**

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ANNEXURE I  
Bill of Quantity (BOQ)

Serial No.	Service Code/Description	UOM	Quantity	Rate	Amount
10.	320004858 CONSULTANCY SERVICES PREPARATION OF COMPREHENSIVE AND INTEGRATED CONSERVATION PLAN FOR THE APSEZ AREA INCLUDING DETAILED BETHYMETRY STUDY AND PROTECTION OF CREEKS / MANGROVE AREA INCLUDING BUFFER ZONE, MAPPING OF CO-ORDINATES, RUNNING LENGTH, HTL AND CRZ BOUNDARY.	LUMP SUM	1.000	31550000.00	31550000.00
				Subtotal :	31,550,000.00
				Total Amount	31,550,000.00

in Words, RUPEE THREE CRORE FIFTEEN LAKH FIFTY THOUSAND ONLY

Free Issue Material List

Material No	Material Description	UOM	Quantity
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(Buyer's Authorised Signatory)

(Vendor's/Service Provider's  
Authorised Signatory & Stamp)

ANNEXURE I(A)

Detailed Service Item Descriptions

10. BETHYMETRY STUDY OF APSEZ.	
Service Code	
Service Item Description	

10. 320004858

(Buyer's Authorised Signatory)

(Vendor's/Service Provider's  
Authorised Signatory & Stamp)

# **Annexure – 13**

04.06.2018

To,  
Director (Environment) & Member Secretary,  
Gujarat Coastal Zone Management Authority,  
Sachivalaya,  
Gandhi Nagar

**Subject:** Submission of final report on comprehensive and integrated plan for preservation and conservation of mangroves and associated creeks in and around APSEZ, Mundra, Gujarat.

**Reference:**

- (1) EC and CRZ clearance of Multi-product SEZ at Mundra vide MoEF&CC letter F. No. 10-138/2008-IA-III dated 15.07.2014
- (2) MoEF&CC order vide F. No. 10-47/2008-IA-III dated 18.09.2015
- (3) Submission of NCSCM's proposal and scope of work vide our letter dated 25.04.2016

Dear Sir,

In view of compliance with the directions issued by MoEF&CC, the scope of work of NCSCM was discussed during 28<sup>th</sup> meeting of GCZMA held on 22.04.2016. The discussed scope of work was submitted to GCZMA vide our letter dated 25.04.2016.

In view of the above, NCSCM commenced the studies covering the following directions mentioned in references above.

- *Bocha island, ecologically sensitive geomorphological features and areas in the island and creeks around the island will be declared as conservation zone action plan for its conservation must be prepared. M/s. APSEZ should provide necessary financial assistance for this purpose.*
- *A Comprehensive and integrated conservation plan including detailed bathymetry study and protection of creeks/mangrove area including buffer zone, mapping of co-ordinates, running length, HTL, CRZ boundary will be put in place. The plan will take note of all the conditions of approvals granted to all the project proponents in this area, e.g., the reported case of disappearance of mangroves near Navinal creek. The preservation of entire area to maintain the fragile ecological condition will be a part of the plan in relation to the creeks, mangrove conservation and conservation of Bocha Island up to Baradimata and others.*

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21/6/18  
ગુજરાત સરકારના અધિકારી  
રજીસ્ટ્રી શાખા  
સેન અને પર્યાવરણ વિભાગ  
સચિવાલય, ગાંધીનગર

Registered Office: Adani House, Nr Mithakhali Circle, Navrangpura, Ahmedabad 380 009, Gujarat, India



- NCSCM will prepare the plan in consultation with NIOT, PP and GCZMA. In recognition of the fact that the existing legal provisions under the E(P) Act 1986 do not provide for any authority to impose ERF by the Government, the plan will be financed by the PP. The implementation will be carried out by GCZMA. The monitoring of the implementation will be carried by NCSCM.

During the course of the study, APSEZ has submitted two reports regarding progress of the study to all concerned authorities as part of the six monthly compliance reports. MoEF&CC vide their letter dated 23.08.2016 requested to submit an updated status of the directions (reference - 2). In reply, APSEZ submitted the requisite information with the progress report of the ongoing studies vide letter dated 10.09.2016. In continuation to the same, following site visits were carried out for verification of compliance status. During the said visits, the progress reports submitted were discussed with the concerned authorities present.

- A joint site visit (MoEF&CC, RO, Bhopal, GCZMA and GPCB, RO, Gandhidham) was carried out during 21 - 22.12.2016.
- Site visit of Regional Officer, MoEF&CC, Bhopal was carried out during 02 - 03.05.2018.

In continuation to our earlier submissions, we would like to inform you that the stated study is now completed (including preparation of the conservation plan) and the report prepared by NCSCM is enclosed for your consideration.

It may be noted that demarcation of HTL and CRZ areas of the entire coast of Gujarat (including the APSEZ area) is being carried out by NCSCM. NCSCM has already prepared the draft maps. Once the maps are finalized, they will be submitted to GCZMA and MoEF&CC as part of the requirements.

Thank you  
Yours sincerely,



Shalin Shah  
Head - Environment

✓ Copy to: Director (Infra II committee), MoEF&CC (IA/II section), Indira Paryavaran Bhavan, Jor bagh road, Aliganj, NewDelhi

  
Section  
जलवायु परिवर्तन प्रभाग  
Environment, Forests & Climate Change  
Govt. of India  
Indira Paryavaran Bhavan  
Jorbagh Road, Aliganj  
New Delhi-110003

# **Annexure – 14**



04.01.2019

To

Director (Environment) & Member Secretary  
Gujarat Coastal Zone Management Authority  
Sachivalaya  
Gandhinagar

**Subject:** Comprehensive and integrated plan for preservation and conservation of mangroves and associated creeks for Mundra.

**Reference:**

- (1) EC and CRZ clearance of Multi-product SEZ at Mundra vide MoEF&CC letter F. No 10-135/2008-IA-III dated 15.07.2014
- (2) MoEF&CC order vide F. No 10-47/2008-IA-III dtd 18.09.2015
- (3) Submission of NCSCM's proposal and scope of work vide our letter dtd. 25.04.2016
- (4) Submission of final report on Comprehensive and integrated plan for preservation and conservation of mangroves and associated creeks at Mundra vide our letter dtd. 04.06.2018

Dear Sir

Vide above references, we would hereby like to submit that, APSEZL has already completed the report preparation on Comprehensive and integrated plan for preservation and conservation of mangroves and associated creeks at Mundra, inline to the compliance with direction issued by MoEF&CC and the scope of work submitted to GCZMA. Report has already been submitted vide our earlier letter dated 30th April 2018 for consideration.

In view of above, it is kindly requested to inform us for further necessary actions, if any to be taken by APSEZ.

Thank you

Yours sincerely

Clerk.  
Forests & Environment Deptt.  
Block No. 14, 1st Floor  
New Sachivalaya, Gandhinagar

Shalin Shah

**Head - Environment**

# **Annexure – 15**



**Expense Details for Fisherfolk Amenities work in different core areas**

Sr.	Details	2016-17	2017-18	2018-19	Oct - 2019	TOTAL	AMT IN LACS
<b>Expenditure Details (Amount in Rs.)</b>							
1	Vidya Deep Yojana	2069300	193000	2087000	545000	4894300	48.94
2	Vidya Sahay Yojana	552580	495000	691000	707630	2446210	24.46
3	Adani Vidya Mandir – Shaping Lives	4200000	4030000	3472000	6434020	18136020	181.36
4	SENIOR CITIZEN HEALTH CARD	0	8430000	1750000	0	10180000	101.80
5	FINANCIAL SUPPORT TO POOR PATIENTS	4439507	1275000	813000	411576	6939083	69.39
6	Machhimar Kaushalya Vardhan Yojana	188708	200000	397000	0	785708	7.86
7	Machhimar Sadhan Sahay Yojana	0	0	315000	200000	515000	5.15
8	Machhimar Awas Yojana	4592106	1165000	0	1155000	6912106	69.12
9	Machhimar Shudhh Jal Yojana	2236050	2700000	2038000	621000	7595050	75.95
10	Sughad Yojana	1367300	170000	0	0	1537300	15.37
11	Machhimar Akshay kiran Yojana	860850	100000	68000	0	1028850	10.29
12	Machhimar Suraksha Yojana			0	0	0	0.00
13	Machhimar Ajivika Uparjan Yojana-Mangroves plantation	1558800	500000	1382000	1231000	4671800	46.72
14	Bandar Svachhata Yojana	106400	50000	0	0	156400	1.56
15	Cricket league and Cycle Marathon	432000	657119	638000	610800	2337919	23.38
16	Sports Material For Children & Youth at Vasahats	197797	0	0	0	197797	1.98
17	New Pilot Initiative for Polyculture	398240	160000	0	0	558240	5.58
18	New Pilot Initiative for Cage farming Asian Seabass & Lobster	864000	660000	0	0	1524000	15.24
19	Sea Weed Culture Project	0	0	0	76000	76000	0.76
		<b>24063638</b>	<b>20785119</b>	<b>13651000</b>	<b>11992026</b>	<b>70491783</b>	<b>704.92</b>

# **Annexure – 16**

રેફ: એ.પી.એસ.ઈ.એડ.એલ/કોપો.અફે./ઝરપરા/૧૨૨ હે.

તા. ૯/૮/૨૦૧૨.

પ્રતિ,  
અગ્ર સચિવશ્રી,  
મહેસુલ વિભાગ,  
સચિવાલય, ગાંધીનગર.

સચિવશ્રી  
૧૨/૮/૨૦૧૨  
૧૨૨ - ૫૫ - ૬૦

વિષય: સ્પેશ્યલ ઇકોનોમીક ઝોનના હેતુ માટે મોજે ઝરપરા, તા. મુન્દ્રા, જિ. કચ્છના સર્વે નંબર ૬૮૯ પૈકી દરીયાઈ વિસ્તારની હે. ૧૨૨-૬૫-૬૦ ચો.મી. અનસર્વેડ જમીનની MPSEZL ની માંગણી સામે સરકારશ્રી દ્વારા અગાઉ MPSEZL ને ફાળવેલ ગૌચર જમીનનો અદલો-બદલો કરવા બાબત.

- સંદર્ભ: ૧. અમોએ કલેક્ટરશ્રી, કચ્છ સમક્ષ કરેલ અરજી તા. ૭/૧૦/૨૦૦૬.  
૨. કલેક્ટરશ્રી, કચ્છના હુકમ નં. લેન્ડ/૫/ઉદ્યોગ/વણી/૫૮૯૧/૨૦૦૬, તા. ૧૮/૧૦/૨૦૦૬.  
૩. કલેક્ટરશ્રી, કચ્છના હુકમ નં. લેન્ડ/૫/ઉદ્યોગ/વણી/૫૬૯૧/૨૦૦૬૭ તા. ૧૯/૧૧/૨૦૦૭.

મે. સાહેબશ્રી,  
સવિનય ઉપરોક્ત વિષયે જણાવવાનું કે સંદર્ભ-૨ અને ૩ માં દર્શાવેલ કલેક્ટરશ્રી, કચ્છના હુકમથી સરકારશ્રી દ્વારા મુન્દ્રા તાલુકાના મોજે ઝરપરાની અનુક્રમે ૬૮૯ પૈકીની દરીયાઈ વિસ્તારની અનસર્વેડ ૯૨-૨૭-૧૬ હેક્ટર જમીન તથા ૪૦૨-૨૪-૦૨ હેક્ટર ગૌચરની જમીન અદાણી પોર્ટર્સ એન્ડ એસ.ઈ.એડ. લી. (APSEZL) (અગાઉનું નામ મુન્દ્રા પોર્ટ એન્ડ સ્પેશ્યલ ઇકોનોમીક ઝોન લી.) ને એસ.ઈ.એડ. ના હેતુ માટે ફાળવવામાં આવેલ છે.

સરકારશ્રી દ્વારા અમોને એસ.ઈ.એડ. માટે ફાળવેલ ઉક્ત જમીનોમાં એકસુત્રતા જાળવવા તથા મોજે ટુંડા ખાતેના પાવર પ્રોજેક્ટ અને એસ.ઈ.એડ.ની તમામ જમીનોને મુન્દ્રા પોર્ટ અને આદીપુર તરફ પસાર થતા રેલ-રોડ, યુટીલીટી કોરીડોરથી જોડવા માટે વચ્ચે આવતી મોજે ઝરપરાના સર્વે નંબર ૬૮૯ પૈકીની દરીયાઈ વિસ્તારની ૨૧૪-૯૨-૭૬ હેક્ટર (૫૩૧-૨૩ એકર) અનસર્વેડ જમીન એસ.ઈ.એડ ના હેતુ માટે ફાળવવા અમોએ સંદર્ભ-૧ માં દર્શાવેલ પત્રથી કલેક્ટરશ્રી, કચ્છ સમક્ષ દરખાસ્ત કરેલ.

અમારી ઉક્ત દરખાસ્ત પૈકી સરકારશ્રી દ્વારા સંદર્ભ-૨ માં દર્શાવેલ કલેક્ટરશ્રી, કચ્છના હુકમથી અમોને ૯૨-૨૭-૧૬ હેક્ટર જમીન એસ. ઇ.એડ માટે ફાળવેલ હતી. ત્યારબાદ, બાકી રહેતી ૧૨૨-૬૫-૬૦ હેક્ટર જમીન એસ.ઈ.એડ. માટે ફાળવવા અંગે અમોએ વારંવાર સરકારશ્રી સમક્ષ વિનંતી કરેલ છે પરંતુ સરકારશ્રી દ્વારા આજ સુધી આ બાબતે જરૂરી નિર્ણય થયેલ નથી.

.૨.

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ઉપરાંત, સરકારશ્રી દ્વારા સંદર્ભ-૩ મા દર્શાવેલ કલેક્ટરશ્રી, કચ્છના હુકમથી અમોને મોજે ઝરપરા ખાતે ફાળવેલ સર્વે નંબર ૬૮૯/૭, ૬૮૯/૨૯, ૬૮૯/૩૦, વિગેરે પૈકીની કુલ ૪૦૨-૨૪-૦૨ હેક્ટર ગૌચર જમીન કે જેમાં ગ્રામજનો દ્વારા થતા સતત વાંધા, વિરોધ અને કોટે રેફરન્સને કારણે સરકારશ્રી દ્વારા સદર જમીનની ફાળવણી થયાને આજે પાંચ વર્ષનો સમય પસાર થયા પછી પણ તેમાં એસ.ઈ.એડ. પ્રોજેક્ટ અંતર્ગત જરૂરી ડેવલપમેન્ટ થઈ શકેલ નથી. વળી, આપને વિદીત છે તેમ, ગ્રામજનો દ્વારા સદર જમીનો પ્રોજેક્ટના ડેવલપમેન્ટમાંથી છોડી દેવા અમારી/સરકારશ્રી સામે વારંવાર રજુઆતો ચાલુ રાખેલ છે.

ઉક્ત સંજોગોમાં એસ.ઈ.એડ. માં સ્થપાયેલ રેલ-રોડ, યુટીલીટી કોરીડોરથી સમગ્ર વિસ્તારને જોડવા માટે ખુબ જ જરૂરી એવી મોજે ઝરપરા, તા. મુન્દ્રા, જિ. કચ્છના સર્વે નંબર ૬૮૯ પૈકીની દરીયાઈ વિસ્તારની છે. ૧૨૨-૬૫-૬૦ ચો.મી. અનસર્વેડ જમીનની અમારી માંગણી સામે સરકારશ્રી દ્વારા અમોને એસ.ઈ.એડ. ના હેતુ માટે અગાઉ ફાળવેલ મોજે ઝરપરાના સીમતળમાં આવેલ ગામતળથી નજીકના સર્વે નંબરો જેવા કે ૬૮૯/૩૬, ૬૮૯/૪૭, ૬૮૯/૪૮, વિગેરે પૈકીની ગૌચર જમીનમાંથી છે. ૧૨૨-૬૫-૬૦ ચો.મી. જમીન સ્વેચ્છાએ ગામના ગૌચર વિકાસ માટે સરકારશ્રીને પરત કરવા આયોજન કરેલ છે જેથી ગ્રામજનો દ્વારા થતા વિરોધને નિવારી એસ.ઈ.એડ. પ્રોજેક્ટ અંતર્ગત જરૂરી ડેવલપમેન્ટ થઈ શકે.

આમ, એસ.ઈ.એડ. પ્રોજેક્ટના ડેવલપમેન્ટ અને મોજે ઝરપરાના ગ્રામજનોની માંગણી ધ્યાને લઈ APSEZL (અગાઉનું નામ MPSEZL) ની એસ.ઈ.એડ.ની જમીનમાંથી આ સાથે સામેલ નકશામાં Proposed land to be given back થી દર્શાવેલ છે. ૧૨૨-૬૫-૬૦ ચો.મી. ગૌચર પૈકીની જમીન કમી કરી તેની સામે અદલા-બદલાના ધોરણે મોજે ઝરપરા, તા. મુન્દ્રા, જિ. કચ્છના સર્વે નંબર ૬૮૯ પૈકીની નકશામાં Proposed land to be received થી દર્શાવેલ દરીયાઈ વિસ્તારની છે. ૧૨૨-૬૫-૬૦ ચો.મી. અનસર્વેડ જમીનની અમારી માંગણી અંગે યોગ્ય નિર્ણય થવા અને તે મુજબનાં ઘટીત આદેશ થવા અમારી આપશ્રીને વિનંતી છે.

આભારસહ...

આપનો વિશ્વાસુ



(સૌરીન શાહ)

જોઇન્ટ પ્રેસીડેન્ટ (કોર્પો.અફે.)

ભિડાણ : ઉપર મુજબ.

✓ નકલ સવિનય રવાના :

કલેક્ટરશ્રી, કચ્છ-ભુજ તરફ.... જાણ તથા જરૂરી કાર્યવાહી અર્થે.

Adani Ports and Special Economic Zone Ltd  
Adani House  
Nr Mithakhali Circle, Navrangpura  
Ahmedabad 380 009  
Gujarat, India

Tel +91 79 2656 5555  
Fax +91 79 2555 5500  
info@adani.com  
www.adani.com

Registered Office: Adani House, Nr Mithakhali Circle, Navrangpura, Ahmedabad 380 009, Gujarat, India



# **Annexure – 17**

Date: 24<sup>th</sup> February, 2014

To  
Director (Environment) & Member Secretary, GCZMA  
Forests & Environment Department,  
Government of Gujarat  
Block No. 14, 8<sup>th</sup> Floor, Sachivalaya,  
Gandhinagar – 382 010.

**Sub: ToR for Cumulative Impact Assessment at Mundra**

**Ref: Your letter no. ENV-10-2013-118-E dated. 13<sup>th</sup> February, 2014**

Dear Mr. Hardik Shah,

This is in reference to your letter as per above mentioned subject matter.

We hereby would like to submit Draft Terms of Reference for carrying out Cumulative Impact Assessment (CIA) at Mundra for your consideration. We request you to kindly convene a meeting at the earliest so that same can be presented, discussed and finalized.

We are also pleased to inform you that we have started procedure for identifying appropriate NABET accredited consultant to carry out required CIA studies as per the ToR which will be finalized under your guidance.

Look forward to your meeting to discuss on the subject matter.

Thanking you,

Yours faithfully,



**P N Roy Chowdhury**  
**Head - Environment**

Encl: Draft Terms of Reference for CIA

*Handwritten signature and date: 24/02/14*  
નાયબ સેક્શન ઓફિસરી  
રજીસ્ટ્રી કાર્યાલય  
વન અને પર્યાવરણ વિભાગ  
સચિવાલય, ગાંધીનગર.

**Terms of Reference for Undertaking  
Cumulative Environmental Impact Assessment  
Studies  
of  
Waterfront, SEZ and Ancillary Developments  
along Mundra Coast**



**Adani Ports and SEZ Ltd. (APSEZL)**

## **1.0 Introduction**

Adani Ports and Special Economic Zone Ltd. (APSEZL) is promoted by the Adani Group. Mundra Port is strategically located on the northern coast of the Gulf of Kutch on the west coast of India and provides a convenient international trade gateway to Europe, Africa, America and the Middle East. Mundra has a deep draft (12.5 meters - 17 meters) which enables large vessels like Panamax and super post-Panamax carriers to dock alongside its berth. It also has an adjoining large land area available for development, part of which is now the Mundra SEZ which proposes to attract port-led industrial development. Mundra Port is situated in Gujarat, one of India's most industrialised, investor friendly and commercially successful states.

It is one of the closest ports to the huge hinterland of northern and central India which comprises Rajasthan, Haryana, Delhi, Punjab, Jammu and Kashmir, Uttarakhand, Himachal Pradesh, Madhya Pradesh and Uttar Pradesh, accounting for about 2/3 of India's cargo. The port has excellent in-land connectivity thru rail track, road network, airport and cross country pipelines.

### **1.1. Characteristics of Mundra Coast**

The Gulf of Kutch, which occupies an area of 7300 km<sup>2</sup>, has maximum depth that varies from 20 m at the head (Kandla - Navlakhi) to 60 m in the outer regions. Mundra port is situated on northern bank of Gulf of Kutch and represents the typical environment of the northern Gulf with vast intertidal and low lying segments. The major creeks in the area are Bocha, Navinal, Baradimata, Kotdi etc which sustain stretches of mangroves. The near shore bed is sandy/silty. There is neither significant vegetation nor any habitation in the seafront area.

All along the coast, very few rivers drain into the Gulf and they carry only a small quantity of freshwater, except during the erratic monsoon. The riverbed is mostly composed of coarse sand and gravel. Due to extreme unreliability of rainfall in the region, ground water is a more reliable source of water for domestic as well as agricultural needs. However, uncontrolled and indiscriminate withdrawal of ground water has resulted in a sharp decline in water table over a period of time.



## **1.2. Industrial Development in Mundra Region**

Northern coast of Gulf of Kutch is industrially backward as compared to Southern coast. Except lignite mines, thermal power plants, fertilizer plant and Ports i.e. Mundra and Kandla.

Old Mundra Port is a fair weather lighterage Port situated in Navinal Creek in the Gulf of Kutch on the West Coast of India. Mundra is connected to Gandhidham by road and then by National Highway. A broad gauge railway line is available from Gandhidham to Adani Port. Nearest airports are Kandla and Bhuj which are 70 km away from the port. Ashapura Minechem Ltd. has constructed private RCC Jetty of 60 meter length at Mundra Port. This wharf has commenced cargo operations.

Adani Ports and Special Economic Zone Limited (APSEZL), India's largest private port and special economic zone, was incorporated as Gujarat Adani Port Limited (GAPL) in 1998 to develop a private port at Mundra, on the west coast of India. Mundra Special Economic Zone Limited (MSEZL) was incorporated in November 2003, to set up an SEZ at Mundra. MSEZL was merged with GAPL in April 2006 and the company was renamed as Mundra Port and Special Economic Zone Limited, to reflect the nature of business. The board of MPSEZL on Nov 21, 2011 has approved a proposal to change the company's name to Adani Ports and Special Economic Zone Ltd (APSEZL).

Apart from APSEZL, several other developments also exist in hinterland. Coastal Gujarat Power Limited (CGPL) a wholly owned subsidiary of the Tata Power Company Limited and Adani Power Limited (APL) has developed thermal power project of capacity 4000 MW and 4620 MW respectively at Tunda – Vandh villages. Tank farms of HPCL and IOCL are situated on north side of existing port. Huge salt works are operational near western and eastern boundaries of WFDP. Other industries like Ashapura Garments, Oriental Carbon and Chemical, Bharat Forge and industries in Dhrub GIDC are located near northern boundary of APSEZ.

## **1.3. Development of Mundra Region by APSEZL**

APSEZL is in the process of implementing ambitious waterfront development at Mundra, which envisages holistic Port development plan integrated with ancillary infrastructure development. This Water Front Development Project (WFDP)

includes development of four ports at different locations within the port limit of Mundra. They are known as West Port, South Port, North Port & East Port. Out of which so far substantial progress has been achieved at West Port & South Port.

West Port at present includes four berths specifically to handle coal which further feeds to the Adani Power plant and Tata Power in the Mundra. South Port at present includes four multipurpose berths and two container berths to handle different types of cargo. The master layout of Water Front Development Project is enclosed herewith for your reference.

In order to serve the need of various industries which may come up as part of Multi-product SEZ at Mundra, APSEZL envisages additional multipurpose berthing facility to serve the need of potential industries in and around the Mundra region. The proposed facilities would include berthing and backup facility for cargo operations without hindering the present commercial cargo movement from the existing port.

Mundra Thermal Power Project is located in the close vicinity of Mundra Port. The power plant is one of the coal-based power plants of Adani Power. It is the world's fifth-largest single location coal-based thermal power plant as well as India's largest operational power plant in private sector.

Any large scale infrastructure development will undoubtedly impose certain impacts on environment. In view of the above APSEZL, with their holistic approach and concern towards environmental impacts intended to conduct cumulative Environment Impact Assessment.

Chronology of developments by Adani Group, respective environment clearances and present status of developments are given in following table.

<b>Development</b>	<b>Date of EC</b>	<b>Present Status</b>
<b><i>Port</i></b>		
M/s. Adani Port – general cargo, LNG and chemical terminal	25 <sup>th</sup> August 1995	Fully operational
Expansion of port as GAPL – container terminal, railway line	20 <sup>th</sup> September 2000	Fully operational
SPM and crude oil terminal	21 <sup>st</sup> July 2004	Fully operational
Multipurpose Berth – Terminal 2	5 <sup>th</sup> February 2007	Fully operational
Waterfront Development Plan – west port, south port, north port and east port	12 <sup>th</sup> and 19 <sup>th</sup> January 2009	South Port and West port are partially operational. No construction is commenced in East and North Port area
<b><i>Power Plant</i></b>		
Phase I – 660 MW	29 <sup>th</sup> and 30 <sup>th</sup> November 2007	Fully operational
Phase II – 1980 MW	8 <sup>th</sup> April 2008	Fully operational
Phase III – 1980 MW	20 <sup>th</sup> May 2010	Fully operational
<b><i>Special Economic Zone</i></b>		
Air strip	30 <sup>th</sup> November 2005 – clearance from Ministry of Defence	Fully operational
Township	20 <sup>th</sup> February 2010	Partially developed and operational
CETP	20 <sup>th</sup> February 2010	Partially developed and operational
Multiproduct SEZ	4 <sup>th</sup> – 5 <sup>th</sup> June 2012 – recommended by EAC	APSEZL is yet to start infrastructure development. 20 units have come up as part of SEZ and part of them are operational as per their respective approvals.

## **2.0 Proposed Terms of Reference for Cumulative EIA**

Following scope of work is proposed for the cumulative impact assessment based on the EIA Notification 2006, EIA manual for Port and Harbor, EIA manual for thermal projects and also various TORs issued recently for ports and harbor projects.

### **2.1. Compilation of EIA reports, ECs, compliance reports and additional studies**

Environmental clearances, compliance reports of respective clearances and supporting documents of following developments will be compiled and reviewed.

- Existing port
- Waterfront development
- Special Economic Zone & its existing units
- Multipurpose Berthing Facility
- Power Plants (Adani Power & Tata Power)
- Airstrip
- Ship Recycling Facility
- Crane Roll-on Jetty near Intake Channel
- Other industries in hinterland (if available)

### **2.2. Review of following studies conducted by APSEZL**

APSEZL have conducted many environmental studies as a part of ToR issued and EC compliance. Following studies conducted by APSEZL will be compiled and reviewed.

- Hydrodynamic modeling reports
- Shoreline changes studies
- Oil spill modeling reports
- Dredge disposal studies
- Risk assessment studies
- Success of mangrove afforestation studies
- Air quality modeling studies



## **2.3. Environmental Impact Assessment**

Cumulative and regional level impacts of developments in Mundra region will be predicted based on review and data analysis of earlier studies. MoEF approved software tools will be used for this purpose. For study purpose, 10 Km periphery boundary of the project area will be considered.

### **2.3.1. Impacts on Land Environment**

- Regional level impacts of infrastructure development and utilities on land, ground water, productive soil, drainage system and flooding pattern will be studied.
- Impacts due to quarrying, level raising and tree felling/plantation will be assessed.
- Salinity ingress aspect will be studied. All bore well sample results in 40 km stretch will be studied for salinity ingress.
- Leaching of chemicals will be studied to predict impacts of port activities and fly ash pond.
- Emission inventories will be developed considering emissions from ships, terrestrial vehicles, power plant emissions, natural dust and sea salt particles. Regional level air quality modeling will be carried out using approved software tools.
- Traffic survey will be conducted on weekdays and weekends.
- Noise emission modeling will be conducted over an area of 10 km radius using software models
- Change in Land Use pattern will be studied using GIS tools. Drainage pattern, soil erosion, settlements and change in vegetation will be assessed.
- Water balance of all ETPs STPs and power plants will be studied. Sewage, wastewater generation and disposal and its impacts on land environment will be studied.
- Quantitative Risk Assessment will be carried out for cargo handling, fuel storage, chemical handling and transport.
- Socioeconomic impacts will be studied to assess per capita income, change in BDL and overall health of community.
- Dredged soil management (limited to terrestrial aspects only)
- Land side chemical spills and associated impacts
- Ecological impacts during construction and operational phases

### **2.3.2. Impacts on Marine Environment**

- Hydrodynamic modeling will be conducted on regional level (from Tunda-Vandh to Luni-Bhadreshwar) to assess impacts current/wave pattern and sediment transport.
- Shoreline changes will be studied.
- Impacts due to desalination plant and reject outfall will be studied for Temperature, Marine Biota & Fisheries point of view.
- Chemical spill and oil spill simulations will be conducted on regional level
- Sediment contamination study will be done at all dredging and dredged spoil disposal sites.
- Thermal dispersion modeling of power plant outfall will be reviewed.
- Impact on marine productivity, mangroves and fishery will be studied using scientific statistical tools.
- Regeneration of benthos at dredged and dredged spoil disposal sites will be studied.

### **2.3.3. Impacts on Mangroves**

A comparative analysis of impacts of dredging and reclamation, thermal outfall near mangroves areas will be assessed against conservation measures and afforestation in Mundra region.

### **2.4. Review of MoEF Committee Report and NGT cases**

- Observations made by MoEF committee on development in Mundra region will be studied.
- Mitigation and management plan will be prepared in response to committee finding
- All NGT cases if any against the development in Mundra will be reviewed and suitable management plan will be developed.

### 3.0. Environment Management Plan

Regional Management Plan will be developed to meet MoEF regulations and guidelines

- MARPOL regulations and implementation plan
- Air quality management plan
- Water consumption reduction and opportunities for reuse and recycle
- Wastewater treatment and recycling
- Sewage treatment
- Action plan for solid and hazardous waste generation, storage, utilization and disposal
- Dredged soil disposal and utilization for reclamation
- Risk mitigation plan and disaster Management Plan
- Biodiversity enhancement plan
- Green belt development
- Need based CSR plan based on the primary and secondary socioeconomic data
- Inputs for Adani Foundation's ongoing efforts for community development plan
- Risk analysis & management
- Disaster management plan
- HAZOP
- Natural calamities i.e. Cyclone, Tsunami, Earthquake, Fire, Floods etc.

# **Annexure – 18**





GOVERNMENT OF GUJARAT  
FORESTS & ENVIRONMENT DEPARTMENT  
BLOCK NO. 14, 8<sup>TH</sup> FLOOR, SACHIVALAYA  
GANDHINAGAR - 382 010.

HARDIK SHAH  
DIRECTOR (ENVIRONMENT) &  
MEMBER SECRETARY, GCZMA

Ph : (079) 23251062  
Fax : (079) 23252156  
Web: [www.gczma.org](http://www.gczma.org)  
E-mail [direnv@gujarat.gov.in](mailto:direnv@gujarat.gov.in)

Ref. No.ENV-10-2013-118-E

December 19, 2014

To,  
✓ Shri P.N.Roy Chowdhury  
Head-Environment  
M/S Adani Port and SEZ Limited,  
Adani House, Near, Mithakhali Six Roads,  
Navarangpura, Ahmedabad

*Sub: Approval of the TORs for Cumulative Impact Assessment studies to be undertaken by the APSEZL-regarding*

Ref: (1) Letters No: F.NO.10-47/2008-IA-III dated 30<sup>th</sup> September, 2013 addressed to the Principal Secretary, Forests and Environment Department, Government of Gujarat, and Chairman, GCZMA received from the Ministry of Environment and Forests, Government of India  
(2) Minutes of the meeting of 23<sup>rd</sup> GCZMA meeting

Dear Sir,

Based on various complaint/representation received about violations of the CRZ Notification 2011 and Environmental Clearances conditions by the APSEZL, the MOEF, GOI constituted a five member committee under Chairperson of Smt Sunia Narain, CSE, Delhi to make site visit and to conduct inspection and submit the report to the MOEF, GOI. The above said Committee visited the site and submitted its report to MOEF, GOI on 18-04-2013 with various recommendations.

After detailed examination of the recommendations made by the committee and response submitted by the APSEZL, the MOEF, GOI has accepted the recommendations of the Committee. Now based on the recommendations made by the Committee in its report, the MOEF, GOI vide its letter dated 30<sup>th</sup> September, 2013 has requested State Government and Gujarat Coastal Zone Management Authority to take



various actions including to guide and supervise the Cumulative Impact Assessment studies to be undertaken by the APSEZL for the project already granted so that future developments can be assessed for clearance based on cumulative impacts. Accordingly, the APSEZL was requested to submit draft TORs. The APSEZL submitted draft TORs.

The matter was discussed in the 11<sup>th</sup> and 12<sup>th</sup> Technical Committee meetings, which were held on 17-05-2014, and 21-07-2014 and the APSEZL was requested to submit details about detailed methodology to be adopted for each components to be included in CEIA alongwith locations, time frame, various models to be used for Air, water, Soil, flora, fauna and marine environment, hydrology of the area(River, Nallah etc), Biodiversity(Each parts should be elaborated) and Socioeconomic study. It was also suggested to come out with certain crucial parameter(like PHCs, DO, Heavy metals etc) to be included in the study. It would be useful to consider the impact of disposal of sewage from the Mundra Town to identify the future impacts on the region. It was also decided to call detailed draft TORs as per above discussion. The matter was discussed in the 23<sup>rd</sup> GCZMA meeting, which was held on 16-10-2014 and it was decided to approve TORs as discussed during Technical Committee's meetings.

Considering the decision of GCZMA, the State Government hereby approves TORs for Cumulative Impact Assessment studies to be undertaken by the APSEZL as follows:

Following components would be included as part of CEIA:

- Effects on ambient conditions such as the incremental contribution of pollutant emissions in an air shed
- Increases in pollutant concentrations in a water body or in the soil or sediments, or their bioaccumulation
- Reduction of water flow in a watershed due to multiple withdrawals
- Increases in sediment loads on a watershed or increased erosion.
- Interference with migratory routes or wildlife movement.

- Secondary or induced social impacts, such as in-migration, or more traffic congestion and accidents along community roadways owing to increases in transport activity in a project's area of influence.
- Coastal erosion and hydrodynamic aspects
- Disturbances to the coastal eco-system and mud-flats
- Regional ecological and biodiversity aspects
- Natural steams and storm water runoff
- Fresh water resources (quality and quantity)
- Ground water resources (quality and quantity)
- Sea water ingress and salinity issues
- Regional air quality impacts
- Regional traffic scenarios
- Solid and hazardous waste disposal aspects
- Fishing and horticulture aspects
- Socioeconomic impacts
- Studies about the biodiversity, Oil Spill, Hazardous Chemical Handling Plan, Offsite and Onsite emergency Plan shall have to be incorporated.
- Long-term Plan and Short term plan shall also be prepared.

All existing facilities developed within 10 km radius would be considered for the study.

The following areas and period for study would be considered for CEIA:

- For Air quality monitoring boundaries will be 10Km from APSEZ area.
- For Water quality monitoring boundaries will be decided after the study of watershed in the APSEZ area.
- For marine monitoring the boundaries will be 12 Nautical Miles from the APSEZ area
- For socioeconomic study administrative boundaries of Mundra Taluka, Mandvi Taluka and some villages from Anjar Taluka will be considered



- Pre development status and development till next **15 years** will be considered as part of proposed cumulative impact assessment.
- Impact scenarios after 5 years, 10 years and 15 years will be predicted.

The APSEZL has obtained several clearances based on various EIA reports prepared, which could be used for identification of future impacts based on the collection of present data and using models for prediction impacts and comparing with present data , which could established the usefulness of models to be used for future predictions of impacts.

It is also suggested to include the number of locations to be used for CEIA and Impacts on marine biota including the mangroves in the region and terrestrial flora and fauna of the region.

As a part of the Regional Economic Development, the APSEZL may include Economic and Social study, longevity etc. The Health study may include the Occupational changes /health profiles of villagers.

The APSEZL shall submit compliance report to the GCZMA/ MOEF&CC, GOI along with outcomes of all study reports with negative and positive impacts

Thanking You

Yours sincerely,



(Hardik Shah)



# **Annexure – 19**

**ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED**

POST BAG NO:1, VILLAGE:DHRUB

TAL: MUNDRA,KUTCH

MUNDRA 370421 GUJARAT,INDIA

Phone:02838-271181-186 Fax:02838-255460

E-Mail:purchase@adani.com

**PURC/F/012**

<b>To,</b> <b>CHOLAMANDALAM MS RISK SERVICES LTD</b>  DARE HOUSE, SECOND FLOOR , NO:2, N S C BOSE ROAD,,, -CHENNAI-600001 TAMIL NADU,INDIA, Phone :044-30445445 Mobile:91-99400-47988 Fax :044-30445550 Email :shankardr@cholams.murugappa.com Vendor Code : 207956 <b>Kind Attn:</b>	<b>SO No</b> 5700172656 <b>SO Date</b> 10.02.2016 <b>Proj/CC Code &amp; Name</b> 2110080 APSEZ-MUND-EHS-ENVIR
<b>Vendor Excise &amp; Tax Reg. Details</b> <b>VAT / TIN No</b> NOT APPLICABLE <b>CST No</b> <b>Excise ECC No</b> <b>Service Tax Reg. No</b> AABCC6610QST001 <b>Tan No.</b> <b>Pan No.</b> AABCC6610Q <b>Import Export Code</b>	<b>Our Excise &amp; Tax Registration Details</b> <b>VAT No &amp; Date</b> 24073400493 <b>CST No &amp; Date</b> 24573400493 <b>Excise ECC No</b> NOT APPLICABLE <b>Range</b> AR-VIII <b>Division</b> SERVICE TAX DIVISION-II <b>Commissionerate</b> SERVICE TAX, AHMEDABAD <b>Service Tax Reg. No</b> AAACG7917KSD002 WEF: <b>TIN No</b> 24073400493 <b>LST No</b> 24073400493 <b>PAN No</b> AAACG7917K <b>TAN No</b> AHMG00515E <b>Import Export Code</b> 800009665 <b>CIN</b> L63090GJ1998PLC034182  <b>Our Contact Details</b> <b>Buyer:</b> Madhu Mohan Tej Teegala <b>Phone:</b> 07925555775 <b>E-Mail:</b> madhumohan.tej@adani.com

Dear Sir,

We are pleased to issue this Service Order for the scope of work mentioned below, subject to the terms and conditions contained herein and in the annexure/s to this SO. Any annexure to this Service Order shall form integral part of the SO and in case there is any contradiction in the different documents with regard to any provision, the order of precedence shall be as mentioned in General terms & conditions.

**Scope of Work**

The proposed cumulative environmental impact assessment study activities will be grouped into seven (7) components as stated hereunder:

Task 1: Collection of published secondary data from various government, research and Adani group studies etc

Task 2: Baseline environmental monitoring (Terrestrial and marine environment)

Task 3: Terrestrial cumulative impact modeling and predictions (Air, ground water, surface water, sea water ingress, waste disposal, ecological and socioeconomic aspects etc)

Task 4: Marine cumulative impact modeling and predictions (shoreline change,

For ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED

**For CHOLAMANDALAM MS RISK SERVICES LTD,**

Authorised Signatory

Reg.Office: POST BAG NO:1, VILL:DHRUB TAL: MUNDRA MUNDRA-370421 Phone: Fax:

Admin.Office:'Adani House', Nr. Mithakhali Circle, Navrangpura, Ahmedabad Phone: Fax:

Date:24.02.2016 Time :14:24:01

Page 1-of- 17

erosion/accretion, mangrove eco-system, nutrients balance & food chain impacts, silting and sedimentation, oil spill modeling, marine outfall modeling etc).  
Task 5: Terrestrial cumulative area level environmental management plan  
Task 6: Marine cumulative area level environmental management plan  
Task 7: Integrated long term regional strategic environmental management plan.

Service Order Currency RUPEE

Price & Conditions (Priced BOQ attached for breakup)

	Currency	Amount
SERVICE ORDER PRICE INCLUDING DISCOUNT	INR	13000000.00
SERVICE TAX	INR	1820000.00
SWACHHA BHARAT CESS	INR	65000.00
Total Service Order Price :		<b>14,885,000.00</b>

**In Words,** RUPEE ONE CRORE FORTY EIGHT LAKH EIGHTY FIVE THOUSAND ONLY

#### Taxes & Duties :

Service Tax as per applicable rate.

Commencement Date 10.02.2016 Completion Date 09.02.2017

#### Milestones

Commencement Date: From the date of Service Order.

Completion Date: Entire scope of work shall be completed within 10-12 months from the commencement date.

Terms & Conditions:

#### Payment Terms: (Z998) See Payment Terms

As per Annexure I.

#### Retention Clause

NA

#### Bank Guarantee

NA

#### Taxes & Duties

Service Tax as per applicable rate.

#### Special Terms & Conditions

1. The project is estimated to be completed in 12 months period from the date of issue of SO.
2. In the event the project is delayed beyond 24th month from the date of commencement of the study due to some policy decision of Adani Group or due to delays in regulatory reviews, additional fee of Rs. 1 lakh per month will be charged.
3. In the event of pre-closure of the project after commencement of the baseline studies, 70% of the total project cost shall be paid.
4. Service Taxes as applicable will be charges extra.

(Buyer's Authorised Signatory)

**(Vendor's/Service Provider's  
Authorised Signatory & Stamp)**

- 5. Baseline data collection shall be in the scope of M/s. Chola MS Risk Services.
- 6. Stakeholder consultations i.e. ground work, coordination & communication shall be in the scope of M/s. Chola MS Risk Services.

Annexures

Annexure - I: Milestone Payment Schedule

(Buyer's Authorised Signatory)

(Vendor's/Service Provider's  
Authorised Signatory & Stamp)



ANNEXURE I  
Bill of Quantity (BOQ)

Serial No.	Service Code/Description	UOM	Quantity	Rate	Amount
10.	320004858	LUMP SUM	1.000	13000000.00	13000000.00
	CONSULTANCY SERVICES				
				Subtotal :	13,000,000.00
				Total Amount	13,000,000.00

in Words, RUPEE ONE CRORE THIRTY LAKH ONLY

Free Issue Material List

Material No	Material Description	UOM	Quantity
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(Buyer's Authorised Signatory)

(Vendor's/Service Provider's  
Authorised Signatory & Stamp)

**ANNEXURE II**  
**General Terms & Conditions****1. DEFINITIONS:**

The following terms capitalized and used herein or any other document related to the Contract, shall have the meaning as set forth in this clause [1].

- a) "Contract Price" means the price set out in clause of contract price and includes all adjustments carried out in accordance with these Conditions.
- b) "Contractor" means the person named as the contractor in the Letter of Acceptance issued by the APSEZL unless it be repugnant to the context or meaning thereof shall include its legal successors in title.
- c) "Contractors Equipment" means the equipment, machinery, vehicles, apparatus and all other material as required by the Contractor for the execution and completion of the Work including repairing and remedying of defects. Contractor's Equipment shall exclude APSEZL's Equipment (if any) and any other thing forming a permanent part or section of the Works.
- d) "Contractors Personnel" means all employees, staff and labour of the Contractor as may be notified by the Contractor to the APSEZL.
- e) "Cost" means all expenses reasonably incurred or to be incurred by the Contractor in relation to the Work including overhead and similar charges but does not include profit
- f) "Mobilization" means transporting/establishing of sufficiently adequate infrastructure by the Contractor at port/site comprising of Contractor's Equipment, aids, tools tackles including setting comprising of Contractor Personnel, engineers, supervising personnel and an adequate strength of skilled, semi-skilled and unskilled workers, who, with the so established infrastructure shall be in a position to commence execution of Work at port/site, in accordance with the agreed quality and health, safety and environment requirements and complete the same within the Completion Time.
- g) "Owner" or "APSEZL" means the company, who has agreed the contract, incorporated under the Companies Act, 1956, which shall include its legal successors in title and permitted assignees. All rights, benefits and remedies conferred upon by this contract shall accrue and be available to and are for the express benefit of the APSEZL for which the Services are rendered.
- h) "APSEZL's Personnel" means all employees, staff and labour or representatives of the APSEZL and any other person as maybe notified to the Contractor by the APSEZL.
- i) "Person" shall mean an individual, partnership, limited partnership, corporation, business trust, Joint Stock Company, trust, unincorporated association, joint venture, Governmental Entity or other entity of whatever nature.
- j) "Subcontractor" means any person named in these Conditions or the Special Conditions as the subcontractor and unless it be repugnant to the context or meaning thereof shall include its legal successors in title.

**2. INTERPRETATION:**

In this Agreement, unless the context otherwise requires:

- a) Under this contract, all the communications, correspondence and all other documents should be written, prepared and supplied in English language unless otherwise specified in the contract.
- b) Words of any gender are deemed to include the other gender;
- c) The terms "hereof", "herein", "hereby", "hereto" and derivative or similar words refer to this entire agreement;
- d) References to all agreement, documents and / or any other instruments include (subject to all relevant approvals) a reference to that agreement, document or instrument as amended, supplemented renovated or assigned from time to time.
- e) Any term or expression used but not defined herein shall have the same meaning as attributed to it under applicable law;
- f) Any reference to a day, unless it is specifically mentioned in this agreement, shall mean a reference to a calendar day.
- g) Any reference to any period commencing "from" a specified day or date and "till" or "until" a specified date shall include both such days and dates.

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**ANNEXURE II**  
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No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract, and is signed by APSEZL or its duly authorized representative and the Contractor or its duly authorized representative hereto.

**i) Severability**

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

**3. REPRESENTATIONS AND WARRANTIES :**

The Contractor hereby represents and warrants to APSEZL as follows:

**a) Due Organization of the Contractor.**

The Contractor is a corporation duly incorporated, validly existing and in good standing under the laws of India and has all requisite corporate power and authority to own and operate its business and properties and to carry on its business as such business is now being conducted and is duly qualified to do business in all jurisdictions in connection with the performance of its obligations under the Contract.

**b) Regulatory Approvals.**

All Permits, authorizations by, approvals or orders by, consents of, notices to, filings with or other acts by or in respect of any Governmental Entity or any other Person required in connection with the execution, delivery and performance of the Contract by the Contractor have been obtained or shall be obtained in due course.

**c) Requisite Knowledge.**

The Contractor represents and warrants that it has all requisite knowledge, know-how, skill, expertise and experience to perform the Work in accordance with the terms of the Contract.

**d) Work Standards**

The Work shall be rendered with promptness and diligence and shall be executed in a workmanlike manner, in accordance with the Best Industry Practice prevailing in the industry and the Contract. Contractor shall use adequate numbers of qualified individuals with suitable training, education, experience, competence and skill to perform the Work.

**e) Efficiency and Cost Effectiveness**

Contractor shall use commercially reasonable efforts to provide the Work in the most cost-effective manner, and the required level of quality and performance.

**4. SCOPE OF WORK :**

In addition to the Scope of work as per Annexure # I attached herewith:

**a) Scope of work**

The Contractor shall perform the Work as described in this Contract. All Work provided by or for the Contractor to APSEZL shall comply with all relevant applicable Laws, Permits, Specifications, applicable standards and Best Industry Practices. The Contractor shall ensure that all the products and services will, as a minimum, meet the performance and design requirements, functionality and capability defined in the appropriate Specifications.

If any services, functions or responsibilities are not specifically described in the Contract and are an inherent, necessary part of the Work or are necessary for proper performance of the Work in accordance with the Contract they shall be deemed to be included within the scope of the Work as if such services, functions or responsibilities were specifically described in the Contract unless, such services, functions or responsibilities were mutually agreed to be specifically excluded.

**b) Permits**

The Contractor shall be responsible for obtaining all Permits, approvals, licenses or clearances required for the

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**ANNEXURE II**  
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execution and implementation of the contract and shall acquire the same in its name from all local, state or national Governmental Entities or public service undertakings that are necessary for the performance of the Contract, including, without limitation, labour licenses, visas and entry permits for the Contractor's Personnel and Subcontractor's expatriate/ personnel and licenses for all imported items, equipment, if any.

**c) Records of Employment**

CONTRACTOR shall maintain proper registers and records under the Factories Act, Minimum Wages Act, Contract Labour Act and for any other applicable law and is required to produce the same for inspection by any Government authorities. The registers should be available for inspection in the port/site premises. APSEZL shall be entitled at all times to carry out any check(s) or inspection(s) of Contractor's facilities, records and accounts to ensure that the provisions aforesaid are being observed by CONTRACTOR and the sub-Contractors and that the workmen are not denied the rights and benefits to which they are entitled under such provisions. Any violation shall, without prejudice to any other rights or remedies available to APSEZL, constitute a ground for termination of the Contract as specifically set forth under termination clause.

**d) Contractor's Equipment**

The Contractor shall be responsible for all Contractors' Equipment. The Contractor's Equipment brought on to the port / site shall be deemed to be exclusively intended for the execution of the contract. The Contractor's Equipment as well as the manpower required for completing the Works within the stipulated schedule shall be mobilised/demobilized at the port/site by the Contractor at no additional cost to APSEZL.

All Contractors' material brought in to be recorded & routed through Security entry.

The Contractor shall not be entitled to any cost, compensation or damages on account of any delay caused directly or indirectly as a result of the works being carried out by any other contractor or agencies in or around the port/site.

The Contractor shall be deemed to have been satisfied as to the suitability and availability of access routes to the Port/site. The Contractor shall use reasonable efforts to prevent any road or bridge from being damaged by the Contractor's traffic or by the Contractor's Personnel. These efforts shall include the proper use of appropriate vehicles and routes.

The Contractor shall indemnify and hold APSEZL harmless against and from all damages, costs, expenses and claims (including legal fees and expenses) resulting from the use, mobilisation and/or demobilisation of the Contractor's Equipment.

**e) Co-operation**

The Contractor shall coordinate and plan their work and activities in mutually agreed schedule with other contractor(s) at Port/site. However, all efforts will be taken to optimise the resources of all contractors working at the Port/site.

**f) Contractor's Personnel, staff and labour**

i. Contractor shall assign sufficient Contractor's Personnel and labour to perform the Work and such Contractor's Personnel and labour shall possess suitable competence, ability and qualifications and shall be properly educated and trained for the Work they are to perform.

ii. If APSEZL determines that any of contractor's personnel or labour is not in the best interests of APSEZL then contractor shall replace such personnel or labour with an individual of suitable ability and qualifications, provided, that the contractor shall not effect any such replacement in violation of applicable laws. Nothing in this provision shall operate to limit Contractor's responsibility for the acts or omissions of the Contractor's Personnel. APSEZL reserves the right to restrict entry of such contractor's personnel or labour in the premises of port/site and to terminate the contract without any notice.

iii. The Contractor shall require the Contractor's Personnel, staff, labour, Subcontractors and its personnel (to the extent applicable) to comply with the terms and conditions of the Contract and shall at all times take reasonable care and precautions to prevent any unlawful, riotous or disorderly conduct by Contractor's Personnel, staff, labour, Subcontractors and their personnel at the Port/site.

iv. As a corollary of the above CONTRACTOR is debarred from / not permitted to use or deploy, for his work, manpower of some other agency/ from any other sources. If, on any day, it is found that CONTRACTOR is

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un-authorizely using manpower from some other source CONTRACTOR shall be liable to appropriate penalty at the absolute discretion of APSEZL. Also if due to/ during such un-authorized deployment of manpower from any other sources, some untoward event such as a accidental injury etc. occurs to such manpower or any damage, injury to others because of negligent actions of such manpower, CONTRACTOR shall be fully and solely responsible for meeting out costs and consequences of the same, both statutory and others as that may occur. Besides, you may also be liable to administrative and / or legal actions as may be considered necessary under the circumstances.

v. In the event of any injury or loss of life to any of Contractor's workers/ staff due any negligence, the APSEZL will not be responsible for the same. The entire responsibility lies with CONTRACTOR. CONTRACTOR is liable to pay the total compensation and all incidental costs arising out of such incident, if any.

vi. The Contractor shall be liable and responsible for all payments to the Contractor's Personnel including salaries, wages, taxes, allowances and other benefits in accordance with the Laws and without any involvement of any middleman and that no amount by way of commission or otherwise is deducted or recovered from the wages of the workmen.

vii. In case of foreign personnel or technicians brought in by the Contractor for the execution of the contract, the Contractor shall be solely responsible for them and shall ensure compliance of all Laws with respect to the said foreign personnel or technicians including obtaining work permits, visas, arranging for accommodation, travel etc.

**g) Subcontracting**

i. The Contractor shall not delegate, subcontract or assign any portion of Work without the prior written approval of APSEZL, especially from the HR Department for the purposes of ensuring statutory compliance, besides commercial department and user department HOD.

ii. APSEZL's approval/consent shall not however affect the Contractor's responsibility under the Contract. APSEZL shall be provided with copies of the executed agreements. The Contractor shall select the Subcontractors in connection with the performance of the contract such that all products and services provided by any such Subcontractors meet the Specifications and all other requirements set forth in the Contract.

iii. Regardless of approval from APSEZL the subcontractor will not, under any circumstances,

ü Give rise to any claim against APSEZL.

ü Give rise to any claim by contractor against APSEZL if such subcontractor breaches its subcontract or contract with the contractor.

ü Create any contractual obligation by APSEZL to the Subcontractor.

ü In any way release the Contractor from being solely responsible to APSEZL for the Work to be performed under the Contract.

iv. The Contractor shall remain fully and primarily responsible for the performance of all acts, omissions or faults of such Subcontractors, agents and/or an employee as if they were the acts, omissions, faults of the Contractor.

v. The warranties of the Contractor set forth in the Contract will be deemed to apply to all Work performed by any Subcontractor as though the Contractor had itself performed such Work.

vi. In case any supplier and/or Subcontractor gives warranty over and above as specified in the Contract, the Contractor shall pass such additional warranty to APSEZL (Extended Warranty).

**h) Emergency Work**

i. If, by reason of an emergency arising in connection with and during the execution of the Contract, any protective or remedial work is necessary as a matter of urgency to prevent damage to the port/site, the Contractor shall immediately carry out such work without making demand for extra payments.

ii. If the Contractor is unable or unwilling to do such work immediately, APSEZL may do or cause such work to be done as APSEZL may determine is necessary in order to prevent damage to the port/site. In such event APSEZL shall, as soon as practicable after the occurrence of any such emergency, notify the Contractor in writing of such emergency, the work done and the reasons therefore. In such a case, APSEZL shall be entitled to recover the Costs incurred by APSEZL in connection therewith from the Contractor.

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**ANNEXURE II**  
**General Terms & Conditions****5. CONTRACT PRICE**

- a) The Contract Price shall be as specified in the appropriate annexure attached herewith.
- b) Unless indicated otherwise in the contract, the Contract Price shall be firm and not subject to any alteration or adjustment.
- c) The Contractor shall be deemed to have satisfied itself as to the correctness and sufficiency of the Contract Price, which shall, except as otherwise provided for in the Contract, cover all its obligations under the Contract.
- d) Should APSEZL be required to issue any tax exemption certificate for claiming exemption by the Contractor, then the benefit obtained by the Contractor towards such taxes and duties, shall be passed on to APSEZL.

**6. RISK AND RESPONSIBILITY**

- a) If Contractor fails to perform the Work in accordance with the Contract, including the Specifications set forth herein, Contractor shall promptly inform, investigate and report on the causes of the problem provide an appropriate root cause analysis report of such failure, promptly initiate remedial action to correct the problem, report to the APSEZL's representatives of the status of remedial efforts being undertaken and provide APSEZL evidence that the causes of such problem have been or will be corrected on a permanent basis.
- b) If any loss or damage occurs during the time when the Contractor is responsible for the Work, the Contractor shall at its own cost and expense, rectify and remedy the damage so that the Works conform to the Contract.

**Idle Charges**

The Contractor shall not be entitled to any idle/downtime charges for whatsoever reason under the Contract.

**7. TAXES AND DUTIES**

The Parties' respective responsibilities for taxes arising under or in connection with the Contract shall be as follows:

- a) Each Party and/or Subcontractors shall be liable for any personal property or use taxes on equipment or property it owns, uses, or leases from a third party, and for taxes based on its net income or gross receipts. The Contractor shall be liable for payment of taxes on equipment leases for which Contractor and/or any Subcontractor has financial responsibility.
- b) Contractor shall be liable for all taxes paid or payable by Contractor's Personnel and/or any Subcontractor's personnel, including personal income taxes levied in the Country where the Port/site is located.
- c) The Contractor shall provide and make available to APSEZL any certificates, information regarding sales/purchases or use of equipment, materials, or services, and other exemption certificates or information reasonably requested by APSEZL.
- d) Notwithstanding anything aforesaid, Contractor shall be responsible for payment of any extra cost or expense incurred by APSEZL due to any non compliance, omission, negligence, inefficiency or default by or on behalf of the Contractor or its Subcontractors with respect to the Contractors/ Subcontractors responsibilities hereunder.
- e) The Contractor represents, warrants and covenants that it shall file appropriate tax returns, and pay applicable taxes owed arising from or related to the contract in applicable jurisdictions and shall defend, indemnify and hold the APSEZL, APSEZL's Personnel, employees and agents harmless from and against all claims, demands, suits, proceedings, damages, costs, expenses, liabilities (including, without limitation, legal fees) or causes of action brought against or incurred by APSEZL and/or APSEZL's Personnel, employees or agents.

**8. TERMINATION:**

- a) The APSEZL shall be at liberty to terminate this Contract without assigning any reason thereof to the CONTRACTOR in the event of following:

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- I. Material breach of any of the terms & condition of this Contract.
  - II. If Contractor Disregards or violates any material Laws, policies, Permits or clearances
  - III. If the Contractor is adjudged bankrupt or insolvent, has a receiving order issued against it, makes a general assignment for the benefit of its creditors, or, if the Contractor is a corporation, a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Contractor takes or suffers any other analogous action in consequence of debt
  - IV. If, by virtue of any order passed by any court of law or any other government authority, the CONTRACTOR ceases to carry out any such activity agreed under this Contract.
  - V. If CONTRACTOR fails to perform the contract to the satisfaction of APSEZL.
  - VI. If CONTRACTOR persistently fails to carry out the instructions of APSEZL.
  - VII. If the Contractor assigns subcontracts or transfers the Contract or any right or interest therein other than in accordance with the Contract.
  - VIII. If Contractor fails to pay to APSEZL any material amount due not otherwise disputed in good faith to APSEZL by the date required for such payment
  - IX. If the Contractor, in the judgment of APSEZL has engaged in fraudulent practices in competing for or in executing the Contract.
  - X. If Contractor fails to comply statutory requirements
- "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of APSEZL, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive APSEZL of the benefits of free and open competition.

- b) Upon receipt of the notice of termination under clause [8] Termination, the Contractor shall either immediately or upon the date specified in the notice of termination cease all further work, except for such work as APSEZL may specify in the notice of termination for the sole purpose of protecting that part of the Works already executed, or any work required to leave the Port/site in a clean and safe condition, remove all temporary site installations, erection / renovation / refurbishment equipment from the Port/site, repatriate the Contractor's Personnel and its Subcontractors' personnel from the Port/site, remove from the Port/site any wreckage, rubbish and debris of any kind, and terminate all subcontracts.
- c) In the event of termination of the Contract under clause [8] Termination, APSEZL shall pay to the Contractor the Contract Price, properly attributable to the parts of the Works executed by the Contractor as of the date of termination and the costs reasonably incurred by the Contractor.
- d) For any termination due to the faults of the Contractor, APSEZL reserves the right to get the balance work done by other agencies at the risk and cost of the Contractor.

**9. SUSPENSION**

- a) APSEZL may at any time request the Contractor by notice, to suspend performance of any or all of its obligations, with the work to be suspended and the effective date, under the Contract. The Contractor shall thereupon suspend performance of such obligation (except those obligations necessary for the care, protection, security or preservation of the Works) until ordered in writing to resume such performance by the APSEZL.
- b) If the Contractor's performance of its obligations is suspended by APSEZL for the reason of the Contractor's or Subcontractor's default or breach of the Contract, APSEZL will give notice of reasonable days, as the case may be, to the Contractor to remedy the cause of breach or default, failing which the Contract may be terminated pursuant to clause Termination [8]. During such suspension due to Contractor's breach of Contract or default, APSEZL shall be entitled to recover/claim its losses from the Contractor.
- c) During the period of suspension, the Contractor shall not remove from the Port / site any Contractor's Equipment, Plant and Equipment or machinery without the prior written consent of APSEZL.
- d) After the permission or instruction to proceed is given by APSEZL to the Contractor, the Contractor and the

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APSEZL representatives shall jointly examine the Works or the sections affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or sections which has occurred during the suspension after receiving from the APSEZL an instruction to such effect at its own cost and risk.

#### 10. FORCE MAJEURE:

If at any time during the subsistence of this Contract, the parties of the Contract become unable to perform in whole or in part any of its obligation under this Contract due to any cause or circumstance which is beyond its reasonable control, any such failure or delay as is caused by act of sabotage, acts of God, earthquake, subsidence, flood, cyclone, tsunami, hurricane, tempests, epidemics, quarantine restriction, serious industrial disputes, strikes, lockouts, fires, explosions, shipwrecks, civil war, terrorism, act of the public enemy including but not restricted to block of passage, wars, riots, interference by military authorities, compliance with the laws, directives of orders of any law court or government authority. It will not amount to non-fulfillment of the contractual obligation and the parties shall have no right to claim damages from each other. The party affected by Force Majeure shall, within Three (3) days of the occurrence of such circumstance, communicate to the other party by telex / cable / fax or E-mail about the existence of such circumstance and in the event of termination of this circumstance, information shall similarly be given. The parties affected shall make reasonable efforts to mitigate the effect of such Force Majeure.

#### 11. INSURANCE:

- a) The CONTRACTOR shall arrange, in the joint name of APSEZL and CONTRACTOR, proper and adequate, comprehensive and full insurance coverage at its own cost for its labours, supervisors, personnel, equipments, tools, tackles, machineries etc. against all risks including but not limited to losses, theft, fire, explosions, riots, malicious damage, atmospheric disturbances, earthquake, cyclone, tsunami, hurricane, tempest, any natural calamity, transit loss / damage within Port/site area, war, act of sabotage, flood, leakage, contamination, tsunami, cyclone or any other natural calamity alongwith the third party liability coverage immediate from the time of the labours, supervisors, personnel, equipments, tools, tackles or any other property of the CONTRACTOR etc. supplied / deployed in the Port/site and until such labours, supervisors, personnel, equipments, tools etc. leaves the Port/site limits at the end of the Contract or earlier determination. Thereafter adequate insurance coverage will be at the Will of the CONTRACTOR. The CONTRACTOR shall also take adequate and all risk insurance coverage under Public Liability and third party liability insurance policy specifically while carrying out stevedoring activity as per the this Contract and / or loading, unloading or handling the cargo at Port/site. APSEZL shall take adequate insurance coverage only for its own equipments, personnel and operating installations. The CONTRACTOR shall submit the original copy of all and any insurance policy to APSEZL.
- b) APSEZL shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to this clause [11]. All insurers' rights of subrogation against such co-insured for losses or claims arising out of the performance of the Contract shall be waived under such policies.
- c) The Contractor shall ensure that, where applicable, its Subcontractor(s) shall take out and maintain in effect adequate insurance policies for their personnel and vehicles and for work executed by them under the Contract, unless such Subcontractors are covered by the policies taken out by the Contractor.
- d) If the Contractor fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contract, or fails to provide satisfactory evidence and copies of policies in accordance with this sub-clause, APSEZL may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. APSEZL under such circumstances shall be entitled for reimbursement from the Contractor for the amount of premiums paid plus 15% towards overhead and the Contract Price shall be adjusted accordingly. Nothing in this clause limits the obligations, liabilities or responsibilities of the Contractor under the other terms of the Contract or otherwise. Any amount not insured or not recovered from the insurers shall be borne by the Contractor in accordance with these obligations,

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liabilities or responsibilities.

e) Unless otherwise provided in the Contract, the Contractor shall prepare and conduct all and any claims made under the policies affected by it pursuant to this clause and all monies payable by any insurers shall be paid to APSEZL as "Loss Payee". APSEZL shall give to the Contractor all such reasonable assistance as may be required by the Contractor. With respect to insurance claims in which APSEZL's interest is involved, the Contractor shall not give any release or make any compromise with the insurer without the prior written consent of APSEZL.

f) Contractor shall name APSEZL as additional insured on the policy. All other insurances, where APSEZL is not named as additional insured with Contractor, the Contractor shall ensure that APSEZL obtains the benefit of such insurance policies, as Loss Payee.

g) All deductibles, exceptions and exclusions applicable to the Insurance covers shall be for the account of and be paid by the Contractor. Any breach of conditions and/or warranties of the insurance policies by Contractor and/or its Subcontractor shall also be for the account of the Contractor.

**12. WAIVER**

None of the provisions of this Contract shall be considered waived by APSEZL unless such waiver is reduced to writing and signed by APSEZL. Any waiver or failure by Owner / APSEZL to claim a breach of any of the provisions of this Contract shall not be deemed to be a waiver of any subsequent breach or affecting in any way the effectiveness of such provisions.

**13. ENTIRE CONTRACT:**

This Contract embodies the entire contract between APSEZL and the CONTRACTOR relating to the work, and the APSEZL shall not be bound by or be liable for any statement, representation, promise, inducement or understanding of any kind or nature relating to the work which is not set forth or provided for herein this Contract. Any work provided for herein which was performed or caused to be performed by APSEZL prior to the date of this Contract shall be deemed to have been performed under this Contract.

**14. GOVERNING LAW:**

The Contract shall be interpreted, construed and governed by the Laws of India. The courts situated at Mundra, in the State of Gujarat, India shall have exclusive jurisdiction in all matters relating to the Contract for the purpose of action and proceedings arising out of the Contract.

**15. CHANGE IN LAWS AND REGULATIONS**

a) If, after the Contract Date there is introduction of a new Law or a change in the existing Laws, ordinances, statutes, rules, regulations, orders or decrees (but excluding changes to tax laws where such taxes are based upon Contractor's inventory, income, profits/losses or cost of finance) which were not known or foreseeable and become effective after the Contract Date and have direct impact on Contract Price that affects the costs and expenses of the Contractor, the Contract Price shall be correspondingly changed, and/or the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract.

b) Such Change in Law provision shall be applicable only if, enacted on or prior to the expiry date of the contract.

c) If due to enactment of such Change in Law, APSEZL is entitled to recover the amount, same shall be recovered from the final due payment and if such amount exceeds the final due payment, then Contractor shall pay additional amount exceeding final payment against a claim by APSEZL.

**16. CONFIDENTIALITY**

a) All information including, without limitation, all oral and written information, disclosed by APSEZL, APSEZL Personnel (Disclosing Party) to the Contractor or any Person acting for and on behalf of the Contractor (Receiving Party) is deemed to be confidential, restricted and proprietary to APSEZL (hereinafter referred to as

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"Proprietary Information").

b) Except as specified in the Contract, the information supplied is required to accomplish the intent of, and in accordance with the terms of, the Contract. The Receiving Party shall provide the same care to avoid disclosure or unauthorized use of the information as it provides to protect its own similar proprietary information. All information, including all copies of such information, unless otherwise specified in writing (a) remains the property of the Disclosing Party, (b) shall be used by the Receiving Party only for the purpose for which it was intended, and (c) shall be returned to the Disclosing Party or destroyed after the Receiving Party's need for it has expired or upon request of the Disclosing Party, and, in any event, upon expiration or termination of the Contract.

c) For the purposes hereof, information does not include information that:

- i) is published or otherwise in the public domain or is properly within the legitimate possession of the Receiving Party
- ii) subsequent to disclosure to the Receiving Party is lawfully received from a third party having rights in the information without restriction of the third party's right to distribute the information and without notice of any restriction against its further disclosure;
- iii) is independently developed by the Receiving Party, by itself or through parties who have not had, either directly or indirectly, access to or knowledge of such information;
- iv) is obligated to be produced under order of a court of competent jurisdiction or other similar requirement of a Governmental Entity, provided that the Receiving Party required to disclose the information provides the Disclosing Party with prior notice of such order or requirement.

**17. ASSIGNMENT**

This Contract and the rights and liabilities hereunder shall bind and inure to the benefit of the respective successors of the Parties hereto. The CONTRACTOR shall not be entitled to assign or transfer any of its rights and / or liabilities hereunder to any third person, without the prior written consent of APSEZL. However, APSEZL, at any time and its sole discretion, during the subsistence of this Contract, can transfer, assign and / or appoint any other CONTRACTOR(s) for the same scope of work agreed herein this Contract, at the risk and cost of CONTRACTOR, at Adani Ports/site without obtaining any prior consent of the CONTRACTOR, if,

- a) CONTRACTOR fails to perform.
- b) CONTRACTOR fails to follow the instructions of APSEZL.

**18. AMMENDMENTS / MODIFICATIONS**

No modification, waiver or amendment of any term or condition of this Contract shall be effective unless and until it shall be reduced to writing and signed and executed by both the Parties hereto or their legal representatives. All legally required amendments made by consent of both the Parties will automatically become a part of this Contract.

**19. PENALTY:**

APSEZL reserves its rights to impose penalty on the CONTRACTOR for the following failures:

- a) Any material breach of any terms and conditions of this Contract by the CONTRACTOR or its labours, supervisors and / or personnel etc.
- b) Failure to comply with APSEZL safety and security policy.
- c) Failure to comply with APSEZL instructions.
- d) Failure to fulfill the minimum requirement of equipment / labour of the desired quality agreed under this Contract as instructed / issued by APSEZL from time to time.
- e) Failure to complete the work in allotted time either specified by railway, ship or APSEZL and / or resulting into direct loss, demurrage, penalty, the same would be recovered from the CONTRACTOR.
- f) Failure to perform the minimum as specified in this contract or as agreed between APSEZL and CONTRACTOR from time to time.

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Penalty shall be levied on the CONTRACTOR to the extent and equivalent to the loss / damage caused / suffered by APSEZL in terms of amount due to failure of the CONTRACTOR or its personnel. Any other penalty on account of failure of the CONTRACTOR shall be determined by APSEZL representative at the time of such failure/damage. APSEZL shall be at liberty and its sole discretion to deduct the amount of penalty towards losses / damages incurred or suffered from the payment of running bills to the CONTRACTOR. In case the amount of loss / damage is in excess of the running bill payable to the CONTRACTOR then APSEZL shall raise an Invoice / debit note for the balance portion of loss / damage amount to the CONTRACTOR. In case of non payment of dues within 7 (seven) days from the date of raising the invoice, the CONTRACTOR shall be liable to pay an interest on the due amount at the rate of 12% p.a.

**20. ARBITRATION:**

Parties to this Contract shall strive to settle dispute or difference, if any, arising out of and in relation to this Contract amicably. If Parties fail to settle the disputes amicably, the matter shall be referred to sole arbitrator appointed by the COO of APSEZL. The arbitration shall be in accordance with the provisions of Arbitration and Conciliation Act 1996. The place of arbitration shall be Mundra. The decision of the arbitrator so appointed shall be final and binding on both the parties. The CONTRACTOR shall not dispute the appointment of sole arbitrators by COO of APSEZL.

**21. JURISDICTION**

The courts in MUNDRA shall have jurisdiction in respect of all matters arising out of or pursuant to this Contract.

**22. COMPLIANCES**

CONTRACTOR shall comply with and ensure strict compliance by his/its sub-Contractors and agents of all applicable Central, State, Municipal and local laws and regulations and undertakes to indemnify APSEZL from and against all levies, damages, penalties, any payments, whatsoever, as may be imposed by reason of any breach or violation of any law, rule or regulation and against all actions, proceedings claims and demand arising there from and/or relative thereto.

**23. LABOUR LAWS AND REGULATIONS**

A. CONTRACTOR shall be responsible for strict compliance of and shall ensure strict compliance by its sub-Contractors, servants and agents of all laws, rules or regulations having the force of law affecting the relationship of employer and employee between CONTRACTOR /sub-Contractors and their respective employees and / or otherwise concerning labour, social welfare and provident fund, pension, bonus, gratuity and other benefits to employees. Without prejudice to the generality of this provision, CONTRACTOR shall comply with and ensure that sub-Contractors and other agencies employed by him comply with the provision of the payment of Wages Act 1963, Minimum Wages Act 1948, Employers Liability Act 1938, Workmen's Compensation Act 1923, Industrial Dispute Act 1947, Maternity Benefit Act 1961, Employees State Insurance Act 1948, Contract Labour (Abolition & Regulation) Act 1970, Payment of Bonus Act, Gratuity Act, Factories Act and the Employees Provident Fund (& Miscellaneous Provisions) Act 1952 as amended from time to time and all rules, regulations and schemes framed there under from time to time.

B. CONTRACTOR will provide necessary safety equipment (PPE) e.g. goggles, gloves, safety shoes, gumboots, masks, apron etc. as per existing norms / factories act to its employees/ workers as and when required. For violation of safety compliances, fine would be charged @ Rs 500/- per incident.

C. CONTRACTOR shall not employ in connection with the work, any person below the age of 18 years.

D. CONTRACTOR will ensure that the work is carried out in a proper manner and no damage or loss to the plant machinery and port/site property. In case of any damage or loss APSEZL will charge as compensation for the loss so incurred.

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**ANNEXURE II**  
**General Terms & Conditions**

E. CONTRACTOR and his sub-contractors shall obtain from the authority(ies) designated in this behalf under any applicable law, rule or regulation (including but not limited to) the Factories Act and Contract Labour (Regulation & Abolition) Act 1970 (in so far as applicable) any and all such license(s), consent(s), registration(s) and/or other authorization(s) as shall from time to time be or become necessary for or relative to the execution of the work or any part or portion thereof or the storage or supply of any material(s) or otherwise in connection with the performance of the contract and shall at all times observe and ensure due observance by the sub-contractors, servants and agents of all terms and conditions of the said license(s), consent(s), regulation(s) and other authorization(s) and laws, rules and regulations applicable thereto. Without prejudice to the generality of this provision, CONTRACTOR shall obtain and ensure that his sub-contractors and other agencies employed by him on the work, obtain a valid License under the Contract Labour (Regulation & Abolition) Act 1970 and shall duly and faithfully observe and comply with the provisions of the Contract Labour (Regulation & Abolition) Central Rule 1971 and other Central and State Rules as amended from time to time and applicable to the work, and shall duly, promptly and faithfully maintain and/or provided in terms thereof or any license granted there under.

F. CONTRACTOR shall be duly registered under the Employees Provident Fund and Miscellaneous Provision Act, 1952 and the Employees State Insurance Act, 1948 (if the area is notified by the Govt. for coverage under the Act) and CONTRACTOR shall duly pay his due contributions and his employees' contribution to the Authorities prescribed under the said Acts and any Schemes framed there under in respect of all labour employed by him for the execution of the contract.

G. On receiving information of any breach, non-fulfillment and/or non-observance by CONTRACTOR and /or his authorised sub-Contractors and other agencies engaged by him in connection with the works or any of the provisions or requirements of any of the Labour Laws, rules and regulations and/or as to the inaccuracy of any of the returns or statements furnished by CONTRACTOR and/or his sub-Contractors and/or any records or accounts maintained by any of them with respect to which APSEZL as the principal employer or otherwise can have a liability, the APSEZL shall be entitled to deduct from the bills and any amounts due or becoming due to CONTRACTOR, under this contract or other contract(s) with CONTRACTOR, any sum(s) required or estimated to be required, in its judgment which shall be final and binding on CONTRACTOR, for making good or compensating for the liability or possible liability of the APSEZL by reason of the said breach, non-fulfillment or non-observance and/or inaccuracy aforesaid.

H. Nothing in the Contract Documents stated shall anyway constitute any Workman / employee of CONTRACTOR or any sub-CONTRACTOR as or to be a Workman / employee of APSEZL, or place obligation or liability in respect of any such Workman / employee upon APSEZL.

I. It is hereby made clear to CONTRACTOR that there is no residence facility in the port/site premises and none of Contractors' staff should reside in the port/site premises.

J. CONTRACTOR will not, directly or indirectly, employ workers or employees from other Contractors working for APSEZL.

K. CONTRACTOR has to comply with all Port/site Rules and Regulations instructions given by authorized officers of APSEZL.

L. The Contractor shall issue identity cards to the Contractor's Workers and each of such person shall display and wear their identity cards all throughout their presence at the site of the Company.

M. CONTRACTOR shall deposit the photo copy of following documents (duly attested) to HR Department of APSEZL every month alongwith the Bills/ Invoices :

- a. PF Challan for the preceding month
- b. wage register for the preceding month
- c. Attendance register of preceding month
- d. Policy for workmen compensation

e. If any of the aforesaid documents are not submitted by CONTRACTOR, deductions as deemed appropriate would be effected from the subsequent running bills / final bill of CONTRACTOR.

N. APSEZL reserves the right to withhold payments of CONTRACTOR in the event of your failure to comply with the labour laws and regulations.

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## ANNEXURE II

### General Terms & Conditions

O. If at any time it is discovered that some of the CONTRACTOR'S employees/ workman have bad antecedents, besides advising the CONTRACTOR to immediately discontinue such labour from APSEZL work and also not deploying them to any other group company or associate company of APSEZL, penalty as deemed suitable may also be levied on the CONTRACTOR and would be deducted from ongoing bills.

P. APSEZL reserves its right to review, edit and enlarge and / or modify these clauses as APSEZL may deem necessary to ensure fuller compliance of various matters pertaining to labour laws and regulations governing engagement of contract labour.

#### 24. Health, Safety, Environment and Security Clause

The contractor shall comply with all Health, Safety, Environment and Security rules and regulations of APSEZL, along with appropriate health, safety, environment and statutory requirements, and safety and security activities of APSEZL, in all areas that fall within the Port, SEZ and associated working areas.

The Contractor shall be solely responsible for ensuring that the safety and security standards are maintained on Port and that the Contractor, Contractor's Personnel, staff, labour, Subcontractors and their personnel and/or any Person acting for on behalf of the Contractor complies with the applicable safety rules and standards.

Before commencing work at APSEZL, the Contractor will ensure that the personnel being deployed:

1. will be over 18 years of age
2. will have no Police Record
3. will have no record of alcohol or drug abuse
4. will have no chronic or contagious diseases
5. will be physically and mentally fit
6. will be a trained and competent person
7. will be provided with Personnel Protective Equipment (Safety Helmet, High Visibility overalls, Safety shoes, working gloves, safety goggles) as required for the work being carried out
8. will have completed the APSEZL Basic Safety Induction course.

On commencement of work, they must follow all APSEZL safety rules and regulations, traffic routings and guidelines. Personnel Protective Equipment must be worn whenever a person is in any open area of the port.

A copy of the APSEZL Contractor Safety and Security Handbook is attached to this agreement contains all the Health, Safety, Environment and Security rules and regulations to provide guidance for compliance.

Any breach of Adani Ports & SEZ Health, Safety, Environment and Security rules and regulations could result in suspension of work, statutory fines, claims for delays and damages / injury etc. and/or cancellation of the agreement.

The Contractor shall indemnify and keep APSEZL harmless against all claims, demands, actions, proceedings, etc. that may be made or initiated against APSEZL or that may be suffered by APSEZL by reason of anything done by the Contractor or its staff, pursuant to non compliance of any safety and/or security measures in execution of the Works.

#### 25. OTHER CONDITIONS

APSEZL reserves right to divide the work between two or more Contractors solely at its discretion without any objection or hindrance from CONTRACTOR.

This contract can be terminated by either of the parties by giving 1 months notice to the other party.

Proper account for materials supplied by APSEZL shall be maintained by CONTRACTOR and a monthly report shall also be given by CONTRACTOR to APSEZL and recovery for the wastage, loss of such material would be reasonable.

#### 26. RELATION OF PARTIES

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**ANNEXURE II**  
**General Terms & Conditions**

- a) APSEZL and CONTRACTOR are independent parties. Nothing in this Contract shall be deemed to create a partnership, franchise, employment, or agency relationship between the parties.
- b) In case of breach of its obligations under this Contract by CONTRACTOR leading to disruption of service promised hereunder, it shall be competent for the Company to procure the service from the other Contractors and in that event CONTRACTOR shall be liable to reimburse to the Company additional Cost if any incurred on such procurement of service.
- c) APSEZL reserves the right to recover for all damages for any breach of the term and condition of the contract.

**27. INDEMNIFICATION (LOSS OF DAMAGE TO PROPERTY, ACCIDENT/ INJURY TO WORKERS)**

The Contractor shall defend, indemnify and hold APSEZL, APSEZL's Personnel, officers, agents and employees harmless from and against all claims, demands, suits, proceedings, damages, costs, expenses, liabilities (including, without limitation, legal fees) or causes of action (collectively, "Liabilities") brought against or incurred by APSEZL for (a) injury to Persons (including physical or mental injury, libel, slander and death) caused by (or relating to the strict liability of) the Contractor, Contractor Personnel, any Subcontractor or its or their respective officers, employees, representatives or agents, (b) loss or damage to real and tangible property, caused by (or relating to the strict liability of) the Contractor, any Subcontractor or its or their respective officers, employees, representatives or agents (c) violations of Laws, Permits, clearances, codes, ordinances or regulations by the Contractor or any Subcontractor, or (d) any other liability or loss that shall: (i) have resulted from any negligent or wilful act or omission or from the default of the Contractor, Contractor's Personnel or any Subcontractor or its or their respective officers, employees, representatives or agents in the performance of the Contract; or (ii) shall be a liability or loss for which the Contractor or any Subcontractor are legally liable.

The Contractor shall be responsible for all damages incurred by APSEZL as a result of any damage or injury caused by or resulting from the fraud, gross negligence or willful misconduct of the Contractor, Contractor's Personnel, Subcontractors or its personnel.

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(Buyer's Authorised Signatory)

**(Vendor's/Service Provider's  
Authorised Signatory & Stamp)**

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# **Annexure – 20**

To,  
Director (Environment) & Member Secretary,  
Gujarat Coastal Zone Management Authority,  
Sachivalaya,  
Gandhi Nagar

**Subject:** Submission of final report for Cumulative Impact Assessment at Mundra

**Reference:**

- (1) Your office letter no. ENV-10-2013-118-E dated 19.12.2014
- (2) MoEF&CC order vide F. No. 10-47/2008-IA-III dated 18.09.2015
- (3) Our submission of 1<sup>st</sup> progress report vide letter dated 10.09.2016
- (4) Our submission of 2<sup>nd</sup> progress report vide letter dated 27.07.2017

Dear Sir,

In view of compliance with the directions issued by MoEF&CC, GCZMA in its 21<sup>st</sup> meeting held on 07.02.2014 has directed APSEZ to submit Terms of Reference (ToR) to undertake a "Cumulative Impact Assessment study for the projects already granted Environmental Clearance (EC) and CRZ clearance in the region so that future developments can be assessed for providing necessary approvals at a later stage".

Further to the submission of ToR and subsequent discussions, GCZMA has approved ToR for undertaking Cumulative Impact Assessment (CIA) study vide letter no: ENV-10-2013-118-E dated 19.12.2014.

In view of the above, APSEZ appointed M/s. Choramandalam MS Risk Services Limited (CMSRSL) for carrying out CIA Study.

Further, an order was issued by MoEF&CC vide F. No. 10-47/2008-IA-III dated 18.09.2015, with specific directions to APSEZ. Below mentioned directions relate to the need of CIA study.

*xi) A regional strategic impact assessment report with a special focus on Mundra region will also be prepared. The cost towards these studies will also be borne by PP.*

*x) In the subject matter of thermal power plant, the proposed regional strategic impact assessment analysis will take in to account salinity aspect along with its potential environmental impact to suggest future corrective actions as well as the guiding tool on extension and additional of the capacities.*






During the course of the study, APSEZ has submitted two progress reports to GCZMA. Also, APSEZ has been submitting the updated status regarding the progress of the CIA study to all concerned authorities as part of the six monthly compliance reports. A joint site visit (MoEF&CC, RO, Bhopal, GCZMA and GPCB, RO, Gandhidham) was carried out during 21 - 22.12.2016 for compliance report verification.

In continuation to our earlier submissions, we would like to inform you that the CIA study is now completed (including baseline data collection, completion of all the technical studies to identify possible impacts on various environmental attributes and drafting a suitable macro level environment management plan) and the final report is enclosed for your consideration.

Thank you  
Yours sincerely,

  
Shalin Shah  
Head - Environment

✓ Copy to: Sh. Kushal Vashist, Director, MoEF&CC, Indira Paryavaran Bhavan, Jor bagh road, Aliganj, NewDelhi

02/12/18  
श्री. कुशल वाशीस्ट को प्रेषित किया  
पर्यावरण, वन, जलवायु परिवर्तन मंत्रालय  
Ministry of Environment, Forests & Climate Change  
भारत सरकार, Govt. of India  
इन्दिरा पर्यावरण भवन, Indira Paryavaran Bhavan  
जोरबाग रोड, अलिगंज/Jorbagh Road, Aliganj  
नई दिल्ली/New Delhi-110003

# **Annexure – 21**



04.01.2019

To

Director (Environment) & Member Secretary  
Gujarat Coastal Zone Management Authority  
Sachivalaya  
Gandhinagar

**Subject:** Cumulative Impact Assessment (CIA) report for Mundra

**Reference:**

- (1) Your office letter no. ENV-10-2013-118-E dated 19.12.2014
- (2) MoEF&CC order vide F. No 10-47/2008-IA-III dtd 18.09.2015
- (3) Our submission of 1<sup>st</sup> progress report vide letter dtd 10.09.2016
- (4) Our submission of 2<sup>nd</sup> progress report vide letter dtd 27.07.2017
- (5) Our submission of final report vide letter dtd 30.04.2018

Dear Sir

Vide above references, we would hereby like to submit that, APSEZL has already completed the CIA studies of Mundra region as per the approved ToR, issued by your good office vide letter dated 19<sup>th</sup> December 2014. Report has already been submitted vide our earlier letter dated 30<sup>th</sup> April 2018 for consideration.

In view of above, it is kindly requested to inform us for further necessary actions, if any to be taken by APSEZ.

Thank you

Yours sincerely

  
Shalin Shah

Head - Environment